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SANDGATE CASTLE, A.D. 1539-40.

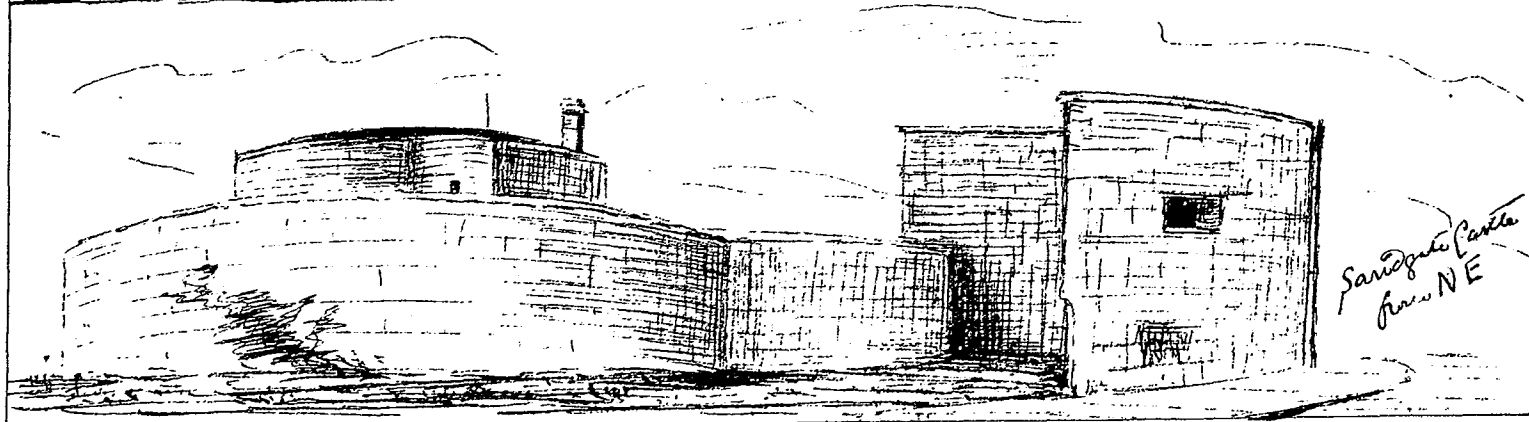
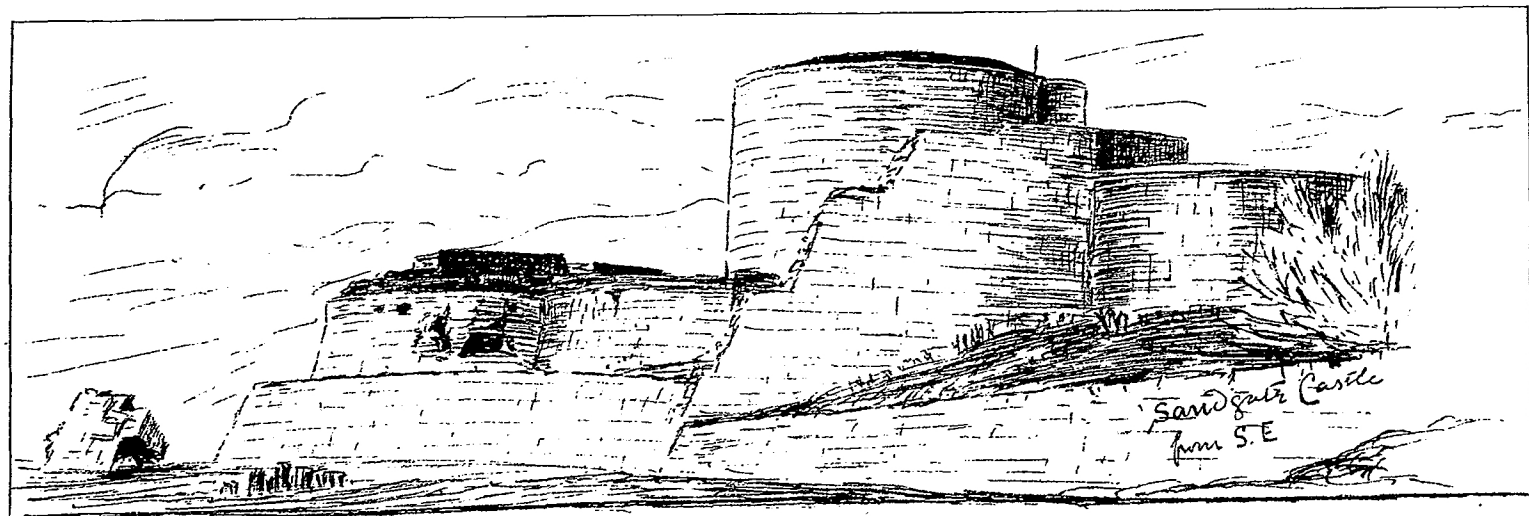
BY WILLIAM LOFTIE RUTTON, F.S.A.

AMONG the Harleian Manuscripts at the British Museum happily survives the "Ledger" kept during the building of this fort or castle, one of several constructed by Henry VIII. for the defence of the southern coast. In it are found full particulars of the expenditure:—the cost of materials, and the sources from which they were derived; the wages of artisans and labourers, and the manner in which the money for their monthly pay was procured and brought to them at Sandgate; the names and remuneration of the officers; and the mention of parts and details of the building no longer existing.

The ledger consists of two folio volumes, numbered respectively 1647 and 1651 in the Harleian collection. When the Index to these MSS. was printed in 1808, the twin volumes seem to have been in their original vellum covers, on which their titles in black letter were inscribed. Afterwards, however, the original covers were replaced by flimsy marble-papered "boards" with weak leather backs, and on the fly-leaves were pasted (to the detriment of the lettering which, apparently from the moisture, has been in part rendered illegible) the portion of the vellum inscribed with the titles. These run thus: On the first volume, "*The Forst, the ii^{do}, iii^{do}, iiiiith, vth, vith, viith, viiiith, and the ixth boke of the leger of the workes of the Kynges Castell at Sandgate in the tyme of Thoms Cockes and Rychard Keys Esquyers Comyschoners there*" [etc. now illegible]; and on the second volume, "*The xth, the xith, xiith, xiiith, xiiiith, xvth, xvith, xviith, xviiith, and the xixth boke of the leeger of the workes of the Kynges Castelle of Sandgate in Kent in the tyme of Reynold Scott Esquyer beyng surveyour thereof and Richard Keys Esquyer then beyng sole Paymaster of the said Workes.*"

The two volumes together contain about 350 carefully written pages, and the clerk, Thomas Busshe, has embellished his pages with wonderfully elaborated initials, often showing considerable skill. Foliated scrollwork is the usual ornament, and in it human faces more or less grotesque are occasionally introduced; one clever sketch, for instance, portrays an elderly goodwife wearing the head-dress proper to the Tudor times of the draughtsman.

