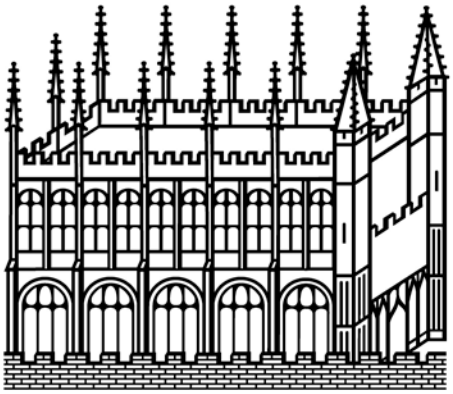


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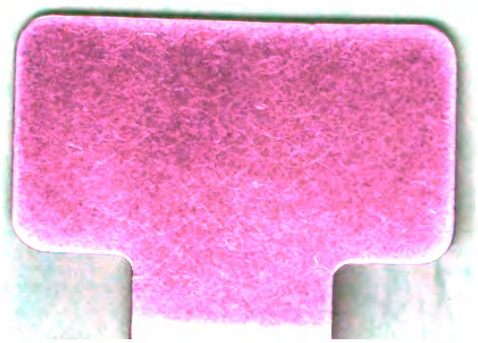
BURTON-ON-TRENT,

ITS HISTORY, ITS WATERS,

AND

ITS BREWERIES.





Gough Adds Staffordsh.

8° 21.



BURTON-ON-TRENT:

ITS HISTORY, ITS WATERS,

AND

ITS BREWERIES.

BY

WILLIAM MOLYNEUX, F.G.S.



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LONDON:—TRÜBNER & CO., PATERNOSTER ROW

BURTON-ON-TRENT:—WHITEHURST.

TO

THE RIGHT HONOURABLE HENRY WILLIAM GEORGE,

MARQUESS OF ANGLESEY,

EARL OF UXBRIDGE, BARON PAGET OF BEAUDESERT,

AND

LORD OF THE MANOR OF BURTON-ON-TRENT,

THESE PAGES ARE

(BY HIS LORDSHIP'S KIND PERMISSION,)

MOST RESPECTFULLY DEDICATED

BY HIS LORDSHIP'S MOST OBEDIENT SERVANT,

The Author.

PREFACE.

THE work, which has occupied all the spare time I have been able to devote to it during the last three years is now completed, and will henceforth be public property. Of the nature and extent of its reception I can form no opinion. I can simply say that I have, in the prosecution of my labours, spared myself in nothing which I considered essential to its completeness, its reliability, and its usefulness; and that it is my sincere hope it may be found, in some respects at least, worthy the name it bears, and the character thus sought for it. I may add that, in fixing the price, I have also been guided by a desire, notwithstanding the heavy responsibility I thereby incur, to give every one the opportunity who has the will to be possessed of it, and in this instance I think I may at least assure myself of giving general satisfaction.

With regard to the work itself I have little to add; but I embrace this opportunity of stating that to the courtesy and consideration of the late Marquess of Anglesey in allowing me to make use of the highly valuable and interesting documents connected with the Burton Estate, I am considerably indebted. I am also under a heavy obligation to the different Brewers and Brewing firms of the town, for their kindness in furnishing, at my request, much important statistical and general information in reference to their establishments. To numerous individuals for their advice and help—especially to one old friend, to whose kindness in correcting my proof-sheets I am particularly indebted—my best and very hearty thanks are due, and I beg to assure each and all of the pleasure it gives me to acknowledge their assistance, and the readiness with which it has been conferred.

BRANSTON COTTAGE,

BURTON-ON-TRENT.

SEPTEMBER 1ST, 1869.

BURTON-ON-TRENT:

—o—

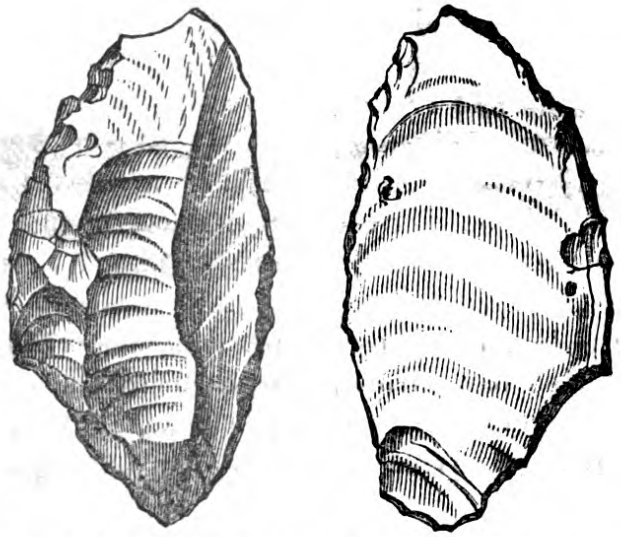
ITS HISTORY.

The Trent Valley, in the immediate neighbourhood of the town of Burton-on-Trent, consists of a broad trough hollowed out of Triassic rocks, and covered up to a depth of from thirty to sixty feet with accumulations of sand and gravel, over certain portions of which are spread in sinuous indented tracts more recent beds of gravel, sand, clay, and peat,—the residiuum of ancient river action. These various deposits, which are continuous over the whole area of the Trent Valley, are referrable to two distinct conditions and horizons of geological action. The more persistent of the gravels are moreover, subdivided into high and low-level sections, the former of which occurs only at intervals and in irregular masses. In this district they are confined to a terrace-like range immediately above, and in part occupied by the village of Stretton; but there can be no question that originally they constituted the entire subaqueous surface of the Trent Valley, and were reduced to their present condition by erosion, consequent on the upheaval of the valley to its first subaerial level.

Of late years much interest has been attached to the investigation of deposits of corresponding age and condition in various parts of Britain and the continent from the fact of their containing evidence of man's existence upon the earth at a period far removed from that embraced by the records of history. This evidence, so far as it refers to valley deposits

generally, first appears in the horizon of the high-level gravels, and consists principally of "celts," hatchets, and spear and arrow-heads chipped to the required form from flint nodules. They are found both in the valley gravels and in caverns hollowed out of rocks by tidal or river action, before being elevated to their existing level above all such active influences. In valley gravels the weapons are rarely associated with any portion of the human frame, but in caverns skulls have been occasionally disinterred; and with these, in positions which show the contemporaniety of their existence, frequently occur in large quantities the remains of a variety of animals which, specifically at least, have long since ceased to be recognised amongst the living forms of the earth.

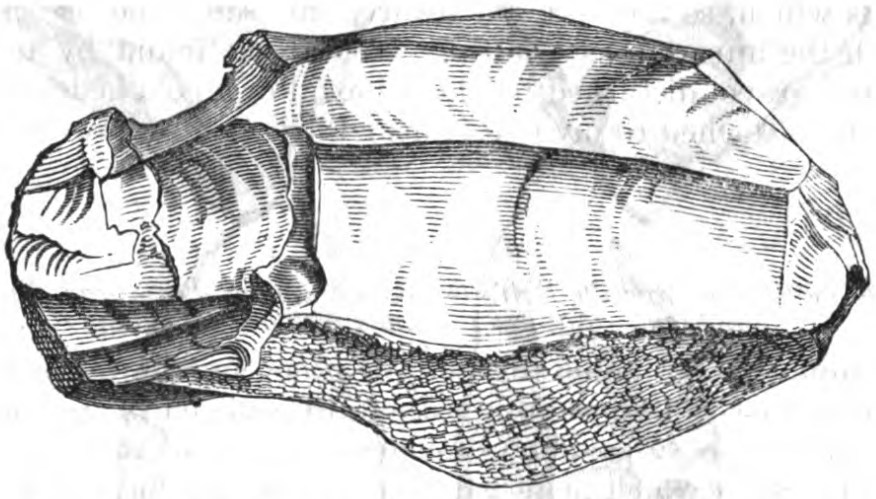
Hitherto, so far as is known, neither the high nor the low level gravels of the Trent Valley have yielded traces of these extinct mammalia, and the only known relic from the latter beds which, so far as I am aware, can safely be associated with the human race is a flint arrow-head found by myself in the gravel disturbed by the removal of an old hedge in the garden attached to my house, near Burton. If, however, the



Flint Arrow-head from the Trent Valley Gravels, near Burton-on-Trent. Nat. size. In the Author's collection.

Trent Valley gravels are so singularly barren in remains of this description, the district has afforded evidence of its occupation by man at a more remote period still, a period proba-

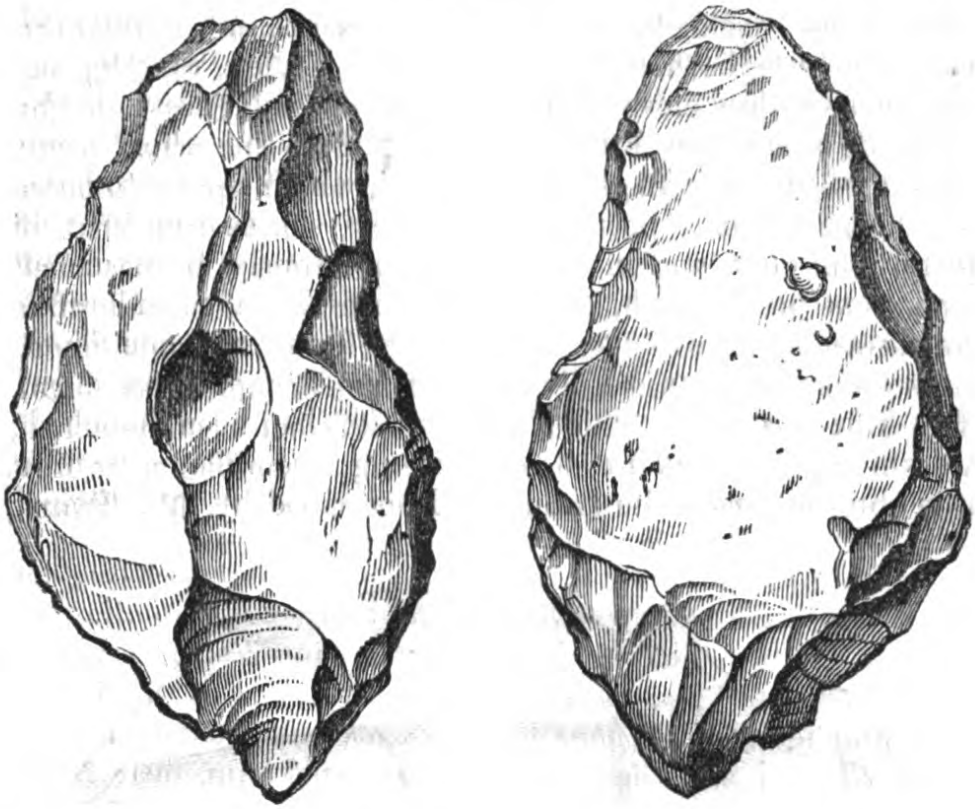
bly anterior to that which witnessed the configuration of the present valley-systems, and when the climatal conditions of Britain were decidedly more of an arctic than a temperate character. On both sides of the Trent Valley, ranging far back over the less elevated hills of Needwood Forest on the one hand, and Coton Park and Winshill on the other, occur isolated tracks of drift gravel and sand, which appear to have been deposited at a period immediately succeeding that of the Boulder-clay, and in one of these previously undisturbed arenaceous beds which, however, contained a considerable admixture of yellow clay, I recently found at some depth below the surface, on a hill side near the Rough Hay farm, a fine flint core, from which several flakes had been detached, and which in some points bears a strong resemblance to flint cores obtained from the Indus, and described by Mr. Evans,



Flint Core from Drift Sand, Rough Hay, near Burton-on-Trent. Nat. size. In the Author's Collection.

F.R.S., in the *Geological Magazine, vol.* 3, *p.* 434. In the gravels at Postern House, near the same place, I also met with a stone of igneous origin, curiously rounded, and which may have been used as a "sling-stone." Equally interesting and determinate with these is a spear-head, bearing upon it all the characteristic marks of antiquity, found by myself during the present year in the coarse flinty gravels of Coton Park, on the East side of the Trent Valley, which are of the same age, and occupy the same level as those of Postern

House.* In all probability these deposits will, on careful



Flint Spear-head from the Drift Gravels of Coton Park, near Burton-on-Trent. Nat. size. In the Author's Collection.

examination, be found to contain other similar relics of the human race, but those in question are sufficiently important and authentic to be adduced as evidence of the remoteness of the period in which man had become an inhabitant of this particular district, and that, however much he may have been wanting in intellectual capacity, he was not ignorant of the means of arming himself with offensive weapons, and that these weapons were doubtless used by him in providing himself and family with the ordinary necessaries of life.

Up to the present time the whole of the implements found in valley gravels consist of rude fabrications from flint nodules; and it is a noteworthy circumstance in connection with their discovery that the range of their occurrence is limited to beds

*I am informed by Mr. E. Brown, F. G. S., that he has in his possession from the Winshill gravels a somewhat imperfect but characteristic specimen of one of these flint weapons.

containing a large percentage of flints in a natural form; the gravels yielding the greater number and variety of implements being invariably situated in the immediate locality of the Chalk formation from which the flints were derived.

Notwithstanding the apparent absence from the Trent Valley gravels of the more characteristic implements of the ancient "flint-folk," it is in conjunction with some of its tributary valleys, of an exeedingly interesting character as containing deposits from which have been exhumed stone weapons of the secondary form, with other relics of man's handicraft, illustrating a more advanced condition of civilization than that arrived at by the previous inhabitants of the country. The more important discovery, however, consists of the remains of man himself, associated with those of extinct animals in a manner and condition which leave no doubt of their contemporaniety. Of these, the Sow Valley, at Stafford, has yielded a human skull, and portions of the skeletons of *Bos primigenius*, *Bos longifrons*, and other mammalia; in the Dove Valley, near Sudbury, similar interesting remains have deen found; also at Trentham, in the bed of the Trent, bones and teeth of *Elephas primigenius*, and a curious stone hammer-head; and the same river at Muskham, near Newark, a few years ago produced a human skull, and the remains of various animals, with which were embedded fragments of coarse brown pottery. These relics of an obsolete age were exhumed from the alluvial beds of the rivers described, at depths varying from twelve to thirty feet below the surface; and are therefore of more recent date than the flint weapons of the low-level gravels of the valley-systems of Britain and the continent.

In the neighbourhood of Burton these old river deposits are largely developed, and it is possible that they contain remains of a corresponding age and character, although at present there is no known discovered evidence of the fact. The line of occurrence of these deposits is distinctly marked, and they show that at the time of their formation the submerged area of the Trent Valley was of considerably greater extent than it is now. It was probably during this period of submergence that the Trent Valley became permanently occupied by a race of men of a different type to those by

whom they were preceded, and of whom the remains alluded to are evidently characteristic examples. The dwellings of these ancient people appear, from evidence discovered in various localities, to have consisted of an assemblage of circular wooden huts fixed upon piles driven deep into the mud beds of rivers, and entirely surrounded by the waters of their less active channels. They formed, in fact, what are described—according to their position—"lake" or "river-villages," and were only approachable by wading, or by means of canoes,—rude vessels hollowed by fire out of single trunks of trees, and propelled by short wooden paddles, of which Eccleshall Moss, and other similar low-lying deposits in this county have yielded interesting examples. The occupation of these water-villages no doubt continued until the surface area of the valleys in which they were situated assumed a more terrestrial condition, and led to their abandonment for more substantial sites.

It is a by no means uninteresting circumstance in connection with the human remains of this period that the pottery found in old river-beds, and in the locality of lake or river villages, bears so close a resemblance both in form and material to the cinerary and other vessels discovered near the surface of the low-level gravels of the Thames, Trent, and other valleys of the interior of the country. There can be no question that pottery of this class was most extensively used, and for a very considerable period, both by valley-settlers, and those of hilly ranges, in connection with their funereal ceremonies, and it is certainly remarkable that the form of vessel, and the pattern adopted in its decoration should be identical in specimens found hundreds of miles distant from each other. A small urn, containing burnt human bones, found some few years ago three feet below the surface of the Thames Valley gravels at Drayton, near Dorchester, in Oxfordshire, corresponded exactly in every respect with one discovered by myself in a barrow situated on a hill bordering the Trent Valley at Trentham, and I have now in my possession fragments of a similar vessel, from the gravels of Egginton Heath, near Burton. These, with numerous additional examples, met with elsewhere, and with which several cinerary urns found some

years ago at Stretton, may be included, fully attest the antiquity of the custom of funereal observances by the early valley-settlers of Britain, and it is possible that these valley-relics mark the place of burial set apart for the purpose by the inhabitants of river-valleys in their immediate neighbourhood.

The gradual elevation of the Trent valley naturally reduced the breadth of its river channels to their present ordinary limits, but the previously submerged tracts, would doubtless for a long time, on account of their low level, and inefficient drainage, remain as swampy ground, and thereby render somewhat difficult of approach the more elevated tracts of gravel on which the inhabitants of the valley had erected their dwellings. Each of the valley-villages of Burton parish stand upon gravel-beds which were formerly surrounded by these old river-channels, and no doubt their original occupation dates from this period. It is difficult, however to calculate the duration of the time which elapsed between the foundation of these villages, and the subjection of their inhabitants, in common with those of the remaining part of Britain, by the Romans. That it was very considerable there can be no question, because it allowed for the congregation of an enlarged population, and the introduction and establishment amongst them of customs and conditions appertaining to an advanced stage of civilization. It was moreover, sufficient to admit of the extinction of numerous species of animals, which, although as shown by their remains, existing in great numbers during the old river-submergence of the valleys are not known amongst the forms which the subsequent founders of the valley-villages had domesticated.

At the time of the Roman Conquest the towns and villages of the interior of Britain were generally, where practicable, protected by a series of banks and ditches, and as a rule it appears the sites selected for occupation were those for which nature had furnished the more available means of defence. Thus it comes that the majority of the old British settlements stood either on the crowns of steep isolated hills, round the flanks of which high banks and deep ditches could readily be constructed to give increased security ; or on the gravel eleva-

tions of the valleys which were more or less surrounded by river channels or the boggy ground left by the river courses of an older period. To this condition is due the origin of the greater proportion of the towns and villages of the present day, and in numerous instances, where all other means of indentifying their foundation with the British race have long since been obliterated, the necessary evidence is furnished by the name of the place itself. In no other instance is this evidence more characteristic or reliable than in the word "Bury," which the Saxons employed, in common with other forms of descriptive word-history, to denote places of British origin. The enlarged adoption of this custom is apparent from the numerous examples met with in this county, there being probably but few parishes which do not either in its simple, or slightly corrupted form, contain places to which the name "Bury" is applied. In most cases where the term still retains its simple form, the sites so named remain unoccupied, but in those to which "ton" is added—hence "Burton"—of which England contains upwards of sixty examples, it shows that upon the site of the more ancient settlement the Saxons established one of their own towns or villages. In addition to the town of Burton—the adjunct "on-Trent" being of modern introduction to distinguish it from other towns and villages of the same name—the parish contains at least three other sites to which the more primitive mame of "Bury" is attached, *i.e.*, the "Bury Croft," at Branston; the "Bury Pool," at Stretton; and Barrow, or "Bury-hill," at the Southern end of the Sinai Park range of hills. The application of the term, however, does not always determine the actual site of a pre-Roman encampment: it appears to have been in many instances applied to the old British burying-grounds, but these being doubtless as a rule situated in close proximity to the towns occupied by those people, there is but little room to question the reliable character of its general signification.

There is yet a broader meaning attached to this Saxon synonym. It includes, not only the place of ordinary occupation and those set apart for funereal purposes, but those claiming the distinction of military positions, "hill-forts," as they are termed, and which would appear to have formed

the rallying-points of the families and adherents of the chieftan whose lands lay around, when subjected to invasion by the bands of neighbouring states. Of these the more important are "Bury-bank," near Stone, "Bury-ring," near Stafford, and the "Bury," or "Burgh," on Maer Heath, near Whitmore, each of which consists of a series of double banks and ditches, enclosing the summits of isolated hills, and assuming their irregular form of outline. There is in addition to these a large somewhat circular and trebly entrenched hill-fort in the old Park at Beau Desert, called "Castle-ring," which belongs to the same period, the difference in name evidently arising from the erection within the entrenchments of a small castle in mediæval times, the existence of which, however, was unknown until about five years ago. The whole of these positions appear to have had originally but a single gateway, very narrow, and protected by embankments, which when necessary, could readily be barricaded by fallen trees or other material; and they may still be studied as well-preserved and remarkable examples of the earliest known attempts at military engineering to be met with in the history of the civilized races of this country.

The Bury-bank entrenchment encloses a circular tumulus composed principally of loose pebbles, and which, on examination a few years ago, was found to contain traces of human interment by cremation. If the other positions were ever dedicated to similar purposes, all exterior evidence of such intention has long since been obliterated: possibly the Bury bank tumulus may be an exceptional case, because although barrows of this description are in some elevated districts frequently protected by earth banks and ditches, it is extremely rare that they approach the enlarged dimensions, and the general character of positions originally intended like those in question for purely defensive purposes. At the present day it is but seldom that British barrows, even in a tolerable state of preservation, are to be met with in river or other valleys of this county. The almost general eradication of these interesting remains is doubtless due to the enclosure of waste lands, and the extension of agricultural operations in the neighbourhood of towns and villages during the last two or three hundred years; but there is one barrow

at least still in existence which may be referred to as a characteristic example, and which does not appear to have attracted previous notice.

On Cannock Chase, near Milford, completely shut in by three hills, is a small picturesque valley with a curious cup-shaped barrow in its centre called the "Bury," composed of large quantities of pebbles, carefully selected from the Bunter gravel beds of the district, and containing at its base three separate and distinct layers of human bones, all showing the action of fire, and associated with a few fragments of coarse brown pottery of British workmanship. The tumulus, however, so far as it was examined, yielded no other remains of the period, or showed the least disturbance from its original construction. In this respect it differed from a (nameless) barrow previously alluded to as occupying an elevated site on the margin of the Trent Valley near Trentham, which, in addition to a bone-filled cist at its base in the centre, contained several subsequent interments of cinerary and other vessels, with numerous flint and stone weapons characteristic of the British tribes. Curiously enough an existing tradition describes the Milford "Bury" as the burial place of three kings slain in a battle fought in the neighbourhood, in some remote and indefinite period. Traditions of battle-slain heroes are not infrequently connected with tumuli. The barrow on Bury-bank is similarly connected with the interment of a giant—but it is not often that the numerical particulars of such traditions receive so singular a confirmation by the discovery of a corresponding number of human remains.

It may therefore be accepted as conclusive that this portion of the Trent Valley was by no means scantily populated long before the date of the Roman conquest of the country, and that this condition was common, not only to the Midland counties, but to Britain generally. It is also a well-known historical fact, that the inland tribes of this period were generally employed in pastoral pursuits, to the success of which the naturally fertile soil of the extensive valley system occupied by them would essentially contribute, and that they carried on an extensive traffic in cattle* with

* It was customary with the inland tribes of this remote period to exchange or barter the natural products of the country for ornaments,

the dwellers on the coast, who in turn were largely engaged in commercial speculations with the more civilized nations of Western Europe. The traffic between the interior and the sea board, was maintained by means of horses, employed on roads or regular tracks, carried, for greater facility, in more or less direct lines across the great wastes and forests which at the time occupied so great a proportion of the surface of the country, and although such roads in point of construction, would bear no comparison to the ordinary byelanes of the present day, they nevertheless represent the original road-systems of Britain, which, subsequently adopted by the Romans, attained under them a degree of excellence certainly unequalled, and in principle unsurpassed, even by the great postal highways of the first quarter of the present century.

Of these ancient, or as they are more familiarly recognised Roman roads, two at least ran through this immediate district, and connected some of the principal cities and military stations, established, in the majority of instances upon the sites of British towns, by the Romans on their conquest of the country. The most important of these roads running through Staffordshire are the *Watling*, the *Ickenield*, and the *Rykenield*, or *Via Devana*. The course of the *Ickenield*, which has been clearly laid down by various authors, connected *Uriconium*, (Wroxeter, near Shrewsbury,) with *Etotecum*, (Wall, near Lichfield,) and it was thence continued, almost due north and south to *Derventio*, (Little Chester, near Derby). It passed in a direct line completely through the the parish of Burton on-Trent, entering it at a point known as Gallows-bridge, above Branstone, and so on through that village, across the "Butts," through the wood, close to the house occupied by the Marquis of Anglesey's gamekeeper, (where remains of it are preserved,) over Branston and Burton Moors, about two hundred yards to the west of, and parallel to the Midland Railway, down

bronze weapons, and other manufactured articles, brought for the purpose by continental traders. In addition to skins of animals and dogs, (for a particular breed of which Britain was then famous) lead, tin, and salt, were by these means, extensively exported, and even marl and gypsum, were not unfrequently included amongst the general merchandise of the British tribes.

Derby Lane, Derby Road, leaving Stretton to the west, and entering Derbyshire across the river Dove at Monk's Bridge. For a considerable distance this road is occupied by the present line of highway, and it appears to have been originally carried across low-lying swampy districts in the form of a causeway about thirty feet in width and composed principally of broken gravel. It is described by PLOT as "yet remaining high and lofty, being but little decayed, or in any way interrupted either by time or the plough." PLOT, however, wrote in the year 1683, when the unenclosed lands in the neighbourhood of Burton were of considerable extent, stretching with but little interruption between Branston and Stretton, and as yet undistubed by the plough, which he truly enough associates with time in the work of destruction of the superficial labours of man.

The *Rykeneld* street is generally considered as having been in the times of the Britons, the great line of traffic between the Midland counties and the salt districts of Cheshire, and hence in some localities through which it passed, is still popularly known as the *Salter's way*. This street has, in name at least, been often confounded with the *Ickenield*, and even now the latter is inadvertently laid down in the Ordnance Survey as the *Rykenield* from Wichnor to Derby. There is however, evidence sufficiently conclusive for the purpose, that the *Rykenield* had originally nothing in common with *Ickenield;* that as each was as a road separate and distinct from the other, so were they, until a comparitively modern date, known and described by the terms now applied to them. In the foundation charter of the Abbey of Hulton, bearing date 1223, special mention is made of the *Rykenield* street, passing through the village of Mere; and in contradistinction to this, a document, pertaining to the abbey of Burton, bearing date 1380, expresses that the abbot, Thomas Packington, "built the Catte-street through the middle of Siwarmore to *Hickenels* street." In PLOT'S map of the county, it is also described as the *Ikenild* street. These two streets are said to have intersected each other at, or in the neighbourhood of Burton, but opinions vary as to the exact point; in fact there are no less than three separate and distinct lines accorded to it by various authors. The genereral course,

however, of the *Rykenield*, the *Via Devana* of some authors, and so described in the Ordnance maps on the Chester side of Chesterton, is now admitted to have been from *Ratæ*, (Leicester) past Ashby-de-la-Zouch and Burton-on-Trent across Needwood Forest, skirting Hanbury, and Uttoxeter* to Tean, (where it joined another Roman road running by way of Rocester to Derby) Draycott, Longton, and Chesterton, (the *Mediolanum* of the Romans) and thence to *Deva* or Chester. Previous to the publication of SHAW'S HISTORY OF STAFFORDSHIRE its existence in this district had met with no accredited notice, but in that work Dr. MASON refers to it in the following letter, under the name of *Via Devana*. He says: "I pursued it no farther, being informed that it went directly through Ashby-de-la-Zouch, consisting of a long street placed upon the road, whence it continues straight to Burton, having all the way a high crest, going for half a mile along a lane across Ashby Wolds, again enters a lane for three miles, in a lane called Newhall lane (now the turnpike road) rises up a ridge upon Winsel common, having a valley upon either hand a quarter of a mile distant, and after a mile descends again; then enters a lane making a set off which leads into a winding hollow way to the bridge, straight through the town of Burton, and over the common, where it crosses the *Rickenild*, thence up the hill into Needwood Forest. Its direction is then towards Hanbury." Mr. LEMAN in the same work says, "Though he regards Dr. MASON'S information upon Roman roads as the very best, he thinks it (the *Via Devana*) crossed the river somewhat short of the town. It certainly (he adds) intersected the *Ryknield* street near a finger post, as it ascended the forest in the direction of Hanbury."

Of these two descriptions that of Dr. MASON refers to the old Ashby road, which, entered Winshill common over the ridge close to the Moat-bank, a square entrenched position of doubtful origin, and was thence continued by the "hollow way" down Bear-wood hill across the Trent, at the point now occupied by the Bridge.†

*Roman remains have been found at both these places.

† Supposing for the sake of argument the *Rykenield* to have crossed the Trent at this point, the passage could only have been been effected

Mr. LEMAN'S suggestion in regard to the direction of this street, is of a very indefinite character, and whether the sentence, "short of the town," means the north or south side of it is difficult to determine,* there is also equal uncertainty, taking his words literally, in arriving at a correct conclusion as the exact position of the "finger-post." At the time these authors wrote, and for at least a century previously, the western outlets to the town of Burton consisted of the Tutbury and Shobnall roads, the former running from Derby Turn, and the latter forming a continuation of Moor-street, entering the outskirts of Needwood forest by way of the Henhurst.† The present Lichfield road was then in use, that portion of the *Ickenield* between Branston and Derby Lane, near the Windmill, having been abandoned many years previously, and consequently at no point between Moor street and the Henhurst, was the Shobnall road intersected by another to render at all necessary the fixing of the usual indicator. As far as I may be permitted to judge, the only reconcileable opinion to be formed upon the two accounts, is, that notwithstanding their apparent discrepancy they really agree as to the point of intersection of the two streets, and that Mr. LEMAN'S ambigious finger post could have occupied no other position than that at Derby Turn; in fact unless he referred to Branston, which is scarcely probable under the circumstances, there was no other unquestionable route open within a distance of two miles from the one described. In a survey of the Burton Estate, bearing date 1656, the

by means of a bridge or a ford. In the former case it would give a Roman origin to Burton Bridge, in the latter the crossing of the east branch of the Trent must have been of artificial construction, the channel being naturally too deep for the purpose. The west branch, however, was, until recently, fordable a little below the old bridge, and in fact before the construction of the present approach to the Meadow, towards the latter part of the last century, it formed the only outlet to Burton Meadows connected with the town.

*It is probable this author alluded to the Stapenhill ford as the point at which the *Rykenield* crossed the Trent. This ford is unquestionably a most ancient one, and before the erection of Burton Bridge, whatever may have been the date of its original construction, it formed the only natural and direct means of communication with the county east and west of it, between Walton and Newton Solney.

†From Hen, Brit. *old*, and Hurst, Sax. *Wood*.

present Dallow-lane, which branches from the Tutbury road close to Derby Turn, and terminates at the Outwoods, is called "Dalla-yate,"* and the fields adjoining it the "Port way Closes." From its proximity to the *Ickenield*, then called the "Darby way," it possibly may have been so named from that circumstance, but the direction of the road so well accords with one subsequently described by Dr. MASON as running up to Hanbury, across the forest, that I think it more likely to indicate the actual extension of the *Rykenield*, of which it, with the Roman road alluded to, in all probability formed disjointed portions.†

From the date of the publication of these statements until recently no additional evidence upon the subject had been adduced, and subsequent writers were content to accept the conclusion that the *Rykenield* crossed the Trent somewhere in the neighbourhood of Burton, the exact point being probably held as of little consequence and scarcely worth the trouble of investigating. The subject has, however, recently assumed additional interest by the discovery of a road, which, although undoubtedly of Roman construction, occupies a route altogether different from that of Dr. MASON, and also that of Mr. LEMAN. This road is described by Mr. E. BROWN, F.G.S., in his "MINERAL WATERS OF BURTON-ON-TRENT," as running in a direction from Ashby to Moira, and so on between Stanton house and Breach farm on the east side of the Trent, above Drakelow Hall, and across the Trent at the head of the Toad-hole; thence in a direct line by the old road across the East-hill, near Barrow-hill, already described, past Megg's hole to Tatenhill, up a valley near Callingwood, and on to Knightly.§ Evi-

*"*Siddalla*" is also a name given in the Survey to a part of Bond End.

† In an ancient perambulation of the parish of Tutbury [*temp* Elizabeth] mention is made of a lane pointing in the direction of Burton, called "Burton yate," also "Port way," and the latter is still the local name of a continuation of this road running from Tutbury to Hanbury and Uttoxeter.

§ Since the publication of Mr. BROWN'S pamphlet I have succeeded in tracing portions of an ancient road, constructed of regularly placed pebbles, for a mile at least beyond Mr. Stone's fish pond, and following the natural curvature of the valley leading to Knightly Park. At various points I met with several fragments of Mediæval pottery,

dence of the road consists of portions of a carefully metalled way discovered at Moira, Breach farm, and the bank of a pond belonging to Mr. Stone, near Callingwood, at which latter place fragments of bluish-brown Roman pottery were obtained from it. So far these facts speak for themselves, and are, if I may use the word, supplemented by the discovery, towards the latter part of the last century, of a number of Roman coins near the line taken by this road at Callingwood. The bank dividing the Trent from the Toadhole at Branston, is a raised causeway of gravel, locally called the "Yeld,"* a name first pointed out by Mr. BROWN, and considered by him to be a British word signifying a dividing or cutting off, and upon which he founds an opinion that it was constructed by the Romans in continuation of the *Via Devana* or *Rykeneld*, (which street he concludes this to be) from the Drakelow side of the Trent.† and con-

schistose slates at one time used in roofing, and bones of animals, but no remains which could safely be referred to the Roman period. I was given to understand that some short time previously the cutting of a deep drain across the line of road where the ground was low and swampy, exposed a kind of wooden bridge constructed of black, roughly-hewn oak-trees, which appeared to have been carried over what was at at one time a small brook course, or a more treacherous bog.

*I find, however, that this is by no means a solitary instance of the appropriation of this expressive name. It was formerly applied to a bank or dam constructed to divert the old course of the Tatenhill brook at the point where it was formerly forded, but is now crossed by a small bridge, at the entrance to that village from Branston. It is also connected with the banks of the same brook-course, near Poolgreen, directly in the line of the Roman road.

†I have anxiously sought for traces of this road on both banks of the Trent in the line it is supposed to have taken, but without success. In a document, 3rd Ed. VI., allusion is made to "'Robin Hood's' ford," which I take to have been at this point, the river being fordable here in dry seasons except for a few yards in mid-channel. The continuation of this road from Branston was partly that of the present road to Tatenhill, as far as the point where the latter turns suddenly to the south, near the foot of the Easthill. For a distance of about two hundred yards before reaching this turn, traces of a well-formed road are readily discernable running parallel, to it in the field on the south side of the road fence, and pointing exactly in the direction of the old road alluded to as running across the Easthill to Tatenhill.

sequently cut off, or divided a branch of that river, which previously is supposed to have left the parent channel at this point, and passing on the west side of Burton, rejoined the main stream at the bottom of Anderstaff Lane.

There are, therefore, three routes put forward by as many authors as the line of the road in question across the Trent in this neighbourhood. In the first place there could not well be three *Rykenield* streets between Burton and Branston, and consequently it follows either that two of the above writers are to a certain extent incorrect in their conclusions, or that the district was occupied by more than one Roman road. I cannot but think that considering the enormous aggregate population of Britain during the principal part of the time it was under the Roman rule, there must have been in its more prosperous condition a vast number of towns, villages, and other places of ordinary occupation to contain it, of which there is no existing historical or even traditional record to denote the site. In the present day every village in Britain has its highway, and there can be no question, that in this respect at least, we are not so much in advance of the Romans to be justified in assigning to them a different condition in respect to the means of communication between the various places in their occupation, whatever may have been the character of such places, or their position in the country. Probably the prevalent opinion which restricts the Roman roads to the great trunk or military ways of the more important cities and stations, established by them for military purposes, is due to Antoninus and others having ignored all save these great permanent ways and the stations connected with them, in their "*Iters*," which were written by them at different times, and assumed to be semi-official descriptions or tables of the Roman military power in Britain; but between the lines of these great roads lay extensive tracts of country, which, from the frequent finding therein of Roman remains, were doubtless thickly peopled, although probably by a mixed population, occupied more in agricultural than in mechanical pursuits, and dwelling in villages nestling round Roman villas or camps and readily accessible by regularly constructed roads, stretching outwards from the great thoroughfares

which intersected Romanized Britain from one end to the other. That two such roads, the one running north and south, the other east and west, crossed each other in the neighbourhood of Burton, there is no doubt, but it is I think, quite as certain, that they were not the only roads the locality contained at the time; and although, from the altered condition of the surface of the land, the actual course of the *Rykenield* may always remain an open question, it is highly probable that ere long, more satisfactory evidence of the existence of these minor roads in this district, may be found.

It is a curious, but not the less interesting circumstance in connection with this subject, that Burton, Stretton, and Branston, have each been selected as the site of *Ad Trivonam*,* a Roman town or station mentioned in the 18th "*Iter*" of Richard of Cirencester, as standing on the *Ickenield*, equi-distant between *Etocetum*, and *Derventio*, or twelve miles from each place. In point of distance, Branston accords more than either of the other places with this description, and in consequence, SHAW and other writers conclude it to have been the site. PLOT however fixes it at Stretton, and STUKELEY at Burton-on-Trent. Stations of this character are supposed to have been built of brick or stone, and SHAW accounts for the apparent absence of all such remains from Branston, by supposing the material to have been removed to Burton and used in the construction of the Abbey, or the old Bridge. It would be natural, however, to expect that either portions of the foundations, or the more useless debris, would occasionally be met with in the various excavations for building or other purposes at the place, (and the same remark applies to Burton) but so far there is no known evidence of the discovery of the least fragment which pertains to the Roman period. PLOT, in fixing Stretton as the site of *Ad Trivonam*, considers that the name itself, which signifies a "town on the street," is sufficient authority for the conclusion.† If, however, the distances recorded in the "*Iter*" alluded

* Signifying a station at, or by Trent.

† Locally, the word is interpreted as "straight on," over the gorse, referring to the former waste, or uninclosed moor below the village, across which the *Ickenield* street ran.

to, are to be depended upon, the station in question could not have stood there, although there are strong reasons for supposing it to have been the site of a Roman, or Romano-British village. During the excavations for the original branch of the North Staffordshire Railway through the rising ground on the south or Burton side of the village, several cinerary urns of reddish clay, containing bones and ashes, are reported to have been found, and as usual broken by the workmen, and at the same time a human skeleton lying at full length, with the feet pointing south is said to have been discovered nearer the village. Some years previously numerous urns containing ashes and bones, deposited about three feet below the surface, were exhumed from some gravel workings in a field near the house occupied by Mr. GRETTON, at the Beach, and which are described as being made of soft reddish clay, and the mouth of each vessel closed with a small slab of sandstone. These particulars have been obtained from several independent sources, which leave no doubt of their trustworthiness, but from the character of the pottery, and its resemblance to the Egginton burials, I am disposed to refer them to the British and not to the Roman race, although it is possible the skeleton may have belonged to the latter people.

It is well known that the fields on both sides of the Lichfield-road, between Branston and Burton, and about a mile from the latter place, are still called the "Broadway Closes," a name of significant derivation, but doubtful as to whether it refers to the *Ickenield* street, which ran about a mile distant to the west, or to a more ancient road, connecting the British towns of Burton and Branston, and communicating at right angles with the ford at Stapenhill, opposite to which these fields are situated. There are many reasons for assuming the latter to be the more correct opinion, and also that if a road of this description really did at the time exist it was subsequently, for some years at least, used by the Romans, inasmuch as some undoubted remains of those people have recently been discovered in these fields, the presence and character of which cannot, I think, be more satisfactorily accounted for, than by their being lost by persons passing from one place to another. These remains con-

sist of a curious iron key, much corroded, seven inches in length, the longer part of the shaft being square, and terminating in a broad, flattened handle, surmounted by a small ring for suspension. It contains two wards, and is altogether identical in form with one found in the excavations at Wroxeter. It was dug out of some sand workings opposite the writer's house, and with it the base of a buff-coloured mortary vessel, which I am assured by Mr. E. Brown, corresponds with a similar, but more perfect vessel, obtained by himself from the excavations at Wall, the site of the Roman city of Etocetum. These vessels are generally considered as having been used by the Romans for pulping vegetables, and are, therefore thick and strong at the base, the surface of which is roughened by the introduction while in a plastic state, of numerous pounded bits of foreign substances, such as hæmatite, coarse sand, or fragments of other pottery. The corresponding particles in the specimen alluded to, consist of what appears to be broken Samian ware, one of the most characteristic forms of Roman pottery. The sand beds in which the above remains were found, form a broad belt coming between the flatter beds of the river margin, and the succeeding gravel terrace; and in some workings of the same beds, close under the Leicester branch of the Midland Railway, nearer Burton, were discovered, about the same time, at a depth of seven feet from the surface, a leaden weight with the letter "S" indented on its surface, fragments of brown pottery, and bones of animals; and some gravel pits near the same place, close to the Lichfield-road, have recently yielded an iron spear-head, nine inches in length, also much corroded, and bearing a striking resemblance to those of known Roman construction. As to the date of these latter objects some doubt exists; they may in part correspond in age with the more characteristic relics, but some of the pottery agree in appearance rather with the Saxon than the Roman form of manufacture.

With the above exceptions, the immediate neighbourhood* of Burton has not been known to yield the least trace of

* Not far from the line of the *Ickenield*, close upon the Trent, in fact on a kind of promontory formed by the present and a now

any permanent occupation during the Roman period,* but the town is not likely to have been abandoned under the rule of those people. If not retained as a Roman post, it was most probably held by a native population, and may, notwithstanding the establishment of a Roman station at Branston, or Stretton, have still continued the principal town of the old manorial boundaries.

Of the history and condition of Burton during the greater part of the long and momentous period which witnessed the foundation and the destruction of the Saxon government in Britain, there are no preserved accounts; nor is there any allusion to the place in the description given by the Saxon chroniclers of theconflicts maintained with such terrible energy between the Saxons and Danes in the ninth and tenth centuries, but from its situation, at the only point between Newton Solney and Walton where the Trent could be conveniently forded, it could hardly have escaped the calamities which befel other towns standing in the track of the ruthless marches of the Danes, whether to victory or defeat.

The contiguous town of Repton for several years formed the capital of the kingdom of Mercia, and also the burial-place of many of its kings and princes, and this large and important town, which from this circumstance it undoubtedly was, was completely destroyed by the Danes in the year 874. Near this place is a hill, called "King Askew's hill,' but history fails to identify this personage with any of the known monarchs who governed in Britain. Probably the name is of local origin and use, and simply a *soubriquet* given to one of the Saxon or Danish kings or princes of this remote age, and popularly preserved to the present day. Whether this be in reality the correct explanation or not, the name is curiously enough still connected with a spring called "Askew's

divided branch of the Trent river, near Willington Bridge, is a curious entrenchment, almost square in form and having two small circular mounds within it, from which during the latter part of the last century a small Roman sword was obtained. There is not much doubt of this being a Roman position. Further references will be made to this subject hereafter.

*Since the above was in type I have been informed by Sir Oswald Mosley, Bart., that he has in his possession a fine Roman urn, discovered many years ago at Shobnall.

well," on the Newton-road, between Burton Bridge and the Winshill Mills.

The ecclesiastical history of Burton commences, or rather is assumed to commence, with the erection of a church or chapel on the island of Andressey by an Irish lady named Modwen, towards the latter part of the ninth century. The particulars of the event which are somewhat intermixed with tradition are thus quaintly described by HOLINGSHED:— "In this season one Modwen, a virgin in Ireland, was greatly renowned in the world, unto whom King Ethelwolfe sent his son Alfred to be cured of a disease that was thought incurable; but by her means he recovered health, and therefore when her monastrie was destroied in Ireland, Modwen came over into England, unto whem King Ethelwolfe gave leave to build two abbies and also delivered unto her his sister Edith to be a professed nun, Modwen hereupon built two monastries, one at Poulesworth, joining to the bounds of Arderne, wherein she placed the foresaid Edith with Osith and Athea: the other, whether it was a monasterie or cell, she founded in Strenshall or Trentsall, where she herself remained solitaire a certain time in praier and other vertuous excercises. And, (as it is reported) she went thrice to Rome, and finallie died, being 130 years of age. Hir bodie was first burried in an island, compassed about with the river of Trent, called Andressey, taking the name of a church or chappelle of St. Andrew, which she had built in the same iland and dwelled therein for the space of seven yeares. Manie Monastries she builded both in Enggland and Scotland, as at Striveling Edenbrough; and in Ireland at Celestline and elsewhere."

Modwen is supposed to have died about the year 900, and to have been buried in the chapel erected by her on Andressy. Her remains were subsequently removed to the Abbey opposite, where her memory was preserved in the following epitaph, translated by SHAW from CAMDEN'S copy of the original Latin.

"Ireland gave Modwin birth; England a grave;
Scotland her end; God he salvation gave;
Life gives the first; her death the third earth gives
The second earth her earthly part receives,
Lanfortin takes whom chief Tyr Connel owns,
And favoured Burton keeps the virgin's bones."

That this singular account of St. Modwen is, to a certain extent at least, founded on fact, is evident, not only from the important position assigned to her by the earlier Abbots of Burton, but also from the preservation of her memory in the names of several places in the locality. The parish church is dedicated to her; the site of her chapel is still called St Modwen's orchard, (it was, in remote times known as Modwennstow) and there is a deep excavation in the bed of the river which divides the island from the church-yard, familiarly designated Mud's-hole. There is even yet a broader interest attached to to the scene of St. Modwen's pious labours in the neighbourhood. It is held that the disease from which king Alfred suffered in his youth was cured by means of the waters of a spring which at the time existed on the island, and that while under St. Modwen's care he resided on Andressey or in Burton, and there received no inconsiderable share of his early education at her hand. If it could only be found that Andressey was but a corruption of Alfreds-eye, or island, or even if the circumstances could, in the remotest degree, be reconcilable with those of any known passage in the life of the great Alfred, there might be some hope of permanently attaching to Burton this important addition to its history and associations. HOLINGSHED'S version, however, which is the only one quoted by subsequent historical writers upon the subject, ignores these points altogether; it is silent in respect to the subject of Alfred's tuition, and plainly states that he was sent to, and cured by Modwen, in Ireland, and that the saint herself did not come to England until some time afterwards, when her Irish monastery had been destroyed. There is, however, one exceedingly interesting and suggestive point in the subject which deserves mention, and which, if it does not offer any available testimony in favour of the Alfred tradition, proves, or goes far to prove, that the spring in question was known to Modwen, and that in all probability many others suffering from the same form of disease as Alfred, received permanent benefit from its use under her personal direction. About two hundred years ago the spring on Andressey was not only known as "St. Modwen's well," but was even then celebrated in the treatment of

scorbutic diseases; and curiously enough there existed at the same time at Canwell, near Drayton Bassett, a spring or well, described by PLOT as "famous for unaccountable cures of divers ailes and weaknesses," and which, like that on Andressey, bore the name of "St. Modwen's well." Whether the presence of springs possessing medicinal qualities had, or had not, anything to do with the original selection of sites for the establishment of the earlier chapels or cells of religious recluses, it is a remarkable co-incidence that there are but few indeed of these ancient foundations which have not in their immediate locality, springs or "holy wells" of this description, which the monks or nuns took under their special protection, and consecrated to the purpose of alleviating the bodily sufferings of the human race. In not a few instances these wells traditionally bear the name of a patron or saint with which the place is in no other known manner connected, as at Canwell, and by this means is preserved what history otherwise fails to do, their association with the individual, who in all probability first discovered, or was possessed of the necessary skill to detect and apply with more than ordinary success, their peculiar properties to the form of complaint for which they were by nature the best adapted.

With respect to Modwen's acquirement of Andressey, a name generally supposed to be derived from the dedication by her of her chapel to St. Andrew, there is every reason to conclude that the principal part of what now forms the Burton estate, was remotely attached to the Mercian crown, and the probability is that if she did not become possessed of it until after the cure of Alfred, it was, with other lands adjoining, granted to her by Ethelwolfe, or by Alfred himself in recognition of her services to the latter king in his youth.

It is, however, notwithstanding Modwen's accredited association with the place, still an open question if the chapel called by her name was the only building devoted to ecclesiastical purposes the island contained at the time. The fact of her dwelling on the island for the space of seven years would indicate something more than a church or chapel as the place of her residence. It is a well-known historical fact that during the first two or three centuries which fol-

lowed the introduction of Christianity into this country, it was a by no means uncommon circumstance for men of strong religious feelings to isolate themselves from all ordinary intercourse with the world, and to establish in some remote or secluded spot a small chapel or cell in which they spent the greater portion of their time in devotional exercises; but it was more in accordance with the views of females, who, like Modwen, had attained the position of lady superior or abbess, to obtain grants of land, and to establish thereon communities of their own sex, selected from amongst those who were disposed to adhere to the special rules and conditions of a monastic government. Thus Modwen is described as having built "manie monasteries," and in a similar manner was founded, more than two hundred years previously, by St. Werbergh, daughter of king Wulphere, the monasteries of Repton, Hanbury, Trentham, and others; and as in St. Werburgh's case the government of these nunneries was entrusted to her, so, in like manner, the supervision of Modwen's many monasteries devolved upon herself, and consequently necessitated on her part, annual, or fixed periods of inspection. The passage in her epitaph describing her death as taking place in Scotland is scarcely reconcilable with any other conclusion than that her presence there was connected with her official duties as abbess, and the removal of her body to Andressey for interment from a point situated so far distant from it, must, it is thought, imply the existence there, not only of a chapel or church, but in addition one of those "manie monasteries" which are attributed to her zealous efforts in the cause of religion, and that her burial there was in accordance with a desire on her part to rest in a place to which she of all others would appear to have been the most attached, and amongst those of her companions for whom her love had been the strongest, and by whom her memory was the more likely to be held in highest veneration.

As previously stated St. Modwen's death is assumed to have taken place about the year 900, but between this date and that of the foundation of Burton Abbey, both history and tradition are silent in respect to the religious establishment on the island where Modwen's remains were interred.

It would be inconsistent with the customs of the church of that period, for a building consecrated by the relics of so famous and honoured a saint as Modwen, to be either willingly neglected or suffered to fall into decay; and the inference is that if it escaped the proverbial vengeance of the Danes, it was continued to be occupied in the same manner, and devoted to similar religious purposes during the century which fills up the gap between the two events, as in the days of Modwen, by whom it was established. Possibly had the island of Andressey been better adapted by nature for the purpose, Wulfric's abbey, which was unquestionably founded in honour of Modwen, would have been built there instead of on the nearest available spot to the scene of her pious and deeply cherished labours.

The abbey of Burton was founded in the year 1002, by Wulfric Spott, Earl of Mercia, and a relative of King Ethelred, "the unready." This prince appears to have been alike distinguished for his extensive possessions, his liberality in the endowment of the abbey, and his treacherous conduct to his king and country. Whatever may have been the motives which induced him to act so munificently in the interests of the church, he did not long survive to witness its results: he was killed in a battle with the Danes at Ipswich in the year 1010, and his remains were in all probability brought from thence, and interred in the abbey he had founded.

The endowment consisted of lands at nineteen places in the county of Stafford, one in that of Warwick, six in Leicester, one in Nottingham, nine in Derby, two in Salop, three in Lancaster and Chester, one in York and others in counties unknown. In addition to these bequests he devised two estates in Lancashire and Cheshire to Aelfhelme and Wulfage, subject to their supplying the abbey annually with 1000 flat fish, and another estate in Yorkshire was held under somewhat similar conditions. The annual value of these estates was estimated at £700,* and to this he added one hundred and sixty horses, and the whole residue of his property. Amongst the places enumerated are the

*According to Nicholson (*English History, Lib. p.* 388.) a Saxon pound contained sometimes 60s., but generally 48s., and each shilling contained 5 pence.

town of Burton, (Burhton) a farm at Burton, Stretton, (Streaton) Winshill, (Wynshylle) Ticknell, (Ticenhale) Abbots' Bromley, (Bromleag) Longdon, (Langadune) and Rudyard, (Rudegarde). For a confirmation of the will, Wulfric gave the king 200 marks or mancuses* of gold, two silver-hilted swords, six horses with appertaining arms, four of them caparisoned. To every bishop he gave four marks of gold, to the two archbishops ten each, to every abbot and abbess five. He constituted King Ethelred sovereign lord, and Archbishop Aelfric, and Aelfhelme his brother, protectors of the monastery and its possessions. Wulfric's donation was ratified in the year 1004 by King Ethelred, and signed by him and his four sons, Eagbyrt, Edmund, Aedric, and Edgar; and witnessed by the two arch-bishops, ten bishops, twelve abbots, three dukes, and twenty-one thanes. The confirmation deed exempts the abbey and its dependances from all exactions, duties, and services, except what were then considered the *trinoda necessitas*, the erection of fortresses and bridges, the reparation of the highways, and the repelling of invasions.†

It would appear that every exertion was used in completing the abbey, the foundation according to the will of Wulfric, bearing date, as before stated, 1002, the appointment of the first abbot taking place A.D. 1004. The site of the building was that of the present church of St. Modwen, which forms the most elevated part of the gravel tract on which Burton is situated, and which in all probability had been previously, occupied as it has since continued to be, by the parish church of the town.

In Domesday Book the property of the abbey is thus described:

The Abbey of St. Mary of *Bertone* holds in the town of

*"A mancus, or mancusa," says SHAW, (*Hist, Staff. vol.* 1, *p.* 2.) was valued at 30 pence, now about three half-crowns. The whole sum given to the king would be about £750 of our money."

†The original will and charter, beautifully engrossed on vellum, in Saxon, are still in the possession of the Marquis of Anglesey at Beau Desert, and they form part of a remarkable and most valuable series of *MSS.* connected with the Abbey of Burton and its dependencies, from the date of its foundation to that of its dissolution.

Stafford one and a half hides* ; the arable land is II carucates,† in demesne IX villans‡ who have II carucates. There are XVI acres of meadow, a wood half-a-mile long and the same broad. In the time of Edward the Confessor it was valued at LX*s.*, now at LXX*s.* §

The same abbey holds *Brantestone.* In the time of king Edward the Confessor the Countess Godeva held it. There is one hide and a half; of arable land, V. carucates: in demesne one and a half, and V. villans and III. bordars †† with III. carucates. There are XXIIII. acres of meadow, a wood one mile long and a half broad. It was formerly valued at LX*s.* now at XL*s.*

The same abbey held *Witmere.* There are one and a half hides with their appurtenances. The arable land is VII. carucates. In demesne there are II. and VI. villans who hold II. carucates. There are IIII. acres of meadow, a wood one mile long and VI. *alia* broad. In the time of King Edward it was valued at IIII. pounds, since then at XX*s.*, now at L*s.*

The same abbey holds *Stratone.* There are one and a half hides, and of arable land II. carucates. In demesne there is one, and VIII villans, and II. bordars who have V. carucates. There are XXVIII acres of meadow. In the time of King Edward it was valued at LX*s.*, since then at XX*s.*, now at XL*s.*

The same abbey holds *Brvnlege,* (Bromley). There is half a hide with its appurtenances; of arable land there is one carucate in demesne, and a priest, (presbyter) with one villan, and one bordar, who have one carucate. A wood II. miles long and one broad. It was formerly valued at X*s.*, now at XX*s.*

The same abbey holds *Derlavestone,* (Darlaston, near

*A hide of land has been variously estimated at from 60 to 500 acres; it probably consisted of about 120 acres according to present measurement.

†The carucate consisted of as much as one yoke of oxen could plough in a year.

‡Villans, or small farmers frequently holding demesne land by personal service.

§In another part of *Domesday* it is stated that the Abbey of *Bertone* held in the borough of Stafford, V. houses.

†† Bordars or cottagers scarcely removed in position from that of serfs, and holding small quantities of land by a base and uncertain tenure.

Stone) from which it is held by two men. There are III. virgates* of land. The arable land is II. carucates: there are II. villans, and VI. acres of meadow, with a wood a furlong long and one broad. In the time of King Edward it was valued at XXX*s.*, since at X*s.*, now at XXVII*s.* and II*d.*

The same abbey holds *Lege.* There are III. virgates of land, of arable land III. carucates, in demesne one; there is one free man, and X. villans holding V. carucates. A wood one mile long and the same broad. It was aforetime and now worth XL*s.*

The same abbey holds *Acovre.* There are III. virgates of land with appurtenances. Of arable land II. carucates, Eddulf holds the greater part. There is a mill, a wood half a mile long and III. furlongs broad. It is valued at XX*s.*

The same abbey holds *Witestone*, and Nauuen holds from the abbey. There is one hide. The arable land is I carucate. The value of the same with I. villan and I bordar is IIII*s.*

The same abbey holds *Beddintone.* There is half a hide of land. The arable land is II. carucates. There is one villan; a wood half a mile long, and the same broad. Its former value was XIII*s.* now VII*s.* and IIII*d.*

The whole of this property was in Staffordshire, and in addition the abbey held in the town of Derby one mill, and one free farm, and two others of which the King had soc. In Over, land worth X*l.* In Appleby land worth III*l.* In Winshill II. carucates, and of arable land, III. carucates, valued at III*l.* In Cotes, land worth XXXS. In Stapenhill, IV. carucates and II bovates, and of arable land IV. carucates, valued at III*l.* In *Caldwell* land worth XX. shillings. In *Tickenhale*, land worth X*s.*, and land at Austrey in Warwickshire worth XXX*s.* The total annual value of the property according to this estimate being £36 15s. 0d. Of this King William bequeathed Caldewall to the monks for his own benefit, the town of *Offra*, (Mickleover, Co. Derby) with the church and all their appurtenances, and *Little Offra*, with the chapel, the town of *Wilenton*, with its church, the church of St. Mary of Derby, with two mills, and 12 acres of land in that town; also the land of *Henovre*, in lieu it is said of others, which he had injuriously taken away. The

*Virgate or yard land computed at from 15 to 40 acres.

monks at Burton also appear to have had concurrent interests in Longdon and Bovington, with the convent of Tamworth and the Bishop of the Diocese.

In Domesday the king is stated to have held various lands at *Bertone*, with a mill worth VIs. Henry de Ferrieres is also represented as holding *Burtone*, "in which stands his castle." The former is, however, determined by SHAW, as referring to Barton-under-Needwood,* and the latter to Burton, near Stafford; but if these statements be correct, it is difficult to account for the the omission of so important a town of Burton-on-Trent from the great and ancient survey of England. In fact, if neither of the places so named refer to this particular town, it leads to the inference that its description of the abbey possessions did not include the whole, and consequently the annual value of the property of which it was seised at the time, inasmuch as Wulfric Spott by his will bequeathed "Burton, also a farm at Burton" to the abbey; and there is no reason whatever to suppose that any severance thereof had taken place between the date of the will and that of the Domesday Book.

This obscurity in the Domesday account with regard to the town of Burton, is however compensated by the tolerably clear and complete description in documents executed during the early part of the time of Henry I,, about twenty years afterwards, of the names and occupation of the tenants of the greater part of the lands belonging to the various townships of the parish, and also of the forms of service imposed upon them by the Abbots in respect thereof; together with the annual rental or value of the property of which the Abbots were then seised.

Thus it appears that at the time in question there was in Burton as much inland, (land under tillage) as would employ two of the strongest ploughs in demesne. The land of the tenants was taxed at one hide and a half; the warland (land neglected or partly cultivated) consisted of thirty bovates, (or as much as one team of oxen could plough,) of which fifteen were fit and fifteen unfit for tillage. Of the former of these two were held by two ox-keepers, (bovarii)

† SHAW subsequently, and inconsistently with this statement, fixes this mill at the Forge, Winshill.

each holding one bovate; Ravechetus held one bovate, and, the remaining twelve bovates were equally divided amongst six villans. The aforesaid two oxkeepers also held six acres of demesne land under tillage. The conditions of these various tenancies are not stated, but probably the land was held at a small annual rent and subject to the king's tax.

The ordinary tenants referred to in the deed consisted of two classes—those who held cottages by the custom of personal labour without rent, and those who paid a small acknowledgment and were free from customary labour, but in some instances the latter was imposed in addition to a yearly rental. Of the former of these ten are enumerated as holding each a cottage, for which they worked one day in each year; namely Aluricus, a cottager, Willliam the cobler, Bristoaldus, Lewinus Fiton, Godricus the barber, Alter Godricus, Ulviet, Wulfricus the carpenter, Lewi, and Luricus. Of the latter, twenty-one are described as holding cottages or small parcels of land at an annual rent, namely: Wardebois two bovates, for which he paid two shillings; Ailricus the same; Gladwin, two bovates at thirty-six pence; Steynulphus, two bovates at three shillings, Aluric, two bovates, one croft, and one house, for which he paid three shillings; Uctebrand, two bovates at three shillings; Lepsi, one at twelve pence; Alsi, one bovate at the same rent; Godricus, the carpenter, one bovate at twelve pence; Terricus, one house; Odardus, one, at sixteen pence; Droet, the same, William the cook, one at eighteen pence; Gilebertus, the same; Alüricus, one house, at sixteen pence; Acelinus, one house and one acre of land at twelve pence; Ælmer, one house at thirteen pence; Godwinus, one house at twelve pence; Leflet, the same; Cacerel, one house at sixpence; and Frawinus, one house at sixteen pence. Lepsi also held *three mills* for which he paid thirty-one shillings rent.

In the same deed it is stated that Ulsi held one house and three acres of land with one acre of meadow in *Scopenhale*, for which he paid twelve pence, and after reciting various other tenancies at *Withmere*, and Burton, it concludes;—Ernwi, the gardener, holds a house, for which he pays twelve pence, Heort, one house at twelve pence; Ailward, the same; Eranwi, the hunter, or forester, one house and

land in tillage; the great Hugo, one house at twelve pence, and Ranulfus the same.