The arithmetic of the ledger, which is that of the time, is clumsy and inconvenient. The Roman numerals are used throughout, the impracticability of the system being very apparent when addition is required; for instead of the orderly columns of units,



tens, and hundreds to which we are accustomed, we have unequal files of numerals; eight letters stand for 88, and two for 90. Addition thus becomes intolerable. The *summa paginæ*—"Sm. Pagin"—at the foot of each page, is neither carried forward nor added to the sum of the next page, nor are the sums of the pages ever brought together and their total shown. On the last page of each month's account is found: "Sum of all this whole book of the th pay;" to check which an auditor would have to gather together the sums of the pages and make the addition. Such a system of course conduces to error and facilitates fraud, but in this case, although I found occasional errors, and could not always make my addition agree with that of the clerk, the difference between us finally is but slight. One other difficulty to the uninitiated must be noticed, *viz.*, such complications as "*xii^{xxvi} li.*" for 12 score and 16 lbs. (=256 lbs.), or "*xxvii li. and di. at ijd. ob.*," for 27½ lbs. at 2½d. Throughout the two volumes, the Arabic numerals now universally used are found but once, *viz.*, in the year date of an "empcion," or purchase, in the fifth month, "*xii* daye of Septembre An^o 1539."

Having carefully examined the accounts, I have classified the information they afford, hoping thus to present it to my readers in the most convenient and intelligible form. But before giving attention to the building of the Castle a few lines are, I think, demanded relative to antecedents at Sandgate.

Hasted, as evidence of the existence of a castle preceding that built by Henry VIII., quotes a writ of Richard II. (Rymer's *Foedera*, ed. 1709, viii., 49) directing the Captain of Sandgate Castle to admit Henry of Lancaster, Duke of Hereford (afterwards Henry IV.), then banished the realm, there to tarry with his family for six weeks. This writ, however, is accompanied and immediately preceded by another of same date (3 October 1398) and of like tenor, directed to the Captain of Calais, and considering the fact of there being a castle at Sangatte (in English documents written Sandgate) about nine miles from Calais on the French coast and within the English pale, the identity of date of the writs, and the improbability that the King when banishing his dangerous cousin should permit him to tarry six weeks on the Kentish coast, we can scarcely doubt that the French Sangatte was implied. This writ, of which the purport has been misunderstood, is the sole basis of belief in a mediæval castle at Sandgate in Kent. But although dismissing as an error the existence of a castle prior to that which now concerns us, it is clear from the evidence adduced in the *Archæologia* (iii., 244), and in Philipot's *Villare Cantianum*, that from the earliest times the "gate" from the shore through the Kentish cliffs into the country had been the object of daily and nightly watch and ward; yet no stronghold or watchtower is mentioned, nor in the record before us of the building of Henry VIII.'s Castle is there any mention of old foundations or old material; on the contrary, without any such mention, we are clearly informed of the founding of the new structure.

The object of Henry VIII. in erecting castles and bulwarks along the coast is thus quaintly given by Lambarde in his *Perambulation of Kent* (1570): "Of this I hold me well assured, that King Henry VIII. having shaken off the intolerable yoke of the Popish tyranny, and espying that the Emperor was offended by the divorce of Queen Katherine his wife, and that the French King had coupled the *Dolphine* his son to the Pope's niece, and married his daughter to the King of Scots, so that he might more justly suspect them all than safely trust any one, determined (by the aid of God) to stand upon his own guard and defence; and without sparing any cost he builded castles, platforms, and blockhouses in all needful places of the Realm. And amongst other, fearing least the ease and advantage of descending on land at this part [*Deal*] should give occasion or hardiness to the enemies to invade him, he erected near together three fortifications which might at all times keep and beat [*sic*] the landing-place, that is to say, Sandown, Deal, and Walmer."

Let us now learn from the ledger what it has to tell concerning the building of the Castle at Sandgate. In quoting the accounts I shall not always follow the spelling, as to do so would, I think, scarcely be to the reader's convenience; for, defined orthography not having then been reached, the clerk apparently wrote as seemed good to him at the moment, among many variations sometimes even giving to the word the form it now wears. The diction, however, will be preserved, with many examples of the old spelling.

Commencement and Progress of the Work.—The second leaf of the first volume of the ledger is inscribed: "The building of the King's Castle of Sangate [*sic*] from Sunday, the 30th day of March, unto Sunday, the 27th day of April, by the space of one month;" and on the reverse page: "Anno 30° & 31° Regni Regis Henrici Octavi." The Sundays though named are not, I think, included in the working month; the masons, however, are each month described as "labouring their holy days and vigils," but there seems to have been general exemption from labour on Sundays, although certain overseers and clerks were paid for the week of seven days.

The first page of the account for each month is headed in this manner: "Payments made and paid for Our Sovereign Lord the King's Grace, for his building there done of and by Master Thomas Cocks and Richard Keys, Commissioners of the said building, as well for all manner of empcions [*purchases*] necessary, and carriages, as also wages to all manner of artificers and labourers, purveyors, clerks, and overseers, that is to say, from Sunday, the 30th day of March, unto Sunday, the 27th day of April, by the space of one month." The masons of course come first in the lists, and the description of their employment during the first month indicates the commencement of the Castle from its foundations. They are scappling, *i.e.* roughly shaping the stone, and "laying it for the foundation and building of the foresaid Castle." The same indication appears in the work of the "scapplemen and rockbreakers," they are "digging and casting beach from the foundation of the Castle,

breaking rocks, carrying them from the sea, and loading earth and stone." There is nothing to suggest that any old foundations were dealt with.

Here it may be well to notice the belief common at Sandgate that the Castle was built on a platform of timber resting on piles. This conjecture had its origin in the exposure of piles some years since, when, by the action of the sea, the southern section of the wall had been undermined and greatly damaged. As far as shown by excavations for sewers, *etc.*, nothing but beach is to be met within a considerable depth; "digging and casting of beach from the foundation of the Castle" is described as one of the first operations towards its erection, and this "casting of beach" is found in the accounts onward to the twelfth month. The ledger has no mention of pile driving, or of carpenters employed on a timber sub-structure; indeed, during the first month four carpenters only are on the list, and their work is described as making barrows, hods, *etc.*, and helving tools; in the second month no carpenters appear to have worked at the Castle; and not before the third month did they muster strongly, when 22 are returned in the account as, in addition to making necessary plant, framing timber (which I suppose to imply floors, roofs, doors, windows, *etc.*), and erecting a forge. I am inclined to think that the discovered piles had been driven for the defence of the walls in years subsequent to the building of the Castle, and after one of the many occasions when they had been injured by the sea, the assaults of which would no doubt have been more ably resisted had the foundations been originally laid securely at a greater depth.

During the first month the total number of men receiving pay was 255; of these, 102 were masons building or getting stone; 4 were carpenters making the plant, *viz.*, barrows of all kinds, hods, mortar bosses and tubs, and helving tools; 4 sawyers; 17 lime-burners; 28 wood-fellers; and the remainder, with 12 overseers and clerks, were carters of materials. The amount of the first pay was £130 8s. 10½*d.*, which, at the present time to appreciate, we may perhaps multiply by nine.

The number of men was doubled in the second month, and their augmentation continued up to the sixth month—that ending 14th September—when the accounts show that 843 men were employed, and £469 19s. 0¾*d.* was spent; this being the highest monthly pay in 1539. In regard to the number of men it must not be understood that the 843 worked the whole month through; many were employed for only a part of the time, and the work of the carters was especially intermittent. Thus, for this month we should take 500 as about the average number working daily at the Castle or near at hand, and to this add an intermittent number of carters, chiefly of timber, the average of which cannot without a very troublesome calculation be ascertained. The 500 may thus be classified: Masons and stonegetters, 74; bricklayers, 103; carpenters and sawyers, 51; plumbers, 5; lime-burners, 16; labourers, 216; carters of stone from the quarry, 21; overseers and clerks, 14. After the

sixth month, and as the winter approached, the men decreased in number, until in the ninth month, ending 7th December, there were but 108 men on the list, the sum of the pay being £57 1s. 10*d.* The tenth month then commenced, but was cut short on the 20th December, from which day there were Christmas holidays for three weeks, during which all work was suspended, three men only being left to keep watch and ward over the rising Castle, the materials and stores.

At this halting place, it is convenient to mention what is gathered touching the workmen's lodgings. Were there houses at Sandgate before the building of the Castle? We hear of one only. In the accounts for the thirteenth month (not yet reached) there is mention of 20*s.* paid as a year's farm of a house hired of one William Jenkyn "to keep the King's money, and as a place to pay it out again;" also in the nineteenth and last month half a year's rent is paid for "the King's Pay House." In the valuable "Plan of Sandgate Castle and parts adjacent," made in 1725 (one of a very interesting Kentish collection, Brit. Mus., King's Library, xviii., 48), there appears only one house with two or three outbuildings attached, close to the Castle on the Hythe side. Possibly this house, or one standing in 1539 on the same site, may have been that used as the King's pay house. Mr. Fynmore of Sandgate, to whom I am much indebted for information, thinks the Fleur de Lis public-house may yet represent it. Nichols, the writer of the Royal Progresses, 1788, says that as lately as 1775 there were only two houses beside the fort, and with this evidence and that of the 1725 plan we may safely conclude that in 1539 no existing buildings were found to shelter the workmen. They would therefore have had to find lodging at Folkestone or Hythe, respectively two and three miles distant; but some temporary provision was made for them near their work, for we have mention in the first month of "hales," or tents, and a "pavilion;" the entries are so interesting that they must be fully given:—

*"For carriages and mending of two hales and a pavilion from London to Sandgate, and for the reparacions of the same: Paid to the Sergeant of the Tents for the mending of two hales and a pavilion, 14*s.* Paid for three baskets to carry the stakes and other stuff from the said place, 15*d.* Paid for carriage of hales and pavilion wth. the timber from the Sergeant's house to the ship at London, 20*d.* Paid for carriage of hales and pavilion from London to Sandgate, 7*s.* Paid for bringing a land [by land] of the said hales and pavilion from Dover to Folkestone, 2*s.* 4*d.* Paid for 10 ells of canvas for mending of the pavilion, price of ell 5*d.*, 4*s.* 2*d.* Paid more for 7 ells of canvas for reparacions of the said hales at 5*d.* the ell, 2*s.* 6*d.*"* Afterwards other repairs of the canvas appear in the accounts, and in addition to the tents a "lodge" was built at the quarry, the men occupying it being called "lodge men." We read also of the inn (hoops for the "inne," and a new bolt for the "iyn," in the eighth and eleventh months), and as the word had then a wider meaning than now, it was probably applied to the

lodge or some other temporary erection. In the second month were purchased "rushes for the hale," as bedding perhaps, and early in December, as the winter drew on, there is the cost of thatching with broom "the house at the quarry."

The Work resumed and finished 1540.—The building of the Castle had been suspended on the eve of St. Thomas the Apostle (20 December 1539), and it was resumed on the 12th January 1540. A change of administration was then made, or rather this seems to have had effect during the tenth month, which comprised the fourteen days of December before the holidays, and fourteen days of January ending on the 25th. Thomas Cockes disappears as Commissioner, and his late colleague, Richard Keys, is associated in the Commission, as Paymaster, with Reinold Scott, Esq., who has now the chief charge as "Surveyor" or "Comptroller." Reinold or Reginald Scott was of Scott's Hall in Smeeth; on the completion of the Castle, or perhaps a little earlier, he was knighted, and in the next year, 1541, he became Sheriff of Kent.