So far these particulars refer principally to Burton, but similar, and in some instances, more exacting forms of customary service, were attached to lands at Branston, Horninglow, Shobnall, Stretton, and Wetmoor. With regard to Branston, it is interesting to find that the earliest known original document referring to land in this district, and, in fact to any part of the county, is a charter, bearing date 956, by which king Edwy granted to his faithful servant or Thaine, Eadwig, eight farms at Branston for his life, with permission, after his death to leave them to whom he pleased, to be inherited for ever. The property was afterwards possessed by the famous Godeva, wife of Leofric, earl of Mercia, Edwyn the heir of whose son, Algar, forfeited it to the Conquerer, by whom it was granted to Burton Abbey. In the time of Henry I, specified portions of the land were divided amongst various tenants at thirty-three shillings and sixpence rent, and some was held by the same custom of personal service to the Abbot as that at Burton, except ploughing half an acre more each year. Robert de Ferrers* held a wood here at twenty shillings rent, and one Ormus is described as holding eight bovates of warland with seven men under him, also twenty six acres of inland, and sixteen of meadow, for which he was obliged to go to the lord's court, to the county and hundred courts, and into the army either with or without the Abbot. In the same manner William de Sobehal held one bovate of land in Wetmore, for twelvepence, for which he paid the king's tax to the Abbot, and was obliged to go wherever he was required either with or without the Abbot; and in 1120, a covenant was made between GEOFFRY, Abbot

* In the time of Henry I. it is recorded that a great dispute arose between Robert de Ferrers, and Geoffrey, Abbot of Burton concerning a wood claimed by the monks and described as being situated between Balea and Watsaches Broc, but which was probably the one in question, when at length the said Robert, struck with the fear of God, and commanded by the King, he appointed himself protector and friend of the Church, and they granted him the said wood for 20s. per annum, and he gave them permission to have two carts in his wood to draw themselves firewood of the dead wood in Needwood.

of Burton, and Ralph, son of William de Ansedeley which provided that the land in Wetmoor was to be held in fee of the abbey by doing homage to the Abbot, and being at his court in Staffordshire whenever required unless there was a necessary excuse, either from infirmity, or in the service of his lord Robert de Ferrers, whose lawful man he was; but by an annual payment to the church of Burton of 6s. 8d., at the feast of St. Thomas the Apostle, he was to be free from all other services and also from the king's tax. Also in 1200, two bovates of land formerly held by Ernald the mason, were granted by the Abbot MELBURN to William de Meleburne to be held free from all service, *except foreign service* at the annual rent of 8s.; and in the 15th Henry III., it was agreed between the Abbot LAWRENCE, and Ralph de Withmere, that the latter should hold three bovates of land in Wetmoor, two in Stretton, and five acres in *Sidhalk*, for life at the annual rent of 5s. 10d. on the same conditions. The same Abbot also granted Roger, son of Robert de Huncedon, every year from *the wood in Burton*, six cart loads of wood to burn, and four more from the enclosure on the side of the forest, for which, with a toft, and orchard, and twelve acres of arable land in Wetmoor, and a capital messuage he was bound to do homage and service, and pay twelve-pence to the Abbey annually. It is further recorded of Wetmoor that *Ailwin the priest*, held one house and a croft of inland, *for which he worked one day*; William the cow-keeper, had the same; and Gamel had a house and croft, of the inland at eightpence rent, and eight day's work in August; Ailwardus one bovate for twelve-pence rent, and eight day's work in August, Serner, a house and croft, and worked one day, also a certain osier bed at twelve pence rent. The great Hugo let two bovates which Aluricus the baker afterwards had for two shillings; Leuricus the steward had a little land called Bolehale and three acres of inland at *Dodeslaw* for eighteen pence. Godricus two bovates for three shillings, and owed two perches to the court, and two to the wood, and thrice a year he had to draw his plough, and thrice in August to mow or reap with all his family.*

* It was customary to enforce the assistance of the families of the

In 1190, Nicholas, son of Henry de Gresley, held of the Abbot three bovates of land with a meadow for the free service of three shillings, and *one salmon*, or twelve pence annual rent; and about the year 1220, GEOFFREY, Abbot of Burton and the convent, granted to their *bondman*, Fromund, land in Burton to build him a house upon, eight and a half bovates of land in Winshill and Horninglow, also three acres and one rod of inland and the procuration or food of one monk as long as he lived for his personal service. All of which, except the procuring of food, they granted to him and his heirs, for seven shillings yearly, free from all customs, except that he should plough once in winter, and once in the beginning of Lent.

These particulars of the ancient feudal customs of the Manor of Burton refer, as will readily be seen, to the ordinary form of tenancy of the conventual property at this period: the following are of a different, but not the less interesting nature, and are cited as evidence of the peculiar conditions which at times attended the transfer of lands and other premises both to and from the Abbey by special arrangement. Thus, Matthew de Scobenhal quit-claims to LAWRENCE, Abbot of Burton, all the land which he held in Scobenhal, by Matilda, formerly his wife, and previously wife of William of the Garden of Lichfield, (1247,) for ever: for which the abbey gave him one mark of silver, and every month a bushel of flour or of rye from the granary of the Abbot. Walter the son of Ralph de Sobenhal (*temp* Henry III.) quit-claims to GOD and the Church, and the Monks of Burton, one messuage with appurtenances in Sobenhal, which Ralph Bole held, together with the messuage of Nicholas de Oxonia, and a small toft near the messuage of Herbert *carucarii* extending from Holebroc towards the Abbot's Hay, for which grant the Abbot LAWRENCE paid him one mark of silver. He also granted them, for the health of his soul, and his ancestors' eight acres of land, in a field called Broderuding for ever. By a similar deed, Hawise, daughter of Jordan de Sobenhal, in her lawful wi-

various villans in securing the crops of demesne, or of such land as was farmed by the Abbots; and it is recorded (1114) of four herdsmen of Stretton that each held two bovates and had four acres sown for their office, and their "wives worked one day."

dowhood, quit-claims for ever to God, and the Abbey of Burton, and LAWRENCE, Abbot, and the Monks there, all that tenement and lands which she held in the *village* of Sobenhal, with a meadow and *volatu* in Littlehay, and all other appurtenances, together with all that tenement and land which Eva, her mother held as her dower, in the *town* of Sobenhal; save only that she should hold the same of the Abbot and Convent for her life by service of four-pence annual rent; for which they granted her certain lands in Horninglow. The following is, however, more curious and suggestive still, and introduces a subject, which, it is presumed will be received with some degree of interest by those who attach any importance to the antiquity of the trade for which Burton is now held so famous. In 1295, Matilda, the daughter of Nicholas de Shobenhale, released to the Abbot and Convent of Burton-on-Trent that service and custody of their Abbey-gate, together with the custody and annual rent thereto belonging, and all the tenements within and without the town of Burton which came to her by inheritance from Walter de Scobenhale, formerly *janitor* of the same. For which release they granted her daily for life *two white loaves* from the monastery, *two gallons of conventual beer*, or *cicer*, if they drank it, and one penny; also *seven gallons of beer for the men*, and one sextary of hay, and another of corn from their granary yearly; and a mark of silver yearly. Also to her son Ralph *handsome food and cloathing* from the Abbey.

The powers with which the Abbots were invested in respect to the rights and liberties of the different manors of the estate were considerable, and to a certain extent absolute, but they do not appear to have been in any instance, greater than those granted to similar institutions at the time. The general character of these powers is clearly set forth in the different charters granted and confirmed to the Abbey by Henry I., King Stephen, Henry II,, Queen Adeliza, and others. That of Henry I., concerning the liberties is as follows:—"I, Henry King of England, to Robert, bishop of Chester, Robert Earl of Chester, and Robert de Ferrers, and all viscounts and their servants within whose lordships and dependencies the lands of the Abbey of Burton are situ-

ated, command that they and he should hold this domain as carefully and as honourably as any Abbot has held it heretofore, with soc and sac, toll and theam, with infangtheof * and all ancient customs in the town, and out of the town, in forest and open country, in waters, roads, and bye-roads. And I particularly order that the new abbot should discharge his duties as well and honourably as any of his predecessors, and I desire that you should pay him all respect and take him by the hand for my sake."

Henry II. granted, or rather confirmed to the Abbey, the right of Free Warren as appears by the following. "Henry, King of England, Duke of Normandy and Aquitaine, to Walter, Bishop of Chester, to his lords, barons, justices, and viscounts and their servants, in whose province the Abbey of Burton holds lands, and to all his faithful French and English subjects sends greeting. Know that I have granted to the Abbot of Burton full right of Free Warren over all his land, in the same way as his predecessor held it in the time of king Henry, my grandfather, as his charter testifieth. And I strictly order that no one shall either chase or take a hare on this estate, nor hunt one, without leave and license from the Abbot, under a fine of ten pounds."

King John by his charter confirmed the right of Free Warren, and also granted to the abbey a fair of three days

*The terms, *sac*, *soc*, *toll*, *theam*, and *infangtheof* were introduced into most of the ancient charter of liberties and privileges granted to boroughs and ecclessiastical institutions, and they mean generally that the lord of the manor had *soc*, *socha*, *sacha*, synonymous terms—liberty of keeping court, or holding trials within his own jurisdiction; of taking *toll* of all persons crossing his ferry, also of all goods, cattle and merchandise bought and sold at his markets and fairs; that he could exact *theam*, a duty or acknowledgement from his inferior tenants, in in respect of their *theme*, or teams bringing corn, &c, for sale; and that by the power of *infangtheof* he was priveleged to judge any thief taken within his manor to erect a gibbet, and on conviction to execute him thereon. The common mode of execution at this time was by hanging, and it appears that the gallows on which these executions took place, were permanent erections placed near the boundary of each township or manor. The "Gallows-bridge" at Branston, doubtless indicates the locality of one of these terrible relics of feudal power, as also the "Gallows-flat," till recently a large field on the verge of the manor of Burton on the west side of Derby Street, but now covered with buildings, and which a curious Saxon grant bearing date 910, describes as the place "where the thieves hangeth."

duration commencing on the eve of St. Modwen, (October 29th.) and also the weekly market which is now held on Thursdays. By the Hundred-roll of the time of Henry III., it appears that the Abbot LAWRENCE, had a market, toll, fairs twice a year, * and a free court in which he held plea of everything except that of forbidden distress, also view of frank-pledge; and there were then in the villages of Horninglow, Stretton, and Branston, together with the villanage of Burton, six hides geldable, and paid per annum to the sheriff one mark for view of frank-pledge, and to the sheriff's aid and wakefeg one mark, and for the said six hides suit at the county and hundred courts by attorney; and the said Abbot, from the 28th Henry III. attached to his free courts of Burton the aforesaid six geldable hides, of assise; viz, of bread, beer, and effusion of blood, whence the lord the king is indemnified for the said attachment of forty shillings, or at half a mark per annum. It is further stated that the said abbot took one waif, viz. one brown steer, or stirk, worth two shillings, but it was not known by what warrant.

In the year 1254, a valuation was made of the monastery of Burton, by the Bishop of Norwich for the use of Henry III., who claimed the tenth thereof, as follows:

The church of Burton is worth 14 marks:†—the tenth deducted thence is 18s. 8d.

The Abbot answers for the one-half, 9s. 4d.

The Sacrist for his part 4s. 4d.

* In addition to these fairs, the second of which, a pleasure fair held on Ascension day, was granted by Henry III., two others are now held annually in Burton. The more ancient and important, that of St. Modwen's, was originally of three, but now, and for many years past of nine days' duration, terminating on the day it formerly began, namely, October 29th. The last day is the great pleasure fair of the year, and also the occasion of a considerable trade in cheese and cattle. Fifty years ago it is stated that, during the first five days, more fine horses, particularly of the black breed, were usually exposed for sale here than at any other fair in the kingdom. The third fair, established in 1771, is held February 2nd., (toll free) for cattle and horses; the fourth on the 5th of April, also for cattle and horses. The "Statutes," are held on the first Monday after Michaelmas, at which it was originally the custom for constables and householders to meet for the purpose of hiring servants, and of settling the differences between masters and men, and of rating servants' wages, &c.

†A mark of silver in the time of Henry I. was worth 6s. 1d.

The Cook for his part 5s.
The revenue of the vestry assessed 5s.
The tenth deducted thence, 6d.
The goods of the kitchen worth £5 5s. 8d. The tenth 10s. 6d.
The goods of the chamber, 5 marks. The tenth 6s. 8d.
The goods of the infirmary 2 marks. The tenth 32d.
The goods of the refectory 30d. The tenth 3d.
The goods of the chantry, 2s. The tenth 2d.
The goods of the almonry, 40s. The tenth 4s.
The total sum £21 14s. 6d.
The sum of the tenths 43s. 5d.

In the year following, the whole revenue of the tenths of the abbey of Burton was assessed at £4 19s.

Of apples, 6d., of geese, poultry, lambs, and pigs, 6s. 8d.

The whole of the tenth of corn and hay in Stretton 46s. 5d. The whole of the tenth of corn and hay in Branston, 15s.

The whole of the tenth of corn and hay in Winshill 5s. 4d. The whole of the tenth of corn and hay in Stapenhill 25s. 9d. This decimation was under a punishment of excommunication by Pope Alexander IV., and a similar one was then made throughout England.

In Pope Nicholas's taxation of the temporalities belonging to this and other religious houses, A.D. 1291, it is specified that the Abbot of Burton then had at Stretton, Horninglow, and Branston, three carucates of land, each carucate being worth xxs. *per anm.* He also had in rents of assise, 60s. and profit of stock, 60s. *per anm.* He had likewise *two mills at Burton*, worth 20s. *per anm.*, and land and stock at Austrey and Ilam, worth 53s., the whole of his property at the time amounting to £22 12s. 3d. per annum. There is every reason to conclude that the Abbey of Burton was in its most flourishing condition during the 13th and 14th centuries, and that its possessions during this time, were more valuable in every respect, than at any other. In the year 1260 it is recorded that thirty monks were kept here. The land occupied by the Abbey, the residence of the Abbots, and the various premises attached to it exceeded 14 acres in extent, the whole of which was enclosed by a stone wall having

three gateways, namely the North-gate, the South-gate, and the West-gate, of which the only portions now remaining are those of the West-gate; and even these do not appear to be of earlier date than the latter part of the 14th century. Originally, the two lodges of this gateway were connected by an embattled arch and flanked by corresponding towers. The present enclosing wall, fronting parts of Lichfield and Fleet-streets, is of modern construction, but upon the site of the original wall, and the greater part of the stone of which it is built, no doubt at one time formed portions of the abbey buildings.

Whether the original edifice of Wulfric Spott, was of wood or stone, is not stated, but the probability is that it was constructed principally of wood, which, as it decayed, or was found necessary to remove for the enlargement of the Abbey gave place to stone, as the more durable material, and the better adapted for architectural effect. This conclusion is to a certain extent substantiated by the various mouldings and other stone-work excavated from the site of the Abbey, and now preserved in the Abbey grounds, none of which are of earlier than Anglo-Norman date. From the massive and peculiar character of Saxon masonry, at least some fragments might naturally have been recovered had the original Abbey been of stone. In the following brief history of the Abbots it will be seen that the first allusion to the erection of any new buildings or restorations of the abbey corresponds in date to the adoption of the more elaborate of the Anglo-Norman style of architecture, of which the remains in question consist, and which it may be, represent the "new work in the west of the church" attributed to the Abbot NIGEL. SHAW, in his HISTORY OF STAFFORDSHIRE, has an engraved ground-plan of the Abbey, discovered by him amongst the Abbey records at Beaudesert, and HOLLAR gives in the MONASTICON, an engraved south view of the Abbey, which represents it as a "magnificent pile of Saxon (?) and Gothic architecture." According to SHAW, the church was 228 feet in length, by 52½ in breadth, the cloister adjoining it on the south side was 100 feet square, and adjoining to that on the south side, was the fraytor, or common-sitting room, 196 feet in length and

30 in breadth. On the east side was the dormitory, 100 feet in length and 10 in breadth, with three other chambers annexed to it on the north. On the west side of the cloister were the Abbot's three chambers, &c. This plan does not show the existence of any buildings on the south side, or upon the site of what is now called the Abbey, and consequently it cannot be considered as including the whole of the more important buildings which constituted the monastery of Burton. In the wall of the North side of the latter residence are still preserved two semi-circular arches of early English architecture, and what is more interesting still, the late Mr. Thornewill discovered and laid open a door-way in the wall which divides the Abbey from the Priory grounds, and which, as a specimen of the Decorated style of ornamentation, is as beautiful as it is unique. This door-way is six feet four inches wide, and originally contained a wicket the step of which is much worn, and stands four feet below the present level of the surrounding soil.* The line of doorway corresponds exactly to that of the West-gate or present entrance to the Manor, and, in all probability, was the principal entrance to the private residence of the Abbots, but which is not shown either in SHAW'S plan, or HOLLAR'S engraving of the Abbey buildings. There has however, been no connection with this doorway and the three arches in the wall fronting the Priory grounds, which stand at a higher level, and are evidently reconstructed portions of cloister or other arches removed from different parts of the Abbey at no far distant date. One arch is Anglo-Norman, and the two others Gothic, but still interesting specimens of the style to which they belong.†

* From this circumstance has arisen the fallacious notion that it was originally the door-way to a subterranean passage. There is no doubt whatever that the level indicated was the ordinary one of the ground at the time the gateway was built. Recently a gravel walk was met with, 4 feet below the surface of the Manor gardens, and, an examination of the ground at almost any point of the Manor and Abbey gardens, shows it to consist of the debris of buildings, from three to four feet in depth. Fragments of encaustic tiles of different designs are not unfrequently obtained from the grounds, also small silver coins of the reign of the Edwards and other kings.

† During some recent excavations at the "Royal Oak" Inn, on the north side of the Market-place. several fragments of encaustic tiles of various patterns were found, and also the larger part of a roofing tile, the upper surface of which was coated with a green glaze. The latter

The Abbey of Burton, the monks of which belonged to the order of St. Benedict, was dedicated to St. Mary, and had within it a chapel dedicated to St. Modwen. The common seal of the Abbey bears the legend, "*Sigillum Sancte Marie de Burtona*," that of St. Modwen, "*Sancta Modwenna*." The Abbots of Burton were thirty-five in number, and, though not mitred, sometimes sat in Parliament. The first seven were monks of Winchester, namely WULGETUS, who was appointed in 1004, and died in 1026; BRETERICUS, who procured Willington, with its church, and Stapenhill with its church, and died 1050; LEWRICUS who governed 35 years, and died 1085. Of this abbot it is recorded that he spoiled the rich shrine of St. Modwen to feed the poor, because there was then a great famine, for which the Lord took revenge, as the miracles of the said virgin set forth. GEOFFRY DE MALATERRA, or *Evilearth*, who was expelled, 1094, for misapplying the conventual revenues. In his time happened that great miracle or horrid revenge of two rusticks of Stapenhill, at Drakelow, who fled to Roger Pictarium, lord of Drakelow, as appears from the above miracle, whence the vulgar saying, "*the Devil of Drakelow*." NIGEL, who soon after his election began the new work in the west part of the church. Also in his time happened that miracle, or revenge, unto the keeper of the Woods of the lord of Tutbury, of the loss of his eyes; GEFFREY, who governed 35 years, and resigned 1150. He built an elegant belfry over the choir, and

circumstance is of rare occurence, and may have been the result of accident, rather than design. The custom of using green glaze in the manufacture of encaustic pavements was common in medieval times and possibly the same process may have been applied to roofing tiles when required for some special purpose. It is well known that all knowledge of the process of the manufacture of these pavements died out with the dissolution of monasteries, and was only revived a few years ago by the late Mr. HERBERT MINTON, of Stoke-on-Trent. Even the manufacture itself, has, for want of confirmatory evidence been generally held as at no time associated with the history of British Pottery; that in fact the encaustic tiles so extensively used in all ancient ecclesiastical buildings were imported into this country. That this was not exclusively the case however, has lately been determined by the discovery at Repton of a manufactory of these tiles, with the ovens and other necessary apparatus in a remarkably good state of preservation, accompanied by large quantities of tiles in different stages of manufacture.

covered it with lead; ROBERT, who governed nine years and was then expelled for alienating the conventual revenues, 1150, by giving the town of Cotes to Stephen Seagrave, Sheriff of Stafford. This property, however, was recovered by his successor, BARNARD, and after his death, 1175, Robert was re-instated, and died 1177. He was succeeded by ROGER MALEBRAUNCH, who died 1182; RICHARD, who died 1188, and NICHOLAS, prior of Abingdon, who, dying 1197, was buried before St. Modwen's altar, between two brothers. His successor was WILLIAM DE MELBURNE, a monk of Reading, who died in 1213. This Abbot appears to have been a great benefactor to the Abbey, and also to the town generally. He built Horninglow-street, and granted it to the burgesses, and obtained a market and fair for them. Amongst other things he gave twelve-pence out of the burgage of Robert le Wariede, annually to the support of one lamp before the Altar of the Holy Cross. To the chapel of St. Modwen in Andersey, he gave twelve pence out of the burgage of Robert de Pecco; likewise he gave to the kitchen *the mill of Siwardmore,** and 18s. to the chamber out of the lands of William de Derby, and xs. at his death. His successor was ROGER, a monk of Normandy, who died 1218, and was succeeded by NICHOLAS DE WALLINGFORD, who died 1223, whose successor was RICHARD DE LISLE, Prior of St. Edmundsbury, who, by charter, dated January 10th, 1226, granted to the support of the kitchen, the mills† upon

* It is difficult to determine the exact site of this mill, but in all probability it stood between the bottom of Station Street and Moor Street on the line of the present brook-course from Branston, by the waters of which the mill was worked. From the common name of "Moor mill dam," given to the fields, hereabouts a large dam was no doubt constructed at the time to regulate the water supply necessary to the proper working of the mill. I have in my possession a cruciform bronze key obtained 13 feet below the surface of the peat beds of this locality.

† One hundred years ago there was no mill upon the Trent in the neighbourhood of Burton, except below the bridge at Winshill. The present weir of the upper mill near Drakelow was, however, then in existence, and no doubt originated in the time and for the use of the mills granted by Richard de Lisle to Burton Abbey, and which it is concluded occupied the site of those now standing there, as it will be seen at page 46, that the abbot Thomas Bromley gave the islands (now two in number) beyond the upper mill, to the convent, &c.

the Trent, between Drakelow and Burton,* also the mill at Stretton, or in lieu of them, 14 marks per annum, to be paid out of divers churches and houses belonging to him. He was preferred to the Abbacy of St. Edmondsbury in 1229, and was succeeded by LAWRENCE, who, on his death, in 1260, was buried under an arch between the altar of the Martyrs, and the Virgin Mary's Chapel. He built a stone-house near the church for the use of the poor, and in his time was begun the erection of St. Mary's Chapel. When King Henry III. took a fifteenth for Charters, and of the Forest, this Abbot gave 800 marks. His successor was JOHN STAFFORD. who was born at Stretton, and died 1281, in the 61st year of his being a monk, and was interred in the middle of St. Mary's Chapel near the high altar, under a marble stone. To him succeeded THOMAS PACKINGTON, who presided 26 years and died 1305, and was buried in the middle of the choir, before the high altar, under a marble stone, having thereon a cross, which stone was afterwards translated to Anderseye by THOMAS FEYLDE, Abbot, and laid upon the tomb of St. Modwenna the Virgin.† During his government the chancel of the chapel of St. Mary was new-built. In the 6th year of his Abbacy there was a very great famine, on which account he *built the Catte-street, through the middle of Siwarmore to Hickenel-street.* His successor was JOHN PISCATOR, *alias* STAPENHILL, who died 1316. On Tuesday, January 18th in the first year of his government the high altar was dedicated, and those of the apostles and martyrs. He made the long building near the Abbey gates and *Helle*, and the structure between the belfry and long building of the sacristy. He was followed by WILLIAM BROMLEY, monk and cellarer of this house, who presided 13 years and died 1329, and was interred before the high altar under a free-stone. He built several of the houses belonging to the Abbey; also the great Hall‡ near the

* The Mill here referred to occupied, it is presumed, the site of the present mill at Dove-Cliff.

† There may now be seen placed against the south wall of the church-yard, and protected by an iron fence, a coffin lid of stone, evidently, from the symbol artistically carved in relief upon its surface that of one of the Abbots of about this period

‡ The building here referred to, probably occupied the site of what is now called "Trent Bank cottage," the outer walls of which fronting the river consist partly of ancient stone-work of great thickness.

water of *le Flete*, and dove-cot in *le Pole yerd*, and great granary in *le Bere* of Stapenhill, and gave to the convent that long edifice near the Abbey gates, and messuages of Thomas Ruse, and the islands beyond the upper mill, and five days *ad sanguinis immunitionem* from the mid-day of the Sabbath to evening prayers on Wednesday, in that enclosed part of the *park of Shopenhale* with an augmentation of bread and *beer* beyond the usual corrody. His successor was ROBERT LONGDONE, who built the Confessors' Chapel, and made the fine carved work there, and built the Chapter House from the ground to the middle. He died 1340, and was succeeded by ROBERT BRICKHULL, a monk and cellarer of this convent who died 1348, and was buried before the high altar in the upper chancel under a marble stone. He finished the Chapter House, a building of elegant workmanship, and made the great window above the high altar, also a large barn and dove-cot, with other buildings at *Shopinhale*, and was in other ways a considerable benefactor to the Abbey. In his time Robert Stapenhill, a brother, gave to this convent a fulling mill, and two houses. To Robert succeeded JOHN IBSTOKE, monk and almoner of the convent, who while holding the latter office built the *high edifice in the market place* called the *Gareffes*, and the north side of the parochial church, and the Abbot's less chamber between the great hall, and the outward room; he also obtained half the manor of Caldwell, the bell-house, orchard, etc., and died 1366, and was buried on the right hand of his predecessor, before the high altar. His successor was THOMAS SOUTHAM, monk and Abbot's chaplain, but he resigned the dignity the year before his death in 1401, and was buried in the Martyr's Chapel. He is recorded as a benefactor to the convent, and that amongst other things he new-cast three of the greatest bells in the lower tower, and gave to the high altar a silver crucifix, with three images thereon, and a chalice with a crucifix for the foot of it. He was succeeded by JOHN SUDBURY, monk and sacrist, who held the dignity 24 years and died 1425, and was buried in the middle of the Confessor's Chapel before the altar. In his younger days while subsacrist he wrote a great book, which he gave to the convent while he was Abbot; he procured for the abbey

the rectory of Aldestre. In his time Richard Creyton, sacrist, made the lattice-work, and new-roofed the lower part of the church; and John Babe, prior and sacrist, made the new-stone work of the belfry in the upper part of the church, and new stalls in the choir, and St. Modwenna's shrine. He resigned the year before his death in favour of WILLIAM MATHEW, who also resigned after holding the Abbey six years, and dying the following year, namely 1431, was buried in St. Mary's Chapel, under an ordinary stone, *above the step near the seat in the wall.* On the 7th March in the 4th year of his government he laid the first stone of the *south gate* of the Abbey, and in the year following the upper part of the town was paved, and the *causey made before the Abbey gates.* His successor was ROBERT OUSBY, monk of St. Albans, who after two years enjoyment of this office surrendered it to RALPH HENLEY. Short however as was his Abbacy he laid the first stone of the new cloister, 3rd March, 1430, which was finished the 2nd September following; as was also the *stone conduit house in the market near the Garretts.* His successor RALPH HENLEY also resigned in 1454, after a government of 22 years, and at his death was buried in the north side of the cloister. He built the *north gates* of the Abbey, the winter-hall and guest stable and in his time was finished the belfry in the lower part of the church, and a bell put in the same. During his prefecture William Heyworth, bishop of Lichfield, gave to this monastery £40 towards building the cloister, £20 for copes, two silver ewers, two candlesticks, and the great silver censer for incense, and 40 marks for the building of two tenements in the town. He was succeeded by WILLIAM BRANSTON, monk and cellarer, who died 1472, and was *sumptuously* buried in St. Mary's Chapel under a marble tomb. He added greatly to the revenues of the house, and gave six pieces of cloth of silver and gold, and also procured an exemption from serving the office of sheriff of the county. His successor was THOMAS FEYLDE who died 1493, and was buried in the area near the porch-door. The name of this Abbot, cut in bold, old-English characters on a large stone in the wall over the parlour chimney-piece in Mr. Lathbury's house at Wetmore, still exists although somewhat defaced

and now covered up. In SHAW'S time it was perfect, and forms, with several seals of the Abbots, one of the many excellent illustrations of his work. During the presidency of this Abbot, 1474, the upper belfry of the church fell, and did considerable damage to the church, and accordingly the year following he new-built the roof thereof, repaired the walls, and rebuilt one of the pillars near the choir on the north side; he also made the arch dividing the upper from the lower part of the church, and new-built the belfry, and erected the high altar, (making steps to ascend it), and richly adorned the same with fine wainscot. He *rebuilt the chapel of St. Modwen, in Andressey*, and erected the great hall in the market, also the Abbot's chamber, and other edifices in the Abbey. He was succeeded by WILLIAM FLEIGH, monk of this house, having charge of the kitchen, who died 1502, and was buried under a marble stone at the north end of the choir. He was esteemed a virtuous and good man, and fond of a contemplative rather than an active life. His successors were WILLIAM BEYNE, who died 1525; JOHN BOSTON, of whose death no account is preserved; and one THOMAS, who was Abbot at the convocation held in 1533. The 35th and last Abbot, was RICHARD EDYS, who surrendered this Abbey at the Dissolution on the 4th November, 1540, 30th Henry 8th.

This account of the Abbots is, it is scarcely necessary to add, an almost *verbatim* copy from that contained in SHAW'S history. The facts of which it treats are of an exceedingly interesting description, and embody most of the important particulars connected with the Abbey, and the public buildings of the town during a period of nearly five-and-a-half centuries. Of the numerous men elected to the Abbot's chair it is instructive to note that but one was remembered as a "virtuous and good man," and but one distinguished himself as a contributor to the literature of his country. On the other hand there appears to have been a peculiar absence of the ordinary ecclesiastical custom of monumental decoration—only one of those thirty-five Abbots is recorded to have been "*buried sumptuously*," and but two whose epitaphs were sufficiently remarkable to be worth preserving.

The description of the burial-place of the Abbots is also important as showing the existence within the Abbey

Church of several small chapels which are not included in the plan previously referred to. Of these the most interesting was the one dedicated to St. Modwen, which no doubt was coeval with the Abbey, and which contained the relics of that saint, translated from Andressey, and placed within a shrine of elaborate workmanship and great value. Its position was near the high altar, and it appears to have been the only internal chapel of the description until the erection of St. Mary's Chapel, 250 years afterwards. To these were added in the course of time, the Chapels of the Apostles, the Confessors and the Martyrs; and, as appears at a later date, the Chapel of St. Edmund; each of which had its altar, and other accessories for the occasional performance of divine service. Beneath the floors of these chapels the majority of the Abbots were buried, and possibly some of the stone coffins now lying neglected in the Abbey grounds and elsewhere, at one time contained the mortal remains of these powerful dignitaries of the Church; but as before stated none of them appear to have been represented in effigy; in fact, with the exception of one of its founders, it is curious that the Abbey itself was destitute of recumbent figures. Even that of Wulfric Spott, which is not referred to in the Abbey deeds, is simply assumed to be such by ERDESWICKE, who states that in 1590 he noticed an emblazoned, alabaster figure lying "close to the new wall that now divides the church from the Abbey ruins," but which was even then much broken and defaced. In SHAW'S time the same effigy lay in the belfry, or west entrance of the church, and it may now be seen in a delapidated and much weathered condition, lying within one of the arches, previously described, in the wall of the Priory gardens. It is six feet six inches in length, and originally represented a figure in plated and chain armour; but its style shows that it must have been executed at least three hundred years after the death of the prince whom it is supposed to commemorate. If it was ever intended for the founder of the Abbey it was made to replace one previously disfigured, or it was the original work of one of the Abbots who "was desirous of showing that he at least was not unmindful of a good man who had been so liberal a benefactor."

The Abbey as previously stated was surrendered to Henry 8th in 1540, by whom it was three years subsequently made

a Collegiate church, and dedicated to Christ and St. Mary. The Church had a dean and four prebends, and was endowed with the greater part of the Abbey possessions. The first dean was the last Abbot, WILLIAM EDYS, who four years afterwards surrendered it into the king's hands, by whom it was suppressed, and in January, 1549, granted with the whole of its property to his secretary, Sir William Paget, the ancestor of the present noble owner, Henry, Marquis of Anglesey. Sir William Paget who was created baron of Beaudesert 1550, died 1563, seised of the *site** of the dissolved College, and the manors, with appurtenances of Burton, Bondend, Annesley, Shobnall-grange, *Burton Rectory*, Branstone, Horninglow, Stretton, Wightmere, and Whittington, which were held of the queen in capite by service of the twentieth part of a knight's fee, and valued at £257 10s. 1d.; subject however to £142 9s. 5d. fees and pensions to the former prebends, canons, and others of the Collegiate church. In the 2nd year of Edward 6th it appears that several persons enfeoffed certain parcels of land and tenements in order that the yearly profits thereof should be annually employed for ever "towards the maintenance of the brotherhood priests in Burton church, to be prayed for for ever by them."

According to a rental of Sir William Paget, made 3rd Edward 6th, the farm of the manor or tenement called the Kitcheners Barnes,† and a dove-cot with all the lands thereto belonging were let (38th Henry 8th) on lease for the lives of John Wateson, his wife Emmott, and Hugh their son at 26s. 8d. per annum, and to find annually one sufficient *bull for the town of Burton*, and to give one fat lamb to the lord of the manor. The Burton mills were let (21st Henry 8th) to Robert Tove for £26 per annum. The *free tenants* were then 57 in number, and worth £11 8s. 2d., and the whole annual rental clear, after paying a fee of £6 to John Moreley, bailiff of Burton,‡ amounted to £130 19s. 4½d.

*The sites both of the Church and Churchyard still form part of the personal property of the Marquis of Anglesey, and are retained in his Lordship's own hands.

† In the year 1659, Henry Toone held the pasture called "Kitchener's Hey," a large field lying to the west of the present Anderstaff lane, consisting of 13a. 0r. 18p., and valued at £26 per annum.

‡ There is one instance of the ancient office of Bailiff being held by a female. In the possession of the Marquis of Anglesey, at Beau-

This income was derived from the ordinary tenures, but the tithes then belonging to Sir William Paget produced £138 5s. 4d., making the total annual rental of the estate, £269 4s. 8½d. The same property at the suppression of the College, according to records in the First-fruits office, produced a clear annual rental of £412 6s. 10d.. SHAW remarks that in his time (1790) the tithes were worth at least £1,500 per annum, and he adds that the Burton estates altogether, if the houses in the town were let to the best advantage and not on leases for lives as was then customary, would produce a clear income of £10,000. On reference to the rental for the year 1789 it is found that the actual value of the estate was as follows:—Principal rents £5905 9s. 7d.; Reserved rents £533 8s. 11d.; Freehold, or Chief rents £17 8s. 1d.; and Tithes £290 0s. 3d., making a total of £6746 6s. 10d. How SHAW arrived at his tithe estimate is difficult to say. From a careful survey of the "Mannour of Burton" in 1656* by B. Fowler, which includes the townships of Burton, Bond-end, Branston, Horninglow, and Wetmore, Stretton, Winshill, and Stapenhill, it appears to have consisted of

	Quantities. A.	R.	P.	Annual value. £.	s.	d.
Demesnes and tenements by lease ...	...5624	0	2	3744	12	11
Commons of pasture	... 140	0	10	89	5	0
Gleab lands	... 58	0	20			
Church lands...	... 1	2	16			
Freehold tenements	... 961	3	26			
Commons	...1698	1	18	1090	5	4
	8484	0	12	4924	3	3†

desert, is a deed entitled "A Declaration of the accounts of Ellen Ensor, widow, Bailiff of the manor of Bromley-hurst, Co. Stafford parcel of the fforren of Burton; for one year, ending March 24, 1610.

* According to the survey of this year, Robert Aldridge gent., held the Manor gardens, &c., thereto belonging, also St. Modwen's orchard, (valued at £2 per annum) the gross rent of which amounted to £22 4s. 0d. The ordinary rent of gardens and pasture land was £2 per acre. John Alwood held shops under the Town Hall. Peter Bunne held the lower corn mill in Winshill, at £80 per annum, also the malt mill in the Market-place, and the Laundry garden (now that of the priory) adjoining the church yard, valued together at £80 per annum. Gerrard Holman held a tenement on the bridge at £2 per annum. Frequent mention is made of "Lion and Love Lane" in Bond-End, Widdow Tasker held the tenement at the Manor gates at £2 10s. 0d.

Of the commons described in the above table, Burton and Bond-end contained 183acres 3 perches, valued at £184 10s. Those of Horninglow, in which the inhabitants of Horninglow Stretton, Wetmore, Annesley, and Rolleston had common, consisted of the Outwoods, 452 acres, 1 rood, 18 perches, (including Horninglow Moor of 120 acres,) valued at 10s. per acre and amounting to £226 3s. There were also "certayne parcels of land, (2 roods 21 perches,) alloted for the maintenance of a *town bull*, and valued at 5s. per annum." In Branston the common lands (including Rough-Hey, 118 acres, 23 perches) in which the tenants and freeholders had common at all times of the year, consisted of 330 acres, 3 roods, valued at £180 per annum, and in addition they had 55 acres which they divided every year amongst themselves by lot; and 1 rood, 28 perches for the keeping of a *town bull*, valued at 8s.; also 84 acres of demesne lands which were common by custom from Lammas to Candlemas, valued at £42 per annum. There were also in Winshill wood 188 acres, and in Stapenhill 182 acres common by *stint* to the inhabitants and freeholders, and valued at £223 per annum.

In the year 1656 there were in Burton and Bond-end 173 tenants by lease, and 96 freehold tenants; and in the year 1769 the freehold tenants were 99 in number. In the year 1760, a careful survey of the estate was made by Mr. Wyatt, the plans whereof are exceedingly interesting as illustrating in one broad picture as it were the general aspect presented by the manor and town of Burton one hundred years ago.

According to these plans the turnpike road from Lichfield ran between the Trent and the house occupied by the late Mr. A. Atkin at Branston, and was thence continued on the south side of the Toadhole, and on to Burton, by its present route. There was then a ferry across the Trent a little

per annum, also the Twigg-holme, near St. Modwen's orchard, and the lower mill holme with the Fishery of the Trent.

†According to these particulars it will therefore be seen that during the first hundred years which followed the grant of the property to Sir William Paget it had increased its annual rent-roll by nearly £4,500. In the somewhat more than a century which succeeded this date, as previously shown, nearly £2,000 per annum were added to it, and from that time to the present, which represents another hundred years, the annual rental may be broadly stated to show an additional increase of considerably above £20,000.

below Drakelow Hall, and a causeway, which still exists, ran directly from it across the meadows into the Branston Road. The line of the *Ickenield Street* from Branstone was marked by an avenue of trees as far as Clay-pit Moor, which with Goose Moor, and Horninglow Moor formed one broad continuous tract of open common to the boundaries of Stretton. Bond-end consisted of a few straggling cottages, two only of which stood to the south of the line now occupied by the canal, but which was not then made. Lichfield Street was described as "Half Street;" Park Street ran direct from the Fleet-stones across Goose Moor, towards "Seyney Park," but it boasted of no house except the Grange homestead, now occupied by Mr. J. Ordish. The frontage to High Street was occupied principally by ordinary tenements, each of which had its garden running to, and bounded on the east side by the "Hay ditch," and on the west by open fields. New Street terminated in a lane which crossed it at about the point now occupied by Union Street, and "Cat Street," now Station Street, was continued straight across "Moor Mill dam" and other meadows to Lichfield Lane and Derby Street, but there was scarcely a house upon it below the line of the High Street gardens. Horninglow Street extended almost as far as the point occupied by Guild Street. What is now known as "Anderstaff Lane," then had no descriptive name; there were but few tenements in it, and *Nether Hall* stood in the fields.

The building now called the Abbey was then described as the Manor, and was approached by a road on the north side of it. The *Priory* garden was the "Bowling-green," and on the north-east side of the church-yard, fronting the river, was a small "Arbor," in addition to the present enclosure of the same name, which then contained a large fish-pond in the centre. The Manor grounds were enclosed by a wall, and between it and the Soho (a large curious building) was a sheet of water apparently connected with a "Wharfe," which adjoined the site of the old offices of the Trent Navigation Company at the bottom of Fleet-street. St. Modwen's orchard was written *St. Maudlen's*, and the island, *Andersley*. There was then no direct communication between the old bridge and Burton Meadow; the house and

premises now standing there were unbuilt, and the site lay open to some common land called "Umpler Green Meadow." From the bridge to the Burton Mills at Winshill the road was described as the "Mill way," and its continuation northwards to Newton consisted simply of a footpath or bridle-road across the open fields.

The plan also contains an excellent view of the old bridge, which is valuable as showing the exact position of the thirty-six arches of which tradition holds the bridge to have originally consisted. From the Winshill side of the valley to the west bank of the western branch of the Trent, the arches were continuous and thirty-four in number, but they here gave place to several tenements, the exterior walls of which on the south side consisted of solid masonry carried down to the basement line of the bridge and incorporated with it. The largest of these tenements stood parallel to the river, and had an arched doorway communicating with the Hay, also several windows of the same pointed form in the upper storey. The space occupied by these buildings was about 120 feet in length, and between them and the terminus of the bridge, opposite the present weighing machine in Bridge street, stood the two additional arches which made up the traditional number of thirty six. So far therefore, as concerns the actual existence of these arches, the evidence is perfectly clear and satisfactory, but it is questionable if these two latter corresponded in age to those of the other portions of the bridge, or were otherwise than supplementary erections introduced at a comparitively modern date for some special purpose. It is quite clear that so recently as less than two hundred years ago, the arches of the bridge were but thirty-four in number, and consequently since that time an increase must have taken place either on the Winshill or the Burton side of the valley. About the year 1590, ERDESWICKE, in his account of the bridge, describes it as "a goodly bridge, well wrought of very good stone, with *thirty-four arches* over Trent:" and PLOT, who visited Burton a little less than a century afterwards, writes, "The most notorious piece of work of a *civil public building* in this county, or anywhere (of the kind) perhaps in England, is the great bridg at BURTON-UPON-TRENT, all of squared freestone, strong and

lofty, and containing in length, as I found it by measure, near about 515 yards as the *cart* goes, *i.e.*, a quarter of a mile and better than ½ furlong more, the river *Trent*, over which it stands, dividing itself into *three channels*, as may be seen in the *Map*, (attached to his history), and passing under it through *thirty-four arches*, whereof *thirty-three* had water running under them when I were there." PLOT'S measurement extended as far as the end of the bridge in Bridge-street, and therefore included the space occupied by the two arches already described. From the well-known carefulness of that author in his description of general objects, it may be accepted as conclusive that had these additional arches then been built, he would not have given a statement contrary to fact. This is the more apparent from the less methodical but equally concise description of ERDESWICKE, with which he was undoubtedly familiar, and would certainly have questioned, instead of confirming, had it been at variance with his own testimony. If I may be permitted to hazard an opinion upon the subject, I think that originally the arched portions of the bridge terminated in the fortified gateway which occupied the site of the tenements alluded to—that although the bridge in reality extended into Bridge-street, it consisted simply of a raised causeway, supported by parapet walls on each side, and that, on the introduction of an enlarged system of carriage traffic* upon the the great highways, about the middle of the last century, this part of the bridge was raised for the purpose of affording a more convenient approach from the town, and the two arches were then erected as outlets to the floods sweeping round from the Hay. PLOT'S observation in respect to the water passing under 33 arches, will I think, on consideration be held to support, if it does not entirely confirm this conclusion, so far as it refers to the position occupied by the 34 arches of "the great bridge of Burton."†

*On the erection of the turnpike on the road from Ashby-de-la-Zouch to Burton in 1753 the Earl of Uxbridge made a demand of £20 *per annum* towards keeping this bridge in repair, as he thought the carriage of heavy goods would be greatly increased by the roads being mended.

†Mr. Measom, High-street, has in his possession a print by S. & N. BUCK, bearing date 1753, and entitled "The East Prospect of Burton-

I have already alluded to the antiquity of the bridge-passage of the Trent at this point, and its probable association with the Roman people; but it should be mentioned that there is, notwithstanding this opinion, no known written evidence to substantiate it, nor in fact is there any record by which the actual date of the erection of the bridge can be clearly determined. The earliest deeds in which the bridge is recognized as being in existence, were executed during the time of the Abbot BERNARD, 1151-1175, but they are altogether silent on the question of its origin. There are four references of this description, two of which, cited by ERDESWICKE, are as follows—"William de la Warde, in the time of the above Abbot, *debit terram Ponti de Burton 6 denarios annuatim sibi et heredibus suis in perpetuum.*" The other, which is without date, states that "Robert de Bersing Coate gave one acre of land in *prato de Burscote juxta Trent, pro fabrica pontis de Burton.*" SHAW quotes from the two remaining deeds that "the Abbot BERNARD granted to John de Bersicote and his heirs, amongst other lands of Beriscote ect., *pratum suum de subponte Burt*," and that "William de la Warde released to the said Abbot and Convent, *calumpniam suam quam habuit in croftam videlicet pontis, solutam et quietam a se et heredibus suis ab omni calumpnia in perpetuum.*" It is therefore clear that at the time indicated by these deeds the bridge was already built, and in all probability it had been constructed so long as to have required extensive repairs, for which purpose the lands described above were evidently granted. SHAW is of opinion that the bridge was

upon-Trent," in which the bridge is shown with the chapel upon it also the Fleet-stones, and many curious particulars of the town at that date. Amongst other marginal references the bridge is described as consisting of thirty-four arches, the whole of which are represented between the Winshill end of it and the chapel. "The Gentleman's Magazine," vol. xxi. p. 296, contains a similar view, and also describes the arches as thirty-four in number. SHAW, however, is in favour of the traditional thirty-six (doubtless from the fact of their existence in his time), and quotes, in support thereof, the following passage (which is not, however, I think, sufficiently reliable to upset the statement of either Plot, or Erdeswicke) from an inscription on a monument in Wigan-lane: "to the memory of Sir Thomas Tyldesley, who, for the desperate storming of Burton-upon-Trent, over a bridge of thirty-six arches, received the honour of Knighthood at the hands of Charles I."

at least coeval with the Abbey, and considering the importance of the communication opened up at this point, between so large a proportion of the counties of Stafford and Derby, there is no doubt of the correctness of his conclusion, but it is inferred that this communication had been established many centuries previous to the foundation of the Abbey, and that the bridge then presumed to have been built was not an original structure, but the restoration in a more convenient and substantial form of a fabric which had bridged over the the Trent valley, and given access to the two counties long before the Saxons became the owners of the soil, and the conquerors of the Romanized Britons.

It appears that the government of the bridge was, for a conderable time vested in the Abbots and convent of Burton, but by what right is not shown, inasmuch as by no charter or conditional grant of land were they bound to maintain it in a proper state of repair. At different times, certain small parcels of land and other bequests were made for the latter purpose, but they were totally insufficient for the necessary work, which was in reality otherwise dependant upon charities and voluntary contributions. In addition to the grants already described, Roger de Huncedon, in the early part of the fifteenth century, by his charter "granted to God and the support of the bridge for the health of his soul, and that of his ancestors and successors, one acre of arable land which formerly belonged to Nicholas de Lomp, extending towards the mill of the More," and also Alice Bolde, of Burton-on-Trent, by her will, dated October 2nd, 1426, amongst other things bequeathed to the bridge "*duo chocharia argentia, item duo cocharia argentia ad sustentationem symbe de Stapenhylle.*" For the proper and judicious disposal of the different sums accruing from these grants, and from alms and other extraneous sources, officers, variously described as proctors, procurators, bailiffs, keepers, and overseers, were appointed by the Abbots, sometimes for life, and at others for a fixed term, generally 30 years, who had lawful and customary power in all things pertaining to the bridge, and superintended generally the repairs and other works essential to its safety and convenience. From one of the instruments or leases of this character it appears that in the year 1441, the bridge

was in a broken and ruinous condition, and according to another deed executed about a century afterwards, it was again in the same state. The particulars of its condition at the latter date are so curious, and at the same time so full of interest that a reprint from SHAW'S *verbatim* copy of the original will, I think, be generally acceptable.

"*To all true Xten peple to whom thys present wrytyin shall come, Willm by the provydence of God abbott of the monastery of Burton-upon-Trent, John, pryor of the monastery of Repyngdon, John, pryor of the monastery of Tutbury, George, Lord Hastyngyes, Sir Richard Sacheverll, Knight, Sir Walter Gryffyth, Knight, Sir Anthony Fitzherbert, Knight, one of the Kyngs justyces of hys comen place, Sir John Porte, Knyght, on' of the Kyngys justyces of hys benche, George Greyseley, esquyer, Humffrey Ferrers, esquyer, Thomas Curson, esquyer, George Fynderne, esquyer, Thomas Dethyk, esquyer, John Stanley, gentylman, bayliff of Burton, Thomas Walker, and William Morekok, of the same, sende gretyng in oure Lorde everlastyng. And for somych as it ys merytorious for ev'y Xpen man to indeus hymselffe to helpe to preffer works of marcy for the increassyng of vertue and helth Xpen peple whereby almyghty God may be pleased affore whom every gode dede shall be rewarded to the helth and comforth of manys soule. We therfore the seyd abbott, pryors, lord Hastyngs, knyghtys, esquyers, with all other above specyffyed, notyffye unto your audyence, that wher' there ys att Burton beforeseyd, a brigge of grett length with many arches goyng over the water of Trent, whiche ys a comen passage to and fro many counteys to the grett releff and comforth of travellyng peple, and to the cuntreys therabowte. And so yt ys that the seyd brigge is of olde fundacon and now of late dayes by the occasion of grett floddys and waters is greatly decayed, for somych as dyverse arches therof be lately decayed and wasted away in the water to the grett joperdye and trowble of all travelling peple that go and ryde thereupon. And the seyd brygge hath nother rents nor annuites for the supportacon of the same, but onely by the devocon and almes dedys of weldysposed cryston peple, wythoute the contynuance wherof the seyd brygge ys lyke utterly to be decayed and forlett. And for as-*

mych as Willm Haryson, now proctor lymytted to be of the same, of his goode and diligent mynd, hath full well endevored himselffe to the helpyng and makyng of the seyde brigge in dyverse places of the same, whiche were and yett be in grett joperdye to hys greytt and importable charges withoute the helpe and almes dedis of weldisposed xpen peple to him be showed in that behalffe. We therefore, the said abbott, priours, lorde Hastyngs, knyghts, esquyers, with all other above specyffyed, in the way of charyte, exorte, move and requere all goode xpen peple, which thys our present wrytyng shall here or se, to helpe and gyff your charytable almes to the seid proctor, or hys depute this bring. Wherby ye may deserve the grett reward of Almighty God, to the helth and comfort of your owne soules, and our full hertye thankys. In wytnesse wherof we the seid abbott, priours, lorde Hastyngys, knyghtys esquyers, and all other above named, to this our present writyng seyverally have sette our seyles, the xxiiith day of the monyth of May, in the xxth yere of the reyne of our soverayne lorde Kyng Henry the VIII."

There is something difficult of explanation in this anomalous association of the Abbots and convent with the old bridge of Burton. That this "comen passage to and fro many counteys" was of the greatest importance not only to the Abbey, but to the country generally, there is no question; but, notwithstanding this, it was a neglected property, belonging to no one in particular, nearly always in trouble, and mainly dependent for its existence upon that most precarious of all sources of revenue—"the devocon and almes dedys of weldysposed cryston peple." One is fain to believe that had the bridge originated with the Abbey, or if it had ever been *bona fide* conventual property the Abbots would have maintained their claim to it, and imposed a toll upon its traffic, or induced some one to bequeath land sufficient for its general reparation; but there is no instance of this being done to the necessary extent, and the probability, therefore is, that the bridge was a common highway of the county long before the date of Wulfric Spott's foundation of the Abbey. However this may be, the claims of the great bridge of Burton were never recognised in the substanial manner they deserved, and it contained a costly tax

upon the estate until its final surrender to the Midland Railway Company in 1859, by whom it has recently been dismantled for the sake of its materials; and now presents the curious, and, considering its historial associations, not very creditable spectacle of a structure whose ancient claim to the distinction of being, "the most notorious piece of work of a civil public building in the county or perhaps in England," has collapsed into a series of skeleton arches, tottering buttresses, and unsightly wall-less sides.

It is well known that the old bridge runs in an irregular curve across the valley, the inner or concave surface of which is presented to the course of the Trent. The actual basement line is curious and consists of a series of angles, divided into different lengths, which with the aid of a pocket-compass, I have determined as follows:—Commencing with the Winshill side of the valley the first angle points due north, the second 35° west of north, the third 50°, the fourth 57°, the fifth 63°, and the sixth 85° west of north, and it is thence continued in a somewhat zigzag line to its termination in Bridge-street. The older portions of the bridge were originally 16 ft. 6 in. in width, with a clear roadway of 15 ft.: it has subsequently been widened to 22 ft. Nearly the whole of the arches are semicircular, with an average span of about 20 ft., each being, with one or two exceptions, strengthened by five parallel chamfered ribs of stone 16 in. wide. Where the necessary examination has been made the buttresses of the bridge are found to rest upon oak piles, driven firmly and closely together into the bed of the river. These, in all probability, constitute the sole remains of the original structure,—the superimposed stone-work of the present day being by comparison of modern construction, and referable to a variety of dates extending backwards to, but not beyond the middle of the thirteenth century. The evidence upon this latter point is clearly established by Monk's Bridge across the Dove at Stretton, which was built by the Abbot, JOHN STAFFORD, a native of Stretton, about the year 1270, and which, in the characteristic details of its masonry, corresponds exactly with that of the oldest existing portions of the bridge of Burton.

At the present day the Trent in its passage past Burton is divided into two channels, one of which, up to a certain

point flows on the extreme easterly margin of the valley, the course of the other being irregular, passing here and there close under the gravel tract upon which the town is situated. The valley between these channels consists of alluvial deposits, the surface level of which is below that of the ordinary Trent-floods, and consequently in providing the necessary freedom of access between the two counties it became a matter of necessity to carry the bridge completely over the space thus subjected to inundation—hence the reason of its unusual length. It has already been shown in the quotation from PLOT, that so recently as the time of that author, the Trent was here divided into *three* channels, and there is no question that this was the condition of the river at the time the bridge was originally constructed.* This third channel commenced in what is called the "Trundle-hole," and was the first or more easterly branch crossed by the bridge. It is now silted up, but its course may readily be traced across the Winhsill meadows to where it rejoined the main branch of the river near the "Lion's Den," above the Forge mills. The old bridge follows from the Winshill side of the valley the natural curve of the east branch, and is in fact built upon its north bank, and the object in introducing the succession of angles previously described was evidently for the purpose of throwing the arches of the

* It will be found on examination that the surface area occupied by the old bridge contains a greater proportion of water than it does of land, and I see no reason to consider that this proportion was at any time since its erection reversed or materially different to what it is now. Judging from the present condition of the mid-channel it would appear that before the erection of the bridge and the adjoining weir, it was for the greater part of its course across the valley, a shallow gravel-scour, and therefore presentimg no serious obstacle to the construction of the pile-borne buttresses of the bridge. The contraction of the water-way of the river by the introduction of the arches increased its velocity, which, assisted by floods, not only deepened the river channels there, but excavated deeper oblong holes in the bed of each stream immediately below the bridge. The "Trundle hole," which is at least 20 feet deep, owes its origin to this cause, and similar holes occur in the mid and west channels, and which are not unknown to lovers of the "gentle art" as good for barbel. From the same reason I conclude that at one time a bridge connected St. Modwen' orchard with the Abbey grounds, and that the famous "Mud's-hole" was excavated by the same natural agency as those at the old, or so named in contradistinction to the above, "Great" bridge of Burton.

bridge at right angles to this Trundle-hole channel, so as to give it full and clear headway. The same principle was applied to the second or mid-channel, and also to the west branch, but there being no deflexion in the course of the latter at the point of intersection, the necessary result was obtained by a direct line.*

The boundary of the counties of Stafford and Derby runs in the centre of the main-channel, passing northwards with it, and thus dividing the bridge, as nearly as possible into two equal parts. It will probably be a matter of opinion as to whether or not this proportionate division of the bridge was merely accidental or was mutually determined by the inhabitants of the two counties. It is certain that by no other adjacent line could this division have been so equably effected; and from the fact of the Trent being from the remotest historical period one of the great tribal boundaries of Britain, it is possible that the ancient importance of the river may have had some direct influence with the founders of the bridge in the choice of a position which gave to neither county the larger proportion of a structure erected for their common benefit and convenience.

One of the most remarkable events connected with the bridge was a battle fought upon it between the forces of Edward II, and Thomas Earl of Lancaster, on the 18th of March, 1321. It was then of the narrow width previously

* Without bringing in question, or advancing any undue comparison in respect to the scientific principles upon which the construction of the old bridge and the new is based, it may not be out of place to remark that so far as regards capacity of volume the old bridge in not inferior to its modern companion. The arches of the latter thrown across the west branch have the advantage both in height and span, and the buttresses are also of lesser bulk, but from the fact of their standing diagonally to the natural flow of the stream, they constitute an opposing obstacle to its course of considerably greater area than is contained in those of the old bridge, and consequently the freedom of the actual river-passage is reduced by this means to less than one half the diameter of the arches. The whole of the buttresses of the old bridge stand exactly parallel to the water-way of the different branches of the river over which they are erected, and the diameter of the arches they support is thus equal to the current volume they were intended to convey. It is to this simple adaptation of engineering principles to the requirements of natural forces that the long preservation of the old bridge is due.

described, had high embattled parapet walls, and upon the end nearest the town stood a strongly fortified gateway which commanded the approach from the west. The east end of the bridge was open, but could readily be defended from hostile attack. Shortly after raising the standard of revolt the Earl of Lancaster concentrated 30,000 troops at his castle at Tutbury, and with the choicest of these he lost no time in garrisoning Burton, and erecting outworks on the Derbyshire end of the bridge to oppose the march of the king into Staffordshire. At the time in question the nearest available passage into the county south of Burton was Salter's bridge, which also stood upon an old British and Roman line of road. The king, on arriving at Caldwell, first heard that the van of his army had attacked and been repulsed with considerable loss, by the earl of Lancaster's troops at the Winshill end of the bridge. The royalists were much dispirited by this disaster, and the king, feeling the necessity of immediate action, decided on leaving a portion of his army to continue the attack upon the bridge, and with the other to push on to Salter's bridge, and by this means to come upon the rear of the earl's army, and to give battle to him in the meadows west of Burton, According to a clear and highly interesting account of this battle in Sir Oswald Mosley's excellent "HISTORY OF TUTBURY" the Trent at this time was much swollen by a recent heavy rain-fall, by which the ordinary fords of the river were rendered impassable. Before marching, however, the king met with a tenant of the Abbot of Burton, who pointed out a ford at Walton, by which he was enabled to cross the stream and to reach the town during the night unperceived by the enemy. The earl was unprepared for this surprise, and abandoning the defence of the bridge retreated into the town; but from which, after setting fire to it, he was compelled to retreat in disorder to Tutbury, and was subsequently taken and beheaded at Pontefract. It was during the flight of his disorganized troops from Burton that the military chest belonging to him was lost in the river Dove at Tutbury, as to which, as Sir Oswald Mosley remarks, "after the lapse of five centuries, upwards of three hundred thousand of the coins it contained, were, in the month of June, 1831, recovered from the bed of the river by the astonished inhabitants of Tutbury and its vicinity."

Possibly, had the earl taken the ordinary precaution of protecting the west side of the town, and guarding the rear of his army against surprise, the result of the action would have been different, but he neither did this, nor was his treatment and that of his officers of the inhabitants of the town calculated to enlist their sympathies or support. The betrayal of the river passage is said to have been volunteered in consequence of severe exactions imposed upon the Abbot's tenants by the earl; and the final act of attempting the destruction of the town by fire had in it nothing which either the customary usages or the necessities of war could possibly justify. The conflagration was, however, soon checked by the king's troops, who found within the town considerable booty which had been hastily abandoned by the fugitives. In commemoration of this victory EDWARD built a chapel over the gateway on the bridge, and in consideration of the depredations the Abbey had sustained from the earl of Lancaster, he gave to it the advowsons of the churches of Hanbury and Tatenhill, which had previously belonged to the earl, and were, in consequence of his rebellion forfeited to the crown.

Notwithstanding the important position of the town of Burton as the key to one of the great thoroughfares between the central midland counties, it does not appear to have been at any time fortified in such a manner as to entitle it to the character of a strong military post. The river channels formed a natural defence for ordinary purposes on the east side of the town, and from the north gate of the Abbey to the gateway on the old bridge, ran a stone wall which was further strengthened by the artificial moat now called the Hay-ditch. It is said that a gate at one time stood across the bottom of High-street, and the two houses occupied by Mr. Ratcliff and Mr. Goodger, have still the term "bar-gates," applied to them. Mr. John Richardson, the High Bailiff, has in his possession a curious key, found many years ago, and popularly believed to be the key of the gates in question. If this be correct, the town had two distinct gateways, one across the High-street and one on the bridge; but it is difficult to conceive the use of gates to a street the west side of which was open to the fields, and communicating with Cat-

street, New-street, and Half-street, at widely separated points and to which there were no gates whatever. Furthermore, both Bridge-street and Horninglow-street, which formed no inconsiderable part of the old town of Burton, would be totally excluded from participating in the protection sought by the erection of these internal gates, and it would be scarcely just to the character of the High-street section of inhabiants to insinuate that they differed from their neighbours in being less ready or less able to "hold their own" when it was required of them so to do. My own impression is that the only fortified gateway of the town was the one which stood upon the old bridge, and that this, with the bridge itself, although to a certain extent under the supervision of the Abbots of Burton was nominally connected with the great highways of the county, and therefore more especially its property than that of the town within whose liberties it was situated. It is not intended to ignore altogether the existence of a bar-gate at the bottom of the High-street, but I think that if such an erection ever occupied the site, it was simply the reconstructed portions of the old bridge gateway and removed there in consequence of the widening of the bridge, for preservation and effect, rather than as a defence to the town. The key itself is not without evidence adverse to the received opinion concerning it. It is of wrought iron, large and weighty, and the handle is surmounted by a bold design of that mysterious emblem known as the "Staffordshire Knot," the armorial origin of which, whatever its true interpretation, is claimed both by the borough and county of Stafford. This badge was certainly assumed by the earlier earls of Stafford who derived their title from the borough; but it at no time, that I am aware, entered into the composition of the coat of arms pertaining to the town of Burton, and consequently was scarcely likely to have been connected with an instrument, which, considering its purpose, was evidently one of the most important items in the town property, and therefore the more necessary to bear its own legitimate stamp.*

* It is well known that, in mediæval times it was customary to introduce into the manufacture of a great variety of personal and other descriptions of property, peculiar heraldic devices, generally by way of ornament, but at the same time as evidence of proprietorship, and

The unfortunate MARY Queen of Scots passed through Burton probably on her way from Chartley to Fotheringay, as appears from the following memorial formerly over the door of the Manor-house at Abbot's Bromley, "Maria regina Scotiæ quondam transibat istam villam 21 Septembris, 1586, usque Burton." The rooms occupied by her at Tutbury Castle were furnished with the household stuff belonging to Lord Paget* at Burton, and removed there for the purpose by the sheriff of the county, Mr. Gresely, at the request of Queen ELIZABETH, in November, 1586. JAMES I. passed through Burton on his visit to Tutbury in 1619. The following extracts from the Churchwardens' accounts of Barton-under-Needwood, quoted in SIR OSWALD MOSLEY'S "HISTORY OF TUTBURY," appear to have reference to this visit :—"Paid for carriage of the butter to Burton, and money that they spent that did carry it, 1s. 4d. Alsoe spent in goinge two days to seeke for pigeons, being fourth all night, and carringe them to Burton, 2s. 2d. Alsoe spent in goinge to Barton to pay for malt and hops, and hay and oats, and the rest of the things, 6d. Alsoe the 1st of September, spent in goinge to Burton to look for chargis which I had been at concerning the Kings Majesties progress, 6d." In the year 1611, one EDWARD WIGHTMAN, a native of Burton, was burnt at Lichfield "for holding dangerous and heretical and blasphemous opinions. His punishment was esteemed a seasonable severity well-pleasing to God, *because*† none was after it found to follow his heretical doctrines."

hereditary association. Individually, this custom, in its old conspicuous form, is gradually dying out, but with corporate and other public bodies it is still faithfully and traditionally adhered to, and, as an instance thereof, any one travelling on the North-Staffordshire Railway may see that the famous "Knot" in question is not likely to lose any of its ancient interest from want of illustration. The Company are, however, merely perpetuating upon a large scale, a device, which, with more legitimate claims had many centuries previously been confined to such works as were under special county jurisdiction; and of which the key in question is evidently an example.