During the midwinter month, December-January, of course little work could be done; 5 masons were employed in preparing stone, 7 carpenters or sawyers were kept at work, and 14 labourers were employed in the quarry; only £16 1s. 4d. was spent. The accounts of the next month show an increase in the number of men, but they made only short time; in the twelfth month, ending March 21, there was further advance, and the labour and expenditure increased until midsummer was reached. The fifteenth month, ending June 12, showed the largest pay-sheet; 900 men had been employed, and £518 spent. Deducting from the total of 900 for intermittent labour, the daily average was about 630 men; masons of various classes employed either on the building or in the quarry numbered 189; of carpenters and sawyers there were 66; lime-burners, 13; labourers, 319; carters of stone from the quarry, 36; overseers and clerks, 7. This was a strong force to be employed on a building of such moderate size, and consequently the advance was rapid. After midsummer the numbers decrease, and in the accounts of each month onwards the approach to completion is more and more evident.

In the seventeenth month preparation was made for crowning the edifice, the vanes appear, eight of them figure in the account at 5s. apiece, and "the great vane" cost 10s.; painting and gilding are provided for; the "go-jons" (*gudgeons*) for the draw-bridge are prepared; the lantern is being completed; 13s. 4d., a large price, is paid for the lock of "the utter gate;" and the guns are fixed. In the eighteenth month, in addition to paviors, plumbers, and calkers, who were at work in the previous month, we have now the painters; and the heading of the nineteenth and last month's account thus refers to the completion of the building: "Payments made fully by Richard Keys, Esquire, Paymaster of the King's works of his Castle of Sandgate in the county of Kent, in the presence and by the surveying and oversight of Reynold Scott, Esquire, surveyor of the books of the said work, for the finishing,

mending, and making of an end of the same Castle. That is to say for making of certain doors, windows for the lantern, platforms of timber and boards, and for paving of three rooms hired by great [*fixed price*]. Also certain hard-hewers for to make holes for bolts, hooks, and bars for windows; also making of gutters with other necessities. Also certain labourers to make clean the countermures and to bear out the rubbish. Also certain painters hired by the day to paint places necessary for the said Castle, by the space of one whole month, that is to say from the 5th day of September unto the 2nd day of October."

We will now gather the information afforded by the ledger in relation to each class of work executed.

The Stone.—Reference has already been made to the quarry; clearly it was near the Castle, though the exact position can scarcely now be defined. On the plan of 1725, before referred to, two quarries are marked, one of them 600 yards from the Castle towards Hythe, the other 900 yards distant towards Folkestone; they are on the shore apparently at low-water-mark, an awkward place for getting stone. Yet that such was the position is indicated in the accounts. In the first month "scapplemen and rockbreakers" are "breaking the rocks and carrying them *from the sea*;" in the third month the "labourers pertaining to the rocks" are engaged "in carrying of stone, not only in lading of carts but also wading in the water for to lade the *boats*, giving attendance to the *tides*, and waiting on the carts;" and in the same account appears the hire of boats "to carry stone into the King's Castle." The boats seem to have been laden with the stone, and, as the tide rose, they were floated to the building. Lyon's *Hist. of Dover* (1813), ii., 185, mentions a certain fisherman named Young, who in 1536, a few years earlier than the building of Sandgate Castle, was rewarded by the King with a pension, for inventing a method of raising and transporting stone by tide-floated boats. At Sandgate, however, the boats do not seem to have answered, for they are mentioned in but one account, afterwards carts only were used.

It is clearly evident from the accounts that "the quarry," often mentioned, continued to be the hard limestone rocks by the seaside. In the fourth and fifth months we find again the "labourers pertaining to the rocks carrying of stone, lading of carts, and giving attendance to the tides;" in the sixth month the beach is being cast, in order probably to get at the rock beneath; the same occurs in the twelfth month, and in the thirteenth month's account the labourers are still "working at the rocks, carrying up stone from the water side for the edifying of the King's Castle." Thus throughout we find certainly that the rough hard stone for the castle walls was got from the rocks by the seaside, and though it cannot be said that the quarry was either of those marked on a map made nearly two centuries later, yet the plan of 1725 is evidence that in the reign of George I. building material was obtained from a quarry similarly situated to that used in the reign of Henry VIII.

But the Kentish shore did not provide all the material for the

fort; much of the stone was of foreign origin, and had come, three centuries before, from that country against a possible attack from which it might now serve. It was in fact second-hand, and came to Sandgate from the lately dismantled priories of St. Radegund, Horton, and Christ Church, Canterbury; in the ledger it is called "*cane stone*," easily recognized as Caen stone. The total number of loads thus obtained—the load being reckoned as a ton weight—was 459, of which more than half, *viz.*, 237, came from St. Radegunds, 90 from Horton, 32 from Canterbury, 33 from Hythe, 57 from places in the Hundreds of Bircholt Franchise, Hayne, Stowting, and Street, and 10 came by sea from Sandwich. At St. Radegunds "the farmer" received for the stone 8*d.* a load; at Horton nothing was paid; at Canterbury the Prior of Christ Church twice received 4*s.* 8*d.* a ton, and afterwards "Mr. Byngham" had 3*s.*, but it is not said that the stone came from the same site; Michael Carver of Hythe was paid 5*s.* a ton for stone delivered at the Castle.

The Caen stone was doubtless used in the jambs, lintels, parapets, and embrasures, and wherever the easily-worked freestone was preferable to the obdurate "*Kentish Rag*." Two special purchases of stone we find in the twelfth month, *viz.*, six gravestones for the covering of six doors, 20*s.* (the place whence they came is not named), and a fair mantel stone for a chimney 10*s.*

The Masons.—These are variously designated according to the work in which they were engaged. The "*freemasons*" employed in "*barking*" [*knocking off the surface*], shaping, and dressing the freestone; the hard-hewers (also called lodgemen from living in the lodge built for them at the quarry) got, broke, and shaped the hard limestone; the scapplers roughly dressed the stone with scappling hammers; the layers or builders; and the setters, who, from there being only two or three, I suppose to have had the setting of the lines for the masonry, and the duty of keeping it in proper form. Robert Lynsted the warden or master-mason—who signs each month's account—gets 10*d.* a day; Nicholas Rychard, the under-warden, and the setters, have 8*d.* a day; the others are paid by the week at 3*s.* 8*d.*, or by the day at 8*d.* and 7*d.*; and there were "*prentices*" at 6*d.* or 5*d.* a day; all these could make extra time at 1*d.* or $\frac{1}{2}$ *d.* an hour, but we do not discover the number of hours reckoned in a day's work.

Masons found within a circuit of fourteen miles were not sufficient; they had to be brought from the distant "*west country*" of Somersetshire and Gloucestershire. In the second month, 43 masons, there "*pressed*," received a bounty of 4*s.* a man, being 6*d.* for every score of miles they had travelled to reach Sandgate; in the following month, June 1539, Thomas Busshe, Clerk of the Ledger, travelling with the same object, enlisted 54 masons; and again in March 1540 a similar journey was made by Richard Tayler, with the result of procuring 71 men in the West and 43 men nearer home. The itinerary is interesting and will be quoted afterwards with the officers' expenses.

Bricks.—About 147,000 were conveyed to the Castle, the price

being generally 4s. 4d. per 1000; the cost of transport, 2d. per mile per load of 500, was additional; the distance sometimes being, as from Wye, 13 miles. The largest number came from Elham, and Clavertigh in Elham, 7 miles distant; some came from Canterbury and "Chartam Court beside Canterbury," reckoned as 12 miles off; some were bought of "Mr. Bois of Denton;" other loads came from Waldershare and "Tynstone;" the Hundreds of Stowting, Folkestone, Longbridge, and Hythe produced small quantities; and 7000 came by water from Rye.

Bricklayers.—Bricklayers were at work in the sixth month (August—September), numbering 84, and 19 prentices; but I rather doubt whether bricklayers were not also masons; there are but 15 in the seventh month, 13 in the eighth, and none later.

Tiles.—44,000 appear to have been used, all from the Hundred of Wye, except 6000 from that of Bircholt Barony; the price was 4s. per thousand. Corner tiles at 13d. per hundred came from the same places. In the last month 200 paving tiles were brought from East Langdon beyond Dover, 10 miles distant.

Lime.—During the first two months the lime came from St. Radegunds, where a kiln had been made "to burn lime in, out of the main chalk;" fuel was obtained from the neighbouring woods, and there is an account for 46 loads "pertaining to my Lord of Canterbury at St. Radegunds." But apparently the distance to Sandgate—six miles—was found too great, for this supply ceased after the second month; 166 loads of lime seem to have been brought thence. In the meantime "the King's kiln at Swetton," his manor in Cheriton parish, had been made, and thence in future came the chief supply of lime; it produced, as nearly as I can ascertain 949 loads, or rather more than half the quantity used; its distance from the rising Castle was between two and three miles. The fuel was chiefly wood from Lyminge Park, Densall Minnis and Densall Bushes, Swingfield Forstall, Poulton, Northcourt, Stockham Bushes, Coppyns Rout, Terlingham, and Orgrove in the manor of Folkestone, places for the most part still known. About 1200 loads of wood were used in Swetton kiln, and about 54 tons of coal; generally 15 limeburners were employed, at 6d. or 7d. a day. Lime was also brought from kilns at Alkam, Swanton, Elham, Postling, and places in the Hundreds of Hayne, Stowting, Bridge, and Folkestone; that at Folkestone is called "the limekiln *above* [and *at*] St. Eanswith's Chapel," a position seemingly near the parish church, but now difficult to identify. The total quantity of lime used at Sandgate Castle was, as well as can be gathered from the ledger, 1829 loads.

Coal or Sea Coal ("See Coole") makes its appearance in the second month (April—May 1539), and was brought to Hythe in two ships "*The Nycolas of Sowolde*" and "*The John of Downwithe*;" Southwold and Dunwich are both ports on the Suffolk coast, but the ships hailing thence must have got the coal elsewhere. Again, in the next month, coal is bought of John Marcoll of *Sowhold*. The total quantity unshipped at Hythe and thence brought by boats to

Sandgate was 96 chaldrons. The chaldron, a varying and therefore ambiguous "dry-measure," is now at London taken to equal $25\frac{1}{2}$ cwt., and the result of my own investigation is to put it (for 1539) at nearly 23 cwt. Thus the whole quantity purchased I calculate to have been about 110 tons. From Hythe the coal was transported by boats to Sandgate, and thence 54 tons were carted to the lime-kiln at Swetton, while 56 tons were retained at Sandgate for the use of the forge, *etc.* The price paid at Hythe was 6s. 8d. a chaldron = 5s. 10d. a ton.

Timber.—This material has a special interest on account of the many places named in connection with its supply; it is surprising to find that it was necessary to go so far for it, in some instances even fourteen miles; "the Weald" certainly was not nearer than eight miles from Sandgate, but there were woods at less distance. In the accounts there is mention of oak, ash, and elm; of beech we do not hear. The timber used in the building was as nearly as I can gather 979 loads or tons, the ton or load being taken to measure 50 cubic feet, as is yet the practice, and the bulk of it, doubtless, was oak. The ash, of which I find 46 loads, appears to have been used entirely for barrows and helms of tools; it came chiefly from Hurst and "Roclands" in the parish of Street. Of elm in planks but little was used.