* Henry VIII granted to William lord Paget, the Manor of Edlaston, formerly belonging to the Priory of Tutbury; and in the reign of Philip and Mary lord Paget was keeper of two of the royal parks on Needwood.

† The italics are the Author's.

The more serious and prolonged troubles which befel the town generally were consequent upon the part it was necessitated to take in the great civil war of the 17th century. Shortly after the memorable raising of the royal standard at Nottingham, the earl of Chesterfield began to fortify his house at Bretby,* and to garrison it for the king. He sent for his son, who, bringing with him a troop of horse from Oxford, met his father in Burton, where the earl publicly took an oath that he would have Derby within a few days. Information of this threat was conveyed to the enemy in that town, upon which, early in December. 1642, (quoting from a curious *MS.* of the times,) "Colonel Gell, having intelligence that the earl of Chesterfierld had fortified his house with forty musquetiers, horse, and seven drakes, whereupon he commanded forth of Derby some four hundred ffoote and Captain White's dragoones, and two sakers to the said earle's house called Bratby, Major Mollanus being commander in chiefe. Uppon the approach of our men, the enemy shott their drakes and musketts at them, but after halfe a dozen shotts of our saccers and musquetiers, and our men beginning to fall upon their workes, the said earle with all his fforces ffled away through his parke and so to Litchfield. Wee forsably entering the house, found his Countess, her gentlewoman, and two or three servants therein, seised presantly upon the armes, and found seven drakes, thirty steele pikes, twenty or thirty musquetts, five double barrells of powder, and goode store of match and bulletts. Major Mollanus, Captayne White, Captayne Sandars, and divers other officers entreated the Countess that she would give every souldyer halfe a crowne for to have her house saved from plundering because it was free bootey. She answered that it was too much and that shee had not so much monyes, they asked her again if she would give amongst them forty marks; she made the same answer that she had not monyes. Then they offered to deposit the money for her if shee would promise to repay it them. She still refractoroly and willfully said than she would not give them one penny, and then indeed the souldyers plundered the house. But the

*Old Bretby house has long entirely disappeared, but the site may still readily be traced in a field in the village opposite the present residence of Mr. JOHN FAULKNER.

said officers saved her own chamber, with all the goods therein. Nighte comeing on, the wayes foule, and we haveing no nearer quarter than Burton, were forced to hast away."

Notwithstanding the loss of Bretby house by the Royalists and the falling of Burton into the hands of their enemies, that town appears to have been shortly afterwards recovered and garrisoned by the earl of Loughborough, whose head quarters were at Tutbury Castle. In April, 1643, "Colonell Gell sent to Lord Grey desiring his assistance for the retaking of Burton, by reason it was the only passage over the Trent and Dove into the North. My Lord within two days came, and mett Colonell Gell att the rendezvouze on Egginton Heath, and soe marched togeather to the said Burton, drove the enemy away, and Colonell Gell left one of his bigest ffoot companys their, consisting of two hundred, under Captayne Sanders, and one peece of ordnance, and presently after made sixty dragoones, and soe kept the passage."

Early in the following month "the Queane marched with all her fforces towards Ashby-de-la-Zouch; Colonel Gell having true intelligcnce that shee was marching westwards, and that shee would fall uppon Burton, because it was the chiefe passage from South to North, sent presently to Staffordshire for all the fforces to meete him, and likewise to Nottingham, where were about three thousand horse and ffoote, and hee himselfe would draw out all his fforces to Egginton Heath, and soe to Burton to assist them till the Queane were past, but noebody would come, soe that within three days after shee marched towards Burton, tooke the towne by storme, killed many of them, tooke the Colonell, Leiftennant Colonell, and most of the officers prisoners, and soe most miserably plundered and destroyed the towne."

About Christmas, 1643, "Colonell Harpur, of Little Over fortefied Burton Bridge, whither Colonell Gell sent his major Mollanus, the 6th of January, 1644, with some of his fforces, and tooke the towne and *bridge*, with all his whole regiment, horse and ffoote, except Colonell and Leiftenant Colonell, who rann away in the night; hee tooke withall the major, six captaynes, and eight other officers with five hundred common soldyers, without any loss of our side, but five of the enemy slayne at the entrance of the bridge."

In the spring of 1644, "Colonel Gell had intelligence that the enemy at Litchfield, Tutbury, Ashby-de-la-Zouch and other garrisons, were gathering their fforces together about Burton, for to relieve the Mannor (Wingfield); he presently sent Sanders, major of his horse, with all the horse and dragoons towards them, and to have an eye to Derby. Our horse coming neare the enemy, and hearing that Colonel Eyre, his regiment, lay in Boylston Church, our dragoones dismounted, and surprised the whole regiment in the church; and soe tooke men, armes, collours, and all without loss of one man on either side. And hearing that Colonell Bagott, governor of Litchfield, was with all his horse and ffoott at Burton, marching towards the rendezvouze, our men presently left a guard of dragoones on the prisoners in the church, and marched with their horse towards Burton, and assaulted the enemy; and after two or three hott encounters, beat them clean out of the towne, where there were five of our side slain, and seventeen of the enemy, many of them taken prisoners, and brought back to Boylston Church to the other prisoners, which made upp three hundred in all, and soe marched with them to Derby."

The foregoing particulars relative to the different engagements which took place at Burton between the troops of the contending armies, are taken from a document much used by historians, entitled, "A true relation of what service hath been done by Colonel Sir John Gell, Bart., for the Kinge and Parliament, in defence of the town and county of Derby, etc., etc., from October, 1642, till October, 1646," and which I have given in the original version, as affording, in addition to its historial value, an interesting example of the simple unaffected language in which the momentous events of the day were narrated. The assault upon the bridge by the Queen's troops appears to have been led by the "fiery Prince Rupert," and was the occasion upon which Sir Thomas Tyldesley won his spurs, as described at page 56. It is a singular circumstance that of the six different attacks upon the town and bridge, not one was unsuccessful, both Royalists and Parliamentarians successively being driven from it by the

forces opposed to them; and it is not the less remarkable that in this frequent interchange of possession, the bridge was never condemned to be dismantled, nor designedly rendered unserviceable as a means of communication, for all purposes apart from actual hostilities.

It is not unreasonable to surmise that these repeated attacks upon the town were more or less ruinous to its inhabitants as a trading community, and entailed upon them a great amount of personal suffering and distress. The people were not only bound to furnish the necessary provisions for the support of the troops quartered upon them, whether belonging to the Crown or the Parliament, but also at times forced to take the field as "armed countrymen" to fight in the ranks of their oppressors. Some notion may be gleaned of the critical position to which they were at length reduced, from a letter of the earl of Essex, bearing date November 22nd, 1644, in reply to a petition to set up a garrison at Burton. His lordship says; "The reason I have detained your messenger so long is that upon discourse with some Staffordshire gentlemen concerning the placeing a garyson at Burton, I fynd in them great opposition and unwillingness, in regard of the pooreness of the inhabitants there, and that the towne consisteth only of clothyers and maulsters, and if that be made a garison, and shut up from trading they would suddenly be impoverished, and likewise the Staffordshire horse having most of their maintenance from that place, and if any forces of other counties be put in garison there, theire forces haveing but lyttle pay now would there be much straightened and discouraged; yet notwithstanding I have prevayled with them that a garison shall be placed there, for which purpose they have desired me, that they may put 200 horse and 100 foote there; and you to joyne with them and place in the rest, for the compleating of the garison, al which I recomend unto you, desiring that you will accept of it, that in your doeing thereof there may be no division among you, but accord (it being for the generall good of the kingdom) as becometh neighbors and loveing frends."

The anticipated impoverished condition of the trade of the town* was too truly and fully realized. The garrison

*It is difficult to say when the Woollen trade became the staple of

was established, and with what result is indicated in the following by Sir Simon Degge. "It was," he says, "before the last war, a town given much to cloathing, their kersies being in great esteem in this country, but since the war it has declined in trade, having suffered much by the plunder; it being held out against the king 1614," and, he adds, "at which time the church was much defaced by the occasion of two barrells of gunpowder casually fired in the church, which blew up the roof and burst all the windows."

The following extracts will give a general idea of the nature of the contributions levied upon the inhabitants of the district in support of the garrisons placed with them previous to the time mentioned by Lord Essex. The Parliamentary Committee by an order bearing date February 17, 1644, reports: "That whereas by our order, Colonell Ashenhurst, was to receive the weekly pay of Burton-upon Trent, and Burton Extra, towards the payment of himselfe, his officers, and souldiers, and upon petition of the said inhabitants, shewing that they have been much plundered by the enemie and now lye under theyr power, it is ordered that the weekly pay of the said places shall be forborne till further orders." And on the 25th of the same month is the further entry that "Whereas the weekly pay of Horninglow and Branston assigned to Colonell Ashenhurst, for the pay of his officers and souldiers are in arrear £12 each; it is

the town, but it could not have been of long standing at the time of the Civil War. LELAND, who wrote in the time of HENRY the VIIIth says that there were then "many Marbellers working in alabaster," and CAMDEN subsequently describes Burton as "famous for its alabaster works," the material being doubtless obtained from the neighbourhood of Hanbury, the point nearest to Burton where Gypsum occurs in sufficient quantities and of the necessary quality to be available for ornamental purposes. This branch of trade had doubtless been followed many centuries in the town, it being one specially encouraged in ecclesiastical and mortuary decorations before the Dissolution of the Monasteries, but after this event it gradually declined and so far as regards Burton, had, as may be inferred from the above, been supplanted by that of clothing before the middle of the 17th century. This was in turn succeeded by the manufacture of hats and military caps, the latter branch being, for a long time, extensively and successfully carried on at the Soho, by the firm of which the late Mr. John Port, was the last representative. Branston, in the time of ERDESWICKE was famous for *Grindstones*, but, like the alabaster, the rocks from which they were quarried lay at a considerable distance from the seat of manufacture.

ordered that in regard of their greate sufferings by the enemie, and that they are still under theyr power, that they shall pay £6 each. and for their 30s. a week only 15s. each."*

Although the inhabitants of the district were thus compelled to maintain the troops assigned to it, the authorities were not the less anxious, by imposing severe punishments upon their men for social excesses, to render them as little liable as possible to personal insult or indignity. It was "ordered" by them "That whosoever shall sweare, for the first offence shall forfeit 4d.; for the second offence to ride the horse, with a paper on his backe declaring his offence; and for the third to be bored through the tongue and casheard, according to the Lord General's order; and for officers to pay 12d. an oath. That whosoever shall be drunk shall forthwith be committed, and have nothing but bread and water for twenty-four hours; for the second offence to ride the horse with two flagons or potts at his backe; and for the third offence to be cashiered as a wicked and unservicable member. That whosoever shall commit fornication, or frequent the companie of light women, whether officer or souldier, shall be forthwith cashiered and the woman carted." Probably the Cavaliers were a little more indulgent in respect to some of these common vices, but they had a ready and doubtless very effective method of dealing with graver charges committed by their men while upon the march. It is recorded that on Whit-sunday, May 25, 1645, the king's army marched to Burton-upon-Trent, the head quarters. His Majesty lay at Tutbury Castle, then under the command of lord Loughborough, and between the two towns "a foot soldier was tyed (with his shoulders and breast naked) to a tree, and every carter of the trayne and carriages was to have a lash, for ravishing two women."

*The effects of these district contributions were not confined to the parishioners individually; they, as a natural consequence, interfered seriously with the payment of rents due to the owners of property. In an account of the "Fforen Rents of Burton," for the years 1643 to 1646 inclusive, large amounts are returned as arrears, for the non-payment of which "no other reason is given but the hardness of the times." The "Parson of Lee," as an additional instance, pleaded that during three of these years his land was under sequestration, and that, for his services in the garrison at Stafford, the Committee granted him an exemption from his customary rent.

When hearth-money was collected in the time of Charles II (1662) there were in Burton 296 hearths which paid £29 12s. 0d., Burton Extra 41 hearths which paid £4 2s 0d. In Branstone 44 hearths which paid £4 8s. 0d. In Horninglow 30 hearths which paid £3 0s. 0d., and in Stretton 33 hearths which paid £3 6s. 0d.

In the year 1255 the greater part of the town, the buildings of which then consisted principally of wood, was destroyed by fire, and on the 27th November, 1514, it was nearly swept away by floods. The particulars of this latter event are attached in the form of a memorandum to a rental of the Burton estate, made by Edmund Twynyho, in 1549. On the above date "their hapned a great floode at Burton-upon-Trent, the lyke whereof (comyne upon so small cause of rayne) was never seen, for besides the overflowing of the Bonde-end, the Cat Streate, and halfe the Newe Street, and all the grounds aboute the towne, yt cam habundantly into the Manor,* and overflowed the buttryes, the seller, the lower hall (to the myddeest steppe going into the courte) and the lower parlor, and the stables, barne, backhouse, brewhouse, and all the houses of offyce therabouts." The town was also in 1771, in 1792, and in 1795 visited by heavy floods which inundated the greater part of it, and inflicted considerable damage. During the latter year (February 13th and 14th) all traffic was completely stopped, and some of the arches of the bridge gave way, the Church, the north side of the Church-yard, and the Market-place being the only places uncovered by the flood. A remarkable inundation occurred in November, 1852, and during the last two or three years the Trent has occasionally resumed some of its ancient power and magnitude. On November 5th, 1795, a terrible hurricane dislodged a considerable part of the battlements of the Church, and did much other damage, and on the 18th of the same month, after a violent wind, the inhabitants were much alarmed by the shock of an

* This document is interesting as evidence of the existence of a Manor house and offices here, previous to the Dissolution of the Monastery, and which, although standing within the Abbey walls and undoubtedly connected with that institution, were nevertheless independent erections, and occupied, in all probability, by the principal lay officer under the Abbots.

earthquake, the course of which was from north-east to south-west.

The parish church, dedicated to St. Modwen, was commenced in the year 1719, and not completed before 1726. It is a lofty, commodious, and not in-elegant stone structure, but much smaller than its predecessor, and, as might naturally be expected from the art-lapsed period of its erection, considerably inferior to it, both in architectural design and in the general character of its masonry. The walls of the old church were entirely removed before it was begun, and now not a stone of the grand old pile remains *in situ* above the surface of the ground, but numerous fragments of its columns, doorways, arches, and windows, enriched by beautifully carved interlacings, foliations, tracery, and other characteristic ornamental work, together with perfect and broken fonts or piscinæ—these latter generally of millstone-grit—are frequently turned up in odd, out-of-the-way places, as evidence, not only of the varied features of an art exercised with such elaborate skill and effect, but also of the vandalism which prompted their wholesale removal from the site they had so long, and as memorials of the establishment of an ancient ecclesiastical power, not ingloriously occupied. The only relic directly connected with the parish church which can claim association with that of the convent, is the font—a fine example of the old immersion fonts—cut out of a solid block of coarse gritty sandstone, octagonal in shape, and each panel carved in Perpendicular shafts and trefoils. Not long ago it was renovated by the mason's chisel, and some such operation it had evidently to undergo, in the year 1662, an incised slab in the shaft containing that date in addition to the initials of three individuals, (*W. M.*, *T.H.*, and *T. W.*,) who were, no doubt, then minister and churchwardens. The arms of CHARLES I. now lying in the vestry, were formerly suspended in the church, and subsequently those of GEORGE 1. The latter, which hang in the porch, were no doubt introduced on the completion of the church in 1726, and the former upon the occasion of some extensive repairs, probably those rendered necessary by the explosion of powder in the year 1644, it being an old custom to suspend in churches, repaired or rebuilt, the arms

of the king in whose reign such restorations were completed. The two flags of the old Burton Volunteers are also preserved in the vestry.

The church contains several mural and other tablets, and a few incised slabs in the floor of the aisles and chancel. In the floor of the south porch are some slabs of alabaster, apparently of great age, but the inscriptions upon them are difficult to decipher. Those within the church, bearing the oldest legible dates, are also of alabaster, near the altar, and record the names of ALEXANDER WALTHALL, *ob* 1688, and 16 6, probably father and son; the third numeral in the latter date is however obliterated. The latest inscription is to the memory of THOMAS SALT, *ob* 24th October, 1864. In the year 1865, the plain glass window of the chancel was replaced by a handsome one in stained glass, representing the principal events in the life of the Redeemer. The central compartment of the window was the gift of the Marquis of Anglesey; the one to the east of it was presented by M. T. Bass, Esq.; and the other by Henry Allsopp, Esq., the total cost amounting to upwards of £400. The organ was the work of the celebrated John Snetzler, of London, and erected by subscription in the year 1771. The tower contains eight musical bells, on which is a set of chimes designed by JOHN WHITEHURST, of Derby and London, and which, with the clock, cost £203; the earl of Uxbridge giving £100, and the remainder being provided by a parish rate. In the south aisle lies the body of Thomas Hixon, who, in the year 1738, bequeathed "£120 to erect an altar piece in this Church."

The parish Register is one of the most perfect in England, and probably pre-dated by few, if any, in the county. It commences two years before the Dissolution of the Abbey, in the 29th Henry VIII, A.D. 1538, and is continued without intermission to the present time. The usual entries are carefully made, but they do not include more than a few notices of special interest. The following extract from amongst the baptisms is curious:—"Willm. Paget, first sonne of Thomas Paget, Lord Paget of Beaudesert, was borne at Norwch in Mr. Stuard's house, within the parishe of St. Peter's, uppon a Wenesday betwene tou and thre of the clocke in the morninge, the seventene day of December,

1572, and was christened the *xxiiij* day of the same moneth. Willm. Lo. Burleighe, highe Treasorer of England, and Robert, earle of Leacester, beinge his godfathers, and Margaret, the countesse of Derbye beinge godmother." The succeeding copy of an entry, which is beautifully written, is amongst others of a similar character then customary to be made by the minister on his appointment to the cure. "*Noma eorum qui de sacro Baptismi fonte suscepti sunt a 24° die Julij; quo die ego Joannes Harsall Nordovicensis Legum Baccalaureus, Novi Collegij in Academiâ Oxoniensi Socius Burtonam veni, ab Honoratisso meo Patrono D. Guliel. Paget ad eclicæ Burtonensis curam accitus*, 1601."*

The Register further shows that in the year 1664, the custom commenced here of making collections in the church to assist in repairing and restoring cathedrals and churches in different parts of the kingdom, (especially such as were injured by fire) the reparation of bridges, the relief of the poor, and for a variety of objects, both domestic and foreign, requiring charitable assistance. These collections were legalized by letters patent, or "briefs," obtained from the Court of Chancery, and the church-wardens were bound, under a penalty of £20, to keep proper accounts thereof, and to remit

*The Marquis of Anglesey is still not only patron of the living but lay rector, of Burton; and the curacy, which is perpetual, was until a few years ago exempt from episcopal jurisdiction. Upon the attainder of Thomas, Lord Paget, the youngest son of the famous William, Lord Paget, who received it from Henry VIII, the whole estate reverted to the crown, but in the 39th year of Elizabeth, 1597, it was re-granted to William Paget, Esq., afterwards Lord Paget, subject to a Fee-farm rent of £715 0s. 11¾d., and also to the following charges :—

	£	s.	d.
The payment of an annual stipend to the curate of Burton	14	10	0
Stipend of the Parish Clerk of Burton	2	0	0
Stipend to the School Master of Burton	2	0	0
Stipend for a Preacher at Burton	14	0	0
	£32	10	0

The Fee-farm rent is now by purchase reduced to £6 6s. 8d. The stipends of the Parish Clerk, School Master, and the Preacher, have entirely lapsed, but that of the Curate is increased. In the 3rd Edward VI. the Curate's stipend was £10; the Priest's £7; the Deacon's £4; and the Clerk's 40s.

within a given time, to the holders of the briefs the different sums collected under them. The following are examples :—

		£	s.	d.
"1664 Oct-9	Collected by a Letter Patent for Henry Lisle, of Gisborough, in ye North Rideing of ye county of York, Wollen Draper, the sum of	0	8	0
October 10	Collected for ye Parishoners of ye Parish Church within ye garrison of Tynemouth, ye sum of	0	7	0
1645 Feb. 19	Collected for Daniel Longe, of Hoveington; co. Wilts, husbandman ye sum of	0	7	0
March 5	Collected for the inhabitants of Chryson, Northamptonshire, for repairing Chryson Bridge, ye sum of	0	4	6
1690 April 14	Paid Adam Froggatt for ye distressed Irish Protestants, ye sum of	9	10	0
1692 Sept. 16	Paid Adam Froggatt for ye redemption of slaves in Algiers, Barberry, etc.	2	10	0
1694 October 1	Paid Adam Froggatt for poor French Protestants	5	10	0
February 9	Given to William Shuter, of Tamworth, in ye county of Warwick, tanner, whose briefe was not read in ye Church	0	5	6
1701 June 20	Paid to John Ramshaw for Ely Minster (damage £2,500 6s. 11d.)	0	5	0
	Paid to John Ramshaw for Crackmeal in Shropshire, (loss £700 and upwards)	0	4	1
	Paid to John Ramshaw for Beccles in Suffolk, (loss £1,649 1s. 9d.)	0	8	9"

The present Churchwardens, Messrs. Warham and Hodson, are in possession of a valuable document, entitled "The Burton Vestry Booke," and headed "Burrough of Burton super Trent, 1699." The first entry bears date March 30th, of the above year, and the last August 7th, 1781. As it contains numerous references to the Burton Town's Lands, such notices will be better understood if given after the ac-

count of the different charities of the town, which it is proposed to introduce as nearly as possible according to the form in which they were originally bequeathed.

From the particulars of a special enquiry into the condition and administration of these charities in the year 1709, it appears that at that time there were divers houses and lands in Burton, Bond-end, Stretton, Horninglow, and Stapenhill, called the town's lands, and in one of these houses was an old coffer, described as the Town Coffer, in which were kept all the documents connected with the different charities of the town. This coffer had four locks, the corresponding keys of which were held by four of the Feoffees, and every year upon St. Thomas's day, the Feoffees met at the house where the coffer was kept, to take account of the rents and to dispose of the charities in the manner prescribed. The Feoffees yearly appointed two officers who were called Town's Masters, and their duty was to collect the rents and to account for the same to the Feoffees on the day named. Out of these rents lord Paget was paid a chief rent of £1 18s. 3d. per annum; the constable's charges were defrayed; the cross was repaired; and also all instruments of Justice, such as stocks, whipping-stocks, etc. There were then two bridges, one in Horninglow Street, and the other in Cat Street, both of which, with the pinfold, were repaired out of the town's rents. A coat was also given to the town servant, who was to keep foreign poor out of the town, and also take care of the stocks and other public things belonging to the town. He was paid a salary of £2 per annum. The pinner was also paid £1 per annum, and the remainder of the rents were employed in apprenticing poor children, from four to six yearly, and sometimes others who had been receiving parish relief. The rents arising from this charity amounted at the time to £38 9s. 4d. per annum, and the government of it was vested in ten or twelve Feoffees chosen out of the burgesses of the town, but at the date in question the surviving Trustees were William, lord Paget, Isaac Hawkins, and John Wakefield. It is curious that at the time of the enquiry the original of this charity could not be discovered, but it appeared from writings then in the town coffer that it dated

long before the dissolution of the Abbey of Burton, one of the feoffments, which was a renewal, being executed 11th July, 21 Henry VIII.

One Burstenhead gave a hundred pounds, which, by the careful management of the town's house, had then been doubled, and the interest arising therefrom was applied to the setting forth of poor children apprentices.

Mr. Finney, a tradesman of London, born at Lichfield, gave one hundred and ten pounds to be laid out in land, and the rent thereof employed in apprenticing one poor boy yearly. The land purchased with this money was a close in Anderstaff Lane, and it then went by the name of Finney's Close.

William Bean, Abbot of Burton, placed a certain sum of money in the hands of Sir Richard Sacheverall to purchase land sufficient to produce an annual rent of £5 6s. 8d., which was to be employed in the maintenance of a school and school master in Burton. The property purchased consisted of several messuages and lands at Orton-on-the-Hill and Breason, in the counties of Leicester and Derby, and on the 20th October, 30, Henry VIII., Sir Richard conveyed the same in trust to William Dethick, of Newhall, Esquire; William Morecocke, of Burton, mercer; and Hugh Gilbert, of Burton, draper, and their heirs. The profits were to be devoted to the purpose intended. It appears, however, that Dethick survived the other trustees, and not only granted a lease of the lands at Orton, but took fines to his own account, and settled the same upon his son at his marriage. In consequence of this proceeding a Commission of Charitable uses was appointed, and the Commissioners decreed that the property should be settled on new trustees for the benefit of the school, and in pursuance of that decree, 20th August, 1605, a settlement was made to William, lord Paget, John Bradshaw, William Caldwell, John Hawkes, Jeremiah Horobin, Robert Toone, William Clarke, Henry Clarke, Thomas Hutten, Richard Clarke, William Woodcock and their heirs. The Feoffment, at the time of the enquiry, had never been renewed, and who was the surviving trustee could not be discovered, but most of the then trustees were feoffees of the Town's Lands and they appointed Mr. Hazard

and Mr. Shilton school-masters, but a Mr. Barnes, pretending that his wife was one of the house of Dethick, took upon himself to be trustee of the School Lands, and, with the assistance of Solomon Clarke, one of the feoffees, granted leases thereof, and took fines to his own use, and at the death of the last school master he, with others who assumed themselves to be Dethick's heirs, would have presented a new school master, but this course being strongly opposed by lord Paget, the matter was referred to Sir John Turton, who, upon hearing, advised all parties to surrender their claims into his lordship's hands, and to take a conveyance from him, which was accordingly done and executed with livery of seizen, and new leases granted to the tenants in possession, which they agreed to take, and thus satisfactorily determined what at one time appeared likely to become an awkward question.

The school revenues at this time were as follows:—

	£	s.	d.
Payable from the Duke of Newcastle, out of Clerkenwell house to the head master	3	0	0
From the same place to the usher	6	0	0
The lands at Breason previously £10, then raised to	21	0	0
The lands at Orton-on-the-Hill increased from £18 6s. 0d. to	25	10	0
Annual income ...	£55	10	0

and then proposed to be disposed of as under:—

The head master to have	40	0	0
For ringing the bell and sweeping the school	1	0	0
For collecting the rents	1	10	0
To be put into the town's coffer for repairs and incidental expenses	2	10	0
For entertainment of the visitors yearly ...	0	10	0
To the Under Schoolmaster	10	0	0
	£55	10	0

In addition, lord Paget by custom gave the under Schoolmaster, £2 per annum, and also in consideration of his being formerly clerk of the church, his lordship allowed him £3 yearly for looking after the choir.

Dame Elizabeth Paulett, widow, commonly called Lady Paulett, by indenture, dated 5th February, 33rd Elizabeth, bequeathed to Humphrey Dethicke, and seven others, and their heirs in trust, the undermentioned messuage, lands, and hereditaments, the residue of the rents and profits arising from which, after the payment of certain fixed sums to the schoolmasters of the Grammar School, as already mentioned, were to be devoted to the foundation and repair of an alm-house in the Swine-market, Burton, and for the relief and maintenance therein, of five unmarried old and impotent women, of the poorest dwelling in the borough of Burton, and of good and honest conversation, each of whom were to receive quarterly the sum of 26s. 8d., and also every year at the feast of All Saints, one freyse gown, one smock, and one apron, and a proper supply yearly of fuel or coal.*

The charity consisted originally of:—	£	s.	d.
One house in the Swine Market at the annual rent of	1	0	0
A Messuage in Fenny Bently, near Ash-bourne	10	0	0
Some lands in Flagg	1	15	0
Some lands in Chelmoreton	2	0	0
A Rent charge per ann., arising out of a house, called "Garner House," in Clerk-enwel Close, payable by lord Crewe	5	0	0
Payable out of Clerkenwell House† by the duke of Newcastle	1	0	0
	£20	15	0

The site of the Alms-house, or "Bede-house," in the Swine Market, was originally occupied by two tenements which were pulled down and the Alms-house erected in the year 1593.

* The yearly stipend of the inmates of this Alms-house was in the year 1807, raised from £10 10s. to £12 10s., and in 1821 to £15, since which time it has received no addition. Each lodging or house consists of a single room on the ground floor.

† This "House" appears to have been part of the then lately dissolved monastery of Clerkenwell.

A Feoffment of this charity was made 17th September, 1689, the writings whereof were in the Town's Coffer.*

Lady Paulett also bequeathed property, the rent of which, amounting to £13 per annum, was to be appropriated to the purchase of twelve-penny worth of bread every Sabbath day, and distributed to twelve poor persons at the Church, immediately after morning service, and the rest was then, or should have been divided amongst the poor at Easter or Whitsuntide. The administration of this charity did not appear to have been satisfactory, according to the following memorandum. "This charity was managed by Mr. Solomon Clarke in his lifetime, and is now managed by Mr. Orme, but where the lands lye, or what the particular charity is or how secured, I cannot tell, Mr. Orme being not willing to give any account thereof."

Ellen Parker, "an antient maide," by will† bearing date February 11th, 1634, bequeathed £800 to buy land within the liberty and town of Burton, for to build and keep in repair one Alms-house with six convenient lodging rooms for six poor widows or old maids, being honest and poor, and of the oldest, those of Stretton, where she was born, to be chosen with such of Burton as were eligible, and the yearly rent of such land was to be paid quarterly for ever towards the maintenance of these six persons, each of whom was to receive every Christmas one black woollen cloth gown, one apron of linen cloth, and one cathern or leathern apron. The lands purchased by the executor, John Birchenhead, consisted of:—

* According to the Burton vestry book it was ordered at a vestry held September 16th, 1744, "that a suit be commenced against Sir Rowland Aston, for the arrears due to Lady Paulett's alms-houses, and the Trustees of the Town's lands." Unfortunately however, neither the particulars of the arrears, or the situation of the property are given, upon which the rents were due.

† According to the will of Ellen Parker three recipients of her charity were to be chosen from Stretton and three from Burton: this condition has longed ceased to be observed. The stipend of each inmate now consists of 5s. 9d. per week, and they receive in addition one gown and apron yearly at Christmas; also upon the Christmas succeeding her appointment each woman is supplied, (but which is not repeated during life,) with a black silk bonnet and woollen cloak.

A farm in Rolleston, the annual rent of which in 1709, amounted to ...	5	0	0
Lands in a close called Ballance Close in Anderstaff-lane, Burton	7	0	0
A Cote-house, close, and some lands, near Nether Hall, Anderstaff-lane ...	8	0	0
Two little houses in Anderstaff-lane ..	1	0	0
A house in the High-street	1	0	0
Lands in Anderstaff lane	1	13	4
A house and dye-house in Anderstaff-lane	3	0	0
Annual value of Charity*	£26	13	4

Ellen Parker's alms-houses stand on the east side of the High-street, with the following inscription thereon: "These Alms-houses were built and endowed Anno Domini 1634, by Mrs. Ellen Parker, for the maintainance of six poor women, and new fronted in the year 1778."

This Feoffment was renewed October 1700, the Feoffees being William, lord Paget, the Honourable Henry Paget, Isaac Hawkins, Christopher Wright, of Stretton, John Wakefield, Francis Wakefield, and Thomas Ward, of Stretton.

Richard Caldwell, of London, Doctor of Physic, born at Rolleston, gave, 22nd of February, 24th Elizabeth, £120, to be lent out for five years interest free, to four poor tradesmen in Burton, for advancing their stocks, wherein the clothiers were to have preference. The government of this charity was vested in the Bailiffs of Lichfield, who, every five years called in the money, and re-lent it to the more necessitous applicants. Upon these occasions the Bailiffs came to Burton, and were paid 20s. for their trouble, which sum was secured upon a shop in Bond-end.

Richard Steele, a tradesman in London, gave 20s. yearly to the poor of Burton, Branston, and Stretton, which was charged upon a lease held of the city of London, and being in arrear for some time, the Executors in order to be relieved of the trust gave £21 in lieu thereof, which money was paid to

* There was also formerly a sum of 3s. received by this charity, in acknowledgment of the privilege of stopping a path belonging to the Alms-house leading to Friars' Walk.

Robert Appleby, who granted an annuity of 21s. yearly out of a house and some freehold land at Anslow, (subsequently exchanged for a field at Rolleston,) to be applied in the manner intended by the original testator.

William Ward, of St. Dunstan-in-the-West, London, by his will, dated November 7th, 1614, gave £40 to be lent out from five years to five years interest free, to six tradesmen in Burton, and the same was then under the government of the Town's house, and held by six persons in equal sums of £6 13s. 4d.

Thomas Goodridge, or Goodinch, late of Yoxall, chapman, by his will dated November 24th, 1648, gave to the town of Burton £25, to be lent out to five tradesmen in Burton at five per cent, and the interest to be distributed amongst the the poor. This money was under the government of the churchwardens, and was, in 1709, in the hands of six persons, four of whom had £3, and the remaining two, £2 10s. each.

Widow Morris gave £10, the interest of which was to be given to the poor. This charity was in the government of the churchwardens.

Richard Hogg gave £20, the interest to be employed in buying eight pairs of shoes yearly, for eight poor people of the town. This money was in the hands of Joseph Warren, of Stapenhill, and the shoes were yearly provided by Joseph Rice.

Robert Watson gave a tenement in New-street, for the payment of £1 6s. 8d. yearly, to be divided amongst the poor of Burton, by 6d. a-piece on Christmas-eve.

Daniel Watson gave two tenements in Cat Street, the rent of which, £2 5s. per annum, was to be divided amongst the poor of Burton on Whitsun-eve.

Mr. Thomas Boylston, of London, established a Lecture upon every Thursday, to be preached in Burton church by some able orthodox divine of the Protestant religion, and for making good thereof, he placed £800, in the Cloth-workers' Company in London, and appointed them to pay yearly to such person as should be chosen lecturer, £21 4s., and to the clerk for ringing the bell, 16s. quarterly. The lecturer was to be chosen by the bailiffs of Burton, or their officers, and four or five or six of the chief and ancient inhabitants

thereof, with the advice and approbation of three neighbouring ministers—John Boliston, of Weston; Thomas Duldale, of Walsall; and Richard Bett, of Stafford; or any two, and as any of these died, the survivors had power to choose others. It was also provided that in case of any neglect or forbearance in preaching the lecture, one-half of the yearly payment to be then made was to go to the treasurer of Christ's Hospital, London, towards the support thereof, and the other half to the poor of the Cloth-worker's Company. On the Tuesday night before Michaelmas, yearly, there was a meeting for the choice of a lecturer, and a sermon preached on the occasion.

There was a house in the High-street, called "Pavement-house," which was given by Richard Bowles, in the year 1531, for the repairing of the pavement in the High street, and the rent thereof, £10 per annum to be thus employed for ever.

Richard Allsopp,* of Burton-upon-Trent, mercer, by his will, dated May 26th, 1728, founded a charity school in Burton for the instruction of thirty poor boys of the town, the poorest, and those attending divine service to be preferred; and endowed the same with the sum of £200, which amount was to be invested in land, and the rents thereof for ever secured to a master to teach the said poor boys to spell and read.† The reverend William Browne, perpetual curate of Burton, Mr. Humphrey Jackson, Mr. Thomas Bucknall, Mrs. Hannah Troundrow, and Mr. Thomas Troundrow, were appointed executors and trustees, with power to the survivor or survivors, upon the death of any of them, to choose other honest and substantial men as trustees, to make up the number of five, who were to be entered in the Book of Public Accounts.

* Richard Allsopp appears to have been in frequent attendance at the vestry meetings of his day, his name written as above, being seldom absent from the list of those present at the various business transactions described in the vestry book. The last time it appears is to an order dated May 4th, 1727.

† Thirty boys are now educated under this charity in the Christ Church National Schools. In the year 1824, the master appointed to teach the boys, had as his salary, the whole of the rents of the land (9a 0r. 39p.), situated on Horninglow and Goose Moors, and amount-

Francis Astle, in 1735, gave by feoffment, land worth £6 per annum, to cloathe yearly for ever, four poor boys, scholars in the school founded by Richard Allsopp, with coats, waistcoats, and breeches of grey cloth, also, hats, stockings, and shoes.

Mrs. Almond, gave by feoffment, a messuage, farmhouse, and lands at Aston, co. Derby, and lands at Rolleston and Horninglow, the produce of which was to be applied as follows: 2s. 3d. to be distributed in three-penny loaves to nine poor persons every Sunday morning in Burton church ; £1 10s. to be paid to each of the overseers of the poor of Branston, Horninglow, and Stretton, to be given yearly, for ever to the poor of each several village on Easter-eve, and the remainder in money to the inferior inhabitants of Burton and Burton-Extra ; also, towards putting out poor boys apprentice, clothing and paying the bell-man, the constable's charges and repairing of bridges, &c.

Isaac Hawkins, by will dated February 3rd., 1712, directed £100 to be laid forth in lands, and settled for ever for the maintenance during life of some poor man in Burton, the oldest to have the preference.

William Hawkins, by will, bearing date September 23rd, 1724, settled a rent-charge of £5 upon a capital messuage and the site thereof, in Newport, to be distributed in bread yearly to the poor people of Burton. Subsequently gowns were substituted for bread, and a certain number of poor women, formerly once in three years, had these articles distributed to them.

The Earl of Uxbridge and the Freeholders of Burton gave, in accordance with the award of the Enclosure Commissioners, in 1772-3, a certain piece of land called the "New Close," the rents whereof were to be devoted to lighting, cleansing, and maintaining the streets of Burton and Bond-end, and for such other public uses for the benefit of the town and hamlet as should be considered necessary.

The Workhouse garden, commonly called "Robinson's charity," consisted of a piece of land on the west side of

ing to £24 per annum. The land originally purchased was situated Kings' Bromley, but on the enclosure of the Burton Moors it was fortunately for the benefit of the charity, exchanged for the land described.

Anderstaff-lane, the rent of which was to be employed in providing annually six poor men with coats and hose.

The reverend John Spateman bequeathed by his will, bearing date 17th of January, 1727, the sum of £10 to be given yearly to the poor of Burton.

In addition to the foregoing, there was, until the year 1791, distributed amongst the poor of Stretton, the interest of £36, but the origin of the charity is not clearly known. The money had been advanced to an inhabitant of Stretton, who became bankrupt; and the charity was consequently lost. There was also the further sum of 6s. 8d., called "Mr. Partridge's money," charged upon a house in Horninglow-street, for repairing the church road, but the payment thereof was refused about the year 1794, and there being no documents to show the origin of the gift, it also was lost.

Elizabeth Wilkins, of Burton, spinster, directed that the interest of £400 (invested in 3 per cent consols.) should be given yearly to the inmates of Ellen Parker's almshouses.

Elizabeth Johnson, in the year 1861, built in memory of her sisters Hannah and Sarah, alms-houses in Hawkin's-lane for six decayed women, and endowed the same with the sum of £2,550, which was invested in 3 per cent consols, in the name of the official trustee of Charitable Trusts. Since the foundation a further sum of £245 18s. 6d. has been similarly invested for the same purpose.

William Phillips, of Springfield house, in the parish of Uttoxeter, by will, dated September 12th, 1863, gave the sum of £400, to the vicar and churchwardens of the parish of Burton-upon-Trent, in trust to invest the same, and to apply the annual income thereof in such manner as the said vicar and churchwardens, or the major part of them may think most desirable, in the purchase of fuel, clothes, meat, or bread, and to distribute the same according to the discretion of the major part of them from year to year, for ever amongst the poor of the parish of Burton-upon-Trent.

At the present day the whole of the previously named charities of the town, with the exception of the school property, and that of William Phillips, are under the the management of the Feoffees, but there is an old gift called the "Widows' groats," still vested in the churchwardens, the amount of which, £1,

is yearly distributed by them in groats, or four-penny pieces, on St. Thomas's day. According to the old Vestry Book, already described, this sum was originally charged, partly upon a house in Burton, commonly known by the name or sign of the "Vine," (the present residence of the Rev. Peter French) and partly upon the public charity money given by Thomas Godridge, of Yoxall; but on the 29th of August, 1731, the respective sums of £10 upon each property was called in, and paid, by the then churchwardens, towards discharging the debts and expenses of the building of the church; and the interest of these two amounts, which has ever since remained a debt, chargeable upon the town, constitutes the charity of the "widows' groats."

There is also an exceedingly important charity, called the Burton Poor's Rate Charity, which originated under an Act of Parliament passed in the year 1812 for inclosing lands within the manor and parish of Burton-upon-Trent, and for selling part of the said lands and applying the produce thereof in aid of the Poor's Rates of the said parish. The lands alluded to consisted of certain commons and open or Lammas meadows, lying partly in Burton meadow, and partly in Burton Extra, and over which the Earl of Uxbridge, with other freeholders of the town, had rights of common of pasture from the time of hay harvest to the Candlemas day following. According to the provisions of the Act certain parcels of land, with the rights of common over the whole, were to be disposed of, and the money invested in Trustees (the Marquis of Anglesey is one of the present Trustees), and laid out in the purchase of lands or of 3 per cent consols, and the rents and profits thereof to be paid over to the Overseers of the poor of the townships of Burton and Burton Extra, to be by them disposed of in the same manner as the rates and assessments for the relief of the poor of the said townships, and for no other use, intent, or purpose whatsoever. The sum of £6,400 is now invested in 3 per cent consols, and the dividends applied as follows; £32 per annum to Burton Extra, and £150 18s. to Burton.

With the view of showing the respective value of the different bequests to the town at three distinct dates, I have prepared the following table

	1702.			1786.			1866.		
Town Lands	38	9	4	...			920	17	3
Burstenhead's Charity ...	10	0	0	lost					
William Finney's	5	10	0	6	5	0	208	6	6
Bean Abbots' School Lands ...	55	10	0	134	10	0	445	10	8
Lady Pauletts' Almshouses ...	20	15	0	42	5	0	98	19	11
Lady Pauletts' Bread Charity ...	13	0	0	lost					
Ellen Parker's Almshouses ...	26	13	4	32	0	0	414	2	7
Richard Caldwells' Gift ...	120	0	0	120	0	0	lost		
Richard Steele Gift	1	1	0	1	1	0	1	1	0
William Ward's Gift ...	40	0	0	lost					
Thomas Goodridge, or Goodinch's Gift	25	0	0	lost					
Widow Morris's Charity ...		10	0	lost					
Richard Hogg's Charity	1	0	0	lost					
Robert Watson's Charity ...	1	6	8	lost					
Daniel Watson's Charity	2	5	0	4	0	0	7	0	0
Richard Bowle's gift (Pavement House),	10	0	0	10	0	0	29	7	6
Richard Allsopp's Charity ...				8	0	0	453	9	10
Francis Astle's Charity				6	0	0	10	0	0
Mrs. Almond's Charity ...				39	10	0	140	6	7
Isaac Hawkin's Charity				4	0	0	10	17	0
William Hawkin's Gift ...				5	0	0	5	0	0
New Close				68	18	0	609	3	2
Burton Poor's Rate Charity							182	18	0
Robinson's Charity (Workhouse Garden)							12	18	0
Rev. John Spateman's Gift ...				10	0	0	lost		
Stretton Charity				1	16	0	lost		
Mr. Partridges' Money ...				0	6	8	lost		
Elizabeth Wilkins' Gift							12	0	0
Elizabeth Johnson's Almshouses							83	17	6
William Phillips' Charity							12	0	0
TOTALS	£371	0	4	£493	11	8	£3657	15	6

On reference to the table it will therefore be found that of the thirty charities and gifts, now and formerly belonging to the town and hamlets of Burton, no less than ten have been entirely lost, and curiously enough they include the whole of the pecuniary bequests which were specially intended for the individual benefit and assistance of the poorer tradesmen of the town. It is scarcely within the province, or the object of these pages, to trace out the different particulars attending the sacrifice of the various amounts in question—it will be sufficient to note the fact thereof, and to explain it as due principally to a laxity in their administration, but not infrequently to proceedings of a less creditable character.* In the case of Caldwell's loan,

*I have been informed by the person who discovered it, that, on the restoration of Stapenhill Church in the year 1838 a stone tablet was found inserted in one of the interior walls of the church,

the last time it was dispensed by the Bailiffs of Lichfield at Burton, was about the year 1824, one of the then recipients being still alive and a resident in the town. It is just possible that the representatives of those to whom the charity was entrusted may be able to account for its discontinuance, but I am not aware that the necessary explanation has been given.

There is a somewhat curious legend connected with the sacrifice of Richard Hoggs' charity, which in effect is as follows: Within the north porch of the old church, close under the stair-case leading to the gallery lies a dark-blue stone slab, upon which may be read, amongst the wreck of an inscription, that it once covered the remains of Richard Hogg, and that he died in August, 1657. The remaining part of the inscription originally described the particulars of Hogg's charity, which as previously noticed was in full operation in the year 1709. Some few years after this date, in consequence of the death of the other trustees, the government of the charity became vested in a single individual, who falling into difficulties disposed of it to his own use, and then fearing that the memorial upon Hoggs' tombstone would still be proof against him, engaged a man to obliterate with a pick this last remaining evidence of the trust which he had designedly abused. How far this legend is to be credited is a matter of opinion, but it is perfectly clear that Richard Hogg's tombstone has been wantonly and purposely defaced—not however by an ordinary "pick," for a tool of that description would scarcely be effective upon so hard a material, but by some sharper instrument; and which, although allowing disjointed portions of several lines

and covered up with plaster, which contained the particulars of a bequest to the poor of Stapenhill of the rent of a field situated in the township, called "Orme's field." It is almost unnecessary to add that no such charity now exists, or has been known to exist within the memory of the living. It also appears that Mrs. Joyce Cox gave £15 to the poor of Stapenhill, and directed that the interest thereof should be distributed on Christmas-eve, yearly for ever, by the vicar and churchwardens. The tablet containing these particulars was formerly preserved in Stapenhill church, but the charity has itself long been lost. There are, however, still remaining to the poor of the village, Robinson's charity of £1 per annum; Cox's charity of 30s. per annum; Jackson's charity, £1 5s.; and Rhode's charity of 15s.

to be with difficulty deciphered, has answered the purpose of thoroughly destroying the sense and purport of the original record.

The property described as the Town Lands is of ancient origin, dating not improbably prior to the foundation of Burton Abbey, and at one time consisted of messuages and lands in every township of the parish. At the present day it consists of upwards of one hundred messuages and tenements, in addition to trade and other premises, gardens, and lands situate in Burton, Burton Extra, Horninglow, and Newton Solney, and held principally under leases from the Feoffees. There is also a considerable sum of money (£8469 18s. 2d.) invested in the public funds, the interest of which forms a considerable item in the yearly rental. Until recently the rents and profits of the estate were gratuitously collected by two Town's Masters, who were formerly the two retiring constables of the town, and more recently the office was performed by the two retiring churchwardens, but about three years ago a Receiver was appointed by the Feoffees, to whom all such rents are now paid. The old custom in respect to the custody of these rents was for the Town's Masters to place all the profits accruing therefrom in the town coffer,* there to remain until St. Thomas's day, when proper accounts of the receipts and disbursements were to be presented by them to the Trustees and such Burgesses and inhabitants of the town as chose to be present at the meeting at the town's house. The freeholders and burgesses then had, and commonly exercised the right of assisting and voting in the management of the property, and all important questions in respect thereof were decided by a majority of those present at the annual meeting. In the year 1824, the money was disposed of, converted, and put, partly to the general and common use, benefit, and profit of the inhabitants of the town of Burton—such as making payment of such sums of money as were and ought to be paid, for and towards the discharge and disburthening of all the inhabitants of the town when any common charge whatever was to be levied within the

* This coffer, to which so many references have been made, is a remarkably massive piece of oak furniture still preserved in the vestry of the old church. It contains many important and curious papers connected with the town.

town—or for any other necessary use and business; and partly applied to particular charitable purposes, such as the apprenticing of poor children, supplying coals to the poor in the alms-houses, clothing for other poor persons, and the distribution of money amongst the poor of the town on St. Thomas's day. According to a statement of accounts for the year above named, there remained, after meeting all the customary claims upon the Charity, the sum of £179 12s. 6½d. The disbursments now comprise amongst others an annual grant to the several schools for the education of the poor in the town, the payment of £15 each to four poor men in the Station-street alms-houses, clothing for other poor persons, and a distribution of money and bread amongst the poor of the town at the church porch on Christmas eve in each year. About ten years ago a "Soup kitchen" was built out of the town's money at the back of these latter alms-houses, and for the last two or three years about one-thousand quarts of soup have there been made and distributed twice during each of the ten or twelve weeks after Christmas, to all who choose to obtain tickets, on the payment of one half-penny per quart, the extra cost however, being defrayed, principally out of Mrs. Almond's charity.

The New Close Charity, as already described, consists of the land now covered by the buildings of Wellington Street which lie between the Borough and Shobnall Roads, and held under building leases at good rents. The rental of this property which is enormous in comparison to what it was previous to the land being laid out in building lots, has of late years been applied principally to the construction of the streets and sewers necessary to the proper developement of the property. In the years 1821-2, the annual rent, derived almost exclusively from the depasturing of stock, scarcely exceeded £80.

It is the intention of the Feoffees, so soon as the necessary consent of the Charity Commissioners can be obtained, to expend about £8,000, in the erection of schools in Waterloo Street, capable of accommodating five hundred children, and to transfer thereto for free education the thirty poor boys provided for under Allsopp's Charity. They further contemplate building alms-houses in Wellington-street, for the bedes-women of Lady Paulett's and Ellen Parker's founda-

tions, the number of which it is proposed to increase to twenty-one—Parker's to fifteen and Paulett's to six.

The Free Grammar School stands upon land formerly belonging to Burton Abbey, and in the year 1656, there was a house adjoining and belonging to it, occupied rent free by the school-master. The school was founded with the consent of the monastery of Burton, and endowed with the lands already described for the purpose of affording a gratuitous classical education to the sons of the parishoners of the town. The earliest deed extant relating to the charity is an indenture of feoffment bearing date June 10th, 1745, in which it appears that the master's salary was fixed at £40 per annum, that some poor scholar should have 20s. a year for ringing the bell and sweeping the school, and that in addition to the other charges already enumerated, 50s. a year should be paid into the town coffer to answer the repairs and incidental charges of the school. It was further provided that in case these repairs exceeded 50s. annually, the excess should be made good out of the master's and usher's income proportionably; but if the rents should be increased, such increase was to be divided between them as the trustees should appoint. In the year 1858, a scheme for the management and regulation of the school was approved by the High Court of Chancery, upon which its present government is based. Under this scheme capitation fees of £7 per annum for the upper school and £2 for the lower school were allowed to be charged, and the trustees empowered to admit to the lower school from any other school in Burton five boys, who, with other five boys of the upper school, were to be educated free. The staff now consists of a master, usher, and assistant master; and the number of scholars averages about seventy.

It was one of the conditions of the testator that the master should be a graduate of the university of Oxford or Cambridge, but the appointment was not to debar him from accepting and performing the duties of a cure. The Rev. Hugh Jones, who was many years curate of Burton, was also master of the school under the old regulation, but under the present scheme the master is no longer free to accept any such office, although the holding of a university degree is

still a necessary qualification for his appointment. The old school, which lay open to the church yard, was a low brick building of one story, and, with the master's house, was pulled down and the present school erected upon the site in the year 1834. The oak desks and forms now used in the school, are, unquestionably of great age, and judging from the carving upon the rail of one of the desks, coeval with the foundation of the school.

It will now be necessary to introduce a selection of the more interesting extracts from the old vestry book, the general contents of which are not only curious but exceedingly valuable as evidence of a variety of customs formerly associated with the government of the town, but which have long since fallen into disuse, and consequently as a rule are now unknown to the inhabitants. The book also contains in addition many important particulars connected with the building of the church, the administration of some of the charities of the town, and reference to other subjects the recital of which, although somewhat voluminous, will probably be more or less acceptable to the reader.

1699, JUNE 11.—Its' ordered that the Churchwardens and Overseers of the Poor do stay att the Church upon every 2nd Sunday in every month after evening prayer to consider further of fitting means for the better relief of ye poor.

1700, MAY 12.—That the money collected at the communion bee forthwith distributed to the poor, and that regard bee had in the first place to those that communicate and that are frequenters of ye Church, and that ye Churchwardens do observe who frequent ye Church and give the minister information thereof. And that noe poor have any share thereof yt doth not communicate twice in ye year, and constantly frequent ye Church unless obstructed by a lawful impediment.

That ye seats in ye south oyle be repayred and that ye or gone bee new built, and that those poore people that receive reliefe from the parishe doe constantly come to church, and sitt on those seates or be putt out of ye poores booke. And yt ye clerks of ye church doe constanly seeke an account thereof, and give the overseers every fortnight

an account thereof provided that no pson bee hindered yt hath lawful exemption.

1701 Aug. 21.—John Astle and John Harrison upon giving in their accounts had in their hands, to pay their successors fifteen shillings, which sum is ordered towards making of bucketts for ye town's use.

1702 Sept. 6—Whereas several persons that receive alms out of the poore's levy of this liberty do often omitt the wearing the public badge of this town or observe the same; It is therefore ordered that when any such poor person or persons shall, or their, or any of their children bee seen without such badge or to observe the same, that upon the view of either of the overseers or reliable information thereof to them, or either of them, of the neglect of wearing or observing such badge, such poore person or persons shall for a fortnight then after loose his and their allowance out of the poore's levy, and the like penalty shall be continued so often as any such offence shall be comitted and not to be put in pay again till such badge be worne.*

Dec. 6.—That the overseers do diligently enquire out such poor boys as are ye children of ye most indigent parents, and give a list of their names to ye Feoffees, on St. Thomas' day, in order to their being bound to apprenticeship at ye favour and discretion of ye said Feoffees.

1703 March 7.—That the Churchwardens and overseers of the poor have due notice given them to bring in their several accompts on Sunday in the evening next after Easter Day, being the 4th April, 1703.

June 6.—That Elizabeth Salisbury, Mary Budworth, Hannah Scott, and Ann Hinckley be taken out of constant pay for their stubborn refusal to wear the badge publickly.

* There are numerous instances of the enforcement of this penalty in consequence of not wearing the badge. The order however appears to have been disregarded more by the women than the men. The resumption of the badge re-intitled the wearer to the parish allowance. The book does not contain any description of this badge, but it probably consisted of the letters in metal, B. P. (Burton Parish) attached to the dress of those receiving parish relief. It is still customary, in many parts of the country, for the inmates of charitable foundations to wear descriptive badges, but their association with pauperism, was, very properly, some years ago, determined by Act of Parliament.

Oct. 3—That the Churchwardens and overseers do take out a warrant from the Justices of the Peace, to take Robert Jackson, baker, before the Justices, and let the complaint be made concerning Robert Jackson's behaviour, and let an order be requested to compel him to sell his goods for relief of his children. and to worke for his liveing, or be sent to ye house of correction.

1705 Feb. 3.—That John Wakefield hath 5d. given him to buy hemp to supply by his labour his present necessities. At the vestry then complaint being made by several Tradesmen for their being assess'd for their trades notwithstanding the low ebb of Trade, the ill payment of debts that are made, and the great losses as be occasioned thereby, as also by goods lyeing in their hands, a consideration of which is desired may be had, and the same referred to ye next vestry to give ease to the same.

1706 April 20.—That noe allowance be made by the Churchwardens for sparrow's heads for the future, nor anything allowed for hedgehogs and fox-heads unless they bee killed in the parish.

1707 Aug. 3.—That the present Churchwardens, Mr. Wright and Mr. Birch, do forthwith provide materials to build a buttress to strengthen the wall of the Church next the garden in possession of George Ley, also that they amend what is amiss and out of order belonging to the leads; and they, the Churchwardens, do agree with Samuel Bucknall, of Rolston at as easy a rate as they can to put the chimes in good and sufficient order.*

1708 Feb. 10.—Whereas an order was made the 20th April last that no Churchwarden be allowed anything during his office for ale expenses, it's found very necessary the same order should continue good as to what expenses Churchwardens have formerly bin att their monthly meetings, but find it would he very inconvenient to have the same orders put in practice at making of their assessments (which is only once in ye year) by reason the Inhabitants refuse to give their attendance to make any such assessment unless they may have their charges de-

* By an order dated Decr 7, 1707, it appears that new chimes had then been completed and the clock put into good order and repair.

frayed as formerly have bin att that time. And also that ye overseers of the poor have their ancient allowance only at making their assessments.*

MAY 16.—That the wife of Richard Cox, a soldier now in the hospitall, be, by ye overseers of ye poor looked after and that 2s. a week be allowed for her maintenance.†

SEPT. 2.—At the choice of a Lecturer the reckoning at the Crown ‡ exceeded eight shillings more than the usuall allowance, which was occasioned by the country people comeing in to the entertainment more than usual.

1709 SEPT. 20.—Att a meeting at ye Crown, in order to ye election of ye Lecturer, ye Reckoning amounting to the sum of £2 13s. 2d., upon the ye extraordinary appearance there, its ordered that one halfe ye said sum shall be paid viz: £1 6s. 7d, by the present Churchwardens of Burton, but the said sum is not to be a precedent for the future.

1710 OCT. 15.—That ye roofe of ye church bee forthwith propp'd and ye battlements abuted and the consideration of takinge downe the spire steeple suspended till my lord Paget has been consulted and his pleasure knowne therein; and that all ye doors leading into the nave and quire, be forthwith nailed upp to prevent all danger.

1711 SEPT. 16.—Agreed then at a Vestry held for ye regulatinge ye expenses of chosenge a Lecturer that the Churchwardens doe for ye future treat none at such meetinge but election approvers, the lecturer, minister,

*The Vestrybook bears ample evidence of these ancient ale drinkings, its calf-skin covers containing an extraordinary number of circular, ale-stained marks, due to the placing thereon of the pots from which these officers drank at their meetings on the town's business. It appears to have been customary at this time to elect annually six vestry men, who assisted the other officers of the borough in making their assessments, and in other business matters generally.

† I have not been able to ascertain whether the Hospital here named was a public building specially reserved for the treatment of the sick, or merely a dwelling-house temporally devoted to the purpose.

‡ This well-known inn stood upon the site, and formed part of the house and premises now occupied by Mr. Birch, High Street. In an old view of Burton either this, or an adjoining house, is shown to be of considerable height, and curiously ornamented, the upper portion of which was subsequently blown down in a gale of wind.

schoolmaster, and curate, ye parishe Clerkes, and ye Churchwardens for ye time beinge and ye whole expenses not to exceed 20s. for ye Towne, and 20s. for ye Country.*

October 9.—That whereas several persons have lately come into this town not having given to the officers certificates as the law appoints, that the officers shall bring for every of them a warrant of removal.

November 4.—That the Churchwardens do attend Isaac Hawkins, esq., and desire him that he will deliver or send to my Ld Paget the certificate obtained at ye Sessions, in order to procure a Briefe for ye Church.

Nov. 25—That whereas several persons have lately come into Burton by certificates and the like—it's therefore ordered that all such persons for ye future shall be assessed to all parish levies because they are exempted from the serving of parochial offices.†

1713 Dec. 27.—That Sam. Marson and Jos. Wood, Overseers, do take proper directions for prosecuting James Flaninghan, an Irishman, for endeavouring to get a settlement in this town, contrary to law, and for following a trade, not being as apprehended a Freeman of this Kingdom.

1718 Nov. 4.—That the Churchwardens for this parish do forthwith imploy proper workmen to glaze the High Hall and to fit up ye same for ye celebrating divine worship therein during the time that ye old Church shall be taken down and till a new one be built and fitted for ye service of God, and to putt the charge of doeing the same into theire Leavys, which we doe hereby promise to sign and to pay proportions, and to see ye Churchwardens shall be no losers thereby.‡

* This resolution appears to have been passed in consequence of the representation made at a public meeting of the inhabitants, April 20th, 1711, that the choosing of a lecturer entailed upon the parish charges which had become oppressive and unbearable.

† It appears that the persons thus assessed refused to pay the amount of their assessments; an order dated May 18th, 1712, instructing the overseers of the poor to "make distresses of ye goods of all such persons for the said moneys," and which order was subsequently carried out; the town undertaking "to stand by the said officers and defray all expenses."

‡ The necessary repairs were done by William and Richard Smith, of Tatenhill, at a cost of £12 0s. 0d.

1719 March 31.—George Sills and Benjamin Printon* were nominated Overseers of ye poor for the year ensuing, and upon their being exempted from serving the office of Overseers of ye poor, to pay for the use of ye Town each of them the sum of two guineas.