Some items of the timber supply, noting occasionally the cost, follow; the carriage was 2d. *per* mile *per* load:

Oak.—Carriage of 36 tons [*or loads*] of the King's timber for his works at Sandgate, from Horton wood unto the sawstage, 12s. 4d.—Hewed in Oxleys wood at Horton wood, beside the late Priory of Horton, 10 oaks containing 26 tons, price the hewing of every ton 10d. Sm. 21s. 8d.—Timber hewed in the parish of Horton, 25 great trees felled and hewed in Oxleys wood, containing 38 tons; and out of the same wood 30 small trees containing 14 tons, price the ton 12d. Sm. 52s.—Felled in Master Scott's wood called "Comebe Woode" 7 trees containing 19 tons, Sm. 19s.—For the hewing of 10 oaks in Mostock Wood, to William Knight of Sellinge, 28 tons, sm. 28s.—71 Oaks from "Bonnings Hoths," £4 2s. 4d., and 36 oaks from "Hygh Fryght" or "Fryht" £3 13s. 9d., both woods in the parish of Great Chart, price of the oaks from 1s. to 2s., and the tops of same from 2d. to 4d.—Carriage of 47 loads of plank and board from same places, 13 miles, at 2d the mile or 2s. 2d. the load. Sm. £5 1s. 10d.—Timber from Mr. Darrell's and Mr. Hesnes' woods by the Hundred of Chart, 4 loads.—Timber from Sarles' land called Nacolt by the Hundred of Longbridge, 10 miles, 24 loads.—Paid to Alexand. Jorwood for 40 trees taken upon the ground of Thomas Sarles the younger, which deceased late of Wye, at 2s. the tree. Sm. 80s.—Timber from John Wally's land at Bethersden, 14 miles, 13 loads.—To Andrew Mongeham in Harst [*Hurst*] wood for hewing of 30 oaks containing 38 tons, price the ton 12d. Sm. 38s.—To Mr. Raynolde Scott and Mr. Shelley for 37 oaks from Hurst wood, 2s. the oak. Sm. £3 14s.—Hewing of 5 tons 39 foot of timber in Master Selleng's wood

from "Tylhast" [or "Tyle Host" in Hundred of Newchurch], 50 foot the ton, price the ton hewing 10*d*.—Hewing 21½ tons of timber at "Rowstokks" [or "*Rowse Stocks*," now *Rough Stocks*, in *Ruckinge*], William Drew's land and John Drew's wood, and "Maydens Way" in Hundred of Newchurch [10 miles cartage].—To William Webb of Warehorne for timber, 48 tons 18 feet ready squared at 2*s*. the ton. Sm. £4 6*s*. [12 miles cartage].—Timber and plank out of Cornewall's land, Hundred of Blackbourn, 14 miles, 220 feet, 2*s*. 4*d*. the load of 50 feet.—Timber from Boddenden wood in the parish of Woodchurch, carriage to Sandgate 14 miles, 21 loads.—To Mr. Thomas Harlakenden of Woodchurch, for 30 oaks at 2*s*. the oak. Sm. £3.—Also oaks taken upon the lands of Sir William Kempe, Edward Phylyps of Thenderden [*Tenterden*], John Boll of Warehorne, John Drew of Rockenge [*Ruckinge*], John Cop of Blessyngton [*Bilsington*], and upon land sometime the prior's of Crychyrche [*Christ Church*] in Canterbury. To John Marble, carpenter, for felling and hewing of 56 trees at 5*d*. the tree. Sm. 23*s*. 4*d*.

Ash.—To "Bertylmewe Goddyn of Powltyu" [*Poulton*], for 8 loads of "Aschyn tymbir" spent in making of hand-barrows, helves for tools and mortar-beaters and other necessities, at 2*s*. the load with carriage. Sm. 6*s*.—Carriage of "Ashe Tymber" from St. Radegunds to Sandgate [6 miles], 4 loads at 12*d*.; paid for the ash 4*s*.—"Ashe" from Horton 6 loads at 10*d*. and 10*d*. carriage.—Carriage of "Asche Timber" from "Harste" [*Hurst*] Wood to Sandgate, 6 miles, 5 loads at 12*d*. the load, Sm. 5*s*., and to Mr. Scott for the said 5 loads 2*s*. 6*d*.—Carriage of "assche tymbre" from Cheriton to Sandgate, for making helves for sledges and hammers, 2 loads at 4*d*. Paid for said wood at 16*d*. the load.—Paid for felling 12 loads of "asshe timbir" in Rocland in the parish of Street, price the load 2*d*.

Elm.—To Stephen Ladde of Lyminge for 400 "elm planche borde" of him bought and employed in the King's use at 2*s*. the 100. Sm. 8*s*.—Paid Master Nethersole of Dover for two loads of "elme" for scaffolding, 5*s*.—Carriage of "elmen tymbre" from Selyng Hort of Hartes land, 6 miles, 2 loads at 12*d*.

Poles for scaffolding, amounting to 146 loads, came chiefly from the vicinity of Horton Priory, the carriage 5 miles. 20 loads—6*d*. a load, 2*d*. felling and 6*d*. carriage—were brought from "Sandlygs," probably Sandling, and "Brock Hill" 3 miles distant; 16 loads came from the Bishop of Canterbury's wood in the parish of Brabourne, 7 miles, and 28 loads from Brabourne Pound; 10*s*. for 6 loads from the Hundred of Bewsborough were paid to John Lushyngton and one Horne and Robert Nethersole of Dover.

Wattles were made use of, but in what manner does not appear; possibly in "wattle and dab" party-walls. Some of the entries follow: Provisions made for "watls" at "Lyckwood Oke in Ovyngstone Wood," 6 dozen there and 6 dozen in Bayls Wood.—Paid to Andrew Joncok and Wllyam. Turroll of Elham for 10 dozen of "watls," price the dozen 10*d*.—Paid to 3 men for felling

of an acre of wood in Assholt Wood [*Hundred of Folkestone*] for "wattls," 4s. 4d.—Two acres of wood felled to make "wattyls" within the parish of Newton [*Newington*], price the acre 15s., and for cutting down of the said two acres 4s. 4d. the acre. Sm. 38s. 8d.—"Wats" made at Rayneden [*Raindean*], Cristoffer Wyddon for making of 16 dozen "wats" at 16d. the dozen. Sm. 21s. 4d.—To same for felling of 2 acres of wood at Rayneden at 3s. 4d. the acre. Sm. 6s. 8d.—About 120 dozen seem to have been used, of which a third came from Raindean, carriage 4 miles.

Wainscot.—There is repeated mention of wainscot, written "wenscotts" and "waynescotts," etc. Thirty pieces are bought of James à Court of Hothfield, and 200 pieces, costing £11 6s. 8d., come from London by ship to Dover Wyck, and thence to Sandgate. I find in all 258 pieces, costing with carriage £15 7s. 6d.; the price generally 14d. the piece, of which, however, I do not find the measurement.