Aug. 20.—At ye Vestry or General Meeting of ye Parishioners and Inhabitants of ye Town and Hamletts of Burton, held at ye School-house in Burton aforesaid, it is ordered, consented unto and agreed that ye sume of one hundred pounds shall be within ye space of this present year, assessed, leavyed and raised by a Church Rate according to ye ancient usage, towards re-building and finishing ye new Church within this parish at this time begun, and that ye said sume hereby so ordered to be raised shall be exclusive of ye ordinary expenses of this present year.†

1721, Feb. 26.—At a meeting of the Parishioners of Burton—It is agreed and resolved that no more money be paid towards rebuilding of the Church until a fair and full account has been exhibited at a parish meeting, how much money hath been paid Mr. Woodcock, Mr. Haynes, and Mr. Smith, on the parish account, and to what uses the same hath been applied; and it is further agreed to have the Church so farr as is already perfected, measured and valued by proper and understanding workmen, to be recommended by Mr. Gilks, and that whatever moneys is next raised towards perfecting the said Church shall be

* Benjamin Printon is the assumed founder of the Brewing Trade of Burton, and I have introduced the above extract as containing the first entry of his name in the Vestry book, the fact of which may probably assist somewhat in determining the time, hitherto considered doubtful, as to when the trade, properly speaking, commenced. After the above date his name frequently appears as one of the Overseers, an office he held in preference to paying the fine to be exempted therefrom. He was subsequently elected to the office of Churchwarden, and afterwards to that of Constable, but his name does not appear in the book after the 11th April, 1721.

† An order was made at a meeting of the Parishioners, held at the Guild Hall, on the 6th September following, to pay Ann Hinckley the sum of £20, as the value of her house, adjoining the Church, held under lease from the Earl of Uxbridge, and which being a great annoyance thereto was to be removed, and erected in another place.

applied to the seating and finishing the inside of the same, and the costs thereof paid by the Churchwardens.*

1725, Dec. 14.—That the five Bells belonging to ye Town and Parish shall be melted down and cast into six Bells by Mr. Abraham Randall, of ye city of Glocester; also that he cast two small Bells under the above six Bells, all of which are to be paid by a levy upon the Town.†

1726, Feb. 18.—That a dial plate be sett up within the circle upon the west side of the steeple, by Mr. Joseph Barsby.

1726, Nov. 26.—That several persons having made a practice of carrying away great quantities of useful stones, (set apart for building a wall about the Church), to their own respective uses to the great injury of the parishioners in general, it is ordered that the Churchwardens do prosecute at the expense of the parish all persons that shall carry away such stones for the future, and that such persons

* On the 7th July, 1722, an order was made for the town to raise £100, and the Hamlets £120, to balance the accounts for the building of the Church, so far as it was then finished. On the 17th of April, 1723, a further sum of £150 was ordered to be raised by the Town and a similar sum by the Hamlets for the like purpose; and on the 4th of August, 1728, an order was made to raise the sum of £250 by a rate, one moiety of which was charged upon the Town and the other upon the Hamlets, "being the sum Mr. Smith, the builder, had agreed to take in full discharge of what remains due to him for building Burton Church." The payment of this latter amount appears to have relieved the town of the debt incurred by the building of the Church, towards which the Parishioners contributed £870 in nine years. What further sums were raised does not appear, but the above cannot represent more than a small proportion of the actual cost.

† At a Vestry held January 22nd, 1726, various regulations were made in respect to the time of ringing the bells, and instructions given to the clerks and sexton not to allow boys or unpractised ringers, within the belfry or steeple at such times as the bells were being rung, without an order; anyone creating a disturbance was to be prosecuted at the public expense. The order contains no reference to the curfew bell, which, in accordance with ancient custom was tolled from Michaelmas Day to Lady Day, each evening, from a quarter before, to eight o'clock. During the remaining part of the year, the curfew was not tolled in the evening, but a bell was rung every morning from 5.45 to 6 o'clock. For these services the sexton was paid a salary of £10 per annum, but, in consequence of some misunderstanding, instructions were in 1867 given by the Feoffees to discontinue the curfew, and its solemn warning is no longer heard in Burton.

return the said stone or make ample satisfaction for the same; also that a committee be appointed to report upon what stone has been so taken away and to prepare an estimate thereof.*

1727, JAN. 28.—That John Orgill and Nathaniel Thorpe, Overseers of the Poor, do take up at interest the sum of £100 on the Town's account, to be employed for discharge of the purchase money of the Barn designed to be converted into a Workhouse and towards building the same.†

1731, SEPT. 12.—It is unanimously ordered and agreed that the Reverend Mr. Higgins Harris, be prosecuted for his non-residence upon his Benefice in Herefordshire, and the expense thereof to be paid out of the Levys to the Church.‡

1733, APRIL 8.—Agreed that in consideration of Wm. Wakefield's daily attendance at Public Prayers and his other industry and good behaviour in his office, that he be allowed £3 yearly from ye Town.

1740, MARCH 13.—At a Vestry meeting it was agreed to give Mr. Gilks the sum of ten pounds ffor the cure of Jacob Mossley, the younger, in case he shall make him sound and well, so as to be able to work at his trade and get his living, to the judgment of a Vestry or otherwise. No cure no pay. The money to be paid at the end of three months after he shall be reported cured.

1749, DEC. 10.—Whereas great numbers of vagrants and sturdy beggars have for some time past frequented this town, and for preventing the same for the future it is

* The report of the Committee was laid before the Parishioners on the 2nd December following, from which it appears that no less than twenty-two of the inhabitants of the town, male and female, whose names are given, had laid themselves open to the charge of fraudently removing the said stone to their own use, the total quantity of which amounted to 4258 cubic feet, and which, valued at 2d. to 3d. per foot, was estimated at £45 14s. 3d. The Church wall was built in the following year at a cost of £80.

† The total cost of "Workman's Stuff," and materials for building the Workhouse amounted to £395 13s. 7¾d., and for Furniture £29 1s. 0d.

‡ Mr. Harris, was curate of Burton. The above order was signed by twenty-eight of the officers and inhabitants of the town, but by what right the order was made is not shown.

ordered that Robert Hinds be allowed 25s. quarterly, for his care and pains in looking after and driving out of town all vagrants and beggars both by night and day.

1782, FEB. 20.—Ordered that Thomas Hopkins be appointed Governor of the Workhouse and his wife Governess of the same, with a salary of £20.*

The old Workhouse stood in Anderstaff Lane, and now forms part of the stores belonging to the Burton Brewery Company. It was for the exclusive use of the Borough of Burton, Bond-end having its own Workhouse and separate system of management. Burton-upon-Trent is now an established union of fifty-four parishes and its Workhouse, which is placed somewhat back and hidden from the Horninglow road, is a plain brick building, erected in the year 1838, from designs by Messrs. Scott and Moffatt, at a cost, including furniture, of £8,262 1s. 0d. It has accommodation for 350 persons.

Previous to 1730, the entire duties of the office of overseer of the poor devolved upon those elected, but in that year, April 5th, Thomas Ford was appointed assistant overseer, at a salary of £4 per annum, paid quarterly. In the year 1700, twelve assessments, for the relief of the poor, were made, amounting to £129 6s. 0d. In 1730 a similar number of assessments realised £125 18s. 5d., and in 1737—the last entry of such particulars—twelve assessments produced £113 19s. 2d. By returns made to Parliament in the year 1785, the assessments for the three previous years amounted to—Burton £525 9s. 1d., Burton Extra £150 15s. 5d. Two assessments for the year ending September, 1867, at 5d. in the pound, realized for Burton-upon-Trent, £2,491 18s. 10d.; and for Burton Extra, £655 0s. 8½d.

It is interesting to note that not only in this but in all other official records connected with it, the town is des-

* Between the years 1751 and 1781, the book contains no entry whatever, an omission difficult of explanation, inasmuch as no leaves appear to have been removed from it. It may not be out of place to remark here that the foregoing extracts have been selected as characteristic examples of a variety of particulars connected with the old customary forms of local government, most of which are now obsolete. It is hoped that the interest attached to them will be ample compensation for their introduction and length.

cribed as a *borough*, and as a rule its freeholders and others of its inhabitants as *burgesses*. With respect to the term borough it is well known that at the present day it signifies a town possessed of the right to be represented in Parliament. Anciently however it had a broader signification, and was applied equally to corporate towns, and to such as were enclosed by walls, or were otherwise fortified; also in some instances it is assumed to have been bestowed upon tithings or companies consisting of ten families which were pledged one for the other. Now, there is no direct evidence that Burton was ever incorporated, or that its inhabitants were at any time possessed of rights and privileges which they could exercise, or which were conferred upon them independent of the lord of the Manor to whom they owed suit and service. It is true that the Abbots of Burton were sometimes summoned to and sat in Parliament by writ, but the privilege was optional on their part, they were not, as in the case of tenants in chief of the king, compelled to exercise it, neither could they demand it under any chartered or confirmed right, and consequently the mere issue of the summons conferred upon the town no title to be recognised as a Parliamentary constituency. OLDFIELD, however, records that Burton anciently sent members to Parliament, but it is inferred that he assumed for the borough a privilege which it only possessed temporarily through its ecclesiastial representatives, inasmuch as had such a distinction been at any time granted, it is improbable that all traces thereof would have been lost to local history. Under these circumstance it is concluded that the term borough, as applied to Burton, had nothing whatever to do either with its ecclesiastial or Parliamentary associations, but that it was equivalent to the Saxon *burgus*, which signified a town generally whether corporate or not.

There is no question that the town of Burton had long before the foundation of its Abbey, acquired a position equal in importance to that of the majority of Saxon burghs of the period; and that within it the lord of the Manor, of which it formed the principal and descriptive member, held from a very remote period the various manorial courts established for the due administration of justice amongst

the tenants of the estate, and over which he as a rule had the highest possible power under the king. Of these courts the more important were the Court Leet and Court Baron, which were formerly held together in the Town Hall, during the month of October in each year. The Court Leet is allowed to be the most ancient court in England, and coeval with the establishment of the Saxons in this country. It took cognisance of all criminal matters or pleas of the crown, and by it the lord was entitled to all profits, fines, amerciaments and essoign-pence of his Manor. To this court, which was generally considered as equivalent to the *populi curia* or folk-mote of the Saxons, all persons except peers, clerks, women, and aliens residing within the Manor, above the age of twelve and under sixty years were compelled to repair when summoned, and swear to their fealty and allegiance. The Court Baron was the great civil court of the day, and had jurisdiction in action for debt, and in all matters relating to lands within the Manor, such as trespass, the removal of nuisances, the determination of boundaries, the transfer of property, and the maintenance of customs and services due to the lord by the freehold and other tenants of the estate.

"The Suit Roll of the Manor and Borough of Burton-upon-Trent and Burton Extra with the members" contained the names of the several Burgesses and Tenants who owed suit and service to the lord, (and which in fact included every householder whether resident therein or not); and who on their names being called were bound to appear either in person or by deputy and there to pay their essoign-pence—every freeholder being liable to the amount of three-pence, and all other tenants one-penny, the latter commonly called "Smoke-penny." In case of non-appearance each tenant was amerced, the amount of which was recoverable by distress or otherwise. These courts were summoned latterly by the town crier in the following manner:—"This is to give notice that the Court Leet and Court Baron of the Most Noble the Marquis of Anglesey, will be held in the Town Hall, at 10 o'clock, when and where all persons owing suit and service not appearing or sending their essoign-pence will be amerced. God save the Queen and the Lord of the

Manor." The courts were presided over by the Steward of the Manor, and a jury or *homage* consisting of from twelve to twenty-three persons who were sworn as well for the Queen as the Lord of the Manor. The cases of the last fifty-years had reference principally to trespass, and nuisances, the latter arising from imperfect drainage, being a frequent source of complaint. The Jury on oath "according to the ancient custom of this Manor" made and delivered their presentments in the following form "We present all Victuallers residing within the Manor who shall sell ale in unsealed measures, and amerce them in 2s. 6d. each: We present all persons who owing suit and service at this court have made default in performing the same, and amerce them in 4d. each over and above the Burgess fee." At these courts the various officers of the manor were annually selected, and in addition to the constables, two of whom with a pinder were appointed for each member, there was a staff of men, six in number, called "Deciners," whose duty it was in modern times to assist the constables in preserving the peace of the manor and borough. The office is peculiarly Saxon, both in its origin and character, and those invested with it were anciently possessed of large authority within their circuits. Their jurisdiction was called "Decenna," because it consisted of ten households; and their duty was to have the oversight of the Friburgs, or view of frankpledge for the maintenance of the king's peace. The name commonly given to these officers was Dozener, and under it they are at the present day, in numerous instances, associated with municipal boroughs. The preservation of this office in the manor and borough of Burton through so many centuries is replete with interest, and conclusively establishes the antiquity of one of its forms of government. It is somewhat curious that formerly the inhabitants of the manor and borough assumed a conditional right in the appointment of the Deciners, and of receiving fines from individuals who preferred paying them to serving the office. The Vestry-book records, under date 14th October, 1726, that at a Court Leet held that day for the manor of Burton, "Richard Commins, on payment of £10 for the public benefit of the town, was exempted from serving the offices of "Dozener, Surveyor

of the Highways, Overseer of the Poor, and Churchwarden of the town." In the different customary processions connected with the manor courts, and the proclamation of the markets and fairs of the town, the Deciners carried, as their insignia of office, steel halbards, attached to long handles, and which in form resembled the old pikes used by the Commonwealth soldiers. These (six in number) with two curious instruments borne by the constables on similar occasions, are still preserved by Mr. FINLAY, at the Abbey.

Independent of the Court Leet and Court Baron, the lord of the manor had a "Genters Court," usually held by the steward of the manor in the Town Hall once in three weeks, for the determination of cases of trespass, the damages for which were generally fixed at £1 19s. 11d., a higher sum than £2 not being recoverable. It is difficult to determine the date of the origin of this court inasmuch as it was held "according to the custom of the said manor from the time whereof the memory of man is not to the contrary used." "The Court of Requests," mentioned by SHAW as existing here, for the recovery of small debts, is inadvertantly confounded by him with the Genter's Court, which, with the Manor Courts, have ceased practically to exist since the year 1855. It may be a question as to the advantages to be derived from the re-establishment of these ancient courts, but the mere fact of the non-exercise of the powers reserved by them to the lord of the manor, does not virtually affect his authority: they may be resumed at pleasure.

In addition to the various fines, essoign-pence, and amercements, of which the lord of the manor hath the right by his courts, he is possessed of certain tolls within the borough secured by charter to his predecessors, the Abbots, some of which have been already enumerated. These tolls form two distinct groups of charges, of which those called piccages*

*The Tolls payable by the purchaser under this head are as follows: —For every horse purchased at the Fairs (not toll-free) 4d.; cows, 2d.; calves, 1d.; sheep and pigs, ½d. each. For every broad-wheeled waggon bringing Barley into the town at any time except Thursdays, 1½d. each wheel, and 1d. for each wheel of other waggons. All other grain is free of toll. On Thursdays the toll is 1s. on each waggon and 6d. on carts. If, however, the owner pay 2s. on Holy Thursday, he is exempted from further toll, except 1d. per annum. Formerly, all hawkers of vegetables within the town, whether resident or not, paid 2d. each per day for carts, and 1d. for baskets. For every two

are conceded by him to the High Bailiff on his appointment. The stallage dues chargeable upon the Markets and Fairs* are alone received by the lord of the manor. It appears that anciently the king's tenants of the honor of Tutbury (particularly those residing in Rolleston and Barton) claimed exemption from toll to the Abbots of Burton; and in the 15th Henry VIII, the question was brought before the Duchy Court, whereby it was directed that all the king's tenants should, in future, be permitted by the Abbots and their successors to attend the fairs and markets at Burton peaceably, and without interruption. (Hist. Tutbury, p. 135.) Formerly the collecting of these tolls was more strictly enforced than has been the custom of recent years, but as the omission involves the sacrifice of a chartered right it is obviously impolitic to base their concession upon questions of a mere pecuniary character.

It was formerly the custom to open with much ceremony the different fairs held in the town, the crier reciting the following curious proclamation: — "Oyez, Oyez, Oyez. Borough of Burton-upon-Trent, belonging to the Right honourable the Marquis of Anglesey, right-owner of the Borough and of the Franchise of the same, doth in the Queen's name strictly charge and command that all persons resorting to this Fair shall have free liberty of buying and selling all such goods, wares, and merchandize, as are here or shall be here to be bought or sold according to the ancient custom of this Borough on paying all such tolls and dues as are accustomed to be paid for the same. No person shall use any unlawful weapon or do anything towards the disturbance of the Fair. All vagrants and beggars to quit the fair on this Proclamation being read, or they will be punished as the law directs. Any person having any damage done to his body or goods, let him repair to the Toll-booth, and he shall have such remedy as to justice shall appertain. God save the Queen and the Right Honourable the Marquis of Anglesey, and the Bailiff of this Borough."

couple of fowls, and for each basket of butter or eggs sold on market days, the vendor should pay 1d.

*The dues thus charged, are upon ordinary Market days 1d., and at the Fairs and Statutes 1½d. per square foot for all stalls erected within the borough. Showmen pay 1d. per wheel, independent of standing ground.

The Cattle Fairs, held as now, in Horninglow street, were proclaimed in the centre of the street, opposite High Street, a little below which point, fronting the Bear Inn, the town bull was formerly baited—a custom of great popularity in bygone times, but none the less cruel and debasing, and not infrequently productive of scenes of violence and bloodshed.* The last public exhibition of this kind took place about forty years ago in New Street, to which place the Bull-ring had then been removed.

The inhabitants of Burton, as is well-known, are possessed of the peculiar privilege of being exempted from serving on county juries. When or by whom this right was conferred is doubtful, but it appears to have been enjoyed from a remote date, and was, in all probability, the result of some special consideration of their condition at the time. The same privilege also applies to the juries of county courts. The manor has the further peculiarity of possessing its own Coroner, whose jurisdiction extends, not beyond, but is undivided within its boundaries, and here, at least upon all quests connected with the office, the burgesses and tenants of the manor, are alone liable to be empannelled. The office, which is without emolument, is, with those of High Bailiff of the borough, and the Steward of the Manor, in the appointment of the Marquis of Anglesey, and generally held by one individual, John Richardson, Esq., solicitor, being the present High Bailiff and Coroner, and William Small, Esq., solicitor, Deputy Coroner. The office of Coroner is of great antiquity in Burton. It was vested in the Abbots, and possibly passed to them with other similar powers from the lords of the Manor by whom they were preceded. The High Bailiff, by virtue of his office, has the appointment of an Inspector of Weights and Measures for the borough, also of the Town Crier.

In addition to the customs previously described it was at one time a stringent condition in leases of property within the manor and borough, that the corn and malt of the tenants should be ground at the lord's mill, or, in lieu thereof,

* According to Sir Oswald Mosley, the famous Tutbury bull-running was discontinued in the year 1778, in consequence of a quarrel between some Burton men, headed by one John Ludlow, and the inhabitants of Tutbury, which resulted in the death of one of the latter, named William Bennett.

when the property consisted of a private dwelling house, an annual toll, generally of one shilling, was imposed; or, in the case of public-houses or inns, a sum varying from 20s. to 40s. This toll was, however, generally conceded to common brewers, and merchants brewing for exportation. In the year 1772, these tolls amounted to £41 4s. 2d. By a lease, dated June 5th, 1770, granted by lord Henry Paget to John Gibson, of a cottage and land adjoining the Burton mills at Winshill, the lessee was bound to grind, free of charge, his lordship's corn, grain, and malt, or in lieu of grinding malt he was to pay a toll of 1s. annually. This custom of grinding the lord's corn is of ancient standing, and represents one of the old forms of customary service, which however at variance with the principles that at the present day govern the relations of the lord of the soil and his tenants, were generally recognized during the many centuries in which they were in operation as of elementary importance in the great system of mutual protection and support. If the lord claimed by hereditary or customary right the personal service of his tenants, whether to cultivate his land, gather his crops, or attend him in his military expeditions during a fixed number of days in each year, or exacted from them the duty of grinding his corn, or providing a specified description or quality of food for his table,* such service represented a certain pecuniary value for which full consideration was allowed in determining the yearly rents reserved upon the houses or land in their occupation. He was moreover, morally, if not legally, bound to protect both the lives and property of those who by their tenures acknowledged his superiority, and during the times when these feudal customs were in greater force, this protection was of no trifling consequence to such as were entitled to it. It may be said that this form of tenure is now obsolete in the manor of Burton, but until within the last four or five years a lingering trace of it was maintained in the custom of the tenants upon the larger farms of the estate being expected,

* The Fishery of the Trent was leased by Henry, earl of Uxbridge to Isaac Hawkins, in 1766, for 21 years at an annual rent of £6 2s. 6d., with liberty for the servants of the earl to fish with nets or otherwise for the use of his lordship during the time he resided at his hall at Beau Desert.

when called upon, to provide teams for drawing coals and building materials for the use of the landlord.

The old form of tenure by pepper-corn rent, has but recently died out in Burton; a lease of this nature being held by the late Mr. John Port, of the Soho, until the year 1832, when it became obsolete by surrender in favour of a lease at a fixed annual rent.

During many centuries, both in the time of the Abbots, and subsequently, the ordinary form of demising the messuages, burgages, and tenements belonging to the lord of, and situate within the Manor, was by lease, determinable with the life of the survivor of three persons, subject to a small annual rent, and by the payment, in lieu of a heriot upon the death of each life, of a certain fixed sum. The heriot consisted of the best beast, or the best piece of furniture or other goods belonging to the tenant, which the lessor was empowered to claim in case of non-payment of the stipulated amount. Since the dissolution of the Monastry, the majority of these messnage, or burgage leases included specified pews or sittings in the old Church, but the exclusive right granted to the lessees of this latter description of property has been of late years claimed by the churchwardens, by whom all pews are now let at different annual rents. Since the year 1863, a fixed term of 99 years at an increased annual rent, has been substituted in the place of leases upon lives with their customary fines upon renewal.

With the exception of those of the Abbey, the town and neighbourhood of Burton possesses but few remains coeval with the existence of that institution, and of these the homestead at Sinai Park is the only building which has been preserved in anything like its original condition. It is a moated, half-timbered erection with stone foundations, and forms three sides of a quadrangle. The rooms are large and generally floored and wainscotted with oak. One small room or recess leading from the principal staircase, still bears the name of the "confessional," a purpose to which there is no doubt it was originally applied. There is a strong popular belief in the tradition which connects this place by a subterranean passage with the Abbey at Burton, and there are rumours of the discovery years ago of an arched

entrance to this passage in the floor of one of the cellars. There may have been a secret communication with the interior of the building from the hillside, but there was a natural impossibility to its extension to Burton by any of the then known means of engineering. The date of the erection of this residence is undetermined, but judging from its general style it would appear to have been built during the latter part of the 15th century. It was occupied by the Abbots of Burton as a summer residence, and the site commands one of the most extended and beautiful prospects in this portion of the Trent Valley hills. The name is supposed to have been given to it in remembrance of Mount Sinai, but in the earliest accounts preserved of the place it is described as *Seyne*, *Seynne*, or *Seyney*, and formerly stood within an enclosed park, so named, containing 519A. 3R. 3P., of which 1A. 1R. 5P. formed the site of the Great Lodge (as the house was then called); 352A. 2R. 16P., consisted of wood, and the remaining 165A. 3R. 22P. were under cultivation; the whole of which, in the year 1656, was in the tenure of the lord of the manor, and valued at £170 per annum. In the map of the estate executed in the year 1759, the park fence is distinctly shown, running at the base of the hills across the Lawns farm to the old road to Tatenhill, and thence parallel to it and onwards to Postern House, along the whole of which line the old earth bank upon which the fence stood may still be traced. It was then continued to Shobnall, where was anciently another park in which stood a large stone building called the Grange, also belonging to the Abbots, and of which a few remains still exist incorporated with the present house occupied by Mr. Meakin. In the year 1656, the Shobnall farms consisted of 371A. 0R. 13P., in the occupation of seven different tenants, and valued at £231 19s. 6d. per annum. Portions of the old road from Burton to Sinai Park are still discernible, running in a direct line across the meadows, south of the Shobnall Road, twelve feet in width, and composed of fine gravel. In the 26th Henry VIII* Seyne Park was valued at £8 per

*Last year, a gold coin of Francis the First of France, in a fine state of preservation, was ploughed up in one of the fields at Sinai Park. It belongs to the time of Henry VIII. of England and

annum, but in the 3rd Edward VI. the herbage of the farm was let to John Taylor at £20. In the year 1334 the Abbot and Convent of Burton granted the bailiwick and custody of their park at Shobnall to Adam Bullock, of Burton, for his life.

It is recorded by Sir Oswald Mosley (Hist. Tutbury, p. 136) that in the time of Henry VIII. the road lying between Shobnall Grange and Needwood forest was principally unreclaimed, and depastured in common by certain of the king's tenants and those of the Abbots of Burton, but as the town and neighbourhood of Burton became more populous, various settlers were brought there by the Abbots, and assart lands to a considerable extent enclosed under their direction. These inclosures were considered by the tenants of the honor of Tutbury as encroachments upon the king's property, but as they are conjectured to have included the more westerly ranges of Sinai Park, and the farm called Rough-Hay, which at no time, or as portions of the manor of Burton were subject to, the honor of Tutbury, it is difficult to understand how the mere inclosure of the land could have been regarded as encroachments of this nature, unless it be taken into consideration that those by whom the question was raised were tenants of Henry VIII., and the property in dispute held by the principal members of a monastic institution. It however appears that the dispute ended by the enclosed lands being permanently annexed to the Abbey possessions, the Abbots, in consideration thereof, surrendering their right to estoven in the forest of Needwood, which they had acquired by grant from the ancient earls of Derby.

Under the Abbots each of the other different members of the Manor had its Grange homestead and Tithe barn, but, with the exception of those described, the one belonging to Bond-end, now occupied by Mr. James Ordish, and Wetmoor Hall, in the occupation of Mr. George Lathbury, none remain upon their original foundations. The former, which is a half-timbered building, has the following inscription on a stone tablet inserted in the wall over the entrance door:—
"Henry Watson and Ann built this house anno. D. 1649."

possibly was brought to this country by some one in the train of Sir William Paget, who was privately employed by Henry in important negociations with the French king, in the year 1527.

Wetmore Grange was at one time a large and important stone building, and occasionally formed the residence of some of the Abbots of Burton. Portions of the exterior walls still exist. The *town* of Withmere was granted by King Ethelred by charter, dated 1012, to the first Abbot Wulgetus, for £70 in gold and silver. The house held by Mr. Ward, at the south corner of the Market Place, bears date 1609, and adjoining Mr. Herratt's shop in the High Street is an ancient timber doorway, formerly ornamented with curious figures. Nether Hall, in Anderstaff Lane, was an old building long in the possession of a family named Blount.* The house and shop, occupied by Mr. Ellis, at the north corner of the Market Place, was originally, in all probability, one of the Prebendal houses of the Collegiate Church, and is described by SHAW as a "remarkable old house, having many curious Gothic ornaments sculptured on the wooden pillars and beams thereof on the outside." One of these pillars, which is of oak, and covered with quaint, but much weathered carvings, is preserved at the abbey, and forms the subject of the legend, quoted below.†

In the porch of Stapenhill Church lies an alabaster tombstone bearing a Latin inscription in old English characters, carefully restored from the assumed original, some few years ago by Mr. William Dodsworth, and of which the following is a translation:—"Here lie William Dethick, Esquire, and Margaret his wife. William died in the month of April in the year of our Lord 1497. May he rest. The said Margaret died in the year of our Lord 1456. The

* John Blount, Esq., a resident of Burton, claimed, in the 10th Henry VIII., to be seised of certain messuages and void ground called the Ryddings, adjoining the Rough-Hay, near Anslow. The name "Hobridding" is still attached to the old homestead there.

†A small brass plate attached to the post contains the following explanatory lines:—

"This post, as Finney's legend saith,
Awoke a scolding wife from death;
But when at length she ceased to breathe,
And honest Finney ceased to grieve,
Oh! then he said, as borne along,
With solemn dirge and funeral song,
Oh! shun my friends, that cruel stump,
That gave my dear so hard a bump."—J. S.

Lord have mercy on their souls." The Dethicks were formerly an important family residing in Stanton, and the neighbourhood. There is a tradition that the above William Dethick was killed at the battle of Bosworth field and brought here to be interred, but as that engagement took place in 1485, the tradition is either without foundation, or the date upon his tomb was, at some subsequent period, incorrectly restored. He, with his wife and several children at their feet, are represented in incised outline.

In the year 1698, an Act of Parliament was obtained for making the river Trent navigable for boats and barges from Wilden ferry to Burton, under which William Lord Paget and his heirs and assigns had full power to nominate and appoint certain persons, whose names are recited in the Act, to accomplish the same, and by which he was authorised to charge and receive the fixed rate of 3d. per ton upon all goods and merchandize conveyed by the said navigation, with other rights connected therewith. Under this Act men only were empowered to hale, but in the 23rd George III, another Act was obtained, whereby the haling of boats was to be performed by horses. The navigation was leased by Lord Paget to several persons who traded under the name of the Burton Boat Company, and originated one of the most ancient, and at the same time most extensive, systems of river navigation in central England.* The powers of the Act did not extend beyond the Fleet-stones in Bond-end, near which were constructed a basin and wharves, also a long stone causeway, of which latter the remains may still be traced in the river opposite the Soho. In order to connect the Trent Navigation with that of the Grand Trunk, or Trent

*This Act has not been repealed, and consequently all the rights and privileges conferred by it belong to the present Marquess of Anglesey. Independent of the powers reserved in respect to the navigation of the Trent, his lordship is entitled to certain rights connected with the fishery of the river from the limits of the Manor at Branston to Wilden Ferry—or, as it is now better known, Cavendish bridge—and which, up to the year 1852, it was customary to exercise once in seven years. In 1817, Lady Gresley, as owner of a meadow in Branston, opposite Drakelow Hall, attempted to discharge the Marquess of Anglesey's keepers from passing the river fronting the Hall, but the question was decided in his lordship's favour, under the provisions of the grant to lord Paget, 20th Elizabeth.

and Mersey canal at Shobnall, the Bond-end Canal was made by the lessees of the Trent Navigation about the year 1774-5 across the private property of the Earl of Uxbridge, in consideration of the great expense of which, and the execution of the work without Act of Parliament, the canal, with some important concessions to the Lessees, was included in a renewed lease to the company, granted in the year 1784. This lease of the Trent Navigation expired on the death of Samuel Lloyd in the year 1849, but the navigation of the Trent had, in effect, closed some thirty years previously.

The land upon which the upper mills and the Bond-end mills stand, was also included in the above lease, the former of which mills were erected by the lessees upon the site of an ancient mill, but the cotton mills of Burton were built by the Peels under a sub-lease from the Lloyds, about the years 1807-9. These cotton mills were at one time extensive, and for many years gave employment to several hundred hands. "Peel's cut," communicating with the Trent above the upper mills was constructed by the mill-owners for the purpose of working the Bond-end mills, the lease of which expired with that of the Trent Navigation, in 1849, since which date the cotton trade has unfortunately disappeared from the town. These buildings, with the adjoining old gas-works, erected to supply the mills, are now used principally as ale-stores and timber-yards, and the upper mills were, until recently, employed for many years in grinding materials used in the manufacture of pottery. The Burton Forge mills at Winshill were, in the year 1762, leased to the two Samuel Lloyds, the elder and younger, of Birmingham, "being a fforge for making and hammering plating iron," and under whom the mills subsequently became celebrated as the manufactory of a particular kind of screw. They are now, with the upper mills, in lease to the executors of the late Thomas Cooper, and used as flint mills. The corn mills at the same place are held on lease by Messrs. Wilson and Company, and the tape mills adjoining are in the occupation of Messrs. Small, Tavernor, and Sharp.

The present Town Hall, which contains a fine portrait* of William Henry, first Marquess of Anglesey, presented by his

*Copied by Barber, from the original, by Sir Thomas Lawrence.

lordship's tenants, was erected in the year 1772, by Henry, lord Paget; and there is no doubt that at the time, and for many years subsequently, it was in every respect more than sufficient for the requirements of the town. It occupies the site of an old building in which the corn market of the town was anciently held.* There is no question that from the great increase in the population and trade of Burton, a more convenient Town Hall, and one more in character with the importance of the town is absolutely necessary, also an extension of the present market place; and, in all probability the day is not far distant when the existing difficulties in the way of these improvements shall have been removed, and an accommodation more in unison with the requirements of the day permanently provided.

In the year 1771-2 two Acts of Parliament were obtained for enclosing the whole of the commons and waste ground of the several townships of the Parish of Burton-upon-Trent, including Goose Moor and Fleet Green, of which, the particulars have already been given at page 52.

In the year 1779 an Act was obtained for "Paving, Repairing, Cleansing and Lighting the Town and Borough of Burton-upon-Trent," by which seventy five persons, householders of the town, with the High Steward, Deputy Steward and Bailiff of the borough, and the Feoffees of the Town Lands were appointed Commissioners, and duly empowered to carry out the provisions of the Act. The first place of meeting was the "George" Inn, and the Commissioners, upon all questions appertaining to their office, were instructed to vote by ballot, and pay their own expenses. By this Act certain sums of money issuing out of the rents and profits of the Town Lands were to be applied to the public use and benefit of the town and borough, and in aid of the rates and assessments authorized by the Act, but which were in no case to exceed sixpence in the pound, or to be less than twopence. In the clause referring to "annoyances" it was enacted (and which is alluded to in illustration of some of the street customs of the time), that "if any person shall throw at, or set up any cock or fowl to be thrown at, in the

*The old Market Cross stood in front of the Alms-houses in the Swine Market, near or on the site now occupied by the Old White Lion Inn and adjoining premises.

manner called cock-throwing, or shall make or assist in making any fire or fires, commonly called bonfires, or shall set fire to, or let off, or throw any squib, serpent, rocket, or firework whatsoever within the said town and borough, shall, for every such offence, forfeit and pay the sum of five shillings over and above such penalties as are imposed by law."

This Act was repealed by the "Burton-upon-Trent Act, 1853," obtained to extend the powers of the Commissioners in regard to public improvements within the town, the manufacture and supply of gas, (the works of which are in Anderstaff-lane), and the regulation of the County Police-Force.* Under this Act certain portions of the townships of Burton Extra and Horninglow were added to the old area of jurisdiction, and the whole divided into three Wards, the Burton-upon-Trent Ward, the Burton Extra Ward, and the Horninglow Ward, of which eighteen Commissioners were appointed for Burton-upon-Trent, six for Burton Extra, and three for Horninglow, twenty-seven in number, to which was added the High Bailiff of the Borough for the time being, whose term of office, unlike that of the other Commissioners, was permanent. The Feoffees of the Town Lands are not recognised as Commissioners by this Act. The Commissioners now constitute the chief governing body of the town. Their present offices are situated at the corner of Horninglow Street and Guild Street, a building newly erected, and for some few months occupied by a branch establishment of the South Staffordshire Banking Company. The old offices of the Commissioners were in High Street. The different Public Acts referring to local government have been adopted by the town, and various sums of money from time to time raised for the

*Previous to the formation of the County Police, the peace of the town and borough was maintained by the Constables and Deciners assisted by a night watch, which latter was established in December of the year 1793, by private subscription, and a man apprehended the same night in the act of stealing fowls. The last active representative of the old constables was a tall, powerful, man, familiary known as "Dick Roe," of whose official exploits many amusing particulars are well remembered. He died in 1853, and was buried in the Old Churchyard. A monument, bearing a characteristic inscription, was erected to his memory by public subscription.

construction of public works, and for the general improvement of the borough. The more important, and at the same time the most complete and satisfactory, in every respect, of these works is the cemetery, which occupies a plot of land, twelve acres in extent, situate in the township of Stapenhill, on the Derbyshire side of the Trent, and purchased from the Marquess of Anglesey, in the year 1864. It is divided into three parts, devoted to the separate burial of members of the Church of England, of Dissenting bodies, and of the Roman Catholic Church, and contains two mortuary chapels, which stand opposite to each other upon a raised terrace, and which, with the gateway, and Registrar's house, are in the Gothic style of architecture of the 13th century, from designs by Messrs. Lucy and Littler, of Liverpool. The total cost of the buildings and laying out of the grounds amounted to £13,000. The cemetery was consecrated by the late Bishop of the diocese, May 25th, 1866, and from that date the old parish grave-yard was virtually closed.*

A tract of land lying to the river fronting the cemetery, is held by the Commissioners on a lease from the Marquess of Anglesey for forty-five years, commencing April 5th, 1865, and is laid out in ornamental walks or gardens for the free use of the inhabitants of the town, as a place of public resort and recreation. In 1866-7 were constructed upon six acres of land (also held by the Commissioners, from the Marquess of Anglesey, on a lease of ninety-nine years, commencing October 10th, 1866), in the Stretton meadows, adjoining the Midland Railway, about two miles north of Burton, a series of sewage tanks, from designs by John Lawson, Esq., C.E., at an outlay of £3750. These works originated in the necessity of providing an effectual remedy for the pollution of the Trent by the sewage of the town, which previously had its outfall into the river at the bottom of Anderstaff Lane, and created a nuisance more or less prejudicial to the general health of the district throughout the year, but more especially under high temperature. The old outfall is now closed, and the sewage conveyed

*By an order in Council dated June 10th, 1864, the Town Commissioners were created a Burial Board under the Burial Act, and in them the management of the cemetery is now vested.

from the town by a closed sewer to the tanks, from whence, after passing over six filter-beds, arranged so as to allow the deposition of a certain per centage of solid matter, it is conveyed by another closed sewer to the Trent in a somewhat less objectionable condition.

The most important of the public works connected with Burton during many generations is the new bridge, a structure which the enormous increase of late years in the traffic between the town and Derbyshire rendered absolutely necessary both for its safety and convenience.* The old bridge, in consequence of its curved form and narrowness, was not unfrequently the scene of accidents† more or less serious, for which there was no remedy but in the diversion of its crowded traffic into a broader and more commodious channel. To effect this, an Act of Parliament was obtained by the Midland Railway Company in the year 1859, by and under whose engineers the new bridge was designed and the works executed. The first stone was laid by John Richardson, Esq., the High Bailiff, February 23rd, 1863, and on the 22nd June, 1864, the ceremony of opening the bridge was performed by the Marquess of Anglesey, at the head of a long and imposing procession, consisting of the Yeomanry, Volunteers, the principal inhabitants of the town and neighbourhood, and others to whom the event must have been one of peculiar interest and satisfaction. The bridge, unlike its predecessor, runs in a direct line across the valley, is 469 yards in length, with two causeways of five feet each, and a roadway of twenty feet, defended by parapet walls 3ft. 8in. in height. It has twenty-nine arches, eight of which are thrown across the west, and three across the east branches of the Trent, supported by light but solid buttresses,‡ and one opening in

*An excellent model of the old Bridge is preserved at the Manor House.

†An incident is quoted by SHAW, of a Countess of Ferrers, or some other lady in the neighbourhood, passing over the bridge in her coach, the leading horses leaped over the parapet wall on one side, but the wheel-horses, fixing their hoofs firmly against the stone-work kept the coach back till the harness which held up the other horses was cut, when they dropped into the river and were drowned. Her ladyship, believing that she owed her life to the wheel-horses, kept them afterwards without work as long as they could live.

‡During the progress of the works it became necessary to remove a portion of the adjoining weir, beneath which was found a human

addition, more elevated than the arches, to admit the passage of locomotives into the Hay, by the lines of railway which communicate with the range of breweries situated on the east side of High Street. The bridge is built principally of millstone grit from the "Whatstandwell" quarries in Derbyshire, the cost of construction amounting to about £22,000. Of this sum the Marquess of Anglesey contributed £10,000, the remainder being provided by the Midland, the London and North Western, and the North Staffordshire Railway Companies. By their Act the Midland became owners of the materials of the old bridge ;* the Marquess of Anglesey surrendered his right to toll or "pontage" of £20 per annum from the Trustees of the Ashby and Tutbury roads, and what was of greater consequence, his lordship became permanently relieved of the liability to maintain in a proper state of repair this "great bridge of Burton-upon-Trent," which was imposed upon the estate by the grant thereof to his ancestors, 39th Elizabeth, 1597.

There is a well-grounded tradition that Burton was visited at about the same time and by the same description of plague as that of London (A.D. 1665), and that during its continuance the inhabitants of the surrounding hamlets were not permitted to approach nearer the town than the old lane called "Butter-woman's Causeway," on Burton Moors, where the ordinary butter and poultry markets were, in consequence, then held. A few years ago some excavations on the site of Messrs. Allsopp and Sons old brewery, on the east side of High Street, exposed several skeletons, the position of which indicated a hurried interment in a common grave. Upon reference to the Parish Register I find that the burials registered during the year 1665 were 59 ; for the year 1666, 83 ; and for 1667, 81 (the number of christenings for the same years being respectively 82, 86, and 83) ; consequently, the mortality of the parish, according to this

skull, having a large circular fracture apparently due to a bullet or a cross-bow bolt. The skull is in the possession of Sir O. Mosley, Bart.

*The whole of that portion of the old bridge, which stood across the west bank of the Trent, including the site of the chapel, has been removed. The chapel itself was demolished a little previous to the year 1777, and a messuage erected upon its site, under a lease granted in that year by lord Paget to Charles Powis.

record, was not greater than usual. There is little doubt that the bodies in question were the victims, either of an epidemic, or of one of the battles fought in the town during some period of its history; but if of the former class, and the tradition is correct in its date, the visitation must either have been of a slight character (which, considering the precautions taken by forbidding the country people to come within the town, and the well-known fearful nature of the disease was scarcely probable), or that those who died from it were, by rule, buried in unconsecrated ground, and therefore omitted to be entered in the customary parochial record of mortality. Even, in this case, it appears only fair to assume that a calamity which must have left a deep impression upon the public mind would have found some permanent record of its infliction, and where so simple and natural a channel as that of the Parish Register? But this work is altogether silent upon the subject; it contains no memorandum or note that such a plague visited Burton, and the probability is that if it occurred at all it was at a date long anterior to that of the commencement of the Register.

In the year 1832 cholera of the Asiatic type was introduced into the town by some tramps from Leicester. It was, however, confined to one or two courts in Horninglow-street, and of from fifteen to twenty cases which occurred, nine were fatal. The second visitation of the epidemic in 1849, was comparatively slight.

Of the population of the parish of Burton-upon-Trent from the commencement of the present century the following table furnishes full particulars; what it consisted of during the hundred years previously cannot be so accurately arrived at, but according to plans and surveys of the Manor it is tolerably certain that of the greater part of the century commencing with the close of the civil war it did not exceed 2,500 persons. In all probability, however, these figures represent the minimum of inhabitants of the different townships for a very considerable period, inasmuch as under the Abbots the average number of residents upon the estate appears to have been much in excess of that of the time alluded to; in fact there is every reason to conclude that the hamlets at least were more thickly populated, and con-

tained a greater number of dwellings at the time of the foundation of the Abbey than at the date of the first recorded census, 1801.

Doubtless at different periods of its history a variety of local troubles arose to affect the condition of the town in this respect, but none are authenticated as of so severe or prominent a character as those of the great struggle of the seventeenth century, from the effects of which it had by no means thoroughly recovered upwards of one hundred years afterwards. The estimated number of inhabitants now residing within the limits of the town is somewhat in excess of twenty thousand, and it is a curious coincidence that to the century dating backwards from the present year, should belong the peculiarity not only of registering both the maximum and the minimum strength of the population of Burton at any known period of its history, but also that the same time should be the witness of a corresponding condition in respect to its commercial position—and one which, notwithstanding that it commenced under circumstances which, at the present day, would scarcely be recognised as entitling it to so distinctive a character as that conveyed by the word commerce, rapidly increased in importance and magnitude, and ultimately attained an eminence to which there are comparitively few parallel examples connected with the history of British commercial towns of modern times.

According to the table the first great increase in the population of the town took place during the ten years ending 1861, since which date the average has been at the rate of about one thousand per annum. The annual value of the rateable property of the town for the year ending December 25th, 1853, was £21,956 10s. 0d., and the first Town rate of 6d. in the pound, then made by the Commissioners under their present Act realized £435 15s. 2d. The gross rateable value of property within the limits of the town was, in June, 1867, estimated at the annual sum of £82,466 17s. 0d., and upon which, less £5,615 6s. 0d. abatements to owners, a rate of 1s. 6d. in the pound actually produced £5,445 13s. 6d.

During the last five years, the Marquess of Anglesey and the Feoffees of the Burton Town Lands have leased upwards of 200 acres of land for building and trade purposes, five

miles of new streets have been laid out and completed, or are in course of formation, and 1,100 houses erected, or covenanted to be erected by lessees, of the annual value of £18,000. In addition to this, 6½ acres of freehold land on Horninglow Moors have been recently allotted for building purposes, and will, probably, in a short time be covered,—about 40 houses having already been erected thereon.

This remarkable extension of Burton has taken place principally in the neighbourhood of the old Derby Lane (now Derby Street), west of the Midland Railway, and the Bond-end canal in Burton Extra, one block of buildings at the latter place consisting of 192 houses, erected by and forming a portion of the property leased from the Marquess of Anglesey by the "Burton-upon-Trent Cottage Building Company," established in the year 1864, who are also Lessees, under his lordship, of an additional nine acres of land at Winshill, upon which it is proposed to erect a similar block of buildings for the occupation of the labouring classes. Notwithstanding this increased accomodation and the slight falling-off in the number of men employed in the Breweries during the last two years, the general prosperity of Burton is evidenced by the fact that the void or uninhabited houses do not exceed five per cent of the gross number.

TABLE OF THE TOWNSHIPS AND POPULATION OF THE PARISH OF BURTON-UPON-TRENT.

	1801	1811	1821	1831	1841	1851	1861
Burton-upon-Trent	3679	3972	4114	4339	4863	6374	9534
Burton Extra	716	872	910	910	1193	1289	2849
Branston	281	373	412	382	441	473	542
Horninglow	272	297	341	391	852	815	1968
Stretton	330	372	374	373	410	413	472
Stapenhill	457	447	535	572	577	635	1112
Winshill	309	317	357	344	377	405	880

Of these townships the first five are in Staffordshire, and the two last in Derbyshire. Stapenhill until the year 1864 belonged partly to the parish of Burton-upon-Trent, and was partly a parish in itself, but the whole, including portions of the townships of Stanton, Newhall, Caldwell and Brislingcote was within the ecclesiastical division of

Burton. In the year named, Stapenhill was by the consent of the Marquess of Anglesey and the Curate of St. Modwen's separated from the mother church, and is now ecclesiastically a parish possessed of the usual rights and governed by its own elected officers. The church is of ancient foundation and in all probability coeval with the Abbey of Burton, the second Abbot of which procured it for the Monastery previous to the year 1050. The present building, which occupies a picturesque and commanding position opposite Burton was erected, upon the old foundations, in the year 1838. The Rev. John Clay, appointed in the year 1835, is vicar. In the village stands Stapenhill Hall, a fine brick building of the seventeenth century, belonging to Joseph S. Clay, Esq., who is also owner of about 300 acres of land in the parish.

Burton-upon-Trent contains three churches, the parish churh of St. Modwen's, Trinity Church, and Christ Church. ST. MODWEN'S is built of sandstone, has a square lofty tower over the west entrance, and contains a nave, aisles, two galleries, an organ-loft, and sittings for a congregation of 1050 persons. The Rev. William Jones, M.A., appointed in the year 1860, is perpetual curate, and the Rev. George French, assistant curate. For three centuries it was the only place, in the whole parish, except the church at Stapenhill, and a chapel in High-street, where the inhabitants had the opportunity of assembling for divine worship. There is a tradition however that a church once existed at Stretton,* and in support of it a lane and some fields adjoining the village are still known as Church-lane and fields. The probability is that if such were the case it was simply a chapel-of-ease to the Abbey church, under the Abbots.

TRINITY CHURCH, which occupies a north and south position, the chancel being at the south end, stands in Horninglow-street, and is built of brick coated with cement. It was erected in the year 1824, by funds bequeathed for the purpose by the late Isaac Hawkins, Esq., and opened for divine service as a chapel-of-ease to St. Modwen's on the 1st October,

* There is some faint evidence of the existence of a castle at Stretton in early times, it being recorded that in the year 1114, one "ASCHETILL of the Castle" was tenant of two bovates of waste land at Stretton, for which he paid 2s.

when the Rev. Peter French, M.A., was appointed to the curacy as perpetual curate, which he still continues to hold. The living, which is unendowed is supported principally by the rents of a certain number of appropriated pews. The church contains sittings for about twelve-hundred persons, of which about one thousand are free. It was not till the year 1860, on the death of the Rev. Samuel Stead, perpetual curate of St. Modwen's, that it was permanently relieved of the authority of the mother church, and became a separate district.

CHRIST CHURCH, in Moor-street, which occupies a similar position to that of Trinity, was erected in the year 1844, the present incumbent, the Rev. Charles Guest, being appointed thereto in 1864. It is a sandstone building, with a spire 150 feet in height, and provided with 1000 sittings, of which 750 are free. The Marquess of Anglesey, as before stated is lay-rector of Burton, and patron of each of the livings into which it is now divided. His lordship is also impropriator of the great tithes, which are now chargeable upon the freehold land only of the Manor, those upon his own property being commuted in the year 1848, under the Tithe Commutation Act, of 1835. The lesser tithes or Easter dues, as they are more commonly called, formerly belonged to the perpetual curate of St. Modwen's, but are now by his consent allotted to the different incumbents of the severed districts. Contrary to the usual custom Burton has no wakes, but in all probability such annual festival is represented by the fair on St. Modwen's day, October 29th.

In 1864, a chapel was erected at Branston, which belongs to the Christ Church district, and opened for Divine Service by the late Bishop of Lichfield, on the 16th day of February of the same year. The cost of building, nearly £1,000, was provided principally by private subscription, and the sittings, about 300 in number, are free.

HORNINGLOW CHURCH, (dedicated to St. John), the foundation stone of which was laid by John Hopkins, Esq., December 27th, 1864, and the church consecrated by the late Bishop of Lichfield, October 24th, 1866, was erected from a design by Mr. Edward Holmes, of Birmingham, at a cost including bells, organ, and entrance gates of

£5,936 8s. 7d. It is built principally of Bath and Ancaster stone, has a spire of 120 feet, and stands out well on the elbow of land occupied by, and from which, the name of the village is derived. The greater part of the expense of building this church was provided by a few private individuals, and the endowment of £3,000, was the gift of Mr. Hopkins, to whom, in consideration thereof, has been surrendered the right to the presentation in perpetuity. The Rev. John Auden is incumbent, and the church has 448 sittings, 324 of which are free and unappropriated.

There is now in course of completion at WINSHILL, a church, for which the inhabitants of the village are indebted to the consideration of the late John Gretton, Esq., of the firm of Bass, Ratcliff, and Gretton, of Burton. This church which occupies the crown of an isolated hill overlooking the Trent valley, forms a conspicuous object in a range of considerable extent. It is a remarkably fine building, and in design resembles the church at Horninglow, but is considerably larger, and intended to accomodate about 800 persons. The estimated cost is £11,000 and an additional sum has been bequeathed by Mr. Gretton towards its endowment. The patronage of the living, in acknowledgement of the gift, has been conceded by the Marquess of Anglesey to the representatives of the founder of the church, in perpetuity. The land occupied by this and the other churches alluded to above was given by the lord of the manor. In addition to these M. T. Bass, Esq., M.P., has commenced the erection of a church on land purchased by him for the purpose, on the west side of Wellington-street, which when completed, will be a building of a most commanding exterior, and capable of seating a large congregation. Both the church and its endowment will be the free gift of Mr. Bass. Near Fleet-street in Bond End, and also at Stapenhill, Newhall, Horninglow, and in Anderstaff-lane, Mission rooms or school-rooms, licensed for preaching have recently been erected by the efforts of the respective incumbents, to whose districts they belong, and others interested in providing religious instruction for the inhabitants of these populous localities. The means of education for the lower classes are freely afforded by National and other schools con-

nected with each parochial district. The other religious denominations in the town with their chapels and ministers consist of

The INDEPENDENTS, whose chapel in High-street stands upon the site of a non-conformist meeting-house erected in 1662, by the Rev. Thomas Bakewell, who was ejected from the Rectory of Rolleston for not complying with the act of conformity. The existing building was erected in 1842, and will accomodate six hundred persons.

The WESLEYAN METHODISTS, whose first chapel in Horninglow-street was erected in the year 1766, and the present building on its site in 1843. The Revs. J. Nowell and W. Fox, are the officiating ministers, who reside in two houses connected with the chapel, to which are also attached school-rooms, and a vestry. This body has also taken, on a lease of 99 years, commencing April 5th, 1868, from the Marquess of Anglesey a plot of land opposite the Midland Hotel, in Station-street, upon which it is intended to expend £2,500 in the erection of a chapel and schools.

The UNITED METHODIST FREE CHURCH, George-street, established in 1852, and the present building erected in 1860. Ministers; Revs. E. Browning, and A. B. Matthews. They have also a newly erected Chapel-school in Victoria-street.

PRESBYTERIAN CHAPEL, Cross-street, built in 1861. Minister, Rev. W. Thompson.

PARTICULAR BAPTISTS, Station-street, established 1803. The chapel and adjoining buildings were destroyed by fire, in the year 1860. The present Chapel was opened in the following year.

PRIMITIVE METHODIST'S, whose CHAPEL, in Station-street was built, 1829 ; Rev. J. Eckersley, Minister.

GENERAL BAPTISTS' CHAPEL, Union-street, established 1823, the first place of Meeting being in the old cotton warehouse erected by the Peels near the Fleet-stones. The present (Zion) Chapel was built in 1855. Minister, Rev. J. B. Tetley.

The ROMAN CATHOLIC CHAPEL, in Guild-street, built 1851, and of which the Rev. T. J. Telford is Priest.

The remaining buildings of a public character to which

it is necessary to allude consist of the COUNTY COURT, in Station-street, erected in the year 1862, and of which the Judge. is George Russell, Esq. ; the POLICE STATION, at the corner of Guild-street and Station street, built in 1842, and where the Burton Petty Sessions* are held weekly, on Tuesdays ; the DISPENSARY, which it is intended to incorporate with the New Infirmary, is now in the Market-place, and supported by voluntary subscriptions; and the BURTON-UPON-TRENT LITERARY SOCIETY, in High-street, established in 1844. Formerly there was a MUSEUM in High-street, belonging to Sir Oswald Mosley, Bart., and which contained a good collection of minerals, fossils, birds, and other objects of Natural History, the whole of which, after being offered to the town by Sir Oswald and declined, were removed to his residence at Rolleston.

The present BURTON FLORAL AND HORTICULTURAL SOCIETY was established in 1851, and usually holds two exhibitions, annually in the Hay. The first exhibition was held in the Town Hall 1852, and the first in the Hay 1856. It was founded upon the Burton-upon Trent HORTICULTURAL AND FLORAL SOCIETY, established August 4th, 1835, and the first year the new Society numbered 50 subscribers. In 1867 the number of subscribers was 895.

Last year efforts were made to secure for the town of Burton an INFIRMARY and DISPENSARY, towards the foundation of which the late Mr. Francis Brough, of Winshill, bequeathed £500. The additional amount necessary for the erection of a suitable building has been obtained by private subscriptions and from other sources, and an elegible site secured, of 3187 square yards in extent, (of which 2330 square yards have been presented by the Marquess of Anglesey, the remainder being held on a lease of 99 years, from April 5th, 1868), lying between and having a frontage both to Duke-street and New-street, upon which the Infirmary, designed by Mr. Holmes, and estimated to cost £2,300, is now in course of erection.† It is a brick building,

* The Magistrates formerly held their sittings in a large room at the "Angel" Inn, Bank-square.

† During the excavations for the foundations of the Infirmary, a square shaped hole, about four feet from the surface, was met with, containing human bones and a quantity of oily matter, over which

divided into three wards, capable of containing when completed, proper accommodation for at least twenty-five inmates.

On the 31st December, 1867, was opened ST. GEORGE'S HALL, in George-street, a building erected by a few shareholders at a cost of £2500, for the avowed object of providing a more commodious and suitable place than the Town Hall, for the holding of concerts, lectures, and other public entertainments, and to which the popular Penny Readings, commenced in the Town Hall in the autumn of 1865, have now been removed. It is also used as a Corn Exchange.

The POST OFFICE stands in High-street, and somewhat curiously, after a long course of erratic wanderings, has returned to the site it occupied one hundred-and-fifty years ago. In the same street the BURTON, UTTOXETER, and ASHBOURN UNION BANK, established on the 11th of October, 1839, and a branch of the DERBY and DERBYSHIRE BANK, which commenced here in 1863, have their respective establishments. Previous to the erection of the premises of the first-named company, the monetary business of the town was transacted by the two private banking establishments of Messrs. Clay and Son, and Blurton, Peel, and Co., whose different interests were then purchased by, and amalgamated in, this company, which then bore the name of the Burton, Uttoxeter, and Staffordshire Banking Company.

The Burton-on-Trent MECHANICS' INSTITUTE stands in Guild-street, the building of the institution being erected by subscription in 1858, for the use of the Church of England Young Men's Association; subsequently the society changed its title to the Young Men's Christian Association, and finally in 1867 to that of the Mechanics' Institution. It consists of a library and reading-room, and is well supported.

The town has also three Newspapers; *The Burton Times*, published on Saturdays, established in 1855, proprietors, Messrs. Whitehurst. *The Burton Weekly News*, established shortly afterwards, and published on Fridays, proprietor, Mr. Bellamy. *The Burton Chronicle*, established in 1860, and published on Thursdays, Mr. J. N. Tresise, proprietor.

was constructed an oak timber frame, and covered with thin red bricks. In another instance the covering consisted of stone.

The ANGLESEY, or BURTON-ON-TRENT TROOP of the STAFFORDSHIRE YEOMANRY CAVALRY, was enrolled Nov. 29, 1819, and now numbers fifty men under the command of Captain Lord Henry Paget; Lieutenants, M. T. Bass and Lord Alexander Paget, and Cornet Lord Berkeley Paget. Of its sister service the VOLUNTEERS, Burton furnishes three companies—the first and second Burton being the 7th and 8th companies of the Staffordshire Rifle Volunteers, formed in 1859, and the third Burton or 39th Staffordshire, formed in 1860-1. The officers of the 1st Burton are Captain F. Gretton, Lieutenant R. Ratcliff, and Ensign J. Bindley; of the 2nd Burton, Captain M. A. Bass, M.P., Lieutenant J. Anderson, (Ensigncy vacant); and of the 3rd Burton, Captain R. Thornewill, Lieutenant T. A. Jackson, and Ensign R. W. Tomlinson. The assistant surgeons are R. S. Tomlinson and G. Lowe; Chaplain, the Rev. W. Jones; Quarter-master and Lieut., C. Goer; Treasurer, Mr. E. Brown. John Gretton, Esq., Bladon House, is Major of the 2nd Staffordshire Administrative Battalion, to which the Burton corps belong. The total strength of the 3 Burton companies is, including band, 270 men. The rifle-butts are in Burton meadow, and the practice ground is a fine range of 1200 yards.

Anciently, and before their enclosure,* RACES were held annually on the Outwood hills, the principal race being for a "King's Plate," which was subsequently, on the enclosure of the hills, transferred to Lichfield. In the year, 1811 the old races were re-established, and continued annually without intermission down to August, 1840, when they were discontinued. The race-course was in Burton meadow, and was considered one of the best straight mile courses in England. The grand-stand, which consisted of a crescent-shaped stone building, stood near the east branch of the river, about three hundred yards from the entrance to the meadow. It was removed in 1842, and the greater part of the materials used in the construction of the Independent Chapel in High-street.

* Mr. W. BASS, to whom I am indebted for many interesting particulars relative to Burton, informs me that the commoners of Horninglow were much opposed to the enclosure of the Outwood Hills, and, on more than one occasion, pulled up and burned the posts and rails used in the enclosure of the land.

The town is also possessed of various BOATING and CRICKET CLUBS—namely, the BURTON ROWING CLUB, the TRENT ROWING CLUB, and the NEW LEANDER ROWING CLUB. The Burton REGATTA, established in 1865, is usually held on the Drakelow waters. The CRICKET CLUBS consist, with others, of the BURTON-ON-TRENT and ANGLESEY CRICKET CLUBS, the ground of the former being in Burton Meadow, and of the latter in the Hay, which meadow the Marquess of Anglesey annually offers to the town for public recreation. A COURSING CLUB, under the presidency of the Marquess of Anglesey, was established at Burton in April of the present year, and promises to be highly successful.

Burton contains several mutual BENENIT SOCIETIES, the branch Lodges of the MASONS, the ODD FELLOWS, and the FORESTERS being the most popular: it is also not without its TRADE UNIONS, but happily the latter seldom attain any special prominency in public attention. In the month of August, 1868, the BURTON-ON-TRENT RATEPAYERS' LEAGUE was established, the object of the society, which numbers one-hundred and fifty members, being confined to subjects in which the ratepayers of the town are specially interested.

I think it will be generally admitted that this section of the work would be incomplete without a special, although of necessity it must be a brief notice of the family of which the MARQUESS of ANGLESEY is the representative, and whose association with the Town and Manor of Burton is of so intimate and important a character. It is a curious coincidence, considering their subsequent connection with the place, that the first recorded notice of the family invests them with the mastership of the game in Cankewood, a part of Cannock Chase adjoining Beaudesert, Lewis Paget, Esq, one of the gentlemen of Staffordshire, being appointed to that office in the 11th Henry VII. The first of the Pagets, however, who attained to the dignity of the peerage, was William, son of Mr. Paget, one of the Sergeants of Mace of the City of London, who was born near Wednesbury, and educated at Trinity College, Cambridge. He early in life distinguished himself by his rare abilities, and in the 23rd Henry VII., was made clerk of the Council, and also clerk of the Privy Seal, with the salary

of £30 per annum. Shortly afterwards he was appointed Clerk to Parliament for life. In these various employments he acquitted himself with so much integrity and prudence as to attract the special notice of the king, by whom he was in the year 1544 sent ambassador into France, and on his return, was for his services, made one of the principal secretaries of state, and received the honour of knighthood. In the 36th Henry VIII, he attended that monarch in his expedition to Boulogne, and was associated with the Earl of Hertford in his endeavours to effect a special treaty with France. In the following year he was appointed master of the Posts, with a fee of £60 13s. 4d. per annum, and the next year was one of the Commissioners who concluded a peace with the French. King Henry upon his death-bed bequeathed him a legacy of £300, and appointed him one of his executors, also one of the council to his successor Edward VI., in the 2nd year of whose reign he obtained a grant in fee of Exeter House, without Temple Bar, London, formerly belonging to the Bishops of Exeter, also of a certain parcel of land lying within the garden of the Middle Temple. He partly rebuilt Exeter House, and there resided, calling it Paget House, which subsequently became Leicester House, and then Essex House. In the 4th Edward VI he was sent Ambassador to the Emperor Charles V, and on the 3rd December of that year, being then Knight of the Most Noble Order of the Garter, Comptroller of the King's Household, and Chancellor of the Duchy of Lancaster, he was called by writ, and took his seat in the House of Peers by the title of Lord Paget, of Beaudesert. Upon the 23rd January following, he was, with the Earl of Bedford and others, entrusted to negotiate with the French for a treaty of peace. Notwithstanding these extraordinary services he was, upon the fall of the Duke of Somerset, at the instigation of the Duke of Northumberland, committed to the Tower, and divested of his honours; the principal charges against him being the plotting with others the murder of certain persons at Paget House, selling the King's lands and timber, and the granting of leases without the King's authority, in consideration of which he surrendered his offices, and submitted himself to be fined at the King's pleasure in the sum of

£6,000. Shortly afterwards however it was ascertained that these charges arose more from political motives and the hatred of his enemies than from any actual commission of the offences imputed to him, and in consequence, he, in December, 1552, obtained a general pardon of all transgressions and negligences, except debts due to his Majesty in the Court of Exchequer, the augmentation, the wards, and the first fruits and tenths. In March of the following year, he obtained a grant from the King and his posterity for ever of the coat of arms now borne by the family, which had been taken from him on pretence that it was given by a king-at-arms, who had not sufficient power to grant the same.

On the death of King Edward VI. he joined the Earl of Arundel in proclaiming Mary, Queen of England, and the same night rode post with thirty horse to certify her of her subjects' loyal intentions. For his zeal on her behalf the Queen restored to him the Order of the Garter, with which he was re-invested with much ceremony, and the honourable commendation "that he had highly deserved it of the nation by his prudence and counsel." The Queen also, the same year, granted him the Manor of Alcester, co. Warwick, and divers other lands in the counties of Warwick and Derby, and the reversion of the Manor of Great Marlow, in Buckinghamshire. In March, 1553-4, he was again employed in important negotiations with the ambassadors of the Emperor of the Romans, and upon 29th January—2nd and 3rd Philip and Mary—was constituted lord Privy Seal. In May, 1555, he went over to Calais with Cardinal Pole, the Earl of Arundel, and others, to mediate a peace between the Commissioners of Henry II, of France, and the Emperor of the Romans. On Queen Elizabeth's accession he quitted the public service, although much in the favour of that Queen, and by his last will and testament, bearing date November 4th, 1560, he ordered his body to be buried at Drayton, in Middlesex, if he died within forty miles of that place, or at Burton-upon-Trent if he died within the same distance from it. He died June 9, 1563, aged 57, and was buried at Drayton, but his lady and his son Thomas erected a stately monument to his memory above the choir in Lichfield Cathedral, where the shrine of St. Chad formerly

stood, which, together with that Church, was destroyed in the time of the civil war. A drawing of this monument, with the inscription in Latin* upon it, preserved at Beaudesert, was made at the expense of Lord Hacton previously, and the following translation of the inscription by SHAW, is, with an engraving of the monument and its original inscription, given in his "History of Staffordshire," vol. 1, p. 215: "To the illustrious hero of pious memory, lord William Paget, knight of the most noble Order of the Garter, lord or baron of Beaudesert, the most wise ambassador of the most powerful Prince Henry VIII, to Charles V, the august Emperor, and Francis, the most christian King of France, secretary and most faithful counsellor to the same prince; appointed, among others, administrator of this powerful kingdom in the King's testament; a most worthy Chancellor of the duchy of Lancaster (in the reign of Edward), and most prudent censor, or comptroller, of the King's household; most virtuous keeper of the Privy Seal to the most serene Queen Mary; always most dear to the most illustrious Queen Elizabeth; a most venerable Senator, and who has deserved well of his country and all good men.

"Also, to Lady Anne, his most faithful wife, and lord Henry, their dearest son, and Catherine, his most beloved wife.

"The above-mentioned Anne, a woman of the greatest merit, and Lady Catherine, the most dear wife of the above-mentioned Henry; and the right honourable Thomas Paget, at present lord of Beaudesert, in consequence of the desire and last will of the above-mentioned William and Henry, have (mindful of their duty) most willingly, and with the greatest zeal, erected this monument."

At the time of his death he was, in addition to the different Manors of Burton (described at page 50), seised of the following in this county:—the Baronies of Longdon and Haywood; the Manors of Longdon, Shugborough, Whittington, Haywood, Berkswich (Baswich), Cannock, Rugeley, and Rugeley Park, valued at £143 9s. 0d., and held of the king in capite by service of the twentieth part

* DUGDALE has also a copy of this inscription in his "Baronage," vol. 2, p. 390.

of a knight's fee. The forest and chase of Cannock, Beaudesert Park, the Manor of Farley and rectory, the Manor of Bromley Abbotts and rectory, the Manors of Hurst and Bromley-Hurst, and likewise divers messuages, rents, and services in Pillatonhall, Whiston, Darlaston, Folde, Leighe, Hamstall-Ridware, Ilam, Okeover, Blore, &c. He was succeeded by his eldest son HENRY, who, at the coronation of Queen Mary, was made one of the Knights of the Bath, and in the 8th of Elizabeth was summoned to Parliament, and took his place there on the 30th September. By his will, dated November 27th, 1568, he orders his body to be buried near his father's at Drayton, and, amongst other things, ordains that all the furniture of his mansion-house at Burton shall continue to such as shall be owners thereof. He died December 28th following, and was succeeded by his brother THOMAS in all his estates and honours, and who took his place in Parliament April 4th, 13th Elizabeth. In the 27th Elizabeth, being zealously affected to the Romish religion, and suspected of an attachment to the cause of Mary, Queen of Scots, he withdrew privately into France, and, thereupon, in the Parliament holden at Westminster, 29th Elizabeth, he was attainted with his brother Charles, and their lands and possessions confiscated, whereby the Earl of Leicester obtained a grant of Paget House. He died at Brussels in 1589, his death, according to CAMDEN, "proving a sad and universal loss to the commonwealth of learning."

His son and heir, WILLIAM, was knighted before 39th Elizabeth, when he accompanied the Earl of Essex in his signal expedition of taking the town and island of Cales, and in the Parliament held, 1st James I, was restored to his father's lands and honours. He died August 29, 1629, and was buried with his ancestors at Drayton, being succeeded by his son WILLIAM, at the age of 19—which William was made Knight of the Bath at the coronation of Charles I, and in 1642 appointed by the Parliament Lord Lieutenant of the county of Buckinghamshire. In the great struggle between the King and Parliament he supported the cause of the Royalists, and raised a regiment which, at the battle of Edgehill, did great service. At York he furnished

King Charles with 30 chevaliers, ready mounted and armed at all points cap-a-pie, for which the sequestrators of those times took notice, and forced him to pay the sum of £500. He lived some years after the restoration of the Royal family, and died at his house in the old Palace Yard, Westminster, and was also buried at Drayton.

WILLIAM, sixth lord Paget, his eldest son and heir, succeeded him, and took his seat in the House of Peers November 25, 1678. He was one of the lords who voted for the vacancy of the throne, and settling the crown on the Prince and Princess of Orange, whereupon, on their accession, he was, in March 1688-9, constituted Lord Lieutenant and custos rotulorum of the county of Stafford, and appointed envoy-extraordinary to the Emperor, at whose Court of Vienna he remained until February, 1692-3, when, being appointed ambassador-extraordinary to the grand Signior, he travelled through Hungary and the Turkish territories to Constantinople. His lordship's great abilities were conspicuous through the whole negotiations, and at length he concluded a peace between the Emperor and grand Signior. He spared no cost in the entertainment of the several mediators, nor omitted anything that might lead to the honour of his king and country.* The grand Signior expressed a great veneration and esteem for his Majesty of Great Britain, and assured his lordship he should ever retain a grateful memory of the good offices of his mediation, presenting him with a very rich vest, and a fine Turkish horse with costly furniture. He died at his house in Bloomsbury Square, February 25th, 1712, and was buried in the church of St. Giles-in-the-Fields, London.

His lordship was succeeded by his second son HENRY, who, in his father's lifetime, was elected one of the Knights of the shire for the county of Stafford, and served in the Parliaments both of King William and Queen Anne. In 1702 he was appointed one of the Council in the affairs of the Admiralty, and on June 13, 1711, declared captain of the Yeoman of the Guard, and the next day sworn of her

* The particulars of each item of expenditure during his lordship's visit to Constantinople are contained in a book written at the time, and still preserved at Beaudesert.

Majesty's Privy Council. In the same year he was created a peer of Great Britain by the style and title of lord Burton, baron of Burton, in the county of Stafford, and on succeeding his father in his honours and estates, was constituted Lord Lieutenant and custos rotulorum of the county of Stafford. On April 17th, 1714, her Majesty appointed him to be her envoy-extraordinary to the elector of Hanover, (afterwards George I.) On October 19th of the same year he was created Earl of Uxbridge in the county of Middlesex, and in the year 1735 he resigned his employment, and died 1743. He had issue THOMAS CATESBY, his only son and heir, who was elected to serve in the two parliaments called by George I. His lordship published several poems and essays, and accordingly has a place amongst the "noble authors." He died in his father's life-time, January, 1741-2, leaving issue HENRY, who succeeded his grandfather in his titles and estates, August, 1743, and dying unmarried in 1769, the barony of Burton and earldom of Uxbridge became extinct, but the barony of Paget (being a barony in fee) descended to Henry Bayley, Esq., in right of his mother, as heir general to Sir William Paget, knight of the garter, created Baron Paget, of Beaudesert, 4th Edward VI. The Bayleys are an ancient Scotch family, of which Lewis Bailie (subsequently Bishop of Bangor) came to England with James I in 1602, and whose descendants acquired large possessions in Ireland; also in the Isle of Anglesey, now belonging to the Pagets, and from which the title is derived. Nicholas, the eldest son of Lewis Bailie, or Bayley, Bishop of Bangor, was, for his activity in the cause of Charles I, pursued by Oliver Cromwell into Wales, and narrowly escaped being taken by a party of horse who had surrounded his house—Cromwell declaring that though he fled to the mountains he would make him as low as the grass. He was governor of Galway and the Isles of Arran in Ireland, and had a commission from Charles I to raise a regiment, and was afterwards one of the gentlemen of the bedchamber to Charles II. His son Edward was created a baronet of the kingdom of Ireland by letters patent, dated July 4th, 1730, and died September, 1741, being succeeded in his title and estates by his eldest son, Nicholas, who was chosen to serve

in several parliaments as knight of the shire for the county of Anglesey, and was subsequently appointed his majesty's lieutenant of the said county, in the room of George, earl of Cholmondeley. He first married April 19th, 1737, Carolina, daughter and sole heir of the honourable Thomas Paget, and died December 9th, 1782, and was succeeded in his title and estates by HENRY BAYLEY PAGET, his second son, who was born June 18, 1744, and succeeded to the barony of Paget in right of his mother, January 13, 1770, assuming the arms and name of Paget in virtue of his Majesty's sign-manual, dated the 29th of the same month. On the 20th July, 1782, his Lordship was appointed Lord Lieutenant and custos rotulorum of the county of Anglesey. He was married to Jane, eldest daughter of Arthur Champagné, dean of Clonmacnoise in Ireland, and had issue seven sons and five daughters, the eldest of whom, HENRY WILLIAM, was born May 17th, 1768, and succeeded to the title and estates as fourth earl of Uxbridge on the death of his father, March 13th, 1812.

This nobleman, whose name will ever remain conspicuous amongst the distinguished men of this country, was educated at Westminster and Oxford, which latter university he quitted in 1790. In 1793, being then in his twenty-fifth year, he joined the military profession, and raised amongst his father's tenantry the 80th regiment of foot, or Staffordshire Volunteers. When completed to 600 men he was appointed Lieutenant-Colonel, and, on 400 men being added, sailed with his regiment to Guernsey, and from thence in 1794, joined his Royal Highness the Duke of York in Flanders, with whom he served in the numerous engagements of that campaign, and by his dashing bravery and military resources, earned for himself a name, to which his after career could add but little, as a thorough soldier and disciplinarian. During the memorable retreat across the Meuse which was effected in the midst of an intense frost, and in want of almost every necessary, Lord Paget was at the head of his regiment, and during the temporary absence of Lord Cathcart, had the distinction of replacing that officer at the head of the brigade. On his return to England in 1795 his Lordship was transferred from the 80th to the command of

the 7th Light Dragoons, with which he was sent to Ipswich, and there, with other cavalry under his command, commenced a series of evolutions and laid the foundation of a system of discipline which effected an entire reform in cavalry practice, and rendered it the formidable and terrible instrument which contributed so much to the glory of the British troops on the fields of the Peninsula and the plains of Waterloo.

At the close of the year 1799 Lord Paget accompanied the Duke of York in his expedition to Holland. In the general attack made on the 2nd October, 1799, his Lordship was attached to the division under the command of the Russian general, De Herman, and by his brilliant cavalry manœuvres contributed materially to the victory of that day. Late in the evening the enemy's cavalry, having been defeated in an attempt made by them upon the British Horse Artillery, were charged by Lord Paget's brigade and driven back, with considerable loss, nearly to Egmont-op-Zee. In the final retreat he was entrusted with the duty of protecting the rear of the army, and while thus engaged a skirmish took place, in which the enemy captured some of the British cannon, but his Lordship, with one squadron, made a vigorous attack upon seven squadrons under the command of general Seinon, and not only retook the guns, but captured five others, and utterly routed the enemy with but little loss on his own side. After this time his Lordship devoted several years to the discharge of his military duties, and, by his unremitting attention, achieved for the 7th Light Dragoons the character of being one of the finest cavalry corps in the service. Towards the close of 1808, having in the meantime been gazetted major and lieutenant-general, Lord Paget was ordered into Spain with two brigades of cavalry, consisting of the 7th, 10th, 15th and 18th regiments of Hussars, to strengthen the corps of the army under Sir David Baird, who was marching through Gallicia to effect a junction with the main body under Sir John Moore. His Lordship disembarked at Corunna on the 10th December, arrived at Zamora, and, by forced marches, came up with Sir John Moore on the 14th, just in time to take part in that general's famous retreat. The patrols of

Napoleon's army were already in sight, and had actually come up to the rear of the British columns, while Soult, at the same time, was pushing forward on the other side. For several days the British troops were much harassed by the enemy, and driven forward in the face of the most trying difficulties, not unfrequently at the rate of twenty miles a day. On the 20th December the long-wished for junction with Baird was effected, Lord Paget being then with his division of cavalry a few miles from Sahagum. At the latter place 700 of the enemy's horse had been posted, and these his Lordship proposed to cut off from the main body of the French by a rapid movement. Accordingly at two o'clock on the morning of the 21st, major-general Slade was dispatched with the 10th Dragoons by one route, while Lord Paget, with the 15th Dragoons, pursued another, and succeeded in surprising a picquet of the enemy, but some men having unfortunately escaped, gave an alarm, and thereby afforded the French an opportunity of forming in an advantageous position in the outskirts of the town. His Lordship, however, by superior tactics, out-manœuvred the enemy, and before they could get well into line, by a brilliant charge, completely routed and dispersed them with considerable loss, two lieutenant-colonels and upwards of 200 other prisoners falling into his hands. Various other similar engagements occurred during the disastrous retreat, in one of which Lord Paget's division was fiercely attacked by the Chasseurs of the Imperial Guards, but forming the 10th in line, and with some piquets of German hussars, he received and returned the charge at their head with such impetuous gallantry that the Imperial Guards were utterly overthrown, with the loss of a general, seven officers, and one hundred men made prisoners, and nearly as many killed. His lordship returned to England in the autumn of 1806, and took no further part in the Peinnsular campaign. In the spring of 1815 he commanded the troops assembled in London to quell the Cornhill riots. On the return of Napoleon to France from the isle of Elba, and his taking the field, Lord Uxbridge was entrusted with the command of the cavalry forces attached to the large Anglo-Belgian army, and at Waterloo contributed more than any other leader, except Wellington, to the

signal victory of that eventful day. The French Cuirassiers in their steel corsets entertained an idea that an attack upon them would be ineffectual. Twice had the gallant Earl led the Guards to the charge, cheering them with the rallying cry "Now for the honour of the Household Troops!" when three heavy masses of the enemy's Infantry advanced, supported by Artillery and a numerous body of Curassiers. This formidable force drove in the Belgians, leaving the Highland Brigade to receive the shock. At this critical moment Lord Uxbridge galloped up to the second heavy brigade under the command of Sir William Ponsonby, when the three regiments were wheeled up in the most masterly style, presenting an imposing front of 1,300 men. As the earl rode down the line he was received by a general shout and cheer from the brigade; then placing himself at their head, his favourite post, they made the most rapid and destructive charge ever witnessed. The division they attacked consisted of 9,000 men under Count D'Erlon. Of these 3,000 were in a short time made prisoners, and the rest killed, with the exception of a few hundred men, who formed themselves under cover of the cuirassiers. After this his Lordship bravely led the same troops in several other brilliant attacks, cutting to pieces whole battalions of the old French Guards, into whose masses they penetrated. After performing prodigies of valour, and apparently getting through the arduous struggles of the day, the earl received a wound in the knee by almost the last shot that was fired. At first the wound was not considered material, but upon surgical examination it was found necessary to amputate the leg, which was successfully performed in the house of a draper at the village of Waterloo. The chair in which his Lordship sat while undergoing the operation was long preserved by the owner, who planted a weeping willow upon the spot in his garden where the amputated leg was buried. For his services at Waterloo his Lordship was, five days after the battle, raised to the dignity of a Marquisate of the United Kingdom by the title of Marquess of Anglesey.

After remaining two months at the village of Waterloo the noble Marquess was able to return to England, and to his paternal estate at Beaudesert. At Lichfield he was

received with public honours, and a magnificent sword, voted by the Corporation presented to him. This weapon, with many other articles of great value, including a service of plate subscribed by the inhabitants of Burton-on-Trent, presented to him in recognition of his brilliant services, is now preserved at Beaudesert, together with the blood-stained trousers and the other articles of his Hussar uniform worn by him at Waterloo.

His Lordship subsequently entered the political arena, and under Canning succeeded the Duke of Wellington as Master General of the Ordnance, with a seat in the Cabinet. On the 17th March, 1828, he was appointed Lord-lieutenant of Ireland, which office he held for one year. In December, 1830, his Lordship was again appointed, and arrived in Dublin on the 23rd. He was a great favourite with the Irish. In 1834 his Lordship resigned the Vice-royalty in consequence of declining health, and returned to London, resuming his seat in the House of Peers, where he regularly attended, but seldom spoke. He usually sat by the side of his old companion in arms, the Duke of Wellington, than whom two more remarkable contemporaries England has seldom seen. Upon the death of Earl Talbot he was appointed Lord-lieutenant and custos rotulorum of the county of Stafford. His Lordship expired on the 29th April, 1854, at Uxbridge House, his residence in London. Of the general character and the abilities of this distinguished man the following summary by a writer in the *Times* at the time of his death, may be quoted as a fitting and historical testimonial: "For ourselves we take pleasure in the recollection of the old man's stately form as he was to be seen amongst us, the very model of an officer and a gentleman. He was not only this. He belonged to a race of nobles who have passed away from amongst us; he was the last of the race, and we shall know them no more. He was a man pre-eminently fearless and brave, but ever courteous and of high-bred manners. It is very true that nature had given him great advantage of form and bearing, and the consciousness of his own rank and position might have helped him somewhat in the same direction; but, independently of all this, there was the dignity of a kind heart, and of a man

who respects others because he respects himself. In the present case we find ourselves expressing a sorrow which we most unfeignedly feel for the loss of a man who had obtained a greater age than we, his survivors, can hope to reach. All who ever came in contact with Lord Anglesey must share in the regret. But there is something more in the feeling than considerations purely personal. In parting with Lord Anglesey we part with an historical period; we have done with George 3rd and the Prince of Wales, and the war of the Titans, and George 4th. A student of Alison would have gone back to his library with a greater sense of the realities of that great time from seeing Lord Anglesey canter by in the public streets. That was one of the men who had fought out the great struggle. There may be other survivors but Lord Anglesey had this in common with the great Duke—that he was ever before us. We saw him continually and everywhere. In the parks, in the streets, in assemblies and parties, or stretching down Long Reach in the *Pearl* with his great mainsail set. Lord Anglesey was ever among his countrymen. More than this he was always ready with a kind act for those whom he could oblige, and with a courteous denial for those who had asked from him that which it was not in his power to give. If he did not act the highest part in the world's history, all he did he did well, and that throughout well-nigh four-score years and ten."

On the 5th May the remains of the deceased were removed from Uxbridge House to Lichfield, the procession through London to the station of the Great Northern Railway being in part composed of a detachment of fifty of his own regiment, the 1st Life Guards, the Queen's carriages, and one hundred carriages of the nobility and gentry. At Lichfield the body lay in state during the night, and on the following day was interred with great solemnity, and with the honours befitting his name and position, in the cathedral of that city. The following were his titles and orders: The most honourable Henry William Paget, first Marquis of Anglesey, Earl of Uxbridge, Baron Paget (of Beaudesert), Field Marshal, Colonel of the Royal Horse Guards, Lord Lieutenant and Custos Rotulorum of the counties of

Anglesey and Stafford, Constable of Carnarvon Castle, Ranger of Snowdon Forest, Vice-Admiral of the Coasts of North Wales and Carmarthenshire, Captain of Cowes Castle, Privy Councillor, K.G., G.C.B., Knight of St. Patrick, G.C.H., Knight of Maria Theresa of Austria, Knight of St. George of Russia, Knight of William of Holland.

His lordship married first, 25th July, 1795, Caroline Elizabeth, daughter of George, fourth Earl of Jersey, who died 16th June, 1835, and had issue; Henry, the present Marquess, born July 6th, 1797; William, born March 1st, 1803, Captain, R.N.; Arthur, who died 1825; Caroline, married in 1817, to Charles, 5th duke of Richmond; Jane, married in 1824, to the present Marquess Conyngham; Georgiana, married 1833 to Lord Crofton; Augusta, married in 1820 to Lord Templemore, who died 1837; Agnes married in 1829 to the earl of Strafford, and died in 1845. On that marriage being dissolved by the laws of Scotland (her ladyship married the Duke of Argyle), he again married in 1810, Lady Charlotte Cadogan, daughter of Charles, first Earl of Cadogan, who died July 8th, 1853, and had issue, Clarence Edward, Vice Admiral, R.N., commander-in-chief of the Mediterranean squadron, born June 17, 1811; Alfred Henry, born June 29th, 1816, colonel in the army, equerry and clerk marshall of the Royal Household; George Augustus Frederick, C.B., Major General, and who commanded the Light Cavalry Brigade in the Crimea born March 16th, 1818; Emily, married in 1832, to John, Viscount Sydney; Mary, married in 1838 to the earl of Sandwich, and died 1859; Adelaide, married in 1851 to the Hon. F. W. Cadogan.

The personalty in England was sworn under £140,000. The will bears date 23rd February, 1854.

The truncated pillar, richly ornamented with devices, presented to him by his majesty King George IV (when Prince of Wales) and by the officers of the 10th Hussars, he bequeathed to his eldest son, to be retained as an heir-loom with the earldom of Uxbridge.

HENRY, the present Marquess, (Sir Henry Paget, P.C.) Earl of Uxbridge, co. Middlesex, and Baron Paget of Beaudesert, co. Stafford, and a baronet, Lord Lieutenant of An-

glesey, P.C., summoned to the House of Lords, in 1832, as Baron Paget, of Beaudesert, (in the lifetime of his father), Married; 1st, Eleanora, 2nd daughter of the late John Campbell, Esq., of Shawfield, and Lady Charlotte Campbell, niece of the Duke of Argyll, by whom, who died July 3rd, 1828, he has issue:—

Henry William George, Earl of Uxbridge, late an officer of Grenadier Guards, born December 9th, 1821, married, June 7th, 1845, Sophia, daughter of the late James Eversfield, Esq., of Denne Park, Suffolk.

Eleanor Caroline, married, February 4th, 1847, Sir Sandford Graham, Bart., and died November 17th, 1848.

Constance Henrietta, married, August, 1846, to the Earl of Winchilsea.

His Lordship married, secondly, August 27th, 1833, Henrietta Maria, 4th daughter of the late Right Honourable Sir Charles Bagot, and has by that lady, who died 22nd March, 1844:—

Henry, born December 25th, 1835, Captain Staffordshire Yeomanry Cavalry.

Alexander Victor, born April 25, 1839, Lieutenant Staffordshire Yeomanry Cavalry.

Berkeley Charles Sydney, born March 5th, 1844, Cornet Staffordshire Yeomanry Cavalry.

Florence Cecilia, married, July 10th, 1864, to Henry, 4th and present Marquess of Hastings.

His Lordship married, thirdly, March 8th, 1860, Ellen Jane, daughter of George Burnand, Esq.

His Lordship, by commission dated July 21st, 1814, joined the 7th Hussars as Lieutenant, and on the 27th February, 1817, obtained his Captaincy. In April, 1820, he exchanged into the 1st Life Guards, and on the 17th June, 1823, was gazetted as Major, and on the 5th August following as Lieutenant-Colonel of the same regiment. In 1827, his Lordship retired from the Life Guards, and held no active appointment in the army till the 28th June, 1838, when he obtained his commission as Colonel of the 42nd Highlanders, and from which he finally retired September 5th, 1843. Since 1855 his Lordship's name has appeared in the Army List in the alphabetical list of officers retired from the army.

Arms :—Sable, on a cross engrailed between four eagles displayed Argent, five lions passant of the first.

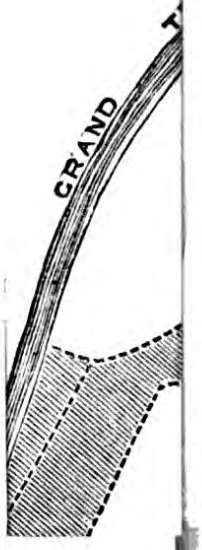
Crest :—On a wreath, a demi-tiger rampant, sable, gorged with a ducal coronet and tuffed and maimed, argent,

Supporters :—Two tigers as in the crest.

Motto :—"Per il suo contrario."



BUILDIN



BURTON-ON-TRENT.

ITS WATERS.

—:o:—

As already stated in the opening section of this work, the Trent Valley in the immediate neighbourhood of Burton consists of a deep excavation in rocks, composed principally of sandstones and marls, the latter containing numerous irregular-bedded masses and veins of gypsum; and, rarely, thin bands of arenaceous limestone. At one particular point on the eastern margin of the valley, a little north of the Winshill Forge-mills, these sandstones give place to coarse conglomerates, a rock which forms a long marginal belt to the western border of the Ashby-de-la-Zouch coalfield, and thickens northwards into the broad hilly tracts of Repton, Bretby, and Foremark. Westwards of the valley the conglomerates and sandstones are generally absent, and the whole of the country included in the ancient tracts of Needwood forest consists of red and white marls; upon the more elevated portions of these, about Christ Church and Bagot's Park, rest outliers of a formation which is now ascertained to occupy a position intermediate with that of the Lias and the red marls of the New-red-sandstone. The greater part of

the area occupied by these various formations is more or less covered up by deposits of drift boulders, clays, sand, and gravel, and passing downwards into the Trent Valley newer deposits of sand and gravel infill its trough-like hollow to a depth of thirty feet and upwards, these being in turn channelled out to a greater or less depth and width by the action of existing and extinct river-courses—the history and general conditions of which are clearly shown in the accumulations of sand, silt, clay, and peat, which make up a by no means inconsiderable portion of the Trent Valley area of the present day.

The rocks thus briefly described belong to different subdivisions of the New-red-sandstone, but at Brislingcote and Bretby, about a mile and a quarter north-east of Burton, they are succeeded by strata of the Carboniferous system which occupy a much lower or more ancient position in the geologic scale. These strata constitute the assumed northern apex of the Ashby coalfield, but it was not till the year 1854, that the extension of the field to this point was established, and that it was proved to contain coals of sufficient value to be worked. In the year named, Mr. W. Bond, of Burton, who was then working a brickyard at Brislingcote, noticed in an adjoining field indications of old pit workings, and this led him to sink a shaft, which at less than fifty yards from the surface struck a coal, four feet in thickness, and which, from the circumstance of its discovery on the property of the Marquess of Anglesey, was named and subsequently worked as the *Anglesey* coal.

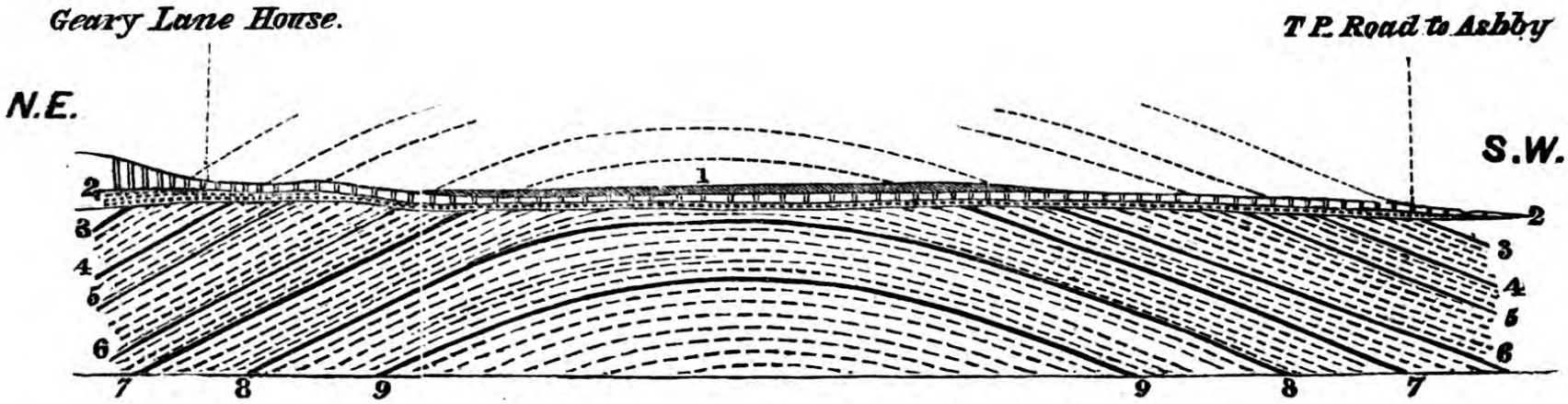
The position of this newly-discovered coal is at the base of the productive measures of the field, but between it and the *Stockings* coal of the Bretby old colleries—which are situated a few hundred yards south-east of the Brislingcote pits—subsequent explorations have proved to exist a series of other coals of greater or less value and thickness. In the year 1857, consequent upon the opening out of the *Anglesey* seam, the out-crop of a coal was detected on the property of the Earl of Chesterfield, near the Bretby toll-gate, which, although proved by borings carried beneath the *Main* coal at Moira in 1833, and at Swadlingcote about 1855, to exist below the *Stockings*—the previously assumed basement coal

of the field had, as was generally concluded, never been mined.* To this coal was given the name of the *Eureka*, and in the working of it by means of levels driven beneath the turnpike road at Bretby originated the now well-known Bretby New Collieries. At intervals down to 1864, various trials were made in the measures underlying the *Eureka*, and these resulted in the discovery of the *Cannel* or shale coal, the *Stanhope* coal, the *Three-quarter* coal, the *Twelve-inch* coal, the *Clod-coal*, and at the base of these the *Kilburn* coal, the relative position of the whole of which is shown in the following section, for the details of which I am indebted to the kindness of Mr. Johnson, the manager of the Bretby Collieries. At the present time the majority of the coals and measures at this colliery may be carefully studied in the cutting for the mineral line from Bretby to the Leicester branch of the Midland Railway at Stanton, which exposes the whole of the basseting portion of the strata overlying the *Clod* and *Kilburn* coals. It is the opinion of Mr. Johnson that the latter seam is identical with the *Anglesey* coal at Brislingcote, and in which he is fully borne out by the fact, arrived at by a series of trial pits, sunk at intervals between the two points in question, that the intervening strata are continuous, and entirely free from faults or dis-

* I am informed by Mr. Johnson that the out-crop of the *Eureka* coal at Bretby had been somewhat extensively mined previous to its detection in 1857. The levels of the old works were curiously wattled with gorse, and in these levels were found at different times in 1864 a large earthenware bottle, globular in shape, coated with a greenish glaze, and bearing upon its upper surface the initials "M.H.," also a heavily-nailed shoe or clog, and a miner's pick, all in a capital state of preservation, and now in Mr. Johnson's possession. It is somewhat curious that even tradition is altogether silent in respect to the previous working of these mines, but judging from their general character the relics appear to be of no older date than about the middle of the seventeenth century. Old levels, wattled in the same manner, also a miner's pick, were found in the Brislingcote pits.

I have been also informed by Mr. Nadin, that at the Stanton Colliery the Eureka Coal, which is now worked at 225 yards from the surface, is intersected by what appears to be an old river channel. The coal, which is 5 feet in thickness, has been completely cut through, and removed to a width of 60 yards, and the denuded space partly filled with detached fragments of stigmaria and other coal-plants. The channel runs E. and W., and has been followed a distance of a quarter of a mile.

Section of Coal Measures exposed in the Railway Cutting at the Bretby New Colliery.



HORIZONTAL & VERTICAL—Scale 144 yards to the inch.

1 Boulder Clay.
2—2 Bunter Sandstone and Conglomerates.
3—3 Eureka coal. The roof of this coal contains Palæoniscus, Platysomus, Rhizodopsis, Diplodus gibbosus and [Cladodus.
4—4 Cannel or Shale Coal.
5—5 Stanhope coal.
6 —6 Three-quarter coal.
7—7 Twelve inch coal.
8—8 Clod-coal, the shales of which contain teeth and scales of two or three species of Palæoniscus, Cœlacanthus lepturus, Gyrolepis, Rhizodopsis, Megalicthys Hibberti, Diplopterus carbonarius, dermal tubercles, &c.
9—9 Kilburn, or Anglesey coal, the black shales of which contain fine fragments of Cœlacanthus lepturus, also, as in the case of the Woodhead coal shales, Rhizodus, Ctenoptychius apicalis, Pæcilodus, &c.

turbance of this kind. This opinion, however, does not appear to be generally accepted, but I think there is no doubt whatever of the identity of the two seams, and, furthermore, that the *Woodhead* coal of the Cheadle coal-field of North Staffordshire is an extension of the same mine.* Mr. Johnson is also inclined to the belief that the *Kilburn* of the Bretby collieries is the representative of the coal so named in the Erewash Valley. The Derbyshire *Kilburn*, as is well known, occurs near the base of the productive measures of the Erewash Valley, and below it lies the valuable group of ironstone measures of that district, with two or three seams of coal. The character of the measures underlying this coal at Bretby has not as yet been determined, but in 1855-6 borings carried to a depth of 362 feet below the *Anglesey* coal at Brislingcote shewed that the measures there contained a thick group of ironstone bands with thin seams of coal,‡ and that it in other respects bore a striking resemblance to the sub-Kilburn section of the Erewash Valley. It is, moreover, found that the Derbyshire and Bretby *Kilburn*, the Brislingcote *Anglesey*, and the Cheadle *Woodhead* coals are each associated with a thin characteristic coal, which is divided

* I am led to this conclusion from the fact that the shales which form the roof of the *Anglesey* coal at Brislingcote, and those of the *Kilburn* at Bretby, are exactly similar, each, on exposure to the weather, breaking into numerous dice-like fragments, and each containing remarkably fine scales and head-plates of the fish *Cœlacanthus lepturus*. In thickness, colour, fracture, and general appearance, they are identical with the shales of the *Woodhead* coal, and except in these shales, as associated with the coal worked at the three different localities under notice, I have not elsewhere met with the remains of Cœlacanthus of so remarkable a size and possessed of the same uniform, characteristic features. The *Woodhead* coal furthermore occurs on or about the same horizon as the *Kilburn* and *Anglesey*, that is the base of the productive or thick coal series of North Staffordshire. Below it comes about three hundred yards of different measures containing, with clay ironstones, seven thin and comparatively valueless coals, and these are succeeded by the curious band of iron-ore known as the Froghall ironstone, which immediately overlies the upper or rough-rock of the Millstone-grit series.

‡ The borings terminated in a grey stone beneath a coal of about 2 feet in thickness. 161 feet above this another coal of 5 inches was struck, the intervening measures containing no less than 14 different bands of ironstone of an aggregate thickness of 4ft. 7in.

from the main seam by an underlying parting of indurated clay.

Upon reference to the section it will be seen that the coal measures at Bretby are covered up by a thin bed of Bunter conglomerates, upon which rests a small capping of boulder clay. The section is valuable as illustrating in the most complete and satisfactory manner, the unconformability of this division of the New Red Sandstone to the coal-measures of the field; and it is otherwise of the greatest interest as exposing the axis of an anticlinal which unquestionably produced a very important alteration in the original condition of the coal-seams of an enlarged area of the Ashby Coal-field. How far, or to what extent, it may have affected the different seams under consideration, is at present unknown—the existence of the fault has been but recently determined, and the only evidence as yet obtained in respect to it is contained in the section herein given.

The direction of the anticlinal is S.E. and N.W., and from its axis the different coal-seams strike off to the S.W. and N.E. in regular sequence at an angle of about 30°. The seams thus brought to the surface are in reality the lowest of the productive measures, and consequently the great bulk of the valuable coals of the Ashby field overlie them to the south and west in natural succession. Whether or not a corresponding stratagraphical arrangement is maintained over a large tract to the east, cannot, in the absence of direct proof be so readily arrived at, but so far as the Bretby levels have been driven in that direction, they show the existence of a similar extension, and hence in all probability it will eventually be found that more or less of the coals which follow those of Bretby to the south and west, follow them to the north and east also, and that they occupy, at a moderate depth from the surface, many thousand acres of what is now held to be barren ground.

At Glover's Mill, about two miles due east of the Bretby pits, a brook-course, coming down from Hartshorn, reveals several interesting sections of rocks, which have been laid bare by the cutting down of the originally superincumbent Bunter conglomerates by denudation. The first of these occurs close to the mill, and consists of about twelve feet of

compact, yellow, micaceous sandstone, regularly bedded, and almost horizontal. The second section is a little lower down the brook, and is made up of a few feet of—first: a remarkably deep yellow and somewhat soft sandstone; and secondly, of a very hard, compact, sub-crystalline sandstone, brown in colour, and much stained with hæmatitic patches. These rocks I am inclined to think true coal-measures, and probably members of the upper division of the field. Following the brook course to the old Leather mill, a short distance to the north, a valuable section of coal-measure shale is exposed, containing bands of grey ironstone, and one of earthy hæmatite. These are brought to the surface by an anticlinal, the axis of which runs N. and S., and is admirably shown in the bed of the brook course, (where the rocks form a small cascade) the shales dipping rapidly from it east and west. A few yards farther north the shales are overlaid by a curious consolidated calcareous breccia, about four feet in thickness, and upon which repose about twenty feet of strong, red, and mottled clays. Between the second and third of the sections named, close to the "Hoofies" farm-house, three thin, but coarser breccias, containing numerous fragments of hæmatite, occur, interstratified with strong red clays streaked with white, but the section, although about twelve feet in thickness, is not sufficiently deep to allow the exposure of the shales, which, according to the strike of the adjoining strata, lie below. The clays are, however, overlaid, apparently unconformably, by beds of soft dull brown and probably Permian sandstone, which appear to be identical, lithologically, with the sandstones that occur at the base of the conglomerates at Linton, Ingleby, and other places in the district.

The breccias and clays, especially the former, correspond in every particular with the breccias and clays characteristic of the upper division of the coal-measures of North, and certain parts of South Staffordshire, and inasmuch as they do not appear in any section beneath the highest known workable seams of coal in the Ashby field, I believe they may be accepted as upper coal-measures, and the representatives of strata, which at one time not only covered the present known area of this particular coalfield, but extended in

broad tracts far beyond its present boundaries. So far as my own examination of the field in question enables me to state, I have not met with similar breccias in it elsewhere, or even of any other breccias, not excepting those of Coton Park, which, if not horizontal, are at least unconformable to the beds on which they rest.* The northern end of the Leather mill section shows the breccias to repose immediately upon dark shales, with which is interstratified a band of earthy hœmatite from two to three inches in thickness, and the whole dip conformably S.W. at an angle of about 25.°

The shales and grey ironstones of the Leather mill section, I have recently found to contain remains of the fishes *Palœoniscus sp.* and *Cœlacanthus lepturus*, and three species of the shell *Anthracosia—A. acuta, A. ovalis, and A. sp.*, with traces of plants. The more interesting, however, of the organisms met with consists of several specimens of the marine shell *Lingula mytiloides*, which were confined to two thin bands of greyish-black shale, the one overlying by ten feet the shell-yielding shales and ironstones, and the other coming almost immediately beneath the breccias alluded to. These and other marine shells are found high in the North Staffordshire and Lancashire coal-series, (one of which, *Aviculopecten fibrillosus*, I also last year detected in the shales of a coal lying a short distance below the cannel coal, on Cannock Chase) but it has not, so far as I am aware, been previously recorded, as occuring in a corresponding position or otherwise in the Ashby coal-field. I may add that the above is not the only locality of the occurrence of the same species of shell in this field. Upon a recent occasion I met with it plentifully embedded in the shale which forms the

*At Mr. Thompson's brickyard on the road-side from Burton-on-Trent to Ashby, east of Swadlincote, occur two unconsolidated breccias each four feet thick, and separated by ten feet of red and mottled clays. They underlie conformably two feet of Bunter conglomerates, and the whole of the beds are horizontal. Beneath the second breccia, which with the upper bed contains a variety of coal-measure and other rocks, and numerous lumps of red and yellow iron-ore, a second bed of red and purple clays, similar to those of North Staffordshire, have been proved to a depth of twelve feet and not bottomed. These clays, which would, I have no doubt, make excellent blue-bricks, are intersected by a fault running N.E. and S.W., in which Calamites and other coal plants in clay ironstone have been found.

roof of the *Ryder Coal** at the Marquis of Hastings' pits, Church Gresley; a coal lying within the salt-water or brine-producing measures of the Moira district, and from which the well-known baths at Ashby-de-la-Zouch are supplied. Lingulæ were undoubtedly molluscs of a marine habitat, and the fact of their being found in shales yielding saliferous waters offers suggestive evidence as to the general conditions under which the shales or mud which directly accompany at least one important coal-seam of this field were deposited.†

The Bretby measures, as previously stated, incline to the south-west at an angle of about 30°, and in this respect they agree with those of Brislingcote. The levels of these latter works were driven out to the N.N.W. and terminated in a fault by which the *Anglesey Coal* was rapidly reduced to a thin band of smut, and with its associated measures thrown downwards to the west. This fault ranges several miles to the north and south, and at these pits brings the Keuper marls in immediate contact with the coal. South of this point, however, between the fault and the exposed surface of the coal-measures, comes a gradually broadening belt of Bunter conglomerates, the inner margin of which constitutes the assumed western boundary of the Ashby coal-field. The natural position of these conglomerates is several hundred feet above the strata of the Carboniferous system, but in the majority of cases in this district they, as hereafter shown, repose directly upon coal-measures, the intervening Permian beds

* In the under-clay of the *Five-foot Coal* at the same pit was found, two years ago, a hard crystalline sandstone boulder, dotted with small angular, quartz pebbles. It has a smooth, well-worn surface, is ten inches in diameter, and six inches thick, and in this latter respect corresponds exactly with the thickness of the clay in which it was embedded.

† While upon the the subject of organic remains I may mention that from the grey shales which overlie the *Nether Coal* at the Cadley Hill Colliery, I have collected *Anthracosia ovata*, *Anthracosia sp.*, *Anthracomya sp.*, *Anthracoptera sp.*, and *Spirorbis carbonarius*, in addition to the scales and teeth of *Palœoniscus*, *Cœlacanthus*, *Platysomus*, *Rhizodopsis*, *and Megalichthys Hibberti*, and I have no doubt that a careful examination of the different shales accompanying the majority of the coal-seams of this field, would result in the discovery of a large and interesting series of organic remains.

having been removed by denudation, At the Brislingcote pits they are about twenty feet in thickness, and evidently an extension of the rock which directly overlies the coal-seam at Bretby, each occupying about the same level. At the latter place, however, they are more abraded, having been swept away by the same denuding agency which excavated the coal strata of the intervening valley to a depth of fifty feet. West of the fault exposed in the Brislingcote pits, the Keuper sandstones, capped by an outlier of Red marl on the Waterloo-hill, occur in characteristic force, and beneath which in 1855-6 attempts were made by borings to prove the extension of the coal-seams of the Ashby field.

The first of these borings was in an old stone quarry near Brislingcote Hall, about four hundred yards west of the boundary fault, and of which the following gives the general section.

	Feet.	Inches.
Red Formation (?) ...	22	0
Keuper Sandstone & binds	116	7
Bunter Conglomerates ...	125	9
Coal measures	74	7
Coal	2	9
Fire-clays & binds ...	28	8
Coal	1	5
Fire-clay	5	0
Total thickness proved	376	9

About two hundred yards west of this point, and at a much lower surface level, the second borings gave :—

	Feet.	Inches.
Red Formation	48	0
Keuper Sandstones & binds	79	6
Total thickness proved	127	6

A third attempt made a mile north-west of these borings in the brook-course at the village of Winshill, showed :—

	Feet.	Inches.
Keuper Sandstone ...	50	0

The section opened up by the first of these borings which I take to be of the greatest interest, and the key as it were to the geology of the district, is of a totally different character to that which occurs beneath the *Anglesey Coal* at Brislingcote; but, allowing for some slight variation in the thickness of the measures, which might naturally be expected in a district affected as it undoubtably has been, by internal movements, it bears a striking resemblance to the measures of the *Twelve-inch coal* and the *Clod-coal* overlying the *Kilburn* or *Anglesey* at Bretby. A few feet more of borings would have completely settled this important point, but an accident to the boring rods prevented further exploration.

At Coton Park, six miles in a direct line south of the Brislingcote borings, and one-and-a-half due west of the assumed boundary of the Moira coal-field, a series of borings, have, within the last four years, been carried down through New-red-sandstone, and at one of three points the *Little Coal* struck at a depth of 272ft., the *Ryder Coal* at 471ft., and the *Moira* or *Main Coal*, of thirteen ft. two inches in thickness, at 476 feet from the surface. At the present time the "Coton Park Colliery Company" have erected powerful machinery and are busily engaged in carrying down a thirteen-foot shaft to the *Main Coal*, which at the point of sinking will probably be struck at about 200 yards from the surface. The shaft has already been carried through the Triassic rocks, which are 240ft. in thickness, and found to repose directly upon grits and red and mottled clays, (containing Stigmaria and other plant remains) intersected by breccias, resembling those of the Leather mill section, and which are here 90 ft. thick. At the base of these clays comes a thin seam of coal, and below it the shales and clays overlying the *Little Coal.* These sinkings show the dip of the New-red-sandstone, to be S.S.W. at an angle of one in thirteen, and to consist, below drift clay, gravel, and sands of Keuper sandstone, and Marls, succeeded by coarse yellow Bunter sandstones and conglomerates, the latter towards the base passing into a deep red colour and containing the usual Carboniferous Limestone pebbles, and so remarkably hard and difficult of working as to acquire from the sinkers the synonym of the "Devil's fore*yedd.*" The overlying, or New-red-rocks of

this section, although so far apart, possesses a remarkable similarity to those at Brislingcote, both as regards thickness and solidity; at each place the conglomerates, or "Poxon Gravels," as they are familiarly known among miners, are present in equal force and hardness, and in each case they repose directly upon coal-measures. There is, however, a great, and in this respect important lithological difference in the character of the measures by which these conglomerates are succeeded, and which I believe goes far to establish the conclusions as to the geological position of the red clays and breccias of the Leather mill section. At Brislingcote the red clays are absent, and the measures consist of ordinary shales and binds, whereas at Coton Park they attain a great thickness, and correspond in point of composition with those of the Leather mill section. There is yet further evidence bearing upon the question of the position occupied by these deposits. At Coton Park a coarse grey grit comes between the Bunters and the red clays, and which, from the description given in the geological Memoir of the Ashby coalfield, by E. HULL, F.G.S., resembles the fissile grits exposed in a ballast quarry near Moira station, and therein laid down as members of the upper coal-measures. I may add that Mr. HULL, in the work referred to, adopts the conclusion previously arrived at by the late Rev. Mr. COLEMAN, in respect to the position of the Moira grits, and which the latter careful and able geologist, from a long course of field-labour, was led to consider as unconformable to the great mass of productive coal strata beneath. Similar grits are interstratified with the red clays of North Staffordshire, but they differ from the Moira grits in being conformable to the measures which form the upper division of the field.

Now I think, so far as I may be permitted to form an opinion upon so important a subject, that in the large per centage of fragments of hæmatite and other iron ores of coal-measure origin, contained in the breccias of these upper measures, there is evidence that at a period immediately preceding their deposition, the Ashby coal-field—in common doubtless with other carboniferous tracts of central England—was subjected to a succession of powerful, deep-seated disturbing agencies, which materially altered the

original position of its strata, and finally resulted in its total submergence. How long this period of submergence existed is difficult to determine, but it was sufficient to allow the denudation of a large area of its superior strata, and the distribution of the abraded material in successive layers over the broad floor of the ocean. This floor, whatever the character of its rocks in other distant districts, consisted in the one under notice, of coal-measure strata, and which from the doubtless unequal application thereto of the disturbing forces by whith their submergence was effected, would, in some instances retain their originally horizontal position, while in others they would be more or less inclined and consequently present their upturned and unconformable edges to the newer deposits by which they in turn became covered. Probably this hypothesis is open to objection, but I cannot in any other manner account for the unconformability of the clays and breccias of one section and their conformability in another. Whatever changes masses of sedimentary rocks belonging to two different periods of action and reposing directly one upon the other, may have undergone, the relative character of their original position cannot, I think, have been affected by any such change, or at least without the permanent association with it of evidence showing its nature and general influence.

The great period, however, so to speak, of general disturbance and denudation to which so important a section of the history of this and British Coalfields in general belong, was the one in which were deposited the enormous masses of gravel described as Bunter conglomerates. These beds, which rarely contain either granites or rocks of trappean origin, are composed principally of a great variety of siliceous pebbles, all of which are well rounded, and the majority contain on their surface numbers of curious pit-like marks, which are due in all probability to concussion or continuous pressure. With these are associated chalcedony, cornelian, jasper, Lydian and other ornamental stones, the agates being frequently in a decomposed condition, and showing, in a highly interesting manner, their beautiful laminated structure. Fragments of Silurian, Mountain limestone, and Millstone-grit rocks, also enter largely into the composition of the Bunters,

and are frequently crowded with characteristic fossils,* but it is a curious coincidence that rocks of a more recent age than Millstone-grit seldom or ever occur in them. This is the more remarkable, inasmuch as a large percentage of the colouring matter of these New-red drifts—oxide of iron— appears to have been derived from local areas of submerged coal measures, during the process of denudation. However this may be, these drifts enter more largely than any other rock of more recent origin into the structure of the western margins of the coal-fields of central England, and I believe they will eventually be found the key to extensive tracts of productive coal-measures, which are now generally regarded as destitute of mineral wealth. It does not, however, follow that where these conglomerates repose directly upon coal-measures that the latter should belong to the higher, or even to the thick

* I fear the study of these travelled fossils is somewhat neglected by geologists generally; but in order to shew that it is by no means barren in interest, I append a list of such fossils obtained by myself from one locality (Trentham Park), and now in my collection. I have pleasure in adding that the whole were determined by Mr. J. W. Salter, F.G.S. *vide* "Geological Magazine," Vol. VI. No. 34:—

SILURIAN.—MAY HILL SANDSTONE GROUP.

Pentamerus oblongus, rare.
——— lens, rare.
Atrypa hemispherica, plentiful.
——— reticularis, var.
Spirifer crispus, and trapezoidalis.
Strophomena depressa.
——— compressa.
——— pecten.
Pterinea demissa.
Euomphalus sculptus.
Orthis elegantula.
Holopea.
Holopella obsoleta.
Palæocyclus præacutus.
Halysites catenulatus.
Petraia subduplicata.
——— var. crenulata.
Phacops Weaveri.
Tentaculites Anglicus.

MOUNTAIN LIMESTONE.

Poteriocrinus crassus, and other species.
Rhodocrinus.
Actinocrinus.
Platycrinus.
Lithostrotion irregulare, & Martini.
Michelinia megastoma.
Zaphrentis, 2 or 3 specimens.
Syringopora reticulata.
Fenestella plebeia.
Phillipsia, part of tail.
Producta semireticulata.
Producta concinna.
——— mesoloba?
Streptorhyncus crenistria, 2 var.
Spirifer triangularis.
——— bisulcatus.
——— octoplicatus.
——— glaber?
Chonetes variolata.
——— Hardrensis.
Dentalium ingens.

coal-bearing strata of the field. In the neighbourhood of Hartshorne, Smisby, and other places on its eastern borders, they overlie measures belonging to a section that terminates far below the horizon of the Anglesey seam; and is, consequently, wanting in coals of workable quality and thickness. On the other hand they, as evidenced by the Coton Park section, form a broad covering to the coal series of the western margin of the field, which there at least include the majority of the valuable seams of which it is known to be possessed, and from this point they pass westwards beneath the Keuper sandstones and marls, accompanied by the coal-measure strata which connect the Ashby with the South Staffordshire coal-field;* and at a distance of fifteen miles reappear at the surface in characteristic force and contour in

* About four years ago some borings, executed at Brereton by the direction of the late Earl of Shrewsbury, resulted in the following section, the details of which have been kindly furnished me by Mr. J. Dean, manager of the Brereton collieries: Keuper sandstones, beneath drift sand, gravel, and clay, 94 feet; Bunter sandstones and conglomerates, 377 feet; coal measures, thickness not proved, 484 feet. The position of the borings was east of the great boundary fault of the South Staffordshire coalfield, and, consequently, within the margin of the Triassic valley-plain, by which the two fields in question are divided. While, therefore, the Coton Park section conclusively establishes the westerly extension of the coal seams of the Ashby field, at least one-and-a-half miles beneath new red sandstone, the Brereton borings are equally satisfactory, geologically speaking, in respect to the easterly extension of those of South Staffordshire; and there is, I believe, no doubt whatever, that the stratagraphical conditions exposed by these marginal sections, are maintained with greater or less regularity over the whole of the intervening space. The Brereton section corresponds with that at Brislingcote in the absence of upper coal-measure clays and grits, and consequently shows that the upper beds of the sub-Triassic coal series were subjected to denudation previous to the deposition of the overlying rocks; but the presence of the upper measures at Coton Park indicate that the degrading forces by which they were at these places removed, were irregular or unequal in their action, in the manner evidenced by the existing conditions of large areas of the adjoining coalfields; and, therefore, it follows that, while at some points in this divisional area, there may be present upon the thick productive coal strata an assemblage of upper beds, and even upon these rocks of Permian origin, there may be, and probably are, other tracts from which the entire vertical group of strata has been denuded down to the lower measures, and possibly to the underlying millstone grit.

the curiously rounded hills and broad plateau-like elevations of Cannock Chase. From hence they dip beneath the Keuper sandstones and marls, which form the central division of the Shropshire and North Staffordshire coalfields, and then stretch under the broad plains of Shropshire and Cheshire, rising again in a deep circular fringe to the Ruabon and Flintshire coalfields, thence round by Chester, Liverpool, and Manchester to the southern boundary of the Lancashire coalfield, and back to the western borders of that of North Staffordshire, forming, as it were, a broad rim to the basin-like division of the great carboniferous plain,* which underlies the whole of this Triassic area, and of which the coalfields of its margin are the outer and connecting edges. They moreover enter largely into the geology of, and bear analogous relations to the eastern marginal coal areas of the counties of Nottingham, Derby, and York, lying on the east side of that great monntain barrier known as the Pennine Chain, which constitutes so remarkable and important a feature in the geological phenomena of the central portion of England, and which has effected so wonderful a change in the primary conditions of the strata by which it was once covered. This chain, commonly called the back-

* There is, I think, no question that the coal-producing areas of this country, are neither more nor less, than enormous ridges or folds severed and elevated *en masse* by some tremendous internal forces, from a great carboniferous plain, which originally stretched in broad horizontal continuity across the central portion of the British islands, from and beyond what are now the shores of the North Sea on the one side to those of the Western Channels on the other; and that consequently beneath the Permian and Triassic, or more recent formations by which these detached coalfields are superficially divided, and at a level in the crust of the earth, determined by the thickness of these superincumbent deposits, the remaining and by far the larger proportion of this old coal continent still exists, cut up it may be by lines of denudation, by faults and other disturbing forces, but nevertheless possesed of very considerable areas of strata not only lying at moderate and readily accessible depths, but containing in corresponding conditions connecting beds of the whole of the vertical series of coal seams, opened out in the different fields of mining operations, if not others of which there is now no practical knowledge, and which in the aggregate will be unquestionably found sufficient for the national requirements of some centuries of generations, even after the known resources of the present day shall have become exhausted.

bone of England, is a broad anticlinal or saddled-shaped elevation, which, commencing in the Weaver hills of North Staffordshire, extends north by south as far as the borders of Scotland.* It consists, in this county and Derbyshire, of Mountain limestone, along the flanks of which lie, in consecutive order, the succeeding Yoredale rocks and Millstone grits. Previous to the commencement of the process by which these rocks were elevated, the position of the limestones was some twenty thousand feet lower in the crust of the earth than the level to which they now attain, and at this time they were not only covered by the Yoredale rocks and Millstone grits, but by a continuation of those enormous deposits of coal-measures, contained in the now detached coal-fields of Derbyshire and Yorkshire on the one side, and those of North Staffordshire and Lancashire on the other, the whole of which connecting groups of coal-measures, with a few exceptions, have been, subsequent to their elevation, swept away by denudation. The exceptions consist of the little lower coal-measure basins of Wetley Moor, Shafferlong, Goldsitch-Moss, and Axedge, in Staffordshire; which are preserved within folds of Millstone grit, the latter at an elevation of 1,900 feet above the sea level, and all containing analogous evidence in their marine fauna† of the contemporaniety of their formation, and their uniform extension over those widely separated tracts from which all other traces of their original occupation have been removed.

Returning now to the more local particulars connected

* I think it probable that, although the mountain chain commences in the Weaver hills, the anticlinal to which its elevation is due extends, although in a less determinate form, a considerable distance further south, and that to its action is due the elevation, to their present position, of the carboniferous limestones of Ticknall, the millstone grits of Repton rocks, and the succeeding lower coal measures of Hartshorn and Smisby.

† These remains, which, independent of their palæontological interest, are of so much value in the determination of zones of marine life, consist of Aviculo-pecten papyraceus, Posidonia Gibsoni, Goniatites Listeri, Orthoceratites, and Lingulæ, the whole of which are confined to distinct horizons, and rarely occur in other than uniform conditions of preservation, whatever the locality from which they are obtained.

with the subject under consideration, I have endeavoured to show, by the section hereafter given, which is continued from the S.E. point of the Bretby anticlinal, the general character of the strata by which the coal-measures are from thence in a westerly direction succeeded, and which includes the whole of the different formations of which the geology of this portion of North Staffordshire is composed.

Introduced by the boundary fault of the coal-measures at Brislingcote, the Keuper sandstones form the substrata of the higher grounds of Winshill and Stapenhill, passing at a gentle inclination in the direction of the Trent Valley, and being here and there, as at the Waterloo, Scalpcliff, and Stapenhill hills, capped by outliers of red marl; while immediately beneath them, as exposed by the Brislingcote borings, lie the conglomerates of the Bunter group. In the brook-course coming down from Winshill, a little north of the forge mills, the Keuper sandstones have been cut down by denudation, and reveal, in an interesting manner, the underlying sandstones and gravels in a long narrow strip, which forms the bed and margin of the rivulet to its junction with the Trent. The Winshill mills stand upon these conglomerates, which following the line of the Newton Road rise into the somewhat bold cliff that forms the east bank of the Trent, until again covered up by the Keuper sandstones of Bladon Hill. The occurrence of these beds at this point is evidently due to an anticlinal, the axis of which, up to a certain point, corresponds with the direction of the brook-course, and is, I think, more or less intimately associated with the forces which produced the Bretby anticlinal. I believe coal measures would be met with here at less than one hundred yards from the surface. South of this valley the ground rises rapidly, and is formed of the lower beds of the Keuper sandstones, which were formerly, both at Winshill and in the neighbourhood of Repton, largely quarried for building purposes, and contributed the greater portion of the stone used in the erection of Burton Abbey, the Old Bridge, and other buildings connected with the town. A large quantity of the stone of which the Burton Cemetery is built was quarried from an old pit opened out on the flanks of the hill south of the valley described above, the

section there exposing, beneath some thin bands of hard calcareous sandstone, three thick horizontal beds, frequently containing small cavities filled with curious crystals of carbonate of lime. The basement beds of the Keuper, hereabouts, are, according to the Repton, Winshill, Brislingcote, and Stanton quarries, thick and massive, compact in structure, red, brown, yellow, and white in colour, often variegated, highly micaceous, and passing upwards into a somewhat coarse, friable stone, brown, white, and mottled, often calcareous, and containing at times small quartz pebbles, and much shotted with blue and brown marl or clay. These are succeeded by dull brown, flaggy beds of clayey sandstone, which at Newton Solney occur as a fine-grained, chocolate-brown stone, possessing a strong resemblance to the wellknown lower Bunter building stones of Nottinghamshire. Upon these rest a series of hard fissile beds, which are in turn overlaid by massive beds of semi-crystalline dark brown sandstones, often due probably to oxide of manganese, becoming almost black in colour, and also shotted with blue and brown marl. These have been passed through in the wells at the Parsonage-house, Winshill, and Bladon Castle; and they may be seen at the base of the road-cutting at Bearwood hill, which affords one of the best sections in the locality for the study of these beds and of the group by which they are succeeded. The latter consists of thin alternations of red, white, and mottled arenaceous beds, overlaid by bluish pyritous shale and binds; and flaggy, shaly, micaceous sandstones, light, yellow, and brown in colour; and denoting—by the frequent occurrence upon their upper surface of ripple-marks, pittings of raindrops, and oblique lines due to the action of wind—the shallow and tidal conditions of the waters by which they were deposited. Some few years ago the excavations in these beds, for the road leading to Mr. Wardle's house, on the Ashby Road, yielded interesting footprints of a reptilian character, associated with the genus *Cheirotherium*,* and which are now in the possession of Mr. Edwin Brown. So far, however, the equivalents of these beds in the Bearwood

* *Cheir*, the hand, *therion*, beast.

hill section have not contributed to these traces of batrachian life, although, did the opportunity occur, there is no doubt similar impressions would be found there. I may add that on one occasion I saw a corresponding footprint upon a slab of sandstone, which belonged to the lower beds of the series, in the old quarry near Brislingcote Hall. Dolomite, and also salt crystals occasionally occur in the beds of the upper or middle division, and in Mr. Radford's brickyard, and on the higher grounds at Stapenhill they are largely impregnated with carbonate of copper. The equivalents of these beds at Barlaston, near Stone, are highly cupriferous; and at Alderley Edge, in Cheshire, they afford a valuable percentage of this ore. The entire series of Keuper beds in the neighbourhood of Burton attain a thickness of about two hundred and fifty feet, the lower beds containing a good and valuable stone for building purposes. Some of these are from twenty to forty feet in thickness, but are difficult of working on account of the thickness of the "bearing." This difficulty is, however, overcome in several instances, as at Beech Cliff, near Trentham; and Chorlton, near Whitmore; and elsewhere by driving levels into the face of the rock; and there is no reason why this plan should not be successfully adopted in the local quarries under consideration.