Carpenters.—The work of the carpenters is described as hewing and squaring of timber, rearing building, framing of timber, making of wheelbarrows, handbarrows, bosses [*short troughs for mortar*], hods, and mortar tubs, helving mattocks, pickaxes, and hammers; and in the last month John Pallmer, the master-carpenter, who has witnessed to the correctness of the accounts by signing every page of them, takes work "by the great," i.e. at the fixed sum of £4 for the making of doors, windows, and other necessities, and has 12s. besides for making a "portall." The carpenters were not in force until the third month, when their number was 22, which increased to 33 in the fifth; the strongest muster was 40, with 10 apprentices, in the fifteenth month; their wage was 8d. and 7d. *per diem*; Pallmer the master or warden had 10d. and Richard Smyth the under-warden, 9d. each day.

Sawyers vary in number from 8 to 20, their daily wage being 7d. They are mentioned in the third month's account as sawing and cutting timber boards for the frames, and planks for the stairs going up to the Castle walls, and for wheelbarrows, hods, etc. Besides the sawstages at Sandgate there were others in Harlaken-den's, Phillypps', and Hygh Fryght woods, where planks were sawn before being carted to Sandgate.

Labourers.—These were engaged in digging and casting beach or "prebylls," in carrying water and slacking lime, making mortar, carrying it in bosses and stone in handbarrows to the masons, in moving and carrying timber and assisting the sawyers and carpenters, in working at the quarry and loading the carts there. Some of the labourers at the quarry were called "slegemen," their work being to "break the rocks with great sledges, to rear the great stones with iron crows," and in short to get the stone for the hardhewers who prepared it for the masons. There were also "minders and diggers of cleaves," whose occupation was to search out and follow the clefts or fissures in the rocks, and "to dig out the myghthe" or rubbish, so that the masses of stone might be got at. In the description of the operations it is clearly evident how arduous was

the labour of quarrying without gunpowder, which is not once mentioned in the accounts.

The best class of labourers, such as the sledgemen and minders, had 6*d.* a day, the others 5*d.*, and like the masons they were paid for extra hours. The greatest number employed was 319 in the fifteenth month (May—June 1540), of which number 117 worked in the quarry.

Carts.—Unlike other words written variously throughout the ledger, carts are uniformly “courts,” an indication perhaps of local pronunciation at the time. It is not clearly gathered of what the ordinary cart and its team consisted; for finding those working between the Castle and the quarry indifferently termed “courts” and “great courts,” and reading in the first month’s accounts of “great courts with six beestis” bringing lime from St. Radegunds (the only instance in which the team is defined), we ask if six oxen formed the usual team of carts, or of exceptionally large carts only? As the recognized load, one ton, was not generally exceeded, I am inclined to think, even mindful of rough roads or no roads, that a pair of oxen would have sufficed for the ton load. Horses evidently were used only for riding.

Every month during the progress of the work, a large number of carts were hired to bring the stone from the quarry, and to convey other materials. The greatest number was 110 in the fourteenth month (April—May 1540), but these did not work all the four weeks, a certain number worked and were then relieved, 40 being the daily average. The carts were procured from all the country round; for instance in the thirteenth month they came from places in the Hundreds of Folkestone, Street, Bircholt Franchise, Chart, Calehill, Wye, and the Liberty of Ashford; and in the other direction from the Hundreds of Hayne, Worth, St. Martin’s, Longport, Aloes Bridge, and the towns of Old Romney, New Romney, and Lydd. To whatever place the carts belonged, the hire for those working at Sandgate was 16*d.* a day; a number also were engaged in the transport of timber and lime, paid, as has been said, at the rate of 2*d.* a mile for the ton load.

Sand and Pebble.—The carts at Sandgate in addition to conveying stone from the quarry had also to carry “Sande Pebyll” or “Sande and Prebill.” The sand was of course for the mortar, the pebbles were probably used with the sand for concrete, or if large for filling up the bulk of masonry.

Ironwork and Tools.—Much interest attaches to the monthly accounts of the “Ironwork made and delivered by Richard Malyce, smith [for the greater part of the time] of the King’s works at Sandgate,” because of the particulars they afford in regard to the tools, and their mention of parts and fixtures of the Castle. The smith bought the iron and steel from the King at cost price, and had a price per lb., 2*d.* or 2½*d.* according to workmanship, for the tools or articles supplied by him; his monthly accounts also comprise his charges for the necessary repair of tools.

Of iron—written “yerne,” “yeron,” and “yron”—I find the

purchase of about $4\frac{1}{2}$ tons; and of 11 sheaves and 9 burdens or bundles of steel, the equivalent of which in modern weight I cannot give; the sheaf is priced at 10*d.* and 8*d.*, the bundle or burden at 4*s.*, but the accounts only shew 44*s.* spent on steel. For the price of iron we have a few entries under the head of "empcions" or purchases, thus: In the first month, "To Master Thomson of Dover Town for 5 cwt. and 26 lbs. of iron . . . at 6*s.* 8*d.* the cwt. [=£6 13*s.* 4*d.* per ton];" in the fifth month we find 3 tons and 7 score lbs. bought of Thomas Bacon, salter, of London, for £18 6*s.* 8*d.* [=£6 per ton]; and there is another purchase the same month of 1 ton from Mr. Ager (place not stated) for £7 6*s.* 8*d.*, a much higher price than the preceding.