The village of Winshill stands upon the upper portion of these lower beds, which are somewhat disturbed by faults; and most people no doubt have noticed, in passing down the road near Mr. Newton's house, an interesting incrustation on the face of the rock, which, if allowed to continue, would in a few years, attain considerable thickness. It consists in the coating of the fronds of a species of the screw moss *Tortula*, by carbonate of lime, which is largely contained in the water which trickles from a bed of white hard calcareous sandstone—about four inches in thickness, lying in the upper part of the section—and runs down the face of the rock upon which the moss freely grows. Beautiful and highly interesting specimens abound, showing the different stages of the process, from the complete incrustation of the plant to the just perceptible hardening, like the stiffening by frost, of its feathery spikes as it continues to grow, and to cover with a delicate green carpet the stony matrix in

which its nether limbs, so to speak, are encased. This plant, in common with some few other mosses, and also the water plant *Chara*, appears to be possessed of the property of absorbing lime held in solution by waters charged with carbonic acid gas; and it is interesting to note the peculiarity of the plant in this respect—lichens, and other forms of vegetable life growing there, being unaffected by the water which is constantly passing over them. It is also a somewhat peculiar circumstance that, although water is regularly percolating from other beds lying at a lower level in the same section, the calcareous ingredients by which the incrustation is produced are confined to the stratum described above. A similar process is also in force on the sides of the well, or spring, fronting the house at Sinai Park; but while the Winshill bed is a member of the Keuper sandstones, the strata from which the latter water is obtained belong to the red marls.

The middle portion of the steep, cliff-like banks of Primrose-hill, which form the eastern margin of the Trent valley from the Forge Nursery, on the Newton road, up to the Recreation Ground, opposite the Cemetery, consists principally of what is commonly called "skerry"—a series of laminated beds of brown and variegated clayey sandstones, which overlie the thicker beds of the lower group already described. These latter rocks incline to the west, but, except for a distance of a few yards west of the first and second buttresses and piers of the New Bridge, which stand directly upon them, they do not as the superior strata of the Trent valley extend, being cut off by an important fault which introduces the red marls. From this point these marls extend beneath the town of Burton, and the thick mass of gravel upon which it stands; and are thence continued to the western margin of the valley, where they rise into the bold sweeping hills of the Outwoods, Sinai Park, and Tatenhill; and thence stretch broadly outwards under the higher table-lands of Needwood Forest; and the country succeeding it in the direction of the North Staffordshire coalfield. Here and there, but with no definite arrangement either stratagraphically or in respect to position in the formation, huge concre-

tions of gypsum or alabaster are met with, and largely quarried, both for purposes of architectural ornamentation, and also for manufacture as plaster of Paris. At the present day, Fauld, near Tutbury, is the only locality in North Staffordshire where it is worked as an article of commerce, and the quarries there have for centuries been famous for the beautiful and valuable character of the mineral they produce. The working of the stone was not, however, always confined to Fauld, or even to Castle Hayes, where it was anciently mined. Two hundred years ago (and for centuries previously) it was quarried at Highlins Park, on Needwood Forest, near Tatenhill; and, in all probability, it was here the Burton "workers in alabaster" obtained the material which gave them a certain status in the artistic professions of the day. Impure gypsum, or rather marl, charged with unequal proportions of sulphate of lime, occurs in large blocks in the marl pit at Horninglow, in the Oaks' cover, near the Shobnall road, and under the Easthills, near Tatenhill, and it is possible that a more pure and valuable deposit, serviceable at least for manufacturing purposes, exists at intervals at a greater depth than the present floor of the pits, or more within the body of the hills in which the workings are driven. The same hill sides also contain thin and more regular veins or bands of fibrous gypsum, approaching the character of selenite, and several bands of the mineral in this form occur in the brickyard worked by Mr. Lowe, at the base of the Waterloo hill, on the Ashby Road. The Oaks' cover section is also interesting, as containing—what I have not, on this side the valley elsewhere noticed—two stratified beds of arenaceous limestone of from two to six inches in thickness, and which, with the marl in which they are embedded, dip gently to the S.W. Hitherto I have not been able to detect any definite traces of organic life in these limestones, but I think they will eventually be found to contain species of the small bivalved crustacean *Cythere*. Here, also, the gypsum occurs, ramifying the loose marl in thin fibrous or flaky veins in every possible direction, and affords a fair opportunity of studying the infiltratory process by which the lime was in this form deposited. The Horninglow sec-

tions exhibit the characteristic alternations of blue and red marl, the irregular divisional lines of which give them a curiously curved or wave-like appearance. This form, however, is better displayed in the face of the rock near the south entrance to the village of Tatenhill; and, I think, satisfactorily shows that the apparently peculiar curvature of the strata is attributable, not to ice action, as has been suggested, but rather to the unequal distribution of the colouring matter of the marls by which this appearance has been produced. The upper part of the section consists of several thin bands of hard, white, sub-crystalline sandstone, laminated and micaceous, and intersecting a series of red and light-coloured sandy marls downwards to the middle of the section, where the curvature of the red and blue marls begins, and is continued to its base. If, therefore, the assumed contortions or flexures are in any manner due to ice, either in the form of glaciers or bergs, pressing upon the surface of the land, it is but natural to conclude that evidence of such action would be contained in the conditions of the upper beds of the section, or those nearest the surface: but the opposite is the case, the upper strata are perfectly horizontal, and exhibit no traces whatever of having been subjected to any external disturbing forces of this description.

The scenery of the west side of the Trent valley, opposite Burton, differs from that of the east in the curious dingles of the Henhurst, Sandyford, and Tatenhill. These are natural excavations in the red marls, by the surface drainage of the Sinai Park and connecting hills to the south and north, and are frequently cut down to a great depth, and in a picturesque manner. Towards the upper part of the Sandyford dingle some coarse white sandstones are exposed in the bed of the channel dipping N.W. beneath the marls, and are, not improbably, the equivalents of the beds of the Tatenhill section, and those of the base of a well-section in fifty-four feet of red, blue, and white marls, at Twitchell's Rough, near Yoxall-Woodhouses. The dingles are favourite habitats of different species of ferns, mosses, and lichens, the whole of which, in addition to the flowering plants found there, have been determined by Mr.

Edwin Brown, and recorded in Sir Oswald Mosley's "Natural History of Tutbury."

From Postern House, south and west, the land gradually rises, and in the neighbourhood of Rangemore and the New Inn is popularly considered as constituting one of the most elevated table-lands of the Midland Counties. This, I think, is due, not exactly to the thickening of the red marls, but rather to the gradual introduction, commencing, probably, near the Rough-Hay farm, beneath a thick covering of Boulder clay, of the red and white marlstone of the Rhætic series by which the Keuper marls are hereabouts succeeded;* and which, after being cut through by the valley of Byrkley Lodge, rise into the higher grounds of Christ Church-on-Needwood; and attain, not only considerable thickness, but stretch, north and south, in a continuous elongated group of strata, a distance of fully three miles. The basement beds of these strata consist of red, blue, and brown conchoidal Keuper marls, of which there is a pit section of about thirty feet at the bottom of the hill below King's Standing, and upon which, beneath Boulder clay, rests the abraded outcrop of a characteristic white calcareous stone.

Passing down Brakenhurst hill from Christ Church, in the direction of Hoarcross, I have, by a series of excavations in the over-grown road-side banks, been able to ascertain the following

SECTION AT BRAKENHURST HILL:—

	Feet	Inches
1.—Drift sand, about	10	0
2.—Red clayey gravel, containing fragments of yellow sandstone, with casts of shells, and at the base large angular blocks of compact dark blue unfossiliferous limestone	12	0
3.—Sandy shale	4	0
4.—Black fissile shale	6	0
	32	0

* The well at Rangemore Farm was sunk through the following:—Soil, 2 feet; red clay, containing subangular limestone boulders, 2 feet; dark red clayey gravel, 12 feet; strong marl, 30 feet; dark brown indurated marl, 4 feet; fissile marlstone, in layers of 8 inches, 5 feet; red marl, 3 feet; total, 58 feet.

SECTION AT BRAKENHURST HILL (CONTINUED) :—

	Feet	Inches.
Brought forward	32	0
5.—Sandy fissile shale	2	0
6.—Black fissile pyritous shale, resembling in general appearance coal measure shale	8	0
7.—Yellow sandstone, micaceous, containing casts of *Axinus*, and concentric markings by oxide of iron	4	0
8.—Dark blue shales, with thin bands of grey limestone, containing *Axinus cloacinus*	4	0
9.—Light-brown sandy shale	6	0
10.—Yellow sandstone, containing *Axinus cloacinus*, tracks of annelides, and ripple marks	4	0
11.—White marl, with bands of marl limestone, about	100	0
12.—Red, blue, and mottled conchoidal marl (Keuper)		
	160	0

From this point, north-west past Newborough, the red marl proper is again in position, but on reaching Agardsley Park the Rhætic beds re-commence, forming the table land of Buttermilk hill and Bagot's Park, four-and-a-half miles long by one-and-a-half broad, and overlooking the valley of the Dove at an elevation of quite four hundred feet above the level of the river. This table land is exceedingly interesting, not only geologically, but also for the fineness of its timber; the oaks at Bagot's Park, including the well-known King's Oak and Beggar's Oak, having for centuries been regarded as remarkable for their size and beauty. Swilcar Lawn Oak is another remarkable example of the enormous dimensions attained by trees of this description on this Rhætic outlier. It measures 42 feet in circumference at the base, and 32 feet round the trunk, and now contains about 1,500, but before the dismembering of some of its limbs by a hurricane it contained 2,000, cubic feet of timber. The surface of the land is generally level, and on the east is bounded by a range of cliffs, which, commencing with that of Marchington, stretches westward in the direction of Uttoxeter, and on the south it terminates in a slope running down towards Abbot's Bromley. At different points in the cliffs on the east, open sections expose the horizontal position of the beds, and the

uniformity of their extension. The following section of the quarry at Buttermilk hill may be taken as typical of the entire series below a certain horizon :—

	Feet	Inches
1.—Superficial soil, consisting of Boulder clay, with quartz, pebbles, hæmatite, and abraded yellow sandstone, containing casts of *Axinus cloacinus* ...	3	0
2.—Dark blue and yellow clay	2	6
3.—Light yellow fissile, micaceous sandstone, containing casts of *Axinus cloacinus*, and tracks of annelides; the base much ripple-marked	2	6
4.—Light sandy shale	0	3
5.—Ferruginous clayey band	0	3
6.—Blue and variegated marly clay	0	6
7.—Stiff, yellow, sandy clay	0	4
8.—Bluish, clayey marl	1	3
9.—Light-coloured marl	1	0
10.—White limestone bands alternating with white marl	10	0
11.—Yellowish fissile sandstone, resembling No. 3, containing *Axinus cloacinus* ...	6	0
12.—White marl with interbedded thin limestones, about	100	0
13.—Red and blue conchoidal marls (Keuper)		
	127	7

In Bertram's dingle, near Swilcar Lawn Oak, the beds commencing with No. 10 of the above may be followed in detail, and in the marl pits of Marchington cliff the junction of the conchoidal marls with the overlying white marlstone series, is clearly illustrated, the basement bed of the latter, in every section I have examined, consisting of a white calcareous stone containing sulphate of strontia. Some few years ago a well, sunk near the cottage of Swilcar Lawn Oak, showed, overlying the beds of the Buttermilk hill section, yellow Boulder clay, 9 feet ; yellow fissile sandstone, 3 inches ; black shale, 33 feet; and, in all probability, it is from the occurrence of these black shales that the popular, but fallacious notion has arisen of the existence of coal in the locality. Borings for this mineral have at various times been undertaken near the "Robin Hood" inn,* also at Coal-pit slade, near Christ Church, and

* These borings are said to have been carried down 70 yards in the marls underlying the white limestones.

other parts of the forest where the shales are known to exist.

The existence of these Rhætic beds in this portion of the Midland Counties is exceedingly interesting, and, moreover geologically, of the greatest value in determining the areal extension of the formation in this direction. They evidently, in their original condition, spread, not only over the whole of what is now Needwood Forest; but extended across Shropshire to the west of England, to Wales, and even to Ireland; and in a north-east direction at least as far as Yorkshire; but the detached portions there found, with a small area in Warwickshire, are the only known indisputable traces remaining in this country. Determinate and clear, and full of information as they are, these forest beds define but a very small proportion of the geologic history to which they contribute. In their normal condition they were overlaid by several hundred feet of strata, belonging to, and completing the series of the formation as developed in the different sections of the west of England and elsewhere; and passing upwards into other subdivisions of the Lias, including, it may be, some of those of the succeeding Oolite, and, probably, even portions of the Chalk.

At intervals, over the whole of the Needwood forest area, including the Sinai Park and Tatenhill hills, and those of Coton Park and Winshill, and others of corresponding altitude on the east of the Trent Valley, generally commencing on the eastern brow of the hills, and apparently infilling large oblong or pit-like excavations in the red marl, occur a series of sands, gravels, and clays of much interest, both as evidence of different geologic conditions in the period allotted to their history, and as also containing the remains of a variety of animals of Rhætic and Liassic origin, unquestionably derived from the denuded beds of the series which originally, as described above, overlaid in thick consecutive order the basement groups of Bagot's Park and Christ Church, and those of the now abraded intervening districts. Hitherto I have not detected in beds *in situ*, whether shales or sandstones, other than *Axinus cloacinus*.†

† In the shales No. 8, Brackenhurst hill section, I noticed, associated with *Axinus*, imperfect casts of what appeared to be *Avicula*, but they were too doubtful to be recorded as such.

Palæntologically, therefore, the drift fossils are the more interesting from their variety, although the above bivalve is found in remarkable numbers, both on the drifted slabs and in the beds of the different sections where they occur. The following list of the organic remains, obtained by me from these drift beds, was kindly prepared by Charles Moore, Esq., F.G.S., of Bath, to whom the thanks of all geologists are due for his original and valuable researches in the Rhætic formations of Somersetshire, and to whom I am also indebted for several interesting communications on the subject of these Needwood beds. I am also under many obligations to R. Etheredge, Esq., F.G.S., of the Museum of Practical Geology, Jermyn-street, to whom some of the first specimens collected were submitted :—

LIST OF RHÆTIC FOSSILS, FROM DRIFT, SANDS, AND GRAVELS OF NORTH STAFFORDSHIRE.

	Localities.
Acrodus minimus.	Agardsley Park.
Lepidotus (scales).	Rangemore.
Hybodus (teeth).	Tatenhill Wood.
Saurichthys (teeth).	Postern House.
Axinus cloacinus. *Quarich.*	Drakelow.
,, depressus. *Moore.*	Coton Park.
Pecten Valloniensis.	Brislingcote.
Modiola minima.	Winshill.
Avicula contorta. *Portlock.*	
Cardium Rhæticum.	
Annelide markings.	
Casts of burrowing shells.	

LIAS FOSSILS.

Gryphæa incurva	Draycott Cliff.
Ostrea	Burton-on-Trent.

The above are all contained in small slabs of sandstone and limestone, the edges of which are but slightly worn at Agardsley Park; but, in the pits further removed east from the locality of the existing parent beds, they become more rounded; and indicate a travelled condition. In none of the open sections do I find traces of the equivalents of the dark blue limestone of the Somersetshire series; but recently some drains, cut in yellow Boulder clay down to a dark shale on the flanks of the hills on the Moor's farm, east of Bagot's Park,* opened out large angular blocks of dark

* Near this place, at Switch Bank, a well has recently been sunk in a light grey conchoidal marlstone, containing species of *cythere*.

blue limestone, similar to those of Brakenhurst hill, and, associated with these, were numerous thin slabs of a grey limestone with scarcely worn edges, and crowded with *Pecten Valloniensis*, *Modiola*, and *Avicula contorta*, and others, with fish scales and bones; and I have also met with rounded fragments of similar fossil-charged limestones on the high grounds of Winshill, and in the brickyard at Brislingcote. These limestones, which a more extended examination of the district will, in all probability, enable me to detect *in situ*, appear to be the representatives of the beds at Camel hill, described by Mr. Moore, *Quart. Jour. Geol. Soc.*, Dec. 1, 1867. The Trent Valley gravels at the base of some of the well sections in Burton have also yielded, not only Rhætic limestone and sandstone fossils, but detached specimens of Gryphæa incurva, portions of an Ostrea, calcareous Liassic shales, containing shells, and yellow Oolitic limestone, charged with fossils of that formation, and fossils from the Chalk.

The sands, gravels, and clays lying on the hill sides of Needwood Forest and other localities are apparently referable to three distinct periods of action, and occur in the following ascending order:—

	Feet.
1.—Sands, made up principally of abraded particles of keuper, red marl, and rhætic beds, and at times passing into a well-washed current-bedded silicious sand, containing pieces of coal; and at others into a sandy gravel made up of a great variety of quartz pebbles, fragments of yoredale, millstone, grit, and coal-measure rocks, keuper sandstones, hard red marls, rhætic marlstone sandstone and limestone, containing shells, fish remains, and traces of plants, and rarely chalk flints, varying in thickness from...	10 to 50
2.—Yellow, blue, and red boulder clays, sometimes free from boulders, at others containing in great numbers masses of trachyte, greenstone, toadstone, porphry and other rocks of similar origin, mountain limestone, yoredale sandstone and millstone grits, and a few chalk flints...	2 to 60

	Feet.
3.—Coarse gravel, set in a strong clayey paste, occasionally intercalcated by beds of sand, and containing quartzose and well rounded pebbles of granite and igneous rocks, huge masses of millstone grit, and rounded fragments of fossiliferous oolitic, and rhætic sandstones and limestones, with, occasionally, chalk flints, from ...	6 to 50

The principal localities where the beds of the first division may be studied are the Draycott Cliff sand pits, the pits at Tatenhill Wood, and some old workings at Hanbury Wood End. The Draycott section shows a great, but unascertained thickness of marly sand, the upper part of which has been eroded in irregular pockets, and infilled by a red boulder clay, upon which lies a bed of flinty gravels. The Tatenhill Wood pits are curious, and have the appearance of being originally a deep elongated excavation in red marls, on the eastern flank of the hills overlooking the Trent Valley, and into which were tumbled, by strong north-westerly currents, thick beds of gravels and sand—the coarser material lying in the upper part, or head of the section—until the hollow was filled to the level of the then surrounding surface of the red marls, over the whole of which was subsequently spread a thick sheet of Boulder clays, and upon these a thin coating of gravel. The beds at Hanbury Wood End occupy a much larger area, and spread over the crown of the hill at a considerable altitude. Sand has been worked there to a depth of thirty feet, but a well section gives :—

	Feet	Inches
1.—Soil	1	0
2.—Coarse, flinty, angular gravel	2	0
3.—Red sand...	0	4
4.—Red clay, with eroded surface	1	0
5.—Red clay, with boulders and flints, from 18 to	60	0
6.—Sand, containing fine springs of water, proved but not bottomed...	30	0
	94	4

These beds dip rapidly west, and appear to be regularly stratified, cropping out beneath the Boulder Clays, and thickening with them to the west; and the whole of the wells of the village are sunk in this sand, which yields a remarkably fine

and abundant supply of water. The well at Moat Bank House, Winshill, the residence of Abram Bass, Esq., which stands at 280 feet above the Trent, and at about the same elevation as Hanbury Wood End, is sunk through 40 feet of red and brown Boulder-clays to these lower water-bearing sands; and, somewhat curiously, although the well pierces the crown of the hill, which is the highest ground within a radius of some miles, the water on the sands being penetrated, rose in a wonderfully rapid manner to within 6 feet of the surface, at which level it has since invariably remained. A well-section at an elevation of 196 feet above the Trent, on the rising ground at the Anslow toll-gate, behind Sinai Park, gives—dark blue and brown Boulder-clays, with limestone boulders, 27 feet; marly sand, 18 feet; running sand 15 feet. On the open sloping grounds of the Bentilee farm, near Abbots Bromley, but at a much less elevation than either of the other localities named, another section gives strong clayey gravel, 2 feet; dark blue and brown compact tenacious Boulder-clay, 42 feet, white running sand, full of water, sunk into 2 feet, but thickness not proved more than 6 feet. This clay, which is used in brick-making, is an exceedingly interesting deposit, entirely free from gravel and boulders, and altogether different to any other clay of similar origin with which I am acquainted in this county. About one hundred yards N.W. of the brickyard, a road-side pit shows 8 feet of yellow sands and gravels, which have gradually over-lapped the Boulder-clay, thickening with it to the N.W. At this point therefore we have representatives of the three different deposits under consideration in regular sequence.

The upper sands and gravels, which over-lie the middle or Boulder-clay beds, are widely spread, and rest in large flat patches upon, and also within the eroded or excavated spaces in the clays, which latter sometimes consist of long narrow fissures or channels, and in other instances of trough-like depressions of considerable length and depth. At the Anslow brickyard an interesting example of the fissure gravels may be studied in a section consisting of a reddish Boulder-clay, fifteen feet thick, and charged with ordinary limestone, greenstone, and grit boulders. It reposes directly upon Red marls, and shows no indication of the intersection of the

lower sands and gravels, but is, in several instances, completely cut through to its base by long narrow fissures, which run east and west, and are completely infilled from above with sand and gravel. Of the other forms of occurrence of these upper beds, large plateau-like patches at Agardsley Park, Brakenhurst Hill, and Rangemore may be taken as examples; and they also exist on the hill sides of the valley near Newborough old Hall. They also occur at 181 feet above the Trent, in a line ranging east and west, about half-a-mile in length, and in places from forty to fifty feet in depth between the old homestead of Hobridding and Postern House. At the latter place a remarkably fine angular mass of coarse Millstone grit, five feet six inches long by four feet six inches deep, lies partly embedded in these gravels, the upper surface being on a level with the surface of the ground. Its size and position have suggested that it may have been used for religious purposes by the early inhabitants of the district. One of the sides of this mass of grit is smoothed as if by the action of ice, and, I think, its presence here, in direct association with the gravels, is accidental, and that it was transported to its present resting place by agencies which were in operation subsequent, in point of time, to those by which the gravels were deposited. The hill, N.W. of the Anslow toll-gate, attains an elevation of 234 feet above the Trent, and consists of a thick capping of these sands and gravels, and from hence they are found in isolated patches lying from 140 to 202 feet above the river, upon the tops and flanks of the hills which run up to and form the western margins of the Trent valley, between the Easthills, the Lawns, and Sinai Park House. They also appear in corresponding condition, and at about the same level upon the crowns of the Coton Park and connecting hills on the east side of the valley, and where, as at Coton Park, they attain any considerable thickness they are generally permeated by an abundant supply of water.

There are yet other deposits which, although possibly of more recent date than those described above, in all probability belong to the same, although the terminal portion of the period of submergence during which the upper gravels were deposited. These consist of a broad but not particu-

larly thick covering to the flatter lands of the Sinai Park, the Outwoods, and Anslow hills, of yellow clays, with sandy intersections,* and loaded with an extraordinary number of masses of Carboniferous limestones, which lie generally about four feet below the surface, and are crowded with species of *Productus*, *Spirifer*, *Terebratula*, *Atrypa*, gigantic stems of *Encrinites*, and other characteristic fossils. With these are associated chert, Yoredale sandstones, and thin limestones and shales, containing *Posidonia*, *Goniatites*, and fish scales; millstone grits and coal-measure sandstones, with plant remains; granites, syenites, greenstones, trachytes, Derbyshire toadstone, and other similar rocks ;† also lumps of lead-ore, and cawk, or sulphate of baryta; but it is worthy of note that amongst all these rock-masses I have hitherto failed to detect any undoubted fragments of the Rhætic or Keuper rocks now or formerly existing in the locality. I, however, find sparingly interspersed amongst the clays black and white quartz, and some few other pebbles, and chalk flints are abundant, both unbroken and split up into thin flakes, probably by frost. Flints, in this latter condition, form a remarkable deposit upon the high grounds of Hanbury Wood End, and from thence stretch in a long narrow trail south-east to Anslow and Sinai Park. South and west of this line chalk flints do not occur in so flaky a form or in such numbers. The rock masses of these deposits present, in their blanched condition, a totally different aspect to those of the upper gravel beds or Boulder clays; they also occasionally show, what these latter do not, beautiful and perfect examples of the polishing, grooving, and striation of ice. The boulders appear to have been derived from the limestones and associated rocks of the Pennine chain, and of districts lying north and east of it, but whether the chalk flints were collected exclusively from the eastern tracts of that formation in Yorkshire, or even in part from the detritus of more local outliers, is doubtful.

* The flint core figured at page 5, was from this deposit.

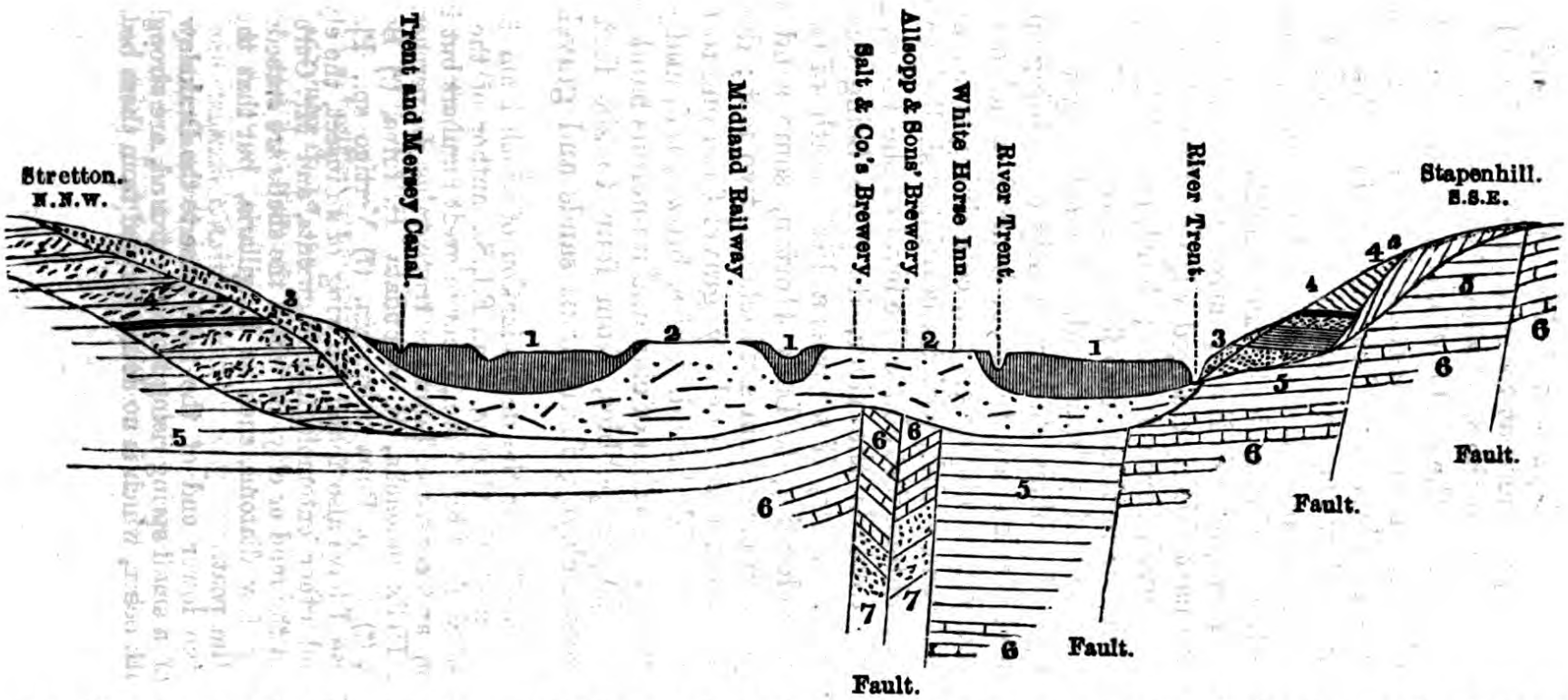
† Several hundred tons of these rock-masses were exhumed from the clays during some recent draining operations on the Sinai Park farm.

Passing now into the Trent valley we find it the repository of a variety of deposits, which, by their condition and order of occurrence, indicate different and distinct lines and ages of fluviatile action. These lines of action are traceable upwards to a level of exactly one hundred feet above the present water line of the Trent; and, carrying this level downwards to the base of the valley gravels, we have for consideration the deposits of a section 135 feet in depth. The general arrangement of these beds I have laid down in the annexed section, which is carried from the brickyards at Stapenhill N.N.W. to the railway excavations at Stretton, a distance of three-and-a-half miles. Commencing at Stapenhill, the line of brickyards, immediately east of the Rosleston Road, show the gradual sloping outcrop of the Stapenhill clays at the level indicated. They are brown and red in colour, intersected, at times, by veins of sand with, occasionally, fragments of Keuper sandstone and a few pebbles, and they lie in masses of irregular thickness upon the eroded surfaces of the hill sides, down to within thirty feet of the level of the Trent. They appear to me to be re-deposited Boulder-clays, carried by the eddies of old river currents within the elbow-like recess assumed by the hills of this portion of the Stapenhill range, and to which the clays, as a workable deposit, are on this side the valley confined.* Generally speaking they are covered up by from two to eight feet of brown sandy clay and silt, containing numbers of flint, quartz, and other pebbles, and occasionally larger pebbles of mountain limestone and igneous rocks. Thin

* These clays are now nearly exhausted; and the material at present used in the manufacture of bricks, consists partly of the rain-wash and partly of the upper portion of the red marls which overlie the Keuper sandstones on the flanks of the hills at Stapenhill. Down to a thickness of from five to ten feet these marls are generally workable, but below this depth they frequently become intersected with irregular lumpy beds of a whitish stone which contains carbonate of lime, and is therefore injurious to brick-making. Nearly the whole of the breweries and other buildings of Burton, were built with the Stapenhill bricks. Recently Mr. Simnett has produced from some beds of white clayey stone, a superior description of floor quarry and other articles for building operations. The clays used in the well-known kiln-tile manufactories at Newton Solney, by Messrs. Marborow, are the equivalents of these Stapenhill red marl-clays.

Section across the Trent Valley from Stapenhill to Stretton.

Distance, three-and-a-half miles.



1, Old river, or alluvial deposits; 2, Valley sands and gravels; 3, Terrace gravels; 4, Sands, gravels, clays, and peat of fluviatile origin; 4 *a*, Stapenhill brick-clays; 5, Keuper marls; 6, Keuper sandstones 7, Bunter conglomerates.

patches of these clays occur behind Mr. Robinson's malthouse at Tatenhill, and also at Stretton, but elsewhere I have not met with them on the west side of the valley.

In the banks of the road leading down from these brickyards to the old ford I have ascertained the existence of the following:—red clay, four feet; stiff yellow clay, six inches; black and yellow clay, gradually passing into a strong black unctuous clay, one foot three inches; peat, from one to three feet, containing shells, and thickly charged with small crystals of sulphate of lime; strong yellowish-brown clay, the upper part thickly charged with shells,* four feet; band of coarse gravel, three inches; hard, consolidated, stratified sand, with few pebbles, two feet; followed by loose current-bedded white and yellow sand, intersected by thin bands of peat clay and pebbles, and frequently containing large lumps of coal and black shale, ten feet; beneath which comes coarse white and yellow clayey gravel, containing bones of animals. The bed of peat, which, with its associated shell clays, occurs at exactly seventeen feet above the level of the Trent, gradually thins out towards the river, its place being occupied by brown clay. Now, if we pass a little south of this section to a field belonging to Lady Horton, some sand workings give:—Brown clay from six inches to two feet; dark earthy sand, one foot; coarse ochrey gravel from one to two feet; loose current-bedded sand, white, brown, red, and yellow in colour, with thin veins of clay and numerous bands of quartz, flint, and jaspar pebbles, from four to six feet, beneath which comes clayey, ferruginous sands and gravels.† The

* These shells, for the determination of which I am indebted to the kindness of R. Garner, Esq., F.L.S., author of the "Natural History of Staffordshire," etc., occur in great numbers but in a fragile condition, and consist of Limnæus truncatulus, L. pereger, Succinea oblonga, Helix pulchella, H. rotundata H. fulva, (?) Bulimus var obscurus, (?) B. sp. Pupa substriata, (?) Vertigo sp., Planorbis sp. With these I have also found the wing of an insect, the elytron of a beetle, and other entomological fragments, and Mr. Garner informs me that in the mud or clay, in which the shells are embedded, he has detected a few diatoms, such as Fragillaria, but that these do not occur in the peat.

† At the lower end of the field close to the Drakelow road, the waters of a small spring rising from the ground, are strongly impregnated with ochre, which is no doubt derived from these beds.

different beds thicken with the rising ground, but the sands ultimately thin out upon the clayey gravels of the base of the section, while the upper clays become covered with a local deposit of coarse shingle. One of the more interesting points in connection with this section is the penetration of the sand bed, to its base, by a remarkable number of the rootlets of aquatic plants, probably *Iris*. If casually observed these rootlets appear to be confined to the sands, and to be cut sharply off at their line of junction with the overlying gravels, the black vertical lines which mark their position in the sands suddenly ceasing at the level indicated. Upon careful examination it will, however, be found that they pass upwards completely through the gravel, and that in their passage, by becoming oxidised, they assume the exact colour of the gravel; and, thereby, render somewhat obscure their distinct existence in it. It is a point of some little interest that the gravel bed occupies a position above the Trent, corresponding with that of the peat bed of the old ford section, namely seventeen feet; but, while the latter is characterised by a deposit of land and aquatic shells, I hitherto have failed to detect in the former the least trace of a Molluscus fauna.* These sands are of no great extension. They commence, as a distinct deposit, in the ridge which forms the east bank of the Trent, north of Drakelow Hall, and are thence continued, gradually increasing in thickness as far as the field between Mr. Scattergood's lower brickyard and Stapenhill ferry, but, except in the pit already described and in another† at the same level near the railway viaduct, I do not find them charged with vegetable remains in this form.

Passing now to the Stretton excavation we have, at the head of the section, a strong red clay, with its upper surface eroded, and the hollows filled with coarse gravel from three to six feet; yellow even-bedded sand, containing fragments of Keuper sandstone, one foot; hard coarse sandstone, one foot; red and blue marls, sixteen feet. The section, there-

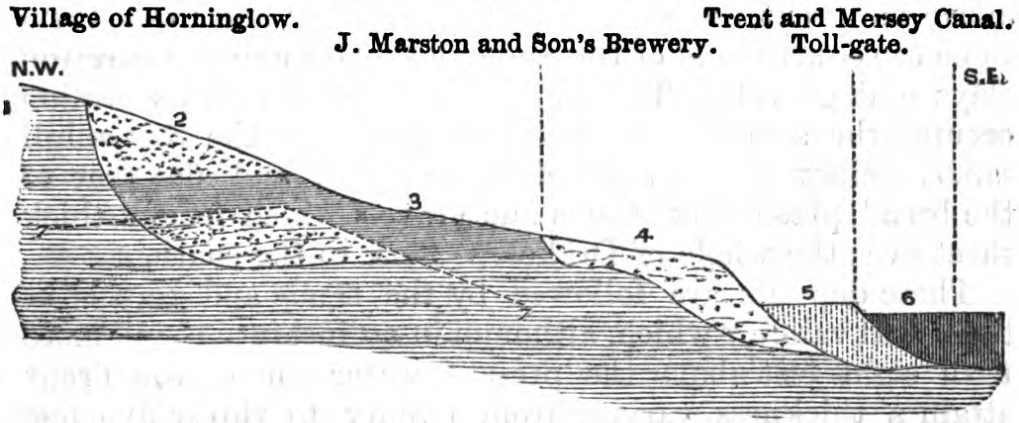
* I on one occasion, obtained from these gravels a fragment of what is probably the claw of a crayfish.

† A few days ago, I detected sticking out from the clay overlying the sands of this pit, a fragment of the rim of a Roman vessel.

fore, shows the junction of the Keuper marls with these members of the valley deposits, and at exactly fifty feet above the line of junction in the centre of the valley. The marls, which have been worn down to an angle of about twenty degrees S.E., soon disappear from sight, becoming, at this point, covered up by the following series of curious deposits:—strong red clay and gravel, ten feet; yellow gravel and sandy clay, five feet; yellow sand and gravel, one foot; blue clay and gravel, passing into strong clay, the upper surface containing a band of from two to three inches of black peaty matter, with, at times, fragments of wood and plants, two feet; coarse yellow gravel, nine inches; white and yellow sand and clayey gravel, with subangular flints, three feet; strong red marly clay and gravel, two feet; a remarkably tenacious dark-blue clay, containing numerous remains of aquatic plants, two feet three inches; deep yellow ochrey sand, three inches; strong white clayey gravel, which has been excavated to a depth of four feet, and is found to be succeeded by blue and brown clays. At the lower end of the section the whole of these beds have disappeared beneath twelve feet of red clayey gravel, and from this point, except here and there a patch of clays upon the surface, the exposed sections consist of white and red sands and gravels. The lower beds are, however, met with in the village, a well-section showing twenty-four feet without passing through them, and in some building excavations they were shown as consisting of yellow and blue clays, and coarse gravel. One curious circumstance in connection with these deposits, is the occurrence, particularly at the base of the upper bed of clays containing plants, of a remarkable number of blue and yellow flints, many several pounds in weight, and all in a more or less angular or unrolled condition. I can account for the presence of these flints in no other manner than by supposing them to have been transported by old river currents, probably from a long distance further up the valley, in broken-up sheets of ice, which had attached itself to the Boulder-clay banks of the river in which the flints had been previously embedded. How far these deposits extend into the valley, at this point, is unknown. They certainly underlie the greater part of the

village of Stretton, but are ultimately lost beneath a thick mass of terrace gravel and sand, which is free from any persistent clayey matrix. I may here remark that from the land formed by these different deposits, and rising westward or behind the village, its inhabitants, previous to the excavation of the beds for this branch of the North Staffordshire Railway, obtained a constant supply of excellent water, which, permeating the upper gravels, was conducted down the surface of the clays to the wells of the village, but the cutting through of these latter deposits unfortunately resulted in the permanent diversion of the water into a different and unavailable channel.

Between Stretton and Horninglow the Keuper marls have been cut down by denudation into a sloping valley, the flanks of which contain a thin scattering of gravel, its main hollow being filled with river clay and silt. On reaching a field belonging to Mr. Hopkins, a series of gravels and sands set in, which, apparently, occupy a broad sloping shelf of red marls, as described in the accompanying section, carried parallel to the road leading from Burton to Horninglow.



1, Keuper marls; 2, Coarse gravel; 3, Sand with pebbles; 4, Terrace gravels; 5, Valley gravels; 6, Old river, or alluvial deposits; 7, Water line.

In the field indicated, a pit-section shows about twelve feet of coarse ferruginous gravels, set towards the base in a strong adhesive, clayey paste. Their thickness here is not known, but they stretch upwards from a level of eighteen to thirty-six feet above the Trent, and are there succeeded by a series of sands and gravels, which attain a vertical depth of thirty feet. These beds, which are confined to an area of about

400 yards in length, form, as it were, a broad but short belt to the shoulder of the hill upon which the village stands, and vary much in their general composition. In some instances they consist of a thick mass of current-bedded sand, throughout which are buried numerous quartz and flint pebbles, and in others they are interstratified with beds of strong gravel and clay. In a pit on Mr. Tunley's leasehold property the section shows coarse gravel with flints, seven feet; current-bedded, variegated sand, with clay bands of from one to three inches in thickness, and thin veins of gravel, eight feet; coarse gravel, two feet; sand, two feet, followed by a red marley gravel. The upper bed in this section is continued from a level of sixty feet to seventy-five feet above the Trent, passing towards its outcrop upon red marls, into a yellow clayey gravel. It not unfrequently happens that the sand upon which they lie contains cavities or pipes into which the gravels have been passed. The sands contain abundance of water at an almost uniform line of thirteen feet from their base. So far as I am aware these are the only sand and gravel deposits, lying at this elevation above the Trent, on the west side of the valley, and I take them to be the equivalents of the Stapenhill clays and the Stretton clays and gravels. The basement gravels of this section occupy the same level above the Trent as the Stapenhill sands, yellow gravels, and clays and peat, and also that of the broad plateau-like sands and gravels which form a thick sheet over the whole of Drakelow Park to the south.

These deposits are followed by the sands and gravels of the Trent valley,* which, although in no instance rising more than eight feet above the present water line of the Trent attain a thickness varying from twenty to thirty-five feet below it. The surface area of these beds is generally of an oblong or circular form, and, as a rule, they are remarkably free from organic matter. To this condition is due the important character assumed by them in the distribution of the "brewing" waters of the town of Burton, and upon which its position, as the great centre of the trade for which it is famous, so essentially depends. These gravels are gener-

* The flint arrow-head, figured at page 4, was obtained from these beds.

ally light-red and brown in colour, and at times contain a large admixture of sand. They are made up in great part of a curious variety of silicious pebbles, including agates, chalcedony, carnelian, and jasper, in fact containing examples of every specimen which enters into the composition of the Bunter conglomerates. To these may be added coal-measure sandstone, containing at times calamites and other coal plants; pieces of coal; coal shales with fossils; Keuper sandstones and marls, evidently of local derivation; Rhætic and Liassic shales, sandstones, and limestones, with embedded and detached fossils of those formations; Oolitic limestones with shells; Chalk flints, containing fossils, and generally in a water-worn condition; but, at times, they are found crowding the base of the gravels in large angular masses, which show no indication of attrition, and are exactly similar in this respect to the flints already described as found in the Stretton section. Associated with these are great numbers and varieties of igneous and metamorphic rocks, such as toadstone, basalt, greenstone, trachyte, syenite, porphyry, and schist, and to these may be added granites, carboniferous limestone, chert, millstone grit, and, in one or two instances, enormous blocks of the latter rock, but not so large as the mass lying in the gravels at Postern House. These gravels, taken in the aggregate, constitute a remarkably curious and interesting assemblage of rocks, which have been derived from members of nearly every formation of which the crust of the earth is known to be composed. It is also a point, by no means devoid of interest, that in these gravels are contained hard, silicious pebbles, which, by natural attrition, have been worn down to a form and size rudely corresponding to that of the tools or implements assigned to the handicraft of the primitive races of mankind. It is possible that similar pebbles found elsewhere may, in part, have furnished the models from which these prehistoric weapons were originally fabricated.*

I have already alluded to the upper or exposed surfaces of these gravel beds, as being of a circular or oblong form;

* I have in my collection, a complete series of these naturally-shaped tools, which I obtained from the above and some ballast gravels, lying on the Midland Railway, at Branston.

and it now remains to show why they retain this shape, while the land by which they are surrounded assumes a more uniform and lower level. On reference to the plan of the town of Burton, prefixed to this division of the work, it will be seen that a large proportion of the area therein laid down is distinguished from the other portion by a series of dark lines. The unshaded tracts represent these gravel beds, and the dark lines the less elevated land by which they are encircled; the one indicating the subaerial, the other the subaqueous conditions of the Trent valley during the first stages of its emergence from a period of total submersion. Now the tracts laid down as subaqueous, run generally parallel to the valley, and on examination are found to consist of a variety of deposits which clearly establish their origin. Commencing in the Andersley, on the east side of the valley, they show clay and silt, one foot six inches; reddish clay, one foot; strong blue unctuous clay, one to three feet; dark sand, with roots and branches of trees, one foot; dark sand and gravel, with roots and branches of trees, hazel nuts, aquatic shells, and numerous bones of animals,* three feet; sand and gravel, nine feet. In the Hay they consist of sandy loam, one foot three inches; gravel, two inches; sand, four inches; strong, red, brick clay, one foot nine inches; stiff, blue and yellow clay, with roots and branches of trees and plants, one foot nine inches; peat, one foot two inches; dark and yellow gravel, two feet. In the second, or Mosley Street line, the beds consist of clayey soil, three feet; yellow and blue clay, two feet; peat, eight feet; black consolidated gravel, eight feet.†

* The animal remains from these beds consist of bones, jaws, and teeth, of Sus scrofa, Bos longifrons, with two or three varieties of the latter modified by domestication, species of Equus, and bones of wolf or dog. Similar remains have also been obtained from the sand beds near the writer's house; from a well sunk in the gravels of the river-margin at Mr. Whitehead's brewery; in the Mosley-street old river-course; also in the sewer excavations near Anderstaff-lane, and at Stretton; the whole of which have been kindly determined for me by W. Boyd Dawkins, Esq., F.G.S.

† Some years ago the deposits of this line of river action were cut through at different points between Mosley-street and its junction with the main channel at the bottom of Anderstaff-lane, and Mr. E.

The Waterloo Street deposits, which lie in the third line, exhibit in well-sections and excavations for sewers, beneath a clayey soil, blue clay, nine inches; yellow clayey gravel, one foot; dark gravel and clay, one foot three inches; coarse yellow gravel, one foot six inches; washed sand, ten feet six inches. In the fourth line, adjoining the Trent and Mersey canal; marley clay, one foot six inches; strong, brown clay, two feet; stiff, blue clay, one foot three inches; yellow clay and gravel, one foot six inches; sand and gravel, four feet; yellow clayey sand, three feet; gravel, eleven feet; greenish clay, two feet; sand, one foot. These are but isolated, and yet, withal, characteristic sections, selected from numerous others which I have been careful to obtain from time to time as opportunity offered, and which do not extend beyond the limits of the plan-section that accompanies the work; but, in order to show the areal extension of the beds in this district of the Trent valley, I will give two other sections—the one exposed in the ballast pit* near

Brown, F.G.S., in his *Mineral Waters, of Burton-upon-Trent*, gives the following list of the land and fresh-water shells obtained by him from the beds exposed. Planorbis contortus, P. spirorbis, P. albus (variety), Limnæus stagnalis, L. palustris, L. pereger, Succinea putris, Bithinea tentaculata, Zua lubrica, Physa fontinalis, Cyclas, cornea, and several undetermined species of the genera Limnæus, Planorbis, and Vertigo, together with the entomostracous genus Daphnia. Several of these I have also met with in the Hay section, in that of Mosley-street, and in the beds exposed by the excavations for the sewage tanks at Stretton. It will be noticed that the shells from the Stapenhill peat and clays differ specifically from the above.

* This pit was opened about eighteen years ago by the Midland Railway Company, and I have within the last few days been told by some of the men first employed in the work that a great number of urns containing human bones were then found about three feet below the surface. Judging from the description given by two of the men, and which from its apparent truthfulness, I have no hesitation in believing, some of these urns were British, while others belonged to either Roman or Saxon times. One contained in addition to charred bones, two iron knives, and iron weapons were found in some others. The field from which these remains were exhumed, consisted of a somewhat circular knob of gravel that sloped gently down to the banks of the old river-course described in the text, and was beyond question the site of an ancient cemetery, first used by a British tribe and in all probability adopted by the succeeding inhabitants of the locality.

Barton station, south of Burton, and the other laid bare in the excavations for the sewage tanks at Stretton, north of the town. The Barton section consists of soil, three feet; sand, one foot three inches; gravel, one foot nine inches; blue clay, two inches; yellow clay, sand, and gravel, full of roots of plants and branches of trees, containing, at times, a thick admixture of peat, two feet; yellow clay and sand, two feet. These deposits, which are enclosed within sloping banks of the valley gravels, occupy an area seventy yards in width, and run in a serpentine course. The gravels are, generally, highly charged with carbonate of iron, and, in places, bin-oxide of manganese, and, generally speaking, they contain a large per centage of vegetable matter. The sand at the base of the section lies upon a yellow gravel, the thickness of which has not been determined.* The Stretton beds were cut through in forming No. 3 tank, and are made up of yellow clay, one foot; blue clay, six inches; peat, three feet; "shell marl," from one to eight feet; gravel, not bottomed, three feet. The deposits opened out by these tanks are very variable, no two sections corresponding in general particulars. The shell marl, which is always full of shells, is an irregular deposit, sometimes lying immediately upon the gravel, at others it reposes upon peat of some three to four inches in thickness, and, in one instance, it was underlaid by a dark clay, containing a remarkable number of aquatic shells. In many cases roots of plants strike downwards, from the peat, through the shell marl, deeply into the underlying gravel, which is also a variable deposit, at times appearing in banks of some feet in height, and, when this is the case, both the peat and shell beds thin out altogether. The blue clay is of a remarkably tenacious composition, and of variable thickness, and the vegetable remains—principally matted masses of aquatic plants—which it at times contains, are generally coated with phosphate of iron. Flints are common in the gravels, and, in addition to the shells, the beds have yielded bones, with a jaw and teeth of *Bos longifrons*.

We will now review the evidence contained in these

* At the base of the excavations in the gravels was recently found, nearly thirty feet below the surface, a fragment of a deer's horn.

various deposits lying within and upon the margins of the Trent valley, and endeavour to deduce therefrom some general conclusions as to the conditions under which they were deposited, and the different epochs they represent in geologic history. In the first place, the more recent of the stratified or original formations, which now contribute to the geology of the district under consideration, are the Rhætic outliers of Christ Church and Bagot's Park, on Needwood forest. From the simple fact of their existence, in this condition, there is no question that originally they, with the underlying Keuper marls which formed the floor of the sea by which the Rhætic beds were deposited, were horizontally continuous over the whole of the area now occupied by the Trent valley, and what are now the isolated hills of Stapenhill, Winshill, Sinai Park, and Cannock Chase. Of the thickness of these Rhætic deposits there are, however, now no means of arriving at a correct estimate, but, judging from the organic remains found in the drifts derived from the formation, and which, evidently, occupied a much higher horizon than that of the fauna of beds still *in situ*, it could not have been less than two hundred feet. Upon these beds in turn reposed a series of Liassic deposits, but to what extent they were developed is impossible to determine. I believe, however, it may be accepted as conclusive that important groups of both the Rhætic and Liassic formations, at one time, covered the whole of this portion of the country,* but whether or not they were overlaid by any of the stratified formations, which follow in geological sequence, there is no distinct evidence to show. It is true that, associated with the Rhætic and Liassic fossils contained in the Trent valley and upper drift fossils, there are fossiliferous fragments of Oolitic rocks, and also a remarkable number of flints derived from the Chalk; but, although it is of course possible that not only these, but other divisions of the Secondary and even early Tertiary systems, may be entitled to a place in the geological history of the district, I think the fragments

* Since the above was in type I have met with traces of what will I think, on further examination. turn out to be Rhætic deposits in the excavations for the Stafford and Uttoxeter railway, at Hopton, near Stafford.

in question were transported from parent beds situated at a distance, rather than from any of local occurrence. What, therefore, were the conditions which obtained during those enormous cycles of time that divide the Liassic from the later Tertiary eras, whether they were of a fixed or alternating character, there is no vestige upon which a satisfactory conclusion can be founded. It is, however, none the less certain that it was during some portion of this divided period, and, in all probability, subsequent to the Chalk, that the original outline of the Trent valley system was laid down; and that, before the glacial epoch, it had been reduced to conditions differing, in no essential degree, from those with which we are now familiar.

Now the history of the geological phenomena of this part of England, in common with its other portions, teaches us that there were enormous or prolonged periods of aggregation, during which the formations under consideration were piled up; and that these periods were followed by comparatively short, but extremely active, epochs of degradation, which, whether continuous or not, effected in their operation, not only the removal of vast masses of strata, but almost entirely destroyed all traces of their former existence. In illustration of this, if we compare the highest point of Needwood forest with the lowest level reached in the excavation of the Trent valley at Burton, we shall find that there is a mean difference in the two beds of nearly 400 feet. Geologically, however, the difference is considerably in excess of this—the valley strata, consisting of Bunter and Keuper marls and sandstones, and those of the forest of Rhætic deposits, the natural horizons of which two latter are divided by at least 1,200 feet. If, therefore, we take into consideration that at the time the Rhœtic series were intact, and, with the underlying Keuper marls and sandstones continuous over the whole of the intervening area, and that these in turn were covered up by the Lias, it follows that no less than from 1,500 to 2,000 feet of strata must have been carried away to effect the exposure of the lower Keuper sandstones and Bunter conglomerates in their present position at the base of the Trent Valley deposits. This is the more striking when it is

considered that the great work of degradation was by no means of limited areal extent. There is no portion of Britain, at least below a certain level, which was not similarly affected, and in numerous instances to a much greater depth than is illustrated in the section alluded to. The Valley-plains which lie north and south of Burton were excavated at this period, and the latter at least contains a deposit that furnishes interesting data in respect to the period when the work of excavation had ceased. In Mr. Roberts' brickyard, at Streethay, near Lichfield, and occupying a central position in the Trent valley, lies a large patch of dark Boulder-clay, upwards of forty feet in thickness, and of a strong and tenacious nature. It appears to occur in the form of a blunted cone, over the crown of which is spread a stratified deposit of yellow sand and gravel, which I take to be the equivalents of the Stapenhill beds, and to occupy about the same level above the Trent. On the south flank of the cone where the clays are worked the section shows, beneath a varying clayey gravel, a horizontal bed of sand intersecting a body of clays, from six to eight feet in thickness, and containing pebbles. These upper clays are distinct from those which succeed them, but are, evidently, a re-deposit of the same formation, which is here destitute of pebbles. The upper clays and gravels are, I believe, of fluviatile origin, and the underlying clays a remnant of the Boulder series, and consequently, from the fact of their occurrence at this point in the valley, and of a thickness in all probability equal to the depth to which it has been excavated, we have here evidence that the work of excavation had been completed previous to the introduction of the Boulder-clays by which its originally hollowed space is now infilled. I am not acquainted with any other section that determines the presence of Boulder clays in the Trent valley itself, but, as already described, they occur upon its margins at a higher level, and overlie beds of sand and gravel which preceded them in order of deposition, while they, in turn, became covered up by other deposits of sand and gravel, which represent less ancient conditions of aqueous action. Whether or not these three deposits,—the lower and upper drift sands and gravels, with their intersecting clays—are

merely subdivisions of the great Boulder-clay series is a point I willingly leave open, but I am, nevertheless, disposed to consider them the equivalents of the later Tertiary deposits, which enter so largely into the geology of the south-eastern parts of England, and also possibly of those white clays, sands, and gravels which occur in various elevated districts in Britain,* of which latter the more local examples consist of the fire-clays, sands, and gravels, overlaid by Boulder clays, found in deep hollows or "swallows" in the limestone and Yoredale rocks of the Weaver hills, and considered by Mr. E. Brown, F.G.S., in a descriptive paper read by him before the British Association at Nottingham in 1866, as "possibly coeval with some of the later Tertiaries as, for instance, the Norwich Crag." I may add that so far I have not detected in these deposits any remains of a contemporaneous fauna, but in all probability they are by no means destitute of such organisms, and when found there will be no difficulty in correlating the entire series.

Now I think that, with the exception of the upper portion of its mountain ranges, these deposits indicate the total submergence of Britain; and that the climatal conditions which prevailed during the latter portion of the period were of an arctic character. It was under these latter conditions that the Sinai Park, Anslow, and Needwood Forest plateaus became sheeted over with their clays and boulders, which, although now covering the surface of land elevated from two to three hundred feet above the level of the Trent, were originally sown broadcast by dissolving ice-bergs, over the floor of a sea depressed some three thousand feet below it. To this drift and Boulder-clay period may also be assigned the infilling of the Trent valley with its sands and gravels, which, with the clays with which they were associated attained a much greater vertical thickness than they now represent. After their deposition the old sea-floor was upheaved, the hills becoming dry land, and the valleys the great channels by which the subsiding waters were conducted to the now distant ocean. Whether the earlier stages of upheaval

* Mr. G. Maw, F.G.S., has ably described these deposits in the *Geological Magazine*, Nos. 6 and 7, 1867.

were slow or rapid cannot well be determined. It is, however, clear that the hills, possibly from being the sooner relieved from aqueous action, retain considerable accumulations of these upper clays and boulders, whereas below a level of one hundred feet above the Trent, they are not found in their original condition; in fact, except the few isolated patches of sand and gravel lying on the flanks of the Sinai Park hills, at one hundred and forty feet, and which, in all probability, owe their preservation to the circumstance of being contained in hollow spaces in the red marls, I do not find any traces of erratic deposits between the line of Boulder-clays and the fluviatile gravels of the valley. I therefore gather from this, that after the appearance of the hills above the surface of the ocean the process of upheaval was accelerated, and that the currents in consequence became rapid and degrading in their action, washing from the hill-sides the clays, gravels, and boulders, lodged thereon under the older marine conditions, and settling them down in more aggregated and uniform masses over the valley area beneath. The Stapenhill brick-clays, and the Horninglow upper sands and gravels, were evidently redeposited during these early stages of the old Trent system, and on the valley attaining an elevation of about thirty feet below the present level of the river, the elevatory forces appear to have become gradually diminished in power, and a more fixed river-action may be said to have commenced. The land, however, was by no means stationary. The process of upheaval still continued, although possibly in a degree of not more than two or three feet during centuries of years; but slow as it was, it resulted in the course of time in the contraction of the water-way of the valley, the deepening of its channels, and the uncovering of those marginal deposits of sand, clays, and gravels, with their intersecting beds of peat and vegetable remains, and entombed land and aquatic shells which we now find at Stretton and Stapenhill, and which record in their evidence the action of a river whose banks were the hills, and whose bed the valley, which now divides the villages of Winshill and Horninglow, the narrowest part of which is upwards of two miles in width. These beds, which lie at a level of from fifteen to

thirty feet above the Trent, became in turn the boundaries of a river-course which possessed of strong currents and assisted by springs issuing from its base, effected the complete removal from the gravels lying in the centre, and on the east side of the valley of the original and reassimilated Boulder-clays, with which they had previously been clogged. It has been customary to consider the well-washed condition of these beds as due to tidal action, and to assume that at the period they represent the Trent valley was an estuary or arm of the sea. I think, however, that if it had ever been subjected to tidal influences, some traces thereof would have occurred in one of the vast number of excavations, well-sinkings, and other openings in the gravels, but so far as I am aware no such evidence has ever been afforded, up to a level of one hundred feet above its existing water-line; in fact, following the line downwards from this level, there is no deposit which has come under my own observation to indicate that the old fluviatile conditions of the valley were at any time replaced by those of tidal or marine action.* At the succeeding stage in the history of its emergence, the Trent valley divided for the first time its surface area into two distinct conditions, the one subaereal, and the other subaqueous. The outlines of the former of these are readily shown in the unshaded portion of the plan of the town, and the dark lines show the other. I may here remark that the boundaries of these different deposits have been laid down with great care, on the ground, and with no little amount of personal labour, and I have therefore every confidence

* At the west end of the railway excavation through the upper flanks of the Sow valley at Hopton, to which I have already alluded, I find a series of sands and dark blue unctious clays, overlaid by coarse gravel which there is no difficulty in correlating with the river deposits of the Stretton and Stapenhill sections. On the flanks of Coton Hill, nearer Stafford, and at other points in the Sow, Blythe, Dove, and Trent valleys, deposits of sand, gravel, and, at times, clay exist in corresponding conditions, and, apparently, at about the same level; and I have no doubt whatever, that if the subject of these old river deposits were taken up, as I hope it will be, by local geologists in a more general manner, that a considerable amount of valuable and interesting data would readily be obtained, and thereby the fact of the Trent and its tributary valleys being at one time included in one general and connected river-system, more fully and satisfactorily ventilated.

that they do not deviate many feet in any one instance from the actual lines taken by the old river courses, which they are intended to represent.

Now the difference in the level between the terrace and valley gravels, which is from ten to fifteen feet, originated in that gradual and continuous process of upheaval of the valley which characterises its condition from the era of its release from oceanic influences. The emergence of these valley gravels may possibly have been assisted by the diminution in the rainfall of the country, and, consequently, in the volume of its land drainage, but, under any circumstances, the time had arrived when the valley area presented the condition of a broad and rapid river, from the surface of which rose a series of low, irregular islands, that in time became covered by trees and plants, and, ultimately, the grazing and feeding ground of species of the horse, ox, wolf, and other animals, which have long since ceased to be recognised amongst the living forms of the earth. The largest of these islands was the one, which about a mile-and-a-half in length and oval in form, extended from a point near the Leicester branch of the Midland Railway to the bottom of Anderstaff Lane, and it was while thus surrounded by a deep river that it was first trodden by the foot of man, and finally became the dwelling-place of a family to whose rude twig and mud-built huts is due the foundation of the town of Burton. The villages of Barton, Branston, and Wetmoor, which occupy similar island-like tracts, owe their origin to the same period, and to the same tribe of valley settlers, who, like the animals noticed above, and with whom they were contemporaneous, belonged to a race whose existence was limited to a period anterior to that of recognised history.

These conditions prevailed, beyond all question, over a considerable era, but, in time, they also changed; the elevatory forces were not, as yet, dormant, and, assisted by rain-wash from the western hills and sediment brought from the higher parts of the valley, the western channels became in part silted up, and the main body of waters, now reduced in volume, passed down the eastern and central divisions of the valley. The flanks of the old islands on the east also became coated over with clay, and upon this were spread

thick beds of sand and fine gravel, in which were buried water-worn bones of animals, and pieces of wood, and curiously smoothed fragments of granite, limestone, and other rocks. And thus the land area of the valley continued to increase age by age, and that of its water to diminish, until in the course of time, where the streams of the old river ran deep and swift, where the log canoes of the valley-settlers sluggishly breasted the strong currents, and myriads of molluscs clung to dense masses of an aquatic vegetation, or glutted themselves upon the decomposed carcase of some drowned animal, we now find broad and fertile meadows, long and thickly-built streets, a population reckoned by thousands, and the seat of a trade by which the name of Burton is rendered familiar to every civilised nation on the face of the globe. The agencies, however, by which these changes were effected are still in force; they have not as yet reached the limit of their operation, nor will they ever cease under existing cosmological conditions. There is, as a watcher may well understand, a gradual and, by comparison, perceptible contraction of the ordinary water-way of the Trent valley going on as it has been during the last thousands of years; but what may be the ultimate result of this action it is impossible to define. In the year 1686, the date of the publication of *Plot's Natural History of Staffordshire*, a third, but long since silted up, channel of the Trent ran beneath the Old Bridge and across the Winshill meadow; in 1213, and many years subsequently, a mill stood between Horninglow Street and Station Street, which was worked by the water of a stream coming down from Branston; and at the same time another and a larger branch of the river ran on the extreme west side of the Drakelow or Branston meadows, in the line of the Lily pits, the Osier bed, beneath the west arch of the Leicester Railway Bridge, across the Trent, and so down the course of the present Peel's Cut and the Black Pool to its present junction with the Trent at the Fleet Green. These, however, have now disappeared from the Trent valley as part of its river-system; and it is only in times of flood, when these old channels become submerged, that we have the opportunity of deriving a correct notion of their number and extent, and of the imposing appearance they contributed to the valley at so recent a period of its history.

Such, therefore, as they appear to me from the evidence adduced, are the outlines of the geological conditions under which this portion of the Trent Valley was determined. It now remains to be seen in what manner these conditions contribute to, and are associated with, that remarkable position obtained by the town to which I have just alluded.

The town of Burton-upon-Trent, it is almost superfluous to add, derives its commercial prosperity from the manufacture of ale; the generally recognised superiority of which is attributable to a certain chemical property possessed by the waters used in its production. This property, as more fully explained hereafter, consists of sulphate of lime, and is derived from the gypseous deposits contained in the Keuper marls of the district. The process by which it is conducted into the different wells of the breweries of the town, and in fact the investigation of the system, so to speak, connected with the supply has hitherto been a subject to which no particular, or at least special, attention has been directed; and the mere fact ot the presence, in requisite quantity, of water containing the proper proportions of the calcareous ingredient has, generally speaking, been held sufficient for all practical and necessary purposes. This secondary kind of interest in a question of such vital importance has no doubt been fostered by the popular notion of the locality which invests the Outwood hills—the hills forming the western margin of the valley opposite the town—as the source of the brewing waters of Burton, and assumes that these waters pass down the flanks of the hills into the valley by natural drainage, that they take up the lime in their passage, and are thence distributed by springs over the gravel beds of the area occupied by the wells of the town. So strong a root has this opinion obtained, that it has led to the conviction that a series of wells or reservoirs sunk through the valley gravels to the underlying marls, in a line parallel to, and immediately beneath, these hills, would effectually intercept the principal stratum of water, and thereby render the owner thereof the dictator, so to speak, of the brewing trade of Burton. I may, however, add that, although there is no doubt the substrata of the Outwood hills contribute a certain, and it may be a large

proportion of the Burton waters, the channels of communication between the lime-bearing beds and the valley gravels are by no means of so superficial a nature as is supposed; and consequently the probability of the interception of any large or important body of the waters by which the town is supplied, by the process described, is exceedingly remote.

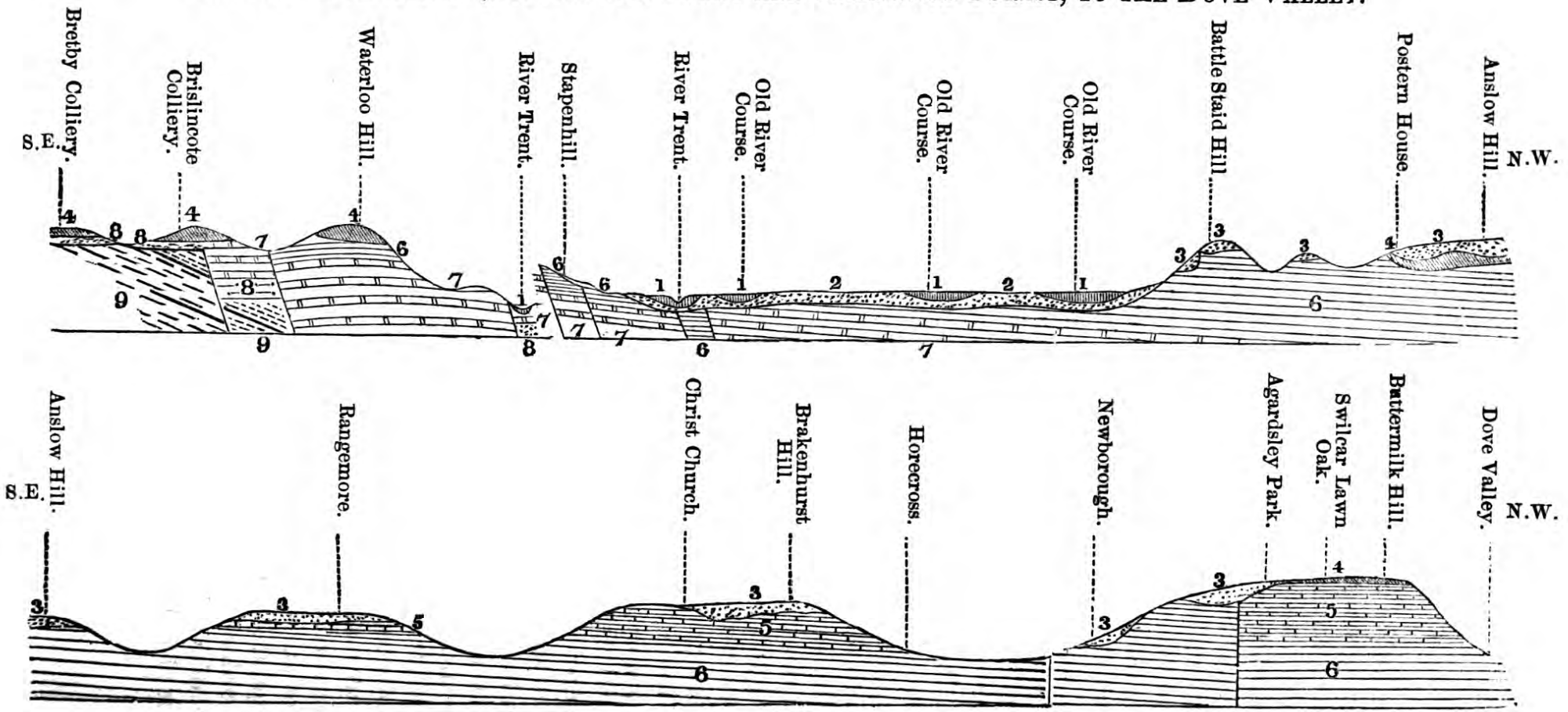
All the old wells of Burton are sunk in ordinary valley gravels, in a line running north and south, and principally on the east side of High Street. Until the year 1856 none of these wells exceeded twenty feet in depth; and except at one point in Anderstaff Lane, neither the thickness of the gravels, nor the nature of the strata upon which they rested, had been determined by actual experiment. In that year, however, by the assistance of powerful pumping machinery a well was carried to a depth of twenty-four feet on the premises of Messrs. Ind, Coope, and Co., in Station Street; and since that time it has become customary to deepen the old and carry all new wells connected with the breweries completely through the gravels to the underlying Keuper beds. In addition to the supplies of the ordinary wells, attempts have been made to obtain water by artesian borings into the different deposits upon which the gravels rest. In 1863 Messrs. Bass and Co. sunk a well through the gravels (twenty-six feet) into Keuper marls, in their New Brewery premises, Station Street, and by borings carried through gypseous marls (seventy feet) obtained a fine supply of water from a bed of loose sand and gravel. Ninety yards north of this point in their Middle Brewery yard, the gravels were twenty-six feet thick; and borings, carried down through 194 feet of gypseous marls with bands of hard sandstone, failed to produce more than a gallon of water during the hour. In the years 1860-1 Messrs. Allsopp and Sons sunk a large well on their premises, near the Station, through the gravels (twenty-eight feet), and bored 102 feet into the underlying marls without tapping, in the latter deposits, any serviceable supply of water. During the years 1867-8 both Messrs. Allsopp and Sons, and Messrs. Salt and Co. have executed a series of borings on their different premises in High Street, Horninglow Street, and Anderstaff Lane, the results of which are remarkably interesting, and of great

value as the means of opening up a more correct knowledge of the geological structure of the valley subjacent to the town than had been previously obtainable. From these borings, the details of which I have much pleasure in acknowledging, were unreservedly placed at my service by Messrs. Allsopp and Sons, and Messrs. Salt and Co., I have been enabled to prepare the previous and following sections of the valley strata as they appear to me to exist in the line occupied by the original breweries of Burton.

One of these sections, which I have already given at page 181, represents the river deposits upon the flanks of the valley at Stapenhill and Stretton, and between these the position and the character of the rocks which underlie the valley gravels in a line north from the White Horse Inn, near the top of High Street, to the bottom of Anderstaff Lane. At page 202 I introduce two other sections, the one commencing with the Coal-measures at Bretby and running west to the Trent below the Recreation Ground; the other which begins at Stapenhill, and crosses the Trent south of the Leicester branch of the Midland Railway, is continued across the valley, over the Lawns and Postern House hills to Rangemoor, Christ Church, and Needwood Forest; showing the position of the drift clays, sands and gravels of these districts, also the Rhœtic deposits, of which I have given full particulars, and terminates in the Dove valley beneath Buttermilk Hill. On the plan of the town I give, on a more enlarged scale, a diagram of the gravel beds and their underlying rocks between the Recreation Ground, on the east, and the Outwood hills, on the west side of the river, and thus completing as far as practicable the series necessary to the elucidation of the stratagraphical conditions of the district under consideration; and also in a greater or less degree the basis of the system, so to speak, by which the calcareous waters of Burton are distributed for use.

The rocks described in these sections consist of Rhœtic deposits, Keuper marls and sandstones, Bunter conglomerates, and Coal-measures, which occur geologically in the order in which they are placed. The marls lying in the line of section on Needwood Forest attain a thickness of quite 1500 feet; but in the neighbourhood of Burton, tak-

Section from Bretby, across the Trent and Needwood Forest, to the Dove Valley.



1, Old river, or alluvial deposits; 2, Valley gravels and sands; 3, Drift sands and gravels; 4, Boulder clays; 5, Rhætic beds; 6, Keuper marls; 7, Keuper sandstones; 8, Bunter conglomerates; 9, Coal-measures.

ing the substrata of the Outwood hills as the maximum, they are about 1000 feet. The sandstones do not I think exceed 250 feet, and the underlying conglomerates 300 feet. The New-red sandstone groups, therefore, hereabouts, represent in the aggregate about 1550 feet of rocks; that is, if it were decided to sink a shaft on the Outwood hills, it would have to be carried down vertically to that depth before it reached Coal-measures. If, on the other hand, Bearwood hill was chosen for operations of the kind, Coal-measures would be struck at about 600 feet from the surface; and if the lower part of the Hay meadow was selected, Carboniferous strata would be reached at 450 feet. These differences in the geological horizon of rocks which appear at the surface or immediately beneath the valley gravels over this limited area are due to faults, or vertical displacements by which their original continuity has been checked and their condition in consequence entirely changed. These faults run north and south, east and west, and so far as I can determine the one group intersects the other in the line of the lower half of the High Street. The north and south faults I have shown as consisting of a series of downthrows to the west, by which the Coal-measures of the Ashby field are in turn covered up by the Bunter conglomerates, the Keuper sandstones and marls. The latter beds introduced by a fault which may be seen in Mr. Radford's brickyard, at Stapenhill, have been cut down in the deundation of the Trent valley to the amount of downthrow, but the fault is succeeded by one parallel to it, which I take it runs down the centre of the Andersley and Broadholme meadows, and throws down the Keuper marls to the west to a depth of nearly 400 feet. This important fact has recently been established by the borings at the White Horse Inn, by Messrs. Salt and Co., to which I have previously alluded, and by which the Keuper sandstones which crop out at the base of the valley gravels on the east side of the valley are here covered by 386 feet of Keuper marls. At Messrs. Allsopp and Sons' brewery, in High Street, the Keuper marls have again disappeared, and their place, introduced by a fault running east and west across the valley, is occupied by the basement beds of the Keuper sandstones 143 feet in thickness, and beneath

which come the Bunter conglomerates, proved to a thickness of 147 feet. At Messrs. Salt & Co's. brewery, a distance of about fifty yards north from the latter section, the Keuper sandstones have increased to 190 feet in thickness, and overlie Bunters which have been proved to a thickness of 29 feet. Between this point and Messrs. Salt & Co's. premises in Anderstaff Lane, a second and parallel fault has re-introduced the Keuper marls, and they there attain a thickness of seventy feet; being succeeded by a proved mass, 87 feet thick, of Keuper sandstones. If, therefore, we take the geological horizon of the beds forming the substrata of the valley at the White Horse Inn, and compare it with that exhibited by the borings at Messrs. Allsopp & Sons' brewery, there is a difference of 500 feet; and continuing the comparison to the beds opened up at the bottom of Anderstaff Lane, we find that the stratagraphical conditions of the White Horse Inn section are with no important exception repeated. Between these two extreme points therefore, taking the marls at 1000 feet and the denuded sandstones at 100 feet, there has been a vertical upheaval of a wall of rocks, 1100 feet in height, and which enormous mass in common with other strata, has been carried away in the excavation of the Trent valley at a period subsequent in date to that of the process by which its vertical displacement was effected.

In the absence of a thorough system of exploration* of the substrata of the Trent valley hereabouts, it is impossible to lay down correctly either the exact lines or the amount of these vertical movements beyond the points indicated, but, individually, I believe them to extend, not only across the

* Considering the serious importance to the town of Burton of all questions affecting the resources of its water supply, it appears to me that a vast amount of permanent and commonly valuable information would result from the undertaking, upon a well-arranged scientific plan of a series of geological explorations of the gravels and underlying strata, and the determination of their chemical contents over the area occupied by the town. By this means not only would the lines of derivation and the limit of the more characteristic qualities of water be ascertained, but some sound data upon which to calculate how long and to what extent the brewing waters would be likely to bear the present enormous, and unquestionably injudicious, strain to which they are subjected.

valley but many miles in a westerly direction, and that it is by these faults, and doubtless many other gravel-hidden seams or fisures in the crust of the earth below, of which no distinct evidence has hitherto been found, that the brewing waters of Burton, collected from an enlarged gypseous watershed, pass along lines of natural drainage in a north-easterly direction, that, on reaching the line of the great fault which runs north and south down the east side of the Trent valley opposite the town, their further progress is completely checked by the fault, and, consequently, they are by their own gravity forced upwards along each line of fault, in a series of springs, remarkable in point of number and volume, amcngst the gravels of the valley, and thence, by assimilating with the ordinary water by which the Trent valley is charged, are distributed in one broad stratum beneath the town, and laden with those calcareous properties which form the material ingredient in the production of its commercial commodity.

The waters used in connection with the breweries of Burton consist of no less than seven different kinds, each of which, with one exception, is derived from different distinct deposits of local occurrence, viz., Bunter conglomerates, Keuper sandstones and marls, the valley-gravels, and from two separate deposits by ancient river action. The seventh is the water from the river Trent. Of these, two only—those from the valley gravels and Keuper marls—have hitherto been used for brewing purposes. The recent artesian borings by Messrs. Allsopp and Sons and Messrs. Salt and Co. into the conglomerates and Keuper sandstones, have resulted in the opening up of secondary supplies from those beds, of which, although there exists no complete analysis of their chemical contents, an examination has been made sufficient for the purpose of determining that they are free from organic matter; that they contain a low per-centage of sulphate of lime, and that, although carbonate of lime is present in large quantities, it does not amount to anything like the proportion of sulphate of lime contained in the waters of the valley gravels, or of waters obtained from borings in rocks directly associated with the Keuper marls.* Hitherto these

* From information kindly supplied by Mr. Cartmell.

waters have been applied simply to cooling and other ordinary purposes connected with the breweries, and their value as brewing waters is a point as yet undecided.

These latter Keuper marls are, I think, scarcely entitled to the distinction of water-bearing beds. Except at Messrs. Bass and Co.'s new brewery in Station Street, their old brewery in High Street, and at Mr. Marston's brewery at Horninglow, I do not find them yielding water in any available quantity; and at the former borings I believe the supply to be derived from faults or fissures cut diagonally through the marls, and not from any undisturbed beds of that formation. I think the isolated position of the supply is indicative of this. Neither at the borings at the middle brewery, which were only about ninety yards distant to the N.E., nor at Messrs. Allsopp and Sons, nor Messrs. Salt and Co.'s borings, adjoining those at the old brewery, was the second stratum touched upon, although not more than about 100 yards north of it, and neither has it been struck elsewhere in the valley. The wells at Mr. Marston's brewery, Horninglow, occupy a different position to any other wells, used for brewing purposes in the neighbourhood, being sunk through three feet of terrace gravels into twenty-seven feet of shaley, blue, and gypseous marls, the water of which appeared to come from a basement band of hard, blue, skerry marls, at fifteen feet below the level of the Trent valley gravels in which the old wells of Burton are generally sunk.

The water obtained from the valley-gravel wells are very dissimilar in their chemical constituents—two of any locality, however closely connected, never thoroughly agreeing in their separate quantities of inorganic matter. The following table of the analytical contents of the Burton waters may, I think, be taken as representing both the maximum and minimum, and also the ordinary, amount of sulphate of lime with which they are charged:

The sample No. 1 was obtained from artesian borings beneath seventy feet of Keuper marls; No. 2 from a well sunk in thirty feet of valley-gravels, on the east side of High Street; and No. 3 from a private well on the west side of High Street, but in the line of the old breweries,

ANALYTICAL CONTENTS

OF SAMPLES OF WATER OBTAINED FROM ARTESIAN BORINGS, AND FROM WELLS SUNK IN VALLEY GRAVELS, BURTON-ON-TRENT.

	No. 1.	No. 2.	No. 3.
	ARTESIAN BORINGS.	VALLEY GRAVELS.	VALLEY GRAVELS.
	Grains in an Imperial Gallon.	Grains in an Imperial Gallon.	Grains in an Imperial Gallon.
Suphate of Lime	70·994	25·480	7·050
Carbonate of Lime	9·046	18·060	15·526
Carbonate of Magnesia	5·880	9·100	2·128
Sulphate of Magnesia	12·600		
Sulphate of Soda	13·300	7·630	3·689
Chloride of Sodium	9·170	10·010	6·636
Chloride of Potassium	966	2·275	13·447
Chloride of Magnesium			7·350
Carbonate of Protoxide of Iron	1·218	900	Trace.
Carbonate of Manganese			Trace.
Nitric Acid (as Lime Salt)			Trace.
Silica	1·120	840	1·904
Total solid residue	124·294	74·295	57·730

and in about twenty feet of gravel.* Two things are specially noticeable in the result of these analyses, viz., the remarkable difference in the total amount of inorganic substances contained in the three samples of water, and the striking preponderance of sulphate of lime present in the waters from artesian borings, as compared with that mineral contained in waters from the valley-gravels. In the first place, as already explained, with the exception of the wells in Keuper marls at Horninglow, none of the borings or sinkings in the marls of the valley show them to be, strictly speaking, water-bearing strata. They are mostly dry, and springs have only been tapped in underlying deposits of sand or shingle, and each at different levels in the deposits penetrated; consequently we must not assume for the marls, subjacent to the town, any particular credit as contributing either to the chemical properties of its waters, or as being, to any appreciable extent, the store-house of the supply. We must look for the source of the calcareous ingredient rather in that vast tract of Keuper marls lying west of the valley, and which, stretching over the old area of Needwood forest, contains, in a greater or less degree of development, those curious gypseous aggregations of which the quarries at Fauld, and an enlarged district surrounding it, afford such interesting examples, and which, in order to meet the demand upon them, must be, comparatively speaking, of almost inexhaustible extent and resource. Herr Griess, F.R.S., kindly informs me that, in any calculations I wish to make, I may take the average amount of gypsum derived from the water used in brewing 1000 barrels of ale at 250 pounds weight. Assuming, therefore, by way of illustration, that Burton produces annually 1,400,000 barrels of ale, no less than 350,000 pounds of this mineral are raised from the valley-gravels, assist in the manufacture of that quantity of ale or bitter beer, and are, with those beverages, imbibed at different points in the four quarters of the earth. If for every barrel of ale we allow two barrels for washing and cooling purposes, the total weight of

* The analysis of this sample of water was made by Mr. Horace Brown, to whom I am pleased to acknowledge my obligation in this and other instances where his scientific assistance has been sought.

gypsum contained in the 4,200,000 barrels of water thus disposed of amounts to 1,050,000 pounds. Enormous, however, as, under the circumstances, these figures show the consumption to be, they do not represent one-tenth of the actual amount of gypsum that is annually derived from the parent beds, and passed seawards beneath the town in a state of solution; and when it is considered that this process, this work of distribution has been in operation century upon century, age upon age, back, it may be, to remote geological epochs, and that, except by the aid of chemistry, which reckons by grains, we have but little evidence of its action,* we cannot, I think, fail to be struck with the magnitude of the deposits from which the sulphate of lime is obtained, and the remarkably persistent and wonderful character of the operation by which it is distributed among the gravels of the valley.

The borings executed in Keuper sandstones by Messrs. Salt and Co., at the "White Horse" Inn, tapped a supply of water which rose, in a pipe attached to the bore, twenty-three feet above the level of the valley; consequently this gives a considerable elevation to the source of these waters,

* In the neighbourhood of Bentilee, near Abbots Bromley, and other parts on Needwood Forest, some curious well-shaped subsidences in the surface of the earth are said to have occurred suddenly at different periods within the last fifty years, much to the alarm of those living near; and not many months ago a similar depression was noticed at Rangemoor. Mr. E. Brown, F.G.S., has suggested that these sinkings are due to the fracture of gypsum beds, which, corroded for ages by under-ground currents, become at length no longer able to sustain the weight of the superimposed strata. I think there is little doubt of the correctness of this description; and that in fact it illustrates the history as this, the only superficial evidence, exposes the condition of the process by which the sulphate of lime is dissolved and passed from the interior of the earth into the valley. The exposed blocks of gypsum in the well-known quarries at Fauld, as any one curious in the matter may see, contain interesting examples of the remarkably varied effect of the action upon them of water charged with carbonic acid gas; and there is little question, I think, that the process, illustrated on a small scale at this place, represents what, considering the enormous amount of gypsum contained in the Burton brewing waters, must be the case– the enlarged character of the aqueous excavations of deeply-buried masses of that mineral, and which will unquestionably effect in the course of time a striking difference in the surface configuration of the locality in which they occur.

and moreover, I think, shews that the channels of communication are of an extended and tolerably free character. In borings, however, carried down in Keuper marls in Horninglow Street, and elsewhere, the waters, (which I take it lay in lines of faults in those deposits) in no instance rose above, but reached and remained stationary at a level of from two to five feet below the present level of the valley; and it was probably by a spring of this description that the famous old well of St. Modwen was fed. Whether or not the assumed efficacy of its waters in cases of king's evil and other skin diseases was due to the large percentage of sulphate of lime which was by this means brought direct to the well, is a question upon which I can form no opinion. The exact site of this well is now unknown, but in the time of the Abbots it maintained its traditional reputation, and even so late as the time of PLOT appears to have been, according to that author, "a well which the people still adorn at certain times of the year with green boughs and flowers, in grateful memory of the good its waters have formerly done."

The three remaining kinds of water used in Burton are from the two deposits by old river action, and the water from the Trent. Of the latter little need be said except that, although conveyed in pipes for cooling and washing purposes to most of the large breweries on the east side of High Street, it is never, as obtained direct from the river, used in brewing. There is, however, so complete and free a means of communication between the channels of the Trent and the gravels of the valley that it would be a very difficult point to determine where, over the upper portion of the Trent valley water-stratum, the river water proper first ceases to be actually present. In times of flood, and, in fact, at all other times, the water-line of the Trent regulates that of its marginal portions of the valley, and as most of the tenants of houses having cellars in Burton well know it does not require a rise of more than six feet above its ordinary level to inundate their buildings in a most unwholesome and inconvenient manner. These inundations are, however, effected, not by surface overflow, but by subterranean uprisings—by the water passing upwards and outwards from the increasing margin of the flooded river-channels through

the associated gravels—a circumstance particularly noticeable in the case of the great flood of 1852, when, not only the whole of Burton, with the exception of the higher portions of High Street, was inundated, but the wells of the town were considerably affected in the introduction, by its means, of superficial contamination. It may not be out of place to introduce here the particulars recorded by SHAW of the great flood of 1794, and which several persons, now living, well remember. He says:—"December, 1794—A severe frost set in accompanied, at various times, by large quantities of snow, which continued till the 9th February, 1795, when, owing to the sudden thaw on this and the succeeding day, the river Trent rose higher than was ever before known by the oldest person in the parish. About twelve o'clock this evening (the water being at the highest) every part of the town, except the church, the north-side of the churchyard, and the market place, was entirely overflowed, the water then standing nine or ten inches in most of the houses; and even at nine o'clock the next morning, when the water was falling, a boat was rowed, from the house of Mr. Hawkins, up the High Street into Cat Street: more or less damage was sustained by every inhabitant. The brewhouses, malt-offices, and other manufactories, the warf and raff-yards suffered considerably, and charcoal, to the amount of several hundred pounds, was carried away from Mr. Lloyd's forge, a little below the bridge.* No mail or waggon was capable of passing in or out of the town for two days. Many parts of the bridge were considerably damaged, and on Friday afternoon, the 13th, the third arch at the west end of it fell in, which was rebuilt, in the course of the following summer by Mr. John Stanley, of Duffield, co. Derby, at the expense of about £200."†

* Mrs. Burton and her sister, Miss Wilson, aged respectively 91 and 90, daughters of Mr. Joseph Wilson, were then living with their father at the Winshill Mills, and well remember this circumstance. They tell me that Mr. Lloyd only recovered large quantities of the charcoal by giving 4d. per bushel to men who collected and brought it from the river and meadows below.

†To complete the account, I give SHAW'S further notes:—"June and July, 1795—Many uncommonly cold days in these two months, so that fires and warm cloathing were used as in winter. July and

The level of the Trent is not more than from eighteen inches to two feet below its banks, and the ordinary water-line of the valley from four to six feet below the surface, but, in the immediate locality of, or rather within, the town and especially adjoining the breweries, this level varies considerably. Now, although the Trent valley waters possess naturally a tolerably uniform level, there is a great and important difference in the character of the chemical contents of one area as compared with that of another. The area described on the plan of the town as that of old river action indicates the lines of occurrence of water charged, more or less, with carbonate of iron, and containing organic substances which have been derived from the vast amount of vegetable matter deposited there by its agency; and yet, so strictly local and fixed are the areas of these organic deposits, that a few feet without or within the lines of demarcation between them and the valley gravels determines the freedom, or otherwise, from the subjacent waters of these objectionable substances. The waters, however, charged with the ferruginous mineral, are confined, except in some instances where the old river channels have been cut down completely through the valley gravels to the underlying Keuper beds, to a level of about twenty feet below the surface, or to an horizon corresponding with that of the base of the waters of the river Trent in its present channel. Below this level, and over the area of the beds described in the section as valley gravels, are spread, in one broad stratum between the Outwood hills and those on the east side of the valley, and as certainly beneath the western branches of the Trent as beneath the town, but varying in the amount of their chemical ingredients according to their situation in respect to the lines of fault and other local conditions, those remarkable supplies of water to which

August—Wheat uncommonly scarce, and sold at the astonishing price of 24s. per strike, The remainder of the summer and autumn very fine, so as to get in a plentiful harvest well, but still everything continued dear, and in February, 1796, corn was full as high as last year, but it fell again very much in April. In the autumn of 1795 the drought continued so long as to make this year still more remarkable, by exhibiting the river Trent at the highest and lowest water ever remembered."

tradition at least assigns the ecclesiastical origin, and from which modern science determines the commercial importance and the flourishing condition of the town of Burton-on-Trent.

BURTON-ON-TRENT.

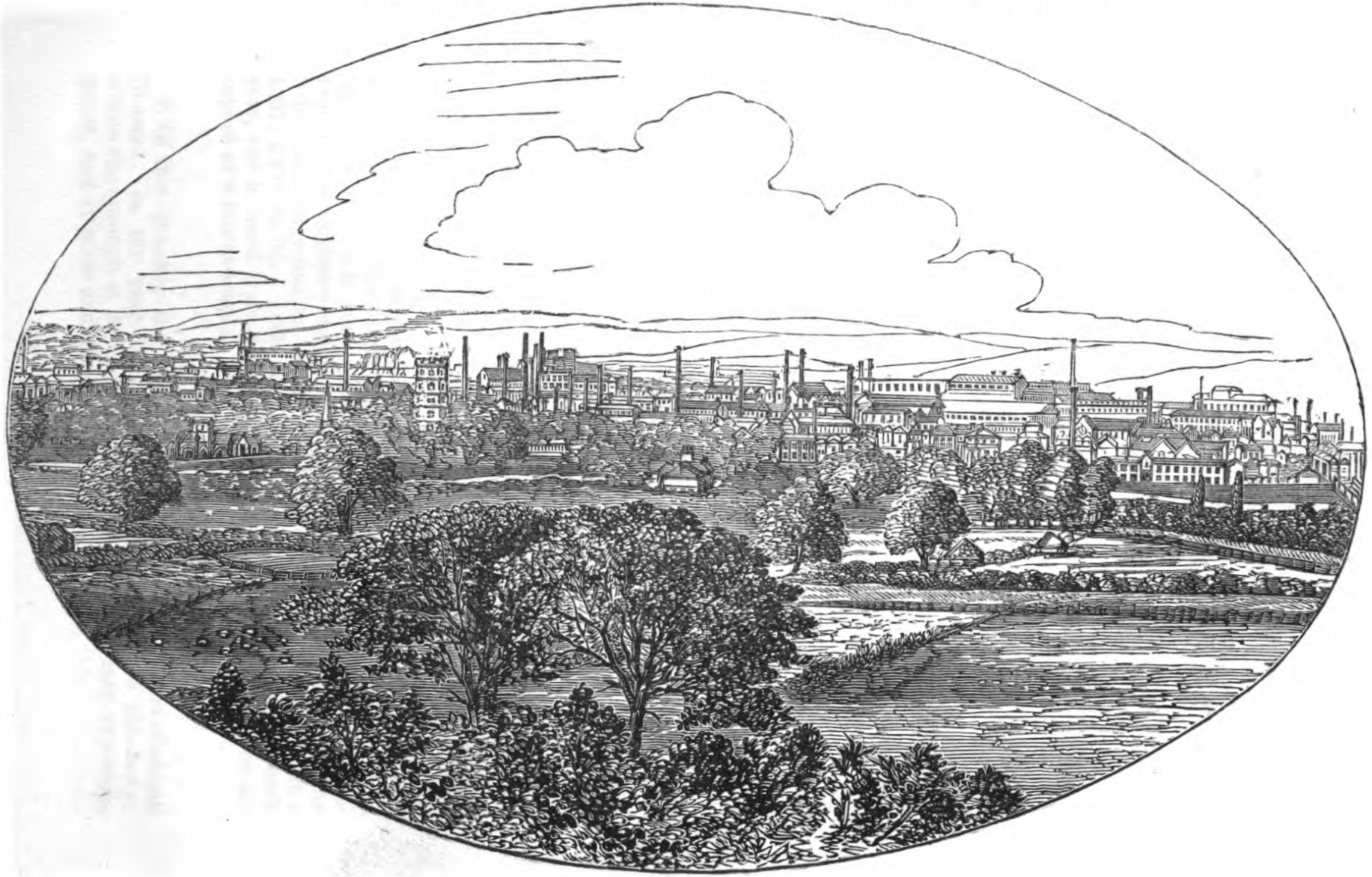
ITS BREWERIES.

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The town of Burton-on-Trent stands on the west bank of the river Trent in the North-east part of the Hundred of Offlow and the Eastern Division of the County of Stafford. Its geographical position is 52° 53′ North latitude, and 1° 35′ West longitude, and is distant East from Stafford twenty-five miles; North-east from Lichfield twelve miles; South-west from Derby eleven miles; and about one hundred and twenty-six miles North-west from London. In the Ecclesiastical Division of the County it is included in the Deanery of Tamworth, and is a parish of 9,625 acres 3 roods and 31¾ perches, divided into the hamlets and townships of Burton-on-Trent, Burton Extra, Branston, Horninglow, and Stretton in the County of Stafford, and Stapenhill and Winshill in the County of Derby. The Marquess of Anglesey is lord of the Manor, owner of 7,700 acres,* and im-

* In addition to land in the parish of Burton-upon-Trent his Lordship is owner of 1 acre 2 roods and 8 perches in the parish of Repton; 16 acres 3 roods and 26 perches in the township of Stanton; and 6 acres 1 rood and 8 perches in the parish of Rolleston.

NORTH-EAST VIEW OF BURTON-ON-TRENT FROM THE ASHBY ROAD. 1869.



propriator of the tithes.* In the year 1853 the "Burton-on-Trent Act, 1853," was obtained, by which the town was divided into three wards:—Burton-on-Trent, containing 563 acres; Burton Extra, 671 acres; and Horninglow, 276 acres, making a total of 1510 acres.† The town thus defined, and which is governed by Commissioners appointed under the Act of 1853, contains 4,062 houses, twenty-five different breweries, belonging to that number of brewers and brewing firms, in addition to cooperages and other buildings connected with the brewing trade; and various other erections devoted to general trade purposes, the annual value of which, under the assessment just completed, is £85,000. It contains sixty-four streets, sixteen miles and two furlongs of sewers, and several miles of railway connecting the different breweries with the main lines of the Midland, the London and North-Western, and the North Staffordshire Railways. The principal street is the High Street, 913 yards in length, and this, with a short length of Horninglow Street, and shorter lengths of Cat, now Station Street, New Street, and Anderstaff Lane, with Half Street, Lichfield Street, Abbey Street, Fleet Street, and Love Lane comprising Bond End, represented the town or borough of Burton during the extended period of 400 years. Originally, however, it could not boast even these: it consisted, in addition to its Abbey and bridge, of but one street, its High or, as it means, *Old* Street; but, in the year 1200, Horninglow Street was built and conceded to the burgesses

* There is a common and somewhat harsh impression in the town that the tithes of the parish increase his Lordship's rent-roll by some thousands of pounds per annum. That there is no foundation whatever for the inference will be evident from the actual amount of the tithe rent charge during the last 3 years, viz., 1866, £102 14s. 7½d.; 1867, £101 5s. 5d.; 1868, £102 11s. 11d. The amount varies each year, and is based upon the price of grain, but the above may be accepted as a fair average.

† Of this quantity the Feoffees of Burton are now owners of about 70 acres. In the year 1615, the property belonging to this body, within the borough of Burton-on-Trent, consisted of twenty-two tenements, and 10 acres and 20 perches of land.

by the Abbot Melburne;* in 1286 Cat Street,† in commemoration of a great famine, was added to the town by the Abbot Packington; and, in the year 1429, New Street and the upper part of the town was paved by the Abbot Matthew. Between this latter date, however, and the year 1840 there does not appear to have been any enlargement of the town, or a new street made, and whatever building operations were executed were confined to the premises connected with the Abbey, and to the restoration or improvement of buildings within the town which had fallen into decay, or, by the results of fire, war, or other violent means, had been destroyed or become untenable. The first efforts made in extending the town were the widening and making of Cat, now Station Street in 1839-40, which, previously, was merely a narrow cart road leading to Derby Lane. This was followed by the construction, in 1850, of Guild Street—so named from the old Guildables lane and ditch which ran in about the same line through open fields—and, shortly afterwards, of Union, Orchard, and other Streets, and by the gradual covering of the lands adjoining these streets with dwelling-houses and other buildings. The opening of the Midland Railway from Hampton-in-Arden to Derby, August 12, 1839, was the first great step in the permanent advance of the town beyond its old traditional boundaries; and, from that time until the present, this advance has been not only constant but, of late years, has gone on at an extraordinary rate.

The sanitary condition of the town up to the year 1779, was of the most unsatisfactory description. The famous High Street consisted of two sloping banks, between which

* The building here meant referred to tenements erected at the side of the street. The street itself, or roadway, was, I believe, a continuation of the Roman Road from Burton to Needwood Forest, described at page 15.

† Burton communicated with the Icknield Street either in the line of Cat Street or of Moor Street before the time of the Abbot Packington, inasmuch as there were dwelling houses erected at Shobnall long before the date in question. Probably the Abbot built a bridge across the branch of the Trent which then ran in the line of Mosley Street, and had, previously, to be forded.

ran an open ditch or sewer, which was the only course for the outfall of the sewage of the town and the breweries on each side the street; and across this ditch stepping stones were placed at intervals to facilitate the means of communication. It had neither a paved footway nor was there a public lamp in the town. In the year named, the Act to which I referred at page 116 was obtained, and steps were at once taken to effect the necessary improvements. A culvert was substituted for the open sewer, from its outfall into the Trent, near the bridge, to the centre of High Street; the road-way was raised, and with two footpaths "pitched" with large stones or boulders; and public lamps were erected.* The work, however, was most imperfectly done, the sewer was utterly useless to the inhabitants of the upper part of High Street and Bond End, and from the dead level at which it was laid near its terminus, allowed the collection of a large amount of filth, which gave serious cause for alarm in respect to its periodical effects upon the public health. In 1833, another effort was made to improve the street, and the boulders of the footways were replaced by flags. In 1843-4, the "pitched" stones of the roadway were also taken up, and replaced by macadamized and less objectionable material; and a proper culvert, with connecting sewers from New Street, Station Street, and Horninglow Street, was carried through the entire length of High Street and Lichfield Street to the Bond End Canal, with the overflow of which it was regularly and effectually flushed. These works, were planned and executed principally under the direction of Mr. William Coxon, the late clerk† to the Commissioners, at a considerable outlay, towards which £400 was contributed by the Feoffees of Burton, who also advanced, under a mortgage of the town rates, the further sum of £300 at three per cent. interest. The completion of these works provided the town with a

* Until the year 1853-4, the Feoffees of Burton gave annually £70 "towards defraying the expenses of the lamp posts in the public streets and also of the large lamp in the Market Place." The cost of lighting the town one year (1847) was £175 5s. 6d. The estimated cost for the year 1869, is about £1,200.

† The present clerk to the Commissioners is Mr. T. N. Whitehead, appointed in 1866.

system of sewerage 3,282 yards in length; and with the system thus laid down were successively connected such sewers as the enlargement of the town rendered necessary, until the year 1865, when in order to obtain a better outfall, and to guard against the contamination of the waters of the town by the infilteration of escaped sewage, a system of sewerage was planned and gradually carried out by the Commissioners, under the direction of their surveyor, Mr. E. Clavey, by which the old culverts were replaced by others laid in mortar, at a considerably lower level, and connected with the main sewer and sewage tanks at Stretton. The cost of executing these works has been considerable, and where applied to streets previously declared highways, and therefore belonging to the town, borne by the ratepayers; but in all new streets, and in streets which, although provided with sewers on the old system had not been declared highways, the cost has been borne solely by the Marquess of Anglesey, and, with that of reforming and making the streets since 1865 under this head, amounts to over £13,500. At the present time, therefore, there is not one of the sixty-four streets within the limits of the Town Act which is not well made and provided with an efficient system of sewerage, and although the sums expended in completing these works have been enormous, and no doubt in many instances much higher than the circumstances required, the ratepayers may congratulate themselves on the fact that the works have been executed in a manner which will relieve them, at least from any similar responsibility, during the next twenty years.

The history of the brewing trade of Burton is confined to a comparatively recent period; but the history of the brewing of ale within the town is unquestionably coeval with the Abbey, it being a beverage in much repute amongst the Saxons, and the office of cellarer one of the most ancient and important in connection with the monastic institutions of both Saxon and Norman times. The readers of *Ivanhoe* will doubtless remember a passage in that work in which its author carries back the fame of the Burton ale to a date anterior to the time of Richard I, and, although there is no doubt Scott in his description took a poetical license in associating these ales with the personages of his work—as he

did in naming the abbey the convent of St. Withold, and its Abbott, Waltheoff—the introduction of the passage may be taken as a high compliment to the town, to the full merit of which he doubtless felt it to be entitled, although the inference can scarcely be taken as of historical value. Shakespeare, whose keen eye and keener memory nothing escaped, while recording his familiarity with a localism which, but for the notice of it in his works we should not know to be of so ancient an age—"*Burton here*,"* makes no mention, so far as I am aware, of the Burton ale. The earliest historical reference to these ales, with which I am acquainted, is given at page 37, in which it will be seen that conventual beer was then, A.D. 1295, a common article of consumption amongst the dependents of the abbey, and there is no doubt that enormous quantities of it were both then and subsequently used in maintaining the hospitable character of the Abbots, which, next to their religious duties, they were most careful to preserve. These ales were, however, brewed on the abbey premises, and, in all probability, the Abbots had their own maltings, inasmuch as I find it to have been a common covenant in leases of the mills, belonging to the Abbey property, for the malt of the lords of the manor, both spiritual and temporal, to be ground free. However this may be there is, I think, little doubt that the trade of malting was largely carried on in the town even in these early days, but that, on the dissolution of the Abbey, it suffered considerably, although not to so large and ruinous an extent as that of its alabaster works. Large maltings were in existence in the Market Place and other parts of the town shortly after the acquisition of the manor by Sir William Paget, and these, doubtless, were old buildings erected under leases from the Abbots. There is, however, I think no question that the trade of the town suffered severely by the withdrawal of its ancient monastic patronage. It had, however, recovered to a certain extent, before the end of Elizabeth's reign, and in that of her successor, James I, it had, unquestionably, regained an important

* The passage occurs in the first part of Henry IV, act 3, scene 1.

"*Hotspur*: Methinks my moiety, north from Burton here,
In quantity equals not one of yours."

and prosperous condition. The outbreak of the civil war, however, resulted in a second complete prostration, both of its maltings and manufacture of woollens, as already shown at page 70-1, and, although at the time of *Plot's* visit in 1680-1 it had recovered most of its old malting enterprise, it is questionable if the demand for its famous "kersies" was ever afterwards of equal extent and importance.*

It has been said that information of the progress of Babington's conspiracy was regularly conveyed to Mary, Queen of Scots, during her confinement in Tutbury castle, by a Burton brewer, who supplied the castle with ale. Whether this be so or not is a doubtful point, but it is perfectly clear that a local trade in brewing had already been established, and with some respectability. In a series of letters written by Secretary Walshingham to Sir Ralph Sadler, governor of Tutbury castle, in 1584, I find it recorded, in reply to a question as to "what place neere Tutbury beere may be provyded for her Majesties' use," that "beere" may be had "at Burton three myles off; and if Mr. Henry Cavendish's brewhouse in Tutbury may be borrowed, sufficient quantity of beere may be brewed there, and so the countrey much eased in caryage."†

The earliest allusions by a contemporary author to the brewing and management of ale in this county are contained in *Plot's Natural History.* His remarks are both curious and interesting, as evidence of the different kind of popular "drinks" made from malt in his day. Although no distinct statement to the effect is made by him in the following quotation, it is, I think, evident that he refers to the ale brewed at Burton-on-Trent, inasmuch as the "potable" condition of the ale assumed by him to be rapidly acquired by a low form of adulteration, is, in reality, one of the peculiar characteristics of the Burton ale, and attributable exclusively

* After the civil war the woollen or clothing trade of the country would appear to have become less central in its operation. PLOT says "Besides wool for the supply of the *cloathing* trade and *felting*, which is chiefly exercised about Tamworth, Burton-on-Trent, and Newcastle-under-Lyme, they sow hemp and flax all over the county in small proportion, whereby they are furnished with linnens."

† Malt was, at this time, 10s. and wheat 20s. a quarter.

to the chemical or natural properties possessed by the water of which the ale was then, as now, made. "Before," he says in his quaint manner, "we leave the arts belonging to *water* we must also remember they have an *art* in this county of making good *ale*, which being a liquid and nothing else but boyled water, impregnated with mault, must be referred thither. In the management of which they have a knack of fineing it in three days to that degree that it shall not only be potable, but as clear and palatable as one would desire any drinke of this kind to be; which, though they are unwilling to own it, I guess they doe by putting alum or vinegar into it whilst it is working, which, as Dr. Wilkes asserts, will both stop the fermentation and precipitate the *lee*, so as to render it potable as when it has stood a competent time to ripen." He, furthermore, makes us acquainted with a custom then pursued in this county which may be of some interest, though possibly of no great service, to the brewers of the present day. He says, "About Shenston they frequently used *Erica vulgaris* heath, or ling, instead of *Hopps*, to preserve their beer, which gave it no ill tast; and that they sometimes here make mault of *oats*, which, mixed with that ot barley, is called dredg mault; of which they make an excellent fresh, quick sort of drink." He also alludes to the use of "French barley, *i. e.*, a plant between wheat and barley, which runs to mault as well as other barley, and makes a good sort of drink." And he adds, "At some places they still thrash their corn after the ancient manner, *sub dio.* as I saw them upon the pavement in the open streets at Burton-on-Trent."

As all readers of SHAW's history of the county well know that author gives, in the following passage, the credit of having originated the brewing trade of Burton to one Benjamin Printon,* whose autograph is hereto annexed.—"The



* The above is a *fac similie* of the autograph of Benjamin Printon.

first origin of this business here was about ninety years ago, and simply commenced with a few publichouses; and one Benjamin Printon was the first who began in a small way (by employing three men) anything like the business of a common brewer," and he adds "hence has it gradually risen to the flourishing state we now see it in; there being at present nine different houses employed in this extensive trade." If, therefore, we follow SHAW'S figures we must assume that the Burton ale trade commenced about the year 1708, or twenty-eight years after the time of PLOT'S visit to the town. I take it however, that SHAW'S statement must be held as referring to the opening of a foreign or export rather than a home trade, inasmuch as there is no question that the innkeepers of the town had brewed their own beer from time immemorial; and, as I have already shewn, there is direct historical evidence in the fact of Burton ale being recommended for the use of Mary Queen of Scots, at Tutbury Castle, to establish the existence of a local trade at least

which, as I have already stated at page 99, is contained in the Burton Vestry Book. I am the more anxious to identify the name of Printon with the history of the brewing trade of Burton, as it has been held in *Burton and its Bitter Beer* (p. 71,) that he was at no time an inhabitant of the town, or connected with its trade; and that, consequently, Shaw's description of him as a Burton brewer is incorrect. The name is certainly an unusual one in the Burton records, and, except in the place and manner described above, it has not come under my notice. I think, moreover, that the association of Printon with the export trade is corroborated by evidence attending its establishment. The Trent Navigation Act was passed in 1698, and the time that would naturally elapse between this date, and the completion of the navigation to Gainsborough, in carrying out the provisions of the Act, would bring us some two or three years at least into the eighteenth century. In 1719 Benjamin Printon was nominated overseer, and, subsequently, churchwarden of Burton, and, I think, the mere fact of his nomination to parochial offices of this description indicates the attainment by him, at this date, of a respectable, and probably influential, position in the town, which, considering the circumstance of his being a stranger or "foreigner," and, therefore, somewhat jealously regarded by the old burgesses, would necessarily be a work of time to effect. In any case the exportation of Burton ale would, unquestionably, be a matter of considerable importance to the inhabitants of the town, and the circumstances attending its origin regarded by them as noteworthy historical facts at the time SHAW was in Burton collecting materials for his history.

two hundred years before the time named by SHAW. It, moreover, had become well known in London long before Printon's time, as explained in the foot-note below.*

Whatever may have been the extent or character of the Burton ale trade before Benjamin Printon became a common brewer, there is no question that the opening up of the Trent navigation, by the Act of 1698, was the first direct means of its introduction, upon any large scale, beyond its old local area. What had been done previously was dependant upon a slow and cumbrous system of land transport, and over roads which had become proverbial for deep ruts and miry obstructions, and the few barrels of ale that occasionally reached London would, no doubt, be after a week's adventure, and at a cost which would render it a dear, although evidently highly reputed, article. The connection of Burton with the sea, while it afforded a more expeditious means of transit to the Burton ale, added, at the same time, enormously to the capacity of those means; and, in fact, opened out a road-way to the whole world sufficient for all and every purpose the trade might require.

The Trent navigation connected Gainsborough with Hull, and Hull with the Baltic ports, and the facilities thus offered for the introduction of the Burton ales were promptly taken advantage of, and by the year 1748 a considerable trade had already been established in the Baltic, the principal port for which was St. Petersburg, where the ale obtained a ready sale at high prices. Both Peter the Great and the Empress Catherine are said to have been immoderately fond of this beverage, which was then high coloured and sweet, and of remarkable strength—qualities which appeared specially suited to the Russian temperament. By the year 1760 the trade had arrived at the proportion of a large mercantile responsibility, having gradually extended across Poland and Prussia into Germany, and in 1796 had, according to SHAW, risen to an extensive and flourishing

* About the year 1630 Burton ale was sold at the "Peacock" inn, in Gray's-inn Lane, and had, even then, acquired a high reputation amongst the famous ales of England. Subsequently, according to the *Spectator*, it was in considerable demand amongst the frequenters of the Vauxhall gardens.

trade, giving employment to nine different houses. These "houses," which, however, I do not think included the whole of the common brewers of the day, but simply such as were distinct from innkeepers or retailers of "home-brewed" beer, appear to have brewed partly for exportation, and partly for home consumption—London, by the improvement of the roads and means of conveyance by land and water, becoming a ready and profitable market; and the construction by Brindley of the Trent and Mersey canal,* about 1774-5, had opened an additional channel of communication with Liverpool, Manchester, and Birmingham which secured to the town similar, but at the same time less precarious, opportunities for the extension of a home trade, as the opening of the Trent navigation had conferred in respect to exportation. SHAW says that the names of the nine brewers alluded to above were contained in the country part of the *British Directory* (p. 417), compiled by Mr. W. Cantrell, of Burton.† I have vainly tried, in the British Museum and elsewhere, to obtain access to this book to ascertain who the brewers of this day were. In *Tunnicliff's Survey of Staffordshire*, published in 1789, the brewers in Burton are described as consisting of

Joseph Clay and Son. (Brewery—Messrs. Salt and Co.'s maltings, adjoining the house occupied by Geo. Lowe, Esq., surgeon, Horninglow Street.)

Hill and Sherratt. (Who were also partners in 1750; now Charles Hill and Son's brewery, Burton Extra.)

* The Trent and Mersey canal, constructed under an Act of Parliament obtained in 1765, was originally intended to communicate with the Trent Navigation at Burton, but, by an unfortunate misunderstanding between the two companies, this desirable course was abandoned, and the canal allowed to pass about a mile west of the town, and parallel to the Trent navigation to Wilden ferry. By their Act, however, the Trent and Mersey Canal Company were restricted from taking any water out of the river Trent, or from any brook flowing into the Trent between Burton and Wilden ferry. The Bond End canal was cut to connect the Trent navigation with the Trent and Mersey canal, but the result was by no means so advantageous as would have been secured under the original plan.

† Mr. Cantrell carried on the business of a chemist and druggist, in the house and premises now occupied by Messrs. C. M. and F. Hallam, chemists, High Street.

Musgrave, James W., and Co.* (This brewery is now partly included in Messrs. Bass and Co's. maltings, and partly in Messrs. Joule and Parson's wine and spirit stores on the north side of Bridge Street.)

Wilson, John Walkers, brewer and raff merchant. (Now part of Messrs. Bass and Co's. Middle Yard, High Street.

Wilson, Benjamin. (Now Messrs. Allsopp and Sons' Old Brewery, High Street.)

Worthington, William. (Now Messrs. William Worthington and Sons' wine and spirit stores, on the east side of High Street.)

To these, with the assistance of Mr. Greaves, surgeon, and others, I am enabled to add the following, who were brewers at about the time referred to.

Henry Evans. (Whose brewery formed part of that now owned by Messrs. W. H. Worthington and Co. on the west side of High Street.)

Charles Leeson. (This brewery adjoined that of Messrs. J. Clay and Son, in Horninglow Street. The house belonging to him is now in the occupation of Mrs. James Ratcliff.)

— Sketchley. (This brewery is now converted into malting offices belonging to Messrs. Allsopp and Sons, opposite Trinity Church, Horninglow Street.)

Since the foregoing page was worked off, Mr. Robert Thornewill has been fortunate enough to pick up, in an old book shop in Bristol, the British Directory in five volumes, the second of which contains about eight pages of carefully-written and valuable matter connected with Burton in the year 1791,† and which SHAW introduced almost *verbatim* into his "History." From these pages to which Mr. Thornewill has kindly given me the opportunity of referring, I gather the following to be the names of these

* One of the subsequent partners in this brewery was Mr. John Greaves, father of Mr. Greaves, surgeon, whose grandfather, John Davis Greaves, he informs me, previously established or carried on the brewery in Horninglow Street now belonging to Messrs. Francis Thompson and Sons.

† At this time the London Mail arrived every evening, except Monday, between five and six o'clock, and letters were dispatched to the

famous nine "common brewers" of Burton, the situation of whose breweries, although not given in the work, I have, in the previous or present list, described.—

Michael Bass.*
Joseph Clay and Sons.
Henry Evans.
Charles Leeson.
J. Musgrave, Wood, and Co.
John Sherratt.
William Wilson.
Benjamin Wilson, jun.
William Worthington and Sons.

The Burton of this day, at the close of the eighteenth century, appears to have been a flourishing town, possessed, in addition to its staple in ale, of several trades and manufactures which gave full employment to its native population, and offered, at the same time, encouraging prospects for the influx of strangers. The three mills† at Winshill were in full work, one being used for grinding corn by Messrs. Evans and Wilson; the second, a cotton mill, belonged to Messrs. Peel, Yates, and Co.; and the third was occupied by the Lloyds in carrying on an extensive manufactory for converting bloom and scrap iron into bars. There was also, on premises now partly occupied by Messrs. Worthington and Co's. maltings in Park Street, a manufactory, subsequently removed to the Upper Mills and belonging to Messrs.

north at the same time. The letters for London and the south were forwarded every evening at 11 o'clock, except Friday. A coach passed each day of the week through Burton, both from and to Sheffield and Birmingham, and another coach also ran between Nottingham and Birmingham three days each week; they all had communication with the London and other coaches at Lichfield and Birmingham. The George, Three Queens, and Crown, were the Inns at which these coaches stopped in Burton. A waggon also left Burton every Saturday morning for London, where it arrived the following Thursday, and there were also nine other waggons which maintained regular communication with Manchester, Sheffield, Derby Birmingham, Nottingham, and Ashby.

* Now Messrs. Bass, Ratcliff, and Gretton's Old Brewery, High Street.

† These were then considered to be the most valuable mills in the County. They consisted of three parts, and constantly employed

Shorthose, Wood, and Co., of a pecular kind of screw* to drive into wood, in which thirty hands were employed; the Upper Mill and Bond End Cotton Mills, worked by Messrs. Peel, Yates, and Co., affording employment to some hundreds of hands; and the manufacture, by several different persons, of hats for the army and navy.† There were also some few manufactories of tammies‡ and woollen cloths, and the maltings were in a flourishing state, great quantities of malt, much esteemed for its paleness, being made. The brewers, also, did not confine themselves exclusively to transactions in ale. Some traded in wines and spirits,

a vast number of men and horses. Mrs. Burton to whom I have referred at page 211, informs me that in her younger days no waggons were employed in bringing corn to the mills, or in supplying flour to customers: it was all done by pack-horses. The corn mill was described as a bolting mill, and ground the corn to flour, and separated the bran from it into three different sorts of fineness; and the stream of the river is referred to "as so great that in the dryest summer water is never wanting to drive the several wheels about, and yet the whole is so contrived by the help of flood gates that the greatest swells of it seldom do much damage. This we are told was the state of it about the year 1745."

* *Shaw*, in describing the process, says that the principal mill was then at Hartshorn, "where they employ 59 pairs of hands, and make on an average 1,200 gross per week by means of 36 engines, or rather lathes turned by one water-wheel, each cutting with great velocity eight or nine screws a minute, and is stopped 18 times in the course of that short period to put in and take out the screws. They are made of various sizes from half-an-ounce to 30 lb. per gross, and children can earn by the employment from 1s. 6d. to 19s. per week. Before the present war they could not be got up fast enough for exportation, but they still continue to make £100 worth per week, and have now (1796) a large warehouse in Burton stored with 4,000 gross; yet the sale is pretty brisk."

† In 1822 the following were Hatters in Burton—John Akers, John Port, sen., (Soho), Robert Port, William Rice, and Stephen Rogers, in Bond End; Elizabeth Beale and Edmund Field, High Street; and Thomas Cooper, New Street. Bond End—originally boundary-end, *i.e.*, the boundary of the Abbey walls—was ever the great seat of the Hatters, and appears to have been composed almost exclusively of their works, and the residences of those engaged in the trade. Many of the now cottages near the Fleet stones were formerly used as hatters shops.

‡ Tammy was a kind of worsted gown, generally of a check pattern, made to open at the front, and secured round the waist by a girdle.

others dealt in timber, and even preserved meats were extensively imported from Russia by the directions of others. So that as SHAW observes, beside the pecuniary emoluments arising from the extensive trade in ale to individuals, not only the town but all the parts adjacent are much benefited by the return of iron, deal planks, hogshead staves, scaffold poles, boards of oak, and other articles daily imported.

The exportation of ale to the Baltic was continued under varying but at the same time generally successful conditions until the year 1806, when, in consequence of the recommencement of the continental wars, it received a check, from which there arose no possibility of recovery up to the year 1814. In fact, at the commencement of this latter year, so paralysed had the northern trade become that the most serious doubts were entertained as to the probability of its future restoration. With the reverses, however, sustained by the French, came brighter prospects for the Burton brewers: the old traffic to Gainsborough* was renewed, and boat-load after boat-load of the welcome ale again found its way to the Russian capital, and various other towns on the shores of the Baltic. The Burton brewers generally, however, had not remained idle during this long continued struggle. The stoppage of the northern trade had led them to seek a less precarious market at home, and largely increasing quantities were annually pushed forward to London, Birmingham, Liverpool, Manchester, and other large towns communicating with Burton by canal, in addition to the extension of a more local, but by no means unimportant trade, by means of or-

They were at one time much worn in the town. One of the last of the Tammy weavers in Burton was Mr. Bott, whose factory now forms Messrs. Allsopp and Son's maltings, opposite the old workhouse in Anderstaff Lane. Mr. Bott subsequently removed the manufacture to Tutbury.

* The rate claimed by the ancestors of the Marquess of Anglesey on goods conveyed by the Trent Navigation was 3d. per ton. The tonnage charged from Wilden Ferry to Gainsborough was, on perishable articles, 10s.; unperishable, 8s.; bulky, 12s.; up to 15s. per ton. There appears to have been some discreditable and corrupt customs in force on the Trent Navigation of this day, and, amongst others, a methodical system of spiling casks, by which large quantities of ale were annually pilfered by the boatmen and others employed in the traffic

dinary road conveyance. From this date (1814) up to 1822, the Burton ale trade was brisk and prosperous, gradually feeling its way over continental Europe, and consolidating itself at home. In the latter year, however, the Russian government, renewing its old policy, imposed a high import, or rather a prohibitory duty on all English ales, and henceforth the fate of the export trade of "piva Burtonski" with Russia was sealed.

On referring to Piggott and Co's. Commercial Directory for 1822, I find it recorded that "great quantities of Burton ale are generally consumed in this country, besides an export trade to a considerable amount to the northern nations of Europe." The only brewers therein named were Samuel Allsopp and Co., High-street; Bass and Ratcliffe (for exportation and home consumption) High-street; Thomas Salt and Co., High-street; John Sherratt, Burton Extra; Wilson and Allsopp, (for exportation), Horninglow-street; William Worthington, (for exportation and home consumption), High-street. According to the same work for 1828-9, the home trade included "a great demand for the ale in the metropolis, where it is much esteemed, but its exports to the north are exceedingly reduced in importance." The brewers of this day were Samuel Allsopp and Son, (for home consumption and exportation), High-street; Bass and Co., (for home consumption and exportation), High-street; Hill and Meakin, (and porter), Burton Extra; John Mason, Horninglow-street; Thomas Salt and Co., High-street; and William Worthington and Son, High-street. The restrictions placed upon the Baltic trade in 1822, may be said to have been the direct means of the inaugeration of a new and indeed brilliant era in the commercial history of the Burton Breweries. Previous to this date the Burton ale, as a distinct beverage, was better known, and to a certain extent more appreciated on the continent than in England. In the year named, however, it became apparent that the northern market was of too precarious a nature for the satisfactory investment of the capital employed in it, and the brewers at once adopted a more decided and uniform system of business in respect to the extension of the home consumption. Henceforth the northern market, although never virtually

closed, ceased to be regarded as one either commercially necessary to be kept open, or politic to attempt to maintain by the slightest risk. The wisdom of this decision in the course of three or four years became apparent in the enormous increase in the demand for Burton ale for the English market, and not the least remarkable circumstance connected with this demand is the unwavering progress, it has subsequently made, in securing to the trade the satisfactory position it now occupies in the commerce of this country. There is, however, no question that much, and in fact by far the larger part of this success is directly due to the manufacture of a peculiar kind of ale or beer, which, so far as I can understand, was first introduced into the market from Burton, under the name of India or Bombay beer, about the year 1823. The origin of India ale is by common consent accredited to a London brewer named Hodgson,* who, while the Burton brewers were intently occupied with the strong ale of the northern market, discovered the process of brewing a beverage peculiarly suited to the climate of the East Indies, and which, under the name of "India Pale Ale," had for several years previous to 1823, monopolized the Indian trade in English ale. The introduction of the Burton ale, in competition with Hodgson's, is due to the suggestion of a captain in the Indian service, named Chapman, and the different brewings and other transactions connected with the exportation of the ale subsequently rendered so famous as "Bitter Beer," during the first two or three years were matters of the strictest secrecy and confidence. The reception given to it in India was of the most satisfactory character, and thenceforth it gradually assumed the position in the market, so long and tenaciously before held by Hodgson's pale ale. India appears to have been the exclusive market for the Burton bitter beer up to about the year 1827, when, in consequence of the wreck in the Irish Channel of a vessel containing a cargo of about 300 hogsheads, several casks saved were sold in Liverpool for the benefit of the underwriters, and by this means, in a

* The Brewery, where pale ale was first brewed, according to popular opinion, was the Old Bow Brewery, carried on at the time by the firm of Abbott and Hodgson. It is now under the management of a Limited Liability Company.

remarkably rapid manner, the fame of the new India ale spread throughout Great Britain. The pale variety was, however, not the first of the ales sent to India from Burton. Both before, and subsequent to, the year 1815, some few casks of Burton ale were forwarded to the East Indies, but the consignment was scarcely equal to the importance of a customary trade transaction, and consisted of the ordinary kind then brewed for the northern market. The great success attending the exportation of the India ale was not obtained without risk and considerable anxiety, and the employment of other and more scientific means than were necessary to produce ale suited to the colder climate of the north. The process of brewing had to be revised and more carefully conducted, the malt prepared in a more special manner, and hops introduced of a selected and peculiar quality; and, in short, it became evident that the manufacture of ale, capable of retaining its condition during a long sea voyage across the tropics, and improving in quality under an Indian climate, must in future be regarded and practised as a science.

In the year 1834, according to White's Directory, the Burton brewers had, after the lapse of forty years, reached to the number they were in SHAW'S time, namely, nine. These consisted of: Samuel Allsopp and Son, High-street; Bass and Ratcliff, High-street; Charles Hill, Lichfield-street; John Mason and Co., Horninglow-street; Jonathan Meakin, High-street; Lewis Meakin, Burton Extra; Thomas Salt and Co., High-street; William Worthington, High-street; John Yeomans, High-street. No mention is made by the author of "Pale" ale, but he says that "immense quantities of ale are sent yearly to all parts of Great Britain, and to many foreign countries, especially to the East and West Indies." In 1851, a second edition of the above work makes us acquainted with the great advance then made by the Burton brewers in their home and foreign trade. They had even then long been engaged in supplying a light agreeable kind of beer called *Pale Ale* for the East Indies and other countries, and also an ale of greater gravity for Australia and other parts of the world. It is also stated that the great spread of the taste for Pale ale had instructed

the brewers to refine the qualities of the stronger ales then and previously brewed, so as to alter, very considerably, the character of the ale which had originally established its fame. "To the decided superiority of its ales, the peculiar properties of its water, and the skill of its brewers, is attributed the fact of the increase, within twenty-five years, of the breweries from five to sixteen, and the employment of no fewer than 867 men and 61 boys in its manufacture." These sixteen brewers of "Pale, Mild, and Strong ales," were—

ALLSOPP, SAMUEL, & SONS, High-street
BASS, RATCLIFF, & Gretton, High-street
GRETTON, WILLIAM, New-street
HICKLIN, BENJAMIN, High-street*
HILL, CHARLES, & SON, Burton Extra
MARSTON, JOHN, & SON, Horninglow
MEAKIN & Co., Burton Extra
MEAKIN & GINDER, High-street
MEASOM, SARAH, High-street
MIDDLETON, WILLIAM, High-street
NUNNELEY, JOSEPH, Bridge-street
PERKS, W. S. & JOHN, Horninglow-street
SALT, THOMAS, & Co., High-street
THOMPSON, JOHN, & SON, Horninglow-street
WORTHINGTON & ROBINSON, High-street
WILDER'S BURTON BREWERY Co., High-street
YEOMANS, JOHN, High-street

The pale ale trade which, from its introduction in 1823, gradually assumed the lead in the commercial transactions of the town, had, in 1830, to clear itself—which it successfully did—from a serious charge conveyed in a publication issued under the superintendence of the Society for Diffusing Useful Knowledge, which, in a Treatise (No. 60) on the "Art of Brewing," accused the Burton

* This brewery was at the rear of the Crown Inn, now the grocer's shop and premises belonging to Mr. Birch, near the Bank, in High Street. As an inn, the "Crown" was one of the oldest in Burton, and I have had occasion to refer to it in the earlier portion of this work. I find it is traditionally reported that Mary, Queen of Scots, passed the night in this Inn on her way through the town, as given at page 66; and about eighty years ago it contained a large highly-carved oak bedstead, upon which it was said the unfortunate Queen slept. If this be so, it is most likely that the sign of the "Crown" was given to the old hostelry in honour of the occasion. In a letter of the period I find it recorded that "Lord Stafford stayde at Hilton, in an ale-house, whilst the Queen passed, and then rode on to Burton for the night, as one of that village brought me word."

brewers of adulterating their ale with a curious variety of ingredients, consisting of salt, steel, honey, prunella, jalap, sulphate of lime, and black rosin. Application, on the part of the Burton brewers, was made by Mr. Campbell to the Court of King's Bench, February 8, 1830, for a rule to show cause why a criminal information should not be filed against Robert Baldwin and Charles Cradock, publishers of the above work, for libel; and on the 10th May, of the same year, the case was disposed of by the admission by the publishers that the statements contained in the "Art of Brewing" were incorrect, and that the Burton brewers were wholly free from any charge made against them in respect to the manufacture of their ales. This conclusion was the result of the thoroughly open and consistent manner in which the ale stores and breweries of the town had been thrown open for scientific examination, and of which advantage had been taken by chemists and others appointed for the purpose. Mr. Brougham* also stated in explanation "that the author of the Treatise was, at the time he wrote his article, not aware that the springs at Burton ran over a rock of gypsum, which gave them a natural impregnation; and that circumstance had misled him, inasmuch as, in the various trials he had made to brew Burton ale, he could in no case succeed in resembling it without adding to malt and hops certain saline impregnations, chiefly gypsum."

The severest, and, in fact, it may be termed the momentous

* It has, I believe, been held by the different biographers, and other writers upon the life and works of this great man, that he never attempted to relieve the stoicism of law by anything approaching wit. The following, for which I am indebted to Mr. Abram Bass, who was engaged in the case, may, perhaps, somewhat qualify this notion.—In the course of his address, Mr. Campbell was desirous of drawing the attention of the court to the character of the several ingredients, said to have been used by the Burton brewers in adulterating their ales:—"My clients," he said, "the Burton Brewers, "have been accused of using all sorts of deleterious ingredients in "the manufacture of their Beer, and amongst them, *rosin*, a thing "good for the bowels of neither man nor beast."—"Oh yes! very good "for *cat-gut*," was the instant reply of Henry Brougham, the opposing counsel.

contest the Burton pale ale has had to undergo in its progress towards universal estimation, was occasioned by the frightful charge made by a French chemist, M. Payer, in a Lecture on Hygiene, delivered at the Conservatoire des Art et Metiér, in Paris, that the peculiar bitterness of pale ale was derived from strychnine, introduced by the brewers during its manufacture. The struggle which began in May, 1852, continued, without intermission, till the following October, and engaged in it not only the whole of the Burton brewers, but several of the chemical analysists of the day. Possibly not one of the newspapers, then published in Britain, but took a prominent part in it by recording its progress, and thereby adding to its excitement. On this occasion, however, no criminal proceedings were instituted, no legal advocacy employed, but the stores of the brewers in every part of the world were freely offered for the selection of samples of the bitter beer for analytical investigation. The fullest enquiry into the system of brewing pursued in Burton was courted, and everything done that honesty of purpose and commercial integrity dictated in testing the validity of the accusation; and the result was that the bitter beer of Burton was by medical and other scientific men,—by the press, and the public generally, at once thoroughly, and let us hope for ever, relieved of the imputation that it contained the smallest deleterious ingredient, or that it consisted of aught save "the purest malt and hops and the purest water combined with the most scrupulous cleanliness and great skill in its manufacture." There was, moreover, this advantage secured by the investigation; it formed one of the best kind of advertisements the ale could possibly have had in creating a universal curiosity respecting it, and the desire to cultivate a closer acquaintance with a beverage admitted to be of so wholesome and genial a character. Coming also immediately upon the Exhibition of 1851, the success of the enquiry was rendered the more complete by the favourable opinion it had already and deservedly obtained amongst the enormous population collected in London upon that occasion from the four quarters of the globe, and which, as a matter of course, would subsequently circulate in the different countries to which it belonged the fame of an

ale which most people either drank or about which they had something to say.

The heavy war duty of 10s. per quarter, imposed upon malt, to assist the government in prosecuting the war against Russia in the Crimea, had some slight, but by no means so serious an effect upon the Burton ale trade as might have been looked for. It sustained no actual depression either in its export or home transactions: the difference consisted rather in the increase not being of the usual rapid rate; but by the removal of the tax on the termination of the war in 1857, the trade resumed its natural buoyancy, and the completion of the year of the Exhibition of 1862, showed that it had increased its annual traffic by several thousand barrels. The succeeding Dublin and Paris Exhibitions, while giving prominence to the high character of the ale, and endorsing the estimation in which it had been held on the two similar occasions in London, afforded no example of an exceptional rate of increase in the annual demand as compared with the increase of succeeding years. Between 1862 and the present year, the trade, with the exception of a temporary check from the high prices of barley in 1867, has rapidly advanced, and the season just ended affords the most satisfactory evidence of its healthiness and prosperity in the consumption of the largest quantity of ale ever before recorded.

Of late years the number and area of the brewing and malting premises within the town have been considerably increased, especially by the enlargement of the old breweries, and the erection of new ones on different sites, and as separate and distinct establishments, by the old brewing firms of Burton. The more important of these latter are the magnificent piles of buildings consisting of Messrs. S. Allsopp and Sons' New Brewery (erected 1860) adjoining the Midland Railway; Messrs. Bass and Co's Middle Brewery, between Guild Street and Station Street, (built 1853), their New Brewery in Station Street, (erected 1864); and the offices and other buildings erected by Messrs Ind, Coope, and Co., in Station Street. The Burton brewers of the present day—the position and area of whose premises are shown on the map of the town—consist of:—

Samuel Allsopp and Sons. Old Brewery and offices, High Street; New Brewery and offices, adjoining the Midland Railway Station. Maltings, on their Old and New Brewery premises, and in High Street, Horninglow Street, Fleet Street, Brook Street, Anderstaff Lane, and Derby Street. Stores at each Brewery. Cooperages in Horninglow Street and Station Street. Trade Mark, "*Open hand.*"

M. T. Bass, Ratcliff, and Gretton. Old Brewery and offices, High Street; Middle Brewery, Guild Street; New Brewery, Station Street. Maltings at their Middle Brewery, and in Guild Street, Station Street, Horninglow Street, Anderstaff Lane, and Bridge Street. Stores in High Street, Guild Street, Station Street, and Mosley Street. Cooperages in their Middle Yard, and in Station Street. Trade Mark, "*Triangle.*"

John Bell. Brewery and offices in Lichfield Street. Maltings in Park Street and Cross Street. Stores at the Soho, the Bond End Mills, and the Old Chapel.* Trade Mark, "*Bell,*"

Joseph Bowler. Brewery in New Street. Stores in Bond Street, at the Bond End Mills, and the Manor Gates. Trade Mark, "*Anchor.*"

Burton Brewery Company, (Limited.) — late Henry Wilders. Brewery and offices in High Street. Maltings in High Street, Station Street, and Anderstaff Lane. Stores in High Street and Anderstaff Lane. Cooperage in Anderstaff Lane. Trade Mark, "*French Eagle,*" with Masonic emblem on breast, scroll and arrows.

Carter and Scattergood. Brewery and maltings in Victoria Street.

Clements and Berry. Brewery and offices in High Street. Maltings in Stanley Street. Stores and cooperage on the premises. Trade Mark, "*Star.*"

* This building is so called from having been many years adapted to the uses of a Methodist Chapel. It however appears to have been erected as a warehouse to the adjoining high four-storey buildings, which, although now converted into several tenements, were originally built, and for a considerable time employed, as cotton works for hand-loom weaving.

Thomas Cooper and Co. Brewery and stores in Victoria Crescent. Trade Mark, "*Crescent.*"

James Eadie. Brewery, stores, and cooperage, in Cross Street. Trade Mark, "*St. Andrew's Cross.*"

Sydney Evershed. Brewery and offices, Bank Square, High Street. Maltings in Park Street and Fleet Street, near the Fleet Stones. Stores and cooperage on the premises. Trade Mark, "*S. E.*," in cypher.

Green Man Brewery, New Street.—void.

Charles Hill and Son. Brewery and offices, Lichfield Street. Maltings in Lichfield Street and Fleet Street. Stores on the premises and in Lichfield Street. Cooperage in Lichfield Street. Trade Mark, "*H. and S.*" in cypher.

Ind, Coope, and Co. Brewery and offices, Station Street. Maltings, in Mosley Street. and Derby Street. Stores on the premises, and at the Bond End Mills. Trade Mark, "*Britannia.*"

London and Colonial. Brewery and offices, Victoria Crescent. Maltings adjoining the Trent and Mersey Canal. Stores and cooperage on the premises—void.

Meakin's London and Burton. Brewery and offices, Abbey Street. Maltings on the premises, and in Lichfield Street. Stores and cooperage on the premises—void.

William Measom. Star Inn Brewery, High Street. Maltings on the premises. Stores on the premises and in High Street. Trade Mark, "*Star.*"

Nichols and Stone, (late Dickenson). Brewery and offices, Moor Street. Stores and cooperage, on the premises. Trade Mark, "*Spread Eagle.*"

Joseph Nunneley. Brewery and offices, Bridge Street. Maltings in George Street, Horninglow Street, and Brook Street. Stores and cooperage on the premises.

Phillips, Brothers. Brewery (erected 1865), Derby Street. Maltings in Byrkeley Street. Stores on the premises.

Thomas Robinson and Co. Brewery and offices (erected 1863), Union Street. Maltings in Union Street. Stores and cooperage on the premises. Trade Mark, "*R*," in ornamental frame, with the date 1842.

Thomas Salt and Co. Brewery and offices, High Street. Maltings in High Street, Horninglow Street, Anderstaff Lane, Brook Street, Bridge Street, and Russell Street. Stores on the premises and in Anderstaff Lane. Cooperage in Anderstaff Lane. Trade Mark, "*Maltese Cross.*"

John Thompson and Son.—Late Thomas Mark Carter and Sons.—Breweries and offices, Horninglow Street and Horninglow road. Maltings in Horninglow Street, Bond Street, and Brook Street. Stores and cooperages on the premises. Trade Mark, "*T. and S.*" in cypher.

Henry Eggington Whitehead. Brewery and stores, adjoining the Old Bridge.

William Henry Worthington and Co. Brewery and offices, High Street. Maltings in Park Street and on the premises. Stores and cooperage on the premises. Trade Mark, "*Shield and Dagger.*"

John Yeomans. Brewery, High Street. Maltings on the premises and in Station Street. Stores and cooperage on the premises.

The list, therefore, comprises twenty-five different brewing establishments belonging to that number of proprietors, but, including the additional works of Messrs. Allsopp and Sons, Messrs. Bass and Co., and Messrs. Thompson and Son, the exact number of breweries in Burton is now (June 1869) twenty-nine.* Of these, however, three are void; and the number in actual work, at the present day, is twenty-six. It is, therefore, to these twenty-six breweries that the working statistics, hereafter given, apply, the three alluded to having been void during the past year.

* This is exclusive of the brewery belonging to Messrs. John Marston and Son, at Horninglow, which, although within the parish of Burton-on-Trent, is outside the limits of the Burton Act of 1853, and, therefore, not shown upon the plan of the town.

It will now be necessary to speak generally of the buildings of which these breweries consist, and the ordinary process of brewing and malting now pursued in the town. The barley used is both of English and foreign growth, and generally selected by specially deputed local agents, upon whose judgment and experience every reliance may safely be placed. The best of the English barley-growing districts are the Chalk and "wash" lands of Norfolk and Suffolk, especially about Bury St. Edmunds; but Lincolnshire and Bedfordshire supply excellent samples, and the light valley-lands of the Midland Counties, including Staffordshire, contribute to the supply. The foreign grain comes principally from the Saumer and Saale districts, but large quantities are also annually brought from Austria and Holland. Of these the Saale barley is held as second only to the best English samples. Some of the brewers charter vessels specially for their own imports, Liverpool being the principal port at which the grain is landed. There is a great difference in the condition of the barley introduced into Burton. All the better English samples are well thrashed, thoroughly winnowed and cleansed, and therefore at once fit to be transferred to the malster. Some of the foreign cargos, however, and particularly the French, show a very curious admixture, consisting of the seeds of numerous species of plants, almost every description of agricultural seeds; earth, pebbles, shells—in fact, bits of most things descriptive of the natural history of the district in which it is harvested; also old iron, pieces of pottery, buttons, and, many other things, even coins; and these different articles equal at least 5 per cent. of the bulk imported as barley.

The first process undergone by the barley is screening, which is generally done by one of Boby's screens, a kind of three-fold riddle, whose duty it is to cleanse it from all extraneous fragments, and to reject all broken corn and grain not of a tolerably uniform weight and bulk. The screen performs its work at the rate of about 60 quarters per day. There are, of course, several of these machines*

* The "Boby" screen is commonly but not exclusively used in Burton. Machines for performing the same operation, and patented by Messrs. F. Gretton and Abbotts, and Mr. Poyser, are also much employed in the town.

employed at each of the larger Breweries, and they are usually placed on the top floor of the maltings, and worked by machinery. The barley being thus prepared for malting is placed in the "cistern,"—a long tank-like receptacle with brick or cement sides, and a sloping floor of perforated tiles, beneath which runs a narrow channel for thorough drainage—and completely covered some six or seven inches with water. This is called "steeping." The barley remains in the cistern from 48 hours and upwards, the time varying according to the quality of the grain, the temperature of the water, and the condition of the atmosphere. The water, which should possess a tolerably uniform temperature of 40°, is passed into the cistern in "tides" of twelve hours each, but it is, at times, necessary to change it twice or thrice during the latter tides in consequence of its becoming impregnated with nitrogenous matter, derived from the decomposition of the husk in which the barley is encased, and which gives out a foul and offensive odour. After being thoroughly drained, which generally takes from four to six hours after the liquor is drawn off, the steeped barley, is thrown carefully and evenly into the "couching frame," where it remains 24 hours, and is subjected to the gauge of the excise officer, and the calculation of the duty to which it is now liable. From the couching frame it undergoes the third operation of "flooring," by being spread thinly over the broad floor of the malthouse, which, except in one case where clay quarries are used, is constructed of plaster made from gypsum. This material, from the readiness with which it may be kept clean and sweet, appears to be well adapted for the purpose, and according to PLOT,* was the material extensively used in the county, in malthouses, two hundred years

* PLOT describes the following as the process by which Plaster was made—"They lay on the ground a stratum of wood (which is best), or a load of wood and coal mixed together, upon which they pile as much rough alabaster: then firing the wood, they let it burn together till 'tis out, which makes the alabaster so soft and brittle that it needs only thrashing to reduce it to powder, the great part whereof being separated from the smaller by a *seive*: the former, mixed with water, are used for flooring, and the finer for sealing and walling of houses. When they lay their floors for maulthouses they wet a whole tub full, and throw it down together, and spread it as fast as they can, for it hardens in a very little time. It is perfectly sweet, having nothing of the ill smell of those made with lime and hair.'

ago. While on this floor the process of germination, which was commenced by the gentle heat acquired naturally in the couching frame, gradually proceeds; and to secure uniformity in this rate of progression requires the exercise of constant care and watchfulness on the part of the malster. The barley, which it is at times found necessary to sprinkle with water, is turned at least twice every day by men with wooden shovels, in the direction of the kiln, where it arrives in exactly twelve days from the time of being thrown into the cistern. The *kiln* is a cast iron cupola-shaped or flat oven, supported by walls of brickwork, and heated by fires of coke or coal—anthracite, because of its heat-giving properties and freedom from smoke, being now largely used—placed beneath in iron pans or frames. Over this oven is a broad floor of perforated tiles, upon which the barley is spread in layers varying from three to ten inches in thickness, and subjected to heat commencing at from 90° to 100° Farenheit. While here the turning process is continued, at first frequently, and gradually increasing to three or four times every hour; the temperature increasing also until it reaches from 145° to 165° Farenheit, or until the necessary colour of the malt is acquired. When this latter desideratum is obtained, the malt is allowed to cool down gradually, in which it is assisted by currents of cold air made to pass beneath the floor by a properly constructed apparatus. This operation generally occupies from twenty-four to forty-eight hours, and concludes the malting operation at the end of sixteen days. The malt is taken from the kiln and passed through a screen to remove the rootlets or "comb,"* and then thrown into bags ready for use.

From the malthouse the malt is taken in bags and lifted by machinery to the top floor or "receiving room" of the brewery, and there undergoes a further cleansing by being passed through the "hopper"—a kind of wooden box with sloping sides, and a coarse wire riddle at the bottom. Its

* The malt comb is now recognised as a valuable feeder of stock, and sold for that purpose at from £5 to £7 per ton. Malt dust—the finer particles of the comb which fall through the perforations in the kiln tiles—is sold at about 50s. per ton, and used as manure for pasture land.

next stage is over two finer screens, where it is freed from much of its coarser dust, and thence shot into the "blower"—which consists of a series of fans, by which all the fine dust is removed from the malt, and it is finally prepared for the "mill." This implement is constructed of two short cast iron cylinders with roughened surfaces, and which revolve in opposite directions. It is seldom idle during the brewing season, and from the vast amount of labour it has to perform, the cylinders have generally to be changed or renewed every three or four months. The mill occupies the second or "grinding room" floor, and the malt is passed into it from the floor above by a closed wooden conductor, and ground or crushed at the rate of about 150 bushels per hour. From the mill the malt gradually passes down an inclined trough, at the bottom of which it falls into the "Jacob's ladder"—a curious yet simple mechanical contrivance consisting of an endless leather strap, about five inches in width, to which at regular intervals are attached a succession of small tin buckets, holding about a pint each. This strap is connected with a wheel with which it constantly revolves in a direction contrary to that of the malt, which travels at a rate just equal to the operation of filling successively one of the passing buckets. By these buckets it is re-lifted to another division of the top floor, and as each in its rotary motion reaches the point of descent it empties its tiny load into a long horizontal box or trough of wood, down which the malt is passed, in equal quantities, at the rate of about four yards per minute, by an archimedian or "endless screw." In this trough are set a series of slides, and, as the malt travels onwards, one, when necessary, is withdrawn and opens a trap door through which the malt falls into the "hopper," which is a large gaping receptacle situate immediately above the "mash tun." The hopper I take to be the brewer's custom house, where nothing contraband is allowed to pass, or the least excess over a given quantity of malt permitted to be introduced. Beneath the hopper, it may be repeated, is the "mash-tun,"—in which the more ancient and familiar name "tub" is lost—and this vessel is the admitted regulator of all brewings, inasmuch as by its size is determined the quantity and strength of the worts. It consists of

a perfectly circular wooden tub, bound with strong iron hoops, having a dome or flat shaped moveable cover to keep in the steam, and is fitted with a false bottom with trumpet-shaped perforations to allow the worts to pass clearly off. In size, as in number, at each different brewery, it of course varies considerably; in fact from the capacity of from one to one hundred quarters, but the prevalent dimensions of those of the larger establishments are equal to the mashing, at one operation, of 60 quarters of malt, and some of these establishments have eight mash tuns at one brewery. Into the mash tun from below is turned the requisite and carefully measured quantity of water,* and at a certain temperature, ranging from 140° to 170° the malt is gradually allowed to fall on to it from six apertures regulated by slides in the hopper above. Immediately this process is commenced, the "porcupine"†—an indescribable apparatus possessed of quills or spokes, irregularly set in a series of square frames—begins to revolve round the tun and mixes the falling malt and the water into a thorough and uniform "mash," which generally, in a 60-quarter tun, occupies from thirty to forty-five minutes. The time necessary for the proper extraction of the saccharine properties of the malt varies from one to three hours. By the application to the wort of a remarkable little instrument called a "saccharometer" or sugar measure, the different stages of the process are, with the greatest accuracy, made known, and, on its completion, the now "sweet-wort" is at once allowed to percolate into the "under-back," a wooden receptacle which will hold about fifty barrels, and from which the worts are pumped into the "top square" tanks on the upper floor. These tanks are connected by pipes with the "wort copper," which, like the mash tun, is of different sizes, but of which the larger examples hold from sixty to ninety barrels, or a maximum of three thousand

* All the water, before being turned into the mash tubs, is boiled in large boilers situated on the top floors of the breweries, and heated by enormous furnaces. In one brewery there are three of these water coppers, each holding 12,000 gallons, and in another brewery two, each equal to upwards of 13,000 gallons.

† At some of the breweries the porcupine is supplanted by an instrument known as "Steele's Patent Mashing Machine," which conducts the water and malt simultaneously into the mash tun.

two hundred and fifty gallons. Into these coppers,* which are open, the wort is conducted, and rapidly brought to a fierce boiling heat, at which it is sustained from two to four hours according to its strength or the requirements of the system adopted by the brewer. It is here that the hops, lifted by hydraulic power from the basement floor, are brought from the "hop room" and mixed with the boiling wort in quantities, dispensed, if I may use the word, under the most careful inspection and with chemical exactness as to weight. Hops are the conservators of beer, but in the coppers they also reduce the frothiness and overflowing tendency of the worts to a manageable condition. After the first wort is drawn off, or rather immediately the process of drawing off is commenced, the "sparge" is set to run on the malt an additional quantity of water, which it does in a dense and uniform shower, and this is always repeated at recognised intervals, thus allowing a first, second, or third wort, as it were, to be successively obtained from the malt, the comparative quantities of which are regulated by the strength or gravity of which the "brew" is to consist. The old system was to thoroughly drain the first wort, and then to have a second and third mashing, but the present plan is held to be equally efficient, and preferable as economising time and labour. When the malt has had its regulated series of spargings, and is thoroughly drained, the now "grains"† are thrown out by men, divested of clothing save

* The number of wort coppers varies of course according to the size of the brewery. In some of the larger breweries there are six and seven of these coppers, each having its own furnace, and with the other furnaces burning from one hundred and fifty to two hundred tons of coal per week.

† The traffic in grains, as may be imagined, is something marvellous. They are generally "booked" to customers six months in advance, and form the principal article of secondary food for stock over a radius of scores of square miles—the North Staffordshire Railway distributing them generally between Burton and Macclesfield; and the Midland up to Birmingham and Worcester on the one side, and Derby and Derbyshire on the other. The selling price ranges from 3d. to 7d. per strike, according to the state of the crops and time of year, and a rise of one penny per strike represents to some of the firms several thousand pounds per annum.

a pair of flannel trousers and clogs,* into "grain tanks," ranged on the top of a kind of balcony, beneath which the different railway or farmer's waggons and carts are drawn, and the grains shot into them through a funnel by the side of the tank.

From the wort copper the wort and hops are run through connecting pipes into the "hop backs,"—large, square, open tanks, with false bottoms of copper, and capable of holding one hundred barrels each. Here the worts gradually drain from the hops, and are thence conducted by pipes into the "coolers,"†—a broad wooden floor divided into a series of square or oblong compartments by shallow frames, and where the wort remains, at a depth of two or three inches, from one to two hours, to allow it to steam itself preparatory to being run into the "refrigerator" for final cooling. When the hops have become sufficiently drained they are thrown by men into the "shoot," a sort of wooden tunnel, to the basement floor, where they are packed in square boxes, each holding about 15 cwt., and subjected to hydraulic pressure, which extracts the whole of the wort, and leaves them in dry compressed masses, in which form they are sold at from about half-a-crown to three shillings per ton as bedding for stock, or for manure. The seeds of the hops are held as egg-producers, but whether this be so or not fowls are particularly fond of them. This "hop-wort" is returned to the cooler. The refrigerator is an apparatus for the rapid cooling of the worts to a temperature proper for the introduction of yeast for the purposes of fermentation. It consists, in reality, of an enormously long tinned-copper pipe, of about two inches in diameter, bent back and arranged cracker-like in a suc-

* Generally speaking these articles are provided for their men by the Brewers.

† It is amusing, but at the same time highly interesting, to contrast the size of these coolers with such as were used in Burton a little before the day that Benjamin Printon began his export trade. In one of Messrs. Worthingtons' spirit stores in High Street is a cooler, which I am assured by Mr. Albert O. Worthington is known to have been attached to the brewery there belonging to his predecessors nearly two hundred years ago. It is of deal, and measures nine feet in length, six in width, and eight inches in depth, and at the ordinary rate of cooling will contain a three-barrel brew of 108 gallons.

cessive and regular series, each about eight feet in length, connected at one end by another pipe with the cooler, and at the other with the fermenting squares. These pipes are completely immersed in water,* or rather fixed in a position which allows their whole surface to be covered by regular currents. The wort on being turned on from the coolers enters the upper part of the refrigerator and passes completely through it in quanties of about 100 barrels per hour. The wort runs one way, but the water—the Trent water being generally used in this case—of which I have just spoken runs in an opposite direction, and at three times the speed, and such is the effect of its action upon the pipe-confined wort, that the latter, which enters the refrigerator hot, passes from it nearly cold. The process occupies one hour.

The wort is conveyed from the refrigerator into the "fermenting squares," or "rounds," on the floor below. These vessels, which are both square and round, are of wood, each holding about ninety barrels, and consist of a very large series, arranged in distinct divisions, with the greatest precision and compactness. To the wort is here added apportioned quantities of yeast, which generally begins to operate in about two or three hours. The process of fermentation continues from two to three days, but even in this case the time is, to a certain extent, determined by the character of the malt used in brewing, and the strength of the wort. When the fermentation is complete the wort is run out by pipes or troughs into the "cleansing casks" of the "union room." These casks are enormous barrels, some of which hold 160 gallons, and others from 150 to 160 gallons; and in one union room in Burton there are 1456 of them, where, during the brewing season, no less than 232,960 gallons of ale are in the different stages of cleansing at one time. When the fermenting wort has been run into the casks, a thin tubing of metal, described from its form a "swan neck," is attached to each bung-hole, and through this the yeast, during the graduating courses of fermentation, rises, and is conducted to

* Refrigerating is done in many other ways, but the general principle is the same—the cooling of the ale by means of a constant stream of water.

the fermenting trough, from whence, on the completion of the process, it is carried into the "barm house," where it is run into flat canvass bags, placed between strong square slabs of wood fixed in a frame, and subjected, like the hops, to hydraulic pressure, which removes the whole of the wort, and reduces the yeast to a dry and friable condition. In this form it is sold at the rate of about £1 per ton, either as food for pigs (who have a remarkable propensity for the article, and, when allowed, will get ridiculously drunk upon it) or for manure for arable land; or it is packed in bags or casks and sent wholesale to "yeast merchants," to be by them distributed amongst vinegar makers and distillers both in England and the continent—France taking large quantities. The ale extracted from the yeast by this process is put into casks and sold principally to farmers for their labourers.

The cleansing or fermenting process occupies from four to seven days according to the strength or gravity of the ale,—the stronger ale taking the longer period. When this is finished the ale is run into the "racking squares," which stand upon the basement floor of the brewery, and consist of oblong wooden tanks of various sizes, the maximum being equal to about 100 barrels. Beneath the squares are ranged at fixed distances the necessary number of casks, and into these the ale is run or "racked" by means of a long line of piping, in which taps are placed to regulate the flow. Every cask is filled to the bung, and in each is put a small quantity of fresh hops, averaging about half-a-pound to a barrel. It is then closed with a wooden "shieve," or bung, and rolled away into the stores as the last act in the process of brewing.

With respect to the various operations described, it may be remarked that they are conducted upon principles more or less scientific in their character, and seconded by all available skill, and the most scrupulous care and cleanliness. No vessel is used a second time without being thoroughly cleansed, and no article is introduced which has not been previously examined as to its quality, fitness, and proportion. Of each and every brewing, which is complete in itself, every detail is journalled, and the strength and gravity of the ale duly chronicled. By this latter method many im-

portant trade impositions have been cleverly detected. The process of brewing the pale, mild, and strong ales is precisely similar; the gravity and description of each being of course regulated by the quantity and quality of the malt and hops used. At the present time few samples of "Strong" ale are brewed, except for some special purpose, of a gravity exceeding forty pounds to the barrel—it ranges from thirty to forty-two (specific gravity from 1·0833 to 1·1167), but the ale brewed for the old Russian trade ranged from forty-two to forty-eight. The "Mild" ale varies from twenty-five to thirty pounds to the barrel (specific gravity from 1·0694 to 1·0833); and the "Pale," or India ale, from twenty to twenty-five (specific gravity 1·0555 to 1·0694). Of the excellent qualities of these different ales the public opinion has long been formed, and I think there is no question that they may fairly be taken as representing the most perfect and serviceable of the malt beverages yet produced by the art or science of brewing. As before stated the secret of this condition is embodied in the water of which the ale is brewed, the chief feature of which is the great amount of gypsum* contained in it, and its remarkable freedom from organic matter. As regards the gypsum, although its functions in the process of brewing have not as yet been perfectly elu-

* The general and fallacious notion is, I believe, that although from the presence of sulphate of lime the Burton water is originally hard, it becomes soft by boiling; and this theory is held as a satisfactory explanation of the peculiar adaptability of the Burton water to brew good ale. Dr. Darwin, in a letter introduced into Pilkington's "History of Derbyshire," makes the following remarks in respect to the Burton waters:—"I cannot leave this account of calcareous, or hard waters, without adding that I suppose from the great affinity between calcareous earth and saccharine acid may be explained a circumstance, the theory of which has never been understood, and therefore the fact has generally been doubted, and that is, that hard water makes stronger beer than soft does. I appeal to the brewers of Burton for the fact, who have the soft water of the Trent running on one side of their brewhouses, and yet prefer universally the hard or calcareous water supplied by their pumps. I suppose there may be some saccharine acid in the malt (which is not all of it perfectly equally made into sugar by the vegetable digestive powers of the germinating barley), which, by its attracting the calcareous earth of hard water may produce a kind of mineral sugar, which, like the true sugar, may be convertable into spirit"

cidated, it is sufficiently well known that its direct action is the rapid and effectual fineing of beer, and that from it the Burton ales derive their very excellent qualities and their remarkable properties of preservation. Some of these ales, brewed nearly forty years ago, are now found to be not only "ripe and mellow," but they show a remarkable amount of freshness and vitality fully equal to ales of two years' preservation.

The brewing season proper commences the first or second week in October, and ends with the first week in April; but it is rare that any week passes during the remaining part of the year in which there are less than two brewings, and very few indeed witness the total suspension of brewing operations in any one of the different breweries of the town. The ales, however, brewed during these intermediate months are exclusively of the light or "mild" description, and such as are required for quick consumption.

The "Cask Department" is one of much importance, and in the larger breweries of gigantic proportions. At the present time there are 1,472,000 casks of all sizes in constant use in the distribution of Burton ale, and the majority of these are filled on an average at least twice during the year. There are few of these casks, which consist of kilderkins, barrels, hogsheads, and butts, which are not made in the town, and principally on the brewery premises, by men employed directly by the brewers. As many as possible, and in fact the bulk, are manufactured by hand, the remainder by machinery. The material used is oak, principally from the Baltic, and which, as of old, arrives in the form of staves; the iron hoops are principally from South Staffordshire. Each cask on completion is numbered, in most cases consecutively, irrespective of size, and thenceforth it has a history of which every phase is carefully noted. On returning from its first journey the number is taken, the "head" knocked out, and the cask thoroughly cleansed by men with hot water and brushes, and placed to dry. It is then passed to the "cooper," and if still sound and sweet, "re-headed," and sent to be refilled, or stowed away till required. In the latter case it is "stacked," with its head out, in the open air, where it at times remains during the greater part of the

summer months, and forms part of those gigantic pyramids which, containing from five to fifty thousand casks, constitute so remarkable a feature in the general appearance of this city of breweries. When the brewing season again comes round the cask is taken to a large shed, "headed up," and filled with hot water for two or three hours, to thoroughly swell out the wood, and remove any impurities it might contain. It is then "rinsed" out, dried, and passed into the hands of the "smeller"—men who work in sets of two each, and are specially deputed to poke their noses into every cask in order to ascertain whether it is "sweet" or "acid." If the former, it is passed on to be examined as to size—no cask being allowed which does not exceed its reputed measure—and thence transmitted to the "tunnery" to be refilled; if the latter, it is taken to the "steam apparatus," where it is treated to half-a-dozen hours of steam, injected into it through pipes attached to an engine, after which it is subjected to a "hot-air" treatment for another hour, when if still fusty or acid it is condemned and sold. At times, however, when but slightly affected, it is washed, and generally successfully so, with a preparation of lime. When a cask shows signs of age, and old age comes upon it in eight or ten years, the ill-fitting joints of its head and body are made tight with "rushes," which are procured from different parts of England, and even Holland. Boys are generally employed to take the numbers of the casks, and the washing is done by men. There is, I believe, a patent under consideration which consists of the coating of the inside of casks with an insoluble preparation of chemicals, the object of which is to prevent leakage, to lessen the probability of foulness, and the consequent expense of labour in cleansing.

As in all other trades and manufactures, the Burton breweries exhibit a very striking contrast in regard to size and capability; in fact they consist of the largest, and perhaps the smallest trade premises of the kind in England. The same natural advantages are however common to all, and the same principles of brewing are invariably adopted, but there is notwithstanding this a peculiarity in each and every description of ale brewed at the different breweries which the connoisseurs of the town do not require the trade mark of

the firm to identify. The old breweries of forty, or even twenty years ago, were comparatively speaking insignificant and inconvenient buildings, situated to the rear of private houses, or inns, and approached by a narrow passage from the High Street, down which all the ale and grains had to be rolled or carried by men and women, to the carts or waggons there placed ready to receive them. They are now generally, although some few still retain all the older characteristics, independent erections; solid bold capacious buildings, neither deficient nor conspicuous in architectural detail, but well and studiously arranged, covering an enormous area of ground, and systematically and continuously connected by chains of railway*—the goods station with the malting offices, and these with the breweries, the cooperages, the stores, and yards. At eight different points these trade railways cross the public streets and unite the breweries on the east side of High Street and the Hay Railway with those between that street and the Midland Station, and that of the London and North Western Railway Company† in Horninglow Street, and there is every reason to conclude that in a short time the town which is now but partly, will be wholly encircled by railway communications; and thereby, although as all must regret, not without the objectionable invasion of its archœological regions, add considerably to the facilities for the extension of its princely trade.

Of the magnitude of the Burton trade, its wonderful

* The total length of private Railways in Burton is 32,495 yards. The powers to carry them across the public streets were obtained by Act of Parliament in 1860. There is no question that the introduction of these railways has been of very considerable advantage, and the means of relieving the streets of a seriously obstructive traffic.

† This Company has running powers over the Midland from the Wichnor Junction to Burton. It has an independent Station in Horninglow Street, and there is a probability of the opening of this Station for passenger traffic. If so, the advantages will be participated in by the North Staffordshire Railway Company, which has recently constructed a branch line from Stretton to Burton. I may here remark that there is a great and urgent want of better and, considering the enormous sums of money annually derived from it by the Midland Railway Company, a more consistent class of station accommodation for passengers in Burton. Possibly under exigent circumstances the Company may be disposed to pay some little complimentary attention to the requirements of a town to which it is so largely indebted.

resources and capabilities, the following statistical evidence, which refers exclusively to the town as defined on the plan, and for which I am indebted to the kindness of the Brewers, may be accepted as approximately correct. As described in the previous list, there are in Burton twenty-six different breweries in active work. With these are connected, either as part and parcel of each brewery, or as separate and independent erections, 104 malthouses,* capable of steeping at one time, 5782 quarters of malt; 76 different stores or buildings devoted exclusively to the storeage of ale, and 20 cooperages employed in the manufacture of casks. These breweries and premises cover 174 acres of land, of which 143 acres are freehold,† and 31 acres leasehold. The maltings—taking the malting season to consist of 212 days; namely, from September to March—are capable of producing 306,300 quarters of malt per annum. The actual quantity manufactured in Burton during the past year I have not been able to ascertain, but the quantity used was about 438,800 quarters—the additional quantity being malted by the brewers at their private maltings, situated in different parts of the country,‡ or purchased by them from trade maltsters. To produce this total bulk of barley would require 109,700 acres of land to be under tillage, the annual value of which at an ordinary rent amounts to £164,500; and the price paid to the farmer for the grain, at a moderate calculation, represents the sum of £877,600. The quantity of hops consumed during the same time was about 63,000 cwt., at a cost of £504,000. With the malt and hops were brewed

* In addition to these Messrs. Ind, Coope, and Co. are now erecting a 100-quarter malthouse on their land adjoining the Midland Railway.

† As might naturally be expected freehold land in Burton has within the last few years risen something like one thousand per cent. in value; land, conveniently situated in High Street, has been sold at the rate of £2 per yard; and in the year 1847 1a. : 2r. : 26p. of land adjoining Station Street were purchased for £515, and in the year 1858 the same land, with an additional quantity of 3a. : 3r. : 21p., was sold for £10,000.

‡ The Brewers in the first place use malt of their own making, and when this is exhausted the additional necessary supply is obtained from maltsters of well-known standing and respectability, and upon whose articles they can depend. Without this care in the selection of malt it would be impossible for the brewers to rely with confidence on the soundness and quality of their ales.

1,735,928 barrels of ale, and 19,324 barrels of porter, giving a total of 1,755,252 barrels—the gross value of which would be £4,739,000; and from which, in the form of licenses and taxes, Her Majesty's Government derives the sum of £501,800. To make this quantity of malt, brew these barrels of ale, to make the casks necessary to contain it, and to store or place it ready for "forwarding," 4,701 men and boys as laborers, and 373 clerks and "heads of departments" are employed, at an annual salary of £241,127; there are 76 stores in the town sufficient for the storeage at any time of 326,500 barrels of ale,* 1,472,000 casks in constant use, 189 horses, 282 floaters, carts, and wagons; 8 private locomotives, employed solely in transporting the malt, ale, and other material of the breweries over 32,495 yards of private railway, and 67 fixed engines, for pumping, grinding, and other similar work, representing 1059 horse-power—these different engines and the furnaces connected with the breweries consume 74,332 tons of coal annually, and which represents a gross outlay of £29,800. These coals, reckoning the supply to be drawn from one seam four feet thick, would exhaust a superficial area of ten square miles in ten years. The wood—converted into casks, taking the barrel as the average (which is really below it)—measures 8,502,235 cubic feet of timber; the hoops, with which they are bound, 11,828 tons of iron; and their manufacture, at the ordinary rate, would employ 100 men upwards of ten years. Enormous, however, as these figures shew the brewing resources of Burton to be, the quantity of ale brewed therein during the past year would only be sufficient to supply two gallons of the beverage to each individual of which the population of Great Britain is composed.†

* The mechanics, and also the labourers employed at the breweries who receive about 15s. per week wages, are supplied with an "allowance" of one quart of ale per day, which they are at liberty either to drink on the premises or to take home. I believe the attempt, some years ago, to do away with the "allowance" system by offering an equivelant in money, most ingloriously failed.

† Most of the brewers have either agencies or branch establishments in London, and also in the principal provincial towns in Great Britain; and many of these are of an exceedingly large and valuable description. Although there are some few exceptions, the bulk of the "bottling" for the trade is done at these minor establishments.

Such, as I have been but imperfectly able tc describe, are the Burton breweries of the past and present day; and to them, both socially and commercially the town owes its existing position. But it may be asked in all seriousness—Were the breweries removed, what of the town? It is without a trade or manufacture which is not more or less dependent upon brewing, and yet there are few towns better or more conveniently situated for the introduction of a variety of manufactures and other works of a large, commercial, and improving character. It has a direct railway and canal communication with all the great centres of manufacturing industry in the midland counties, and lies within a five minutes' run of the localities of valuable mines of coal and other minerals, and is, moreover, possessed of water-power which, if utilized even so far as in the old days of Peel and Yates, would readily provide employment for upwards of 1,000 persons, and relieve the town of the condition of having no resources to modify the effects of any possible depression to which its present trade in ale may be subjected. Its position is certainly a peculiar one, and its history throughout affords no parallel. All others of its old trades; its workings in alabaster, its manufactures in cotton, in woollens, and even in hats have departed, and possibly, of all other manufacturing towns in central England claiming the distinction of being the seat of a largely demanded article, it is the only one which fails to offer the slightest share in the work of producing that article to the female and younger members of its population. Individually I consider, and doubtless many others share in the opinion, that the introduction into Burton of manufactories of articles which would afford a fixed and profitable employment, not only to the men but also to the women and children of the town, would add considerably to its importance, and tend to promote, in a marked and permanent degree, the general prosperity and improvement of its numerous inhabitants.

By way of closing this section of the work I may perhaps be permitted to introduce the erewhile mooted question as to the right the public have to the use of the Hay for purposes of recreation, and I do so in order that it may in future be clearly and popularly understood. I think I cannot do this in a more definite or conclusive manner than by giving a copy of the documents under which the public first enjoyed the privilege :—

"*To the Most Noble the Marquis of Anglesey,*

"The undersigned Tradesmen, Clerks, Apprentices, and Workmen of the Town of Burton-on-Trent, present their humble petition.

"That your Lordship will generously permit them the privilege of playing a game of Cricket, or Prisoner's Base, or Football on some part of your Lordship's estate here; and your petitioners humbly hope that your Lordship will excuse the liberty they take in addressing you, when your Lordship takes into your consideration that they have no other hope but in your Lordship's generosity to attain such a privilege.

"The Common Lands which surround the Town, were formerly open to the young men of the Town for the practice of manly and and athletic Games, but since their enclosure there is not an inch of ground accessible to the tradesmen and poorer classes, for the practice of any game whatever; and as your Lordship is almost the sole proprietor of the Lands about the Town, your petitioners throw themselves on your generosity to grant them the favour they humbly ask.

"Your petitioners would by no means wish the exclusive possession of any particular piece of ground; but they believe that if your Lordship would allow them to play in the field called 'the Hay,' which lies between the Town and the Trent, that the same rent might be obtained from it as is now given. This field is never mown, but is let out in Leys, and it was also for many years customary for its Tenant to permit, in some degree, the sports of the people in it; but lately a Policeman has rigidly prevented any attempts to play upon it.

"This field is most contiguous to the town, but any place which your Lordship may please to appoint would be most thankfully accepted.

"Your petititioners humbly hope that your Lordship will take their request into your favourable consideration, and they will always remember your kindness with gratitude."

This memorial was signed by thirty-nine of the principal tradesmen of the town, and to which the following, dated September 27th, 1841, shews the nature of the reply :—

"*To the Most Noble the Marquis of Anglesey.*

"We, the undersigned Inhabitants of Burton-upon-Trent, beg leave to present this Memorial as a mark of our grateful sense of your Lordship's kindness and generosity in allowing us, or our fellow-townsmen, the privilege, under the necessary restrictions of your agents, of practising all manly and innocent sports and pastimes in the Hay."

This paragraph is followed by several others in further acknowledgement of the privilege, and of the benefit it had conferred upon the inhabitants, but to which it will not be necessary to make any additional reference. The latter document is signed by one hundred and eighty-five of the inhabitants of the town, including all the ministers and professional men, the brewers, and the majority of the tradesmen of the day, most of whom are still living amongst us.

On the 5th of July, 1865, the Royal assent was given to the "Stapenhill Bridge Act," obtained by the late Marquess of Anglesey, to enable him to construct a bridge across the Trent, on the line of the Fleet Stores at Bond End and the Ferry at Stapenhill. At present no active steps have been taken to carry out the full provisions of the Act, but there is little reason to doubt that the undertaking would be successful as a speculation, and at the same time of great service and convenience to the inhabitants of the town and district; it would also relieve the existing bridge and the lower parts of Burton of a large per centage of heavy coal and brick traffic—which is not of a remunerative character to the ratepayers.

In conclusion, it is my painful duty to record the death of Henry second Marquess of Anglesey, who expired suddenly at Beaudesert, on the morning of February 7th, 1869, in the 72nd year of his age, and was interred in the family vault in Lichfield Cathedral on Saturday, the 13th, following. As I have before stated, his lordship joined the army as Lieutenant in the 7th Hussars, on the 21st of July, 1814, and after passing through the different grades of his profession, retired from active service, as Colonel of the 42nd Foot, in 1843. In 1820 he was returned as member for Anglesea, which he continued to represent up to the time of his being called to the House of Peers in 1832. In 1839 he was appointed Lord Chamberlain of Her Majesty's Household, when he was created a member of the Privy Council. He held that appointment until 1841. In June, 1854, he was appointed Lord Lieutenant and Custos Rotulorum of the county of Anglesea, in the place of his father, and which he held up to the time of his death.

In reference to his lordship's early life and his attainments as a sportsman, the *Field*, had the following article, written on the occasion of his death :—

"As a sportsman and proficient in athletic exercises, the late marquess early distinguished himself; and when at Westminster, as has been very recently recorded, 'among the lads famed for activity—and who still looks as wiry as ever—may be mentioned the Marquess of Anglesey, who as a runner and jumper could scarcely be equalled. Indeed his lordship was, and is still, an admirable Crichton as sparrer, cricketer, and fives player; while in after life, as a horseman and crack shot, the ex-Hussar could hold his own with the best.' This, written in 1862, is by no means a bad epitome of the Marquess's accomplishments, both as a boy and a man; while few certainly who had seen so much ever wore so well. To encounter him in the Park or Piccadilly, until within his very last season or so, as he drove by in his capitally-appointed phæton, he looked so fresh and so smart as to give one far more the idea of a man of 53 than 73; notwithstanding something of the old style in the blue bird's-eye neckcloth, the low-crowned B C. hat, and dragsman's overcoat. Still it was as a shot that the Marquess of Anglesey settled down as a sportsman, and the field days at Beaudesert have perhaps never been equalled for combining the luxuries of the battue with a dash of wilder sport. One of the Marquess's chief companions in arms in this way was the late Lord Lichfield, and Sir Francis Grant has grouped them together in the coverts, laying the scene, if we remember aright, at Ranton Abbey. In another line the late Marquess did much for the amusement of his friends and neigh-

bours, and the Burton-on-Trent coursing meetings owe their success to his lordship's countenance. He had also some taste for agriculture, and, in fact, in most ways, very agreeably fulfilled his duties as a country gentleman. The Marquess of Anglesey's introduction to the turf may be traced to the influence of his brother-in-law, the late Duke of Richmond, who had just then set about 'making' Goodwood, and the two were for some time confederates, the Marquess's horses running in the name of Kent, the Duke's own man. The first great race, indeed, he ever won was the Cup at Goodwood, with Rubini in 1833, and in the next season the Stewards' Cup at the same meeting with Baleine. But circumstances soon compelled the Marquess to give up racing, at least for a time, and for close upon twenty years he had not a horse in work. On coming again, however, he won the Cambridgeshire with Sultan, and the Stewards' Cup at Goodwood with Termagant; but his taste for the turf, ever capricious, did not grow upon those victories, and of late he had made no sign in the *Calendar*. In the Jockey Club the Marquess of Anglesey ranked with Lord Lonsdale, Admiral Rous, Lord Stradbroke, Mr. George Payne, General Peel, Lord Wilton, and the Marquess of Conyngham, as the old members of some thirty or forty years' standing."

His lordship will not, however, be best remembered as an officer—in what degree he possessed the soldierly qualities of his father no opportunity afforded the means of judging—nor will his exploits as a sportsman, nor his successes on the turf keep all the greener his memory amongst those by whom he was best known; but it will be as one who was kind to a fault, who by disposition, courteous, affable, and considerate, was always ready with a willing hand to help when the help was to his own hurt, and who was never so happy as when, in his simple-hearted indulgent nature, he found that a word or a deed of his had brightened the path and gladdened the heart of those about him.

His lordship died intestate, but letters of administration of his lordship's personal estate and effects were sworn under £40,000, and granted, on the 13th July, 1869, to his eldest son, the present Marquess of Anglesey; the Right Honourable Ellen Jane, now Dowager Marchioness of Anglesey, the deceased nobleman's wife, who survives him, having first renounced the grant.

He is succeeded in his titles and estates by his eldest son, Henry William George, Marquess of Anglesey, who, as stated at page 145, was born December 9, 1821, and married in June, 1845, Sophia, second daughter of James Evesfield,

Esq., of Denne Park, and is without issue. His lordship represented South Staffordshire in Parliament from 1834 to 1857, and was for some time an officer in the 1st Life Guards, from which he retired in 1845. He was appointed Deputy Lieutenant of Staffordshire in 1851, and was Lieutenant-Colonel of the Staffordshire Militia from 1852 to 1855.

APPENDIX.

Since the first two of the preceding Sections of the work were struck off, some additional subjects of interest, in connection with the geological and archœological remains of the district, have come under my notice, to which I now beg to refer. In the first place I, some time ago, availed myself of the permission of Sir Robert Burdett, the owner, and Mr. Seth Smith, the tenant, of the meadow near Willington Bridge, to examine the entrenchment contained on it, to which I alluded at page 22. The excavation of the principal mound resulted in the discovery that it had been previously disturbed, and I failed to detect any remains of an ancient date. Immediately in front of it, however, on the margin of the old river channel, I found in the gravel a fine flint flake. More recently some drainage operations on the Sinai Park farm brought to light a carefully rounded dark flint stone, half-a-pound in weight, and thinly coated with some black lustrous substance; and so late as the present month (August) Mr. John Smith, of Tatenhill, found in a field on the same farm called "Deer Barn," embedded in the clay of a recently made drain, a beautifully worked yellow jasperry flint arrow-head, exactly one inch in length, and which is now in my possession. I have also an exceedingly curious flint, from the drift gravels of Marchington on Needwood Forest, with a hole drilled through one end, and which has evidently been used as an ornament or child's toy. I am indebted to the kindness of Mr. Hardy, of the Six Road-ends, on the Forest, for this ancient relic, also for a very fine bronze celt, obtained by him from some drainings in Boulder clay not far from his residence.

In the second place the Coton Park sinkings have been brought to a satisfactory conclusion, and I have much pleasure in introducing the following section of the pits, for which I am indebted to the kindness of W. T. S. Daniel, Esq., and the Directors of the Company.

Section of Strata passed through at the Coton Park Colliery.

	THICKNESS. yds.	ft.	in.
Soil	0	0	9
Keuper Sandstones	21	0	0
Bunter Conglomerates	76	0	6
Upper Coal measures, consisting of grits, clays, and binds, containing numerous hæmatite nodules, breccias, and Coal measure Plants	57	0	11
Coal	0	0	1
Bind	6	0	4
Over and Nether or Main Coal	1	2	7
Clunch	0	0	9
Rock	4	2	4
Blue Bind with Ironstone balls...	3	0	7
Toad Coal...	0	2	0
Shale	2	0	7
Clunch	0	5	9
Rock	0	0	8
Bind	3	0	0
Smut and Coal	0	0	6
Bind	0	6	9
Black Shale	1	0	1
Clunch and Ironstone	0	2	6
Slate Coal, with parting (one inch)	0	2	11
Clunch	2	2	5
Rock	0	1	0
Blue Bind...	7	0	10
Black Shale	1	2	8
Bind	5	0	7
Coal Parting } Woodfield ... ... Coal	1 1 0	2 0 1	1 2 2
Bind	7	0	0
Stockings Coal	2	0	3
Bass	0	2	0
Stone Bind	6	1	4
Rock	0	2	0
Eureka Coal	0	2	8
Clunch	2	2	7
Bind and Ironstone	7	0	6
Clunch	1	1	9
Rock	0	2	6
Blue Bind...	1	0	1
Rock	5	1	2
Cannel or Shale Coal	0	1	11
Clunch	2	2	1
Rock	0	2	3

COTON PARK COLLIERY SECTION.—(CONTINUED.)

	THICKNESS. yds.	ft.	in.
Bind	7	0	5
Stanhope Coal	0	1	0
Bind	8	1	3
Three-quarter Coal	0	2	1
Clunch	3	0	5
Bind	4	0	2
Coal	0	0	3
Clunch	1	0	6
Bind	13	2	10
Clunch	0	1	6
Clod Coal measures			

Borings from the base of the pit, were carried down through different measures, containing at 20 yards the Kilburn coal (3 feet 9 inches), and terminating in shaley sandstone at 80 yards—giving a total proving of the district to a depth of 365 yards. The section in general is peculiar, and differs from any other hitherto met with in the adjoining field. Geologically it is of the utmost importance and interest, as determining the extension at a workable depth of productive coal measures beneath the New Red Sandstone on the west margin of the field, and, commercially speaking, it is of the greatest value, as opening out excellent seams of the *Main*, the *Woodfield*, the *Stockings*, the *Eureka*, and the *Stanhope* Coals, and beneath them the *Anglesey* (or *Kilburn*), and the ironstones, which the Brizlingcote borings show to underlie the latter. The *Main* coal, which in the pit sinking was but 6 feet 3 inches, is found to be of excellent quality and to thicken from 8 to 12 feet in the headings already driven into it for a considerable distance, while the *Woodfield* (5 feet) and *Stockings* (6 feet 6 inches) are by the same means found to exceed the average quality of these seams as met with in other districts. At this particular point, probably from the proximity of a fault or roll, the whole of the measures are somewhat attenuated. The beds have yielded abundance of organic remains, and from some sinkings now in operation at Bretby, I have been able to correlate the series occurring beneath the horizon of the *Woodfield* at each locality, and which are specifically identical. At both

places the shells occur in matted and compact masses, frequently several feet in thickness, and they afford the clearest evidence of the wonderful fecundity of the molluscous animals of this remote period. The majority of the specimens are remarkably fine and well preserved, and in this respect and also in their mode of occurrence, and their association with the coal shales of the Lower Middle measures of the field, bear a striking and suggestive resemblance to the contents of the representative beds of North Staffordshire. I have also paid much attention to the organic remains imbedded in the *Anglesey* coal shale at Bretby, and every visit has revealed evidence in support of the opinion I have advanced at page 151, that that seam, and the Woodhead coal of the Cheadle field of North Staffordshire are identical. Of the fish remains, *Pleurodi* especially are numerous and fine, but it is somewhat remarkable that hitherto I have met with none of the large Ichthyodorulites of the genera *Gyracanthus*, *Orthacanthus*, *Ctenacanthus*, etc. That such, with the remains of many genera, both of the Ganoid and Placoid orders, which form so large and valuable a series of the fauna of the North Staffordshire coalfield, exist I have not the least doubt, and that they only require a more general search than I have been able to afford to be identified.* It is a point of some little interest, in connection with the distribution of organic life, to note that, of the only two specimens of a peculiar three-edged kind of tooth hitherto met with, or known to myself at least, one example I obtained from the shale of the Woodhead coal at Ladies' Well, Cheadle, and the other from the shale of the Cannel or Shale coal measures at Coton Park. In the Ladies' Well specimen the teeth are associated with some bones, and a beautifully-preserved fragment of the skin of the fish. The Coton Park example consists of two detached teeth. On the two last pages of this work I have given a table of the fossils of the field, and their locality. The Coton Park coal seams dip about 1 in 12, N.E., and are unconformable to the overlying New Red Sandstone, which dips W.

* So far as I am aware, the only hitherto published notice of the occurrence of animal remains in this field, is contained in the *Geology of the Leicestershire Coalfield* (page 26), by EDWIN HULL, B.A., F.G.S., and consists of a small *Cypris*, discovered by Mr. Green, F.G.S., and species of *Anthracosia*.

I much regret I am compelled, from want of space, to withhold the introduction of an exceedingly interesting list of British birds, found or noticed as visitants in the neighbourhood of Burton, which has been most carefully prepared and placed at my service by Mr. Henry Tomlinson. The work is, however, already more than double the size originally intended, and I now can only notice the fact, and express my thanks to Mr. Tomlinson for his kindness. I may add that, for the same reason, I have been obliged to omit several other matters connected with the general and natural history of the district, but which I hope some future occasion may afford the opportunity of recording.

List of Species.
Palæoniscus Egertoni
——— ornatissmus
——— sp.
Amblypterus, sp.
Gyrolepis, sp.
Platysomus striatus
Amphicentrum, sp.
Cælacanthus lepturus
Rhomboptychius, sp.
Diplopterus carbonarius
Megalichthys Hibberti
Rhizodus granulatus
——— minor
Rhizodopsis, sp.
Diplodus gibbosus
——— minutus
Ctenoptychius apicalis
Pleurodus Rankini
——— sp.
——— sp.
Pæcilodus, angustus
Petalodus, sp.
——— sp.
Helodus simplex
Cladodus, sp.
Small tooth, with three cutting edges (new)
Onchus, sp.
Fin defence, plain, slightly curved, 2½ inches in length
Curiously-ornamented bones, &c.
Lingula mytiloides
Anthracosia ovalis
——— robusta
——— lateralis
——— subconstricta
——— acuta
——— acuta, var.
Anthracoptera modiolaris
——— Browniana
——— sp.
Anthracomya Adamsii
Sanguinolites, (?)
Cytheropsis, sp.
Beyrichia arcuata
——— Binneyana
Spirorbis carbonarius

or Ashby-de-la-Zouch Coal-field.

MEASURES IN DESCENDING ORDER.	LOCALITY.
Pot clay measures.	
Little coal ,,	
Ryder coal ,,	
Main coal ,,	
Toad coal ,,	
Slate coal ,,	
Woodfield coal ,,	
Stockings coal ,,	
Eureka coal ,,	
Cannel, or shale coal ,,	
Stanhope coal ,,	
3-quarter coal ,,	
12-inch coal ,,	
Clod coal ,,	
Kilburn, or Anglesey coal ,,	
	Swadlincote—Smedley's pits.
	Bretby.
	Brislingcote.
	Stanton.
	Church Gresley.
	Moira.
	Coton Park.
	Leather Mill.