I will now class together some examples of tools and ironwork; they are chiefly gathered from the smith's monthly accounts, but some are found as "empcions" or purchases. Shovels and spades were bought at various places as the following entries show: To John Morton of Ashford 6 "schodde schovylys wth. stele" [*or shod with steel*] at 6*d.* To Roberd Wylkyns of London for 2 dozen of "scholvys" at 4*d.* To same for a dozen steeled spades at 6*d.* apiece. To Myghell Abel, smith of Canterbury, for 5 dozen and 4 shovels and spades, shod and steeled, at 6*d.* apiece. To Thomas Valentyne of Hythe for 2 dozen shovels and spades at 6*d.* apiece. To Thomas Hamon of Folkestone for 4 shovels *unshod* 2*d.* apiece. Trees for 8 "shovells" 1*s.* 8*d.* This and the following from the smith's accounts: 4 digging mattocks weighing [*together*] 19 lbs. at $2\frac{1}{2}$ *d.* the lb. Sm. 3*s.* 11 $\frac{1}{2}$ *d.* 4 mattocks for digging of stone at the quarry, 29 lbs. A mattock 8 lbs. 3 great pickaxes, 54 lbs. at $2\frac{1}{2}$ *d.* the lb. 2 pickaxes 12 lbs. A pickaxe for the paviors 4 lbs. To Thomas Hamon of Folkestone for 2 crows of iron for breaking and digging out of rocks, $36\frac{1}{2}$ lbs. at $1\frac{1}{2}$ *d.* the lb. Sm. 4*s.* 6*d.* 4 crows of iron, 75 lbs. 2 jacks, $7\frac{1}{2}$ lbs. at 2*d.* the lb. A vice to bring great iron out of the fire in the smith's forge, 13 lbs. at 2*d.* A great sledge [*hammer*] 20 lbs. at $2\frac{1}{2}$ *d.* 6 steeled sledges, 80 lbs. [$13\frac{1}{2}$ lbs. each]. 2 steeled hammers for breaking rocks 18 lbs. [*9 lbs. each*]. 5 hammers 22 lbs. [$4\frac{2}{3}$ lbs. each]. 9 laying hammers 36 lbs. [*4 lbs. each*]. 21 hammers 76 lbs. [$3\frac{1}{2}$ lbs. each]. 2 "skales" to cleave stone 7 lbs. 3 wedges to cleave wood 30 lbs. at $1\frac{1}{2}$ *d.* Wedges 18 lbs. at $1\frac{1}{2}$ *d.* Small wedges for to put in hewers' hammers $9\frac{1}{2}$ lbs. A mason's axe 5 lbs. at $2\frac{1}{2}$ *d.* 2 brick axes 10 lbs. An axe for the plumber 1*s.* 3*d.* 4 great bills to hew chalk 15 lbs. 2 small bills $5\frac{1}{2}$ lbs. 4 bills for the gunners to pick stones with, 2*s.* 2*d.* 2 steeled punches 4 lbs. at $2\frac{1}{2}$ *d.* 7 masons' points 15 lbs. 12 "poynts and chesellys" [*points and chisels*] to work hard stone 4*d.* apiece. Sm. 4*s.* 2 dozen points and the fells 48 lbs. A mason's "checell" 2 lbs. "A hare chesel for the gones" [*guns*] 4 lbs. 6 masons' irons 15 lbs. "A payre of pynsers" 3 lbs. A "shave" and 2 scappling hooks to draw plank with for the carpenters. 2 iron rakes 16*d.* 2 dozen "spykyns" [*spikes*] for the plumber 10 lbs. at 2*d.* 8 spikes 3 lbs. 26 spikes 5 lbs. 30 great spikes 7 lbs. 3 bars 18 lbs. at 2*d.* 3 bars for a

window 34 lbs. 3 little bars for a window $12\frac{1}{2}$ lbs. 32 bars for the lantern 254 lbs. 5 bars for port holes 25 lbs. 6 great bars for "loops" [*? loop-holes*] 217 lbs. A great bar to lay across the mantel of the Deputy's chamber 73 lbs. A bar of iron for the "kechyn," to hang the hangers on, 58 lbs. 2 great bars for the "kechyn," to hang pots on, 28 lbs. 4 bars for the half-moon 17 lbs. 2 hoops for the "Inne" [*? the lodge at the quarry*] 6 lbs. 2 hoops and 2 for the drawbridge 45 lbs. Hoops, staples, and bolts for the "Inne" 30 lbs. 21 pair of hooks for the "lopes" [*? loop-holes*] 85 lbs. Great hooks for the Castle 44 lbs. A great hook for the castle door 26 lbs. 3 hooks for castle doors $24\frac{1}{2}$ lbs. 2 pair of hooks for the falling door 51 lbs. 3 hooks of iron to bear a "sestorne" [*cistern*] of lead 15 lbs. A pair of "rydes" 12 lbs. at 2d. [*"rydes" = hinges which ride on the hooks*]. 2 pairs of "ryddes" 4 lbs. 34 pairs of rides and hooks 6 cwt. 53 lbs. [=725 lbs. = $21\frac{1}{2}$ lbs. the pair] at 2d. the lb. Sm. £6 0s. 10d. 19 pair of "rydes" for the loop-holes 163 lbs. [$8\frac{1}{2}$ lbs. the pair]. 10 pair of great "rydes" for the great doors 354 lbs. [$35\frac{3}{4}$ lbs. the pair]. A great "ryde" 38 lbs. 2 great "ryds" for the castle gate 81 lbs. [$40\frac{1}{2}$ lbs. each] at 2d. the lb. 3 "ryddys" for the great gate 2 cwt. 45 lbs. [269 lbs. = $89\frac{3}{4}$ lbs. each] at 4d. the lb. Sm. £4 9s. 8d. A "charnell" for the wicket 27 lbs. at 2d. [*charnell is another word for hinge, of form different to the ride*]. A pair of charnels 10d. Charnels and a lock for the great chest 6s. 8d. 2 uprights for a window in the Castle "tynned" [*? coated with tin*] 11 lbs. at $2\frac{1}{2}$ d. 8 uprights and 4 stay bars for windows 200 lbs. at 2d. Lockets and uprights 256 lbs. Lockets and bars for windows 182 lbs. 6 lockets for windows 213 lbs. Bolts for small windows in the round towers 68 lbs. 6 bolts for the great gate and 2 doors in the ditch 62 lbs. 8 pair of clasps and staples for the lantern 44 lbs. 16 clasps for the lantern and 32 staples 16 lbs. 3 staples for the "gonnes" [*guns*] 29 lbs. 8 lbs. of iron that was laid upon the "guns." "Lynche pyns and ryvetts" $38\frac{1}{2}$ lbs. 8 "lying pynnes for the gonnes" 12 lbs. at 2d. 4 clasps for the bell 8 lbs. 2 "go-jons" [*gudgeons*] for the drawbridge 34 lbs. 2 new chains for the drawbridge 1 cwt. 52 lbs. at 4d. the lb. Sm. 54s. 8d. 3 "stalys" [*?*] 5 lbs. 2 "rosses" for doors 1 cwt. 4 lbs. 2d. the lb. Sm. 19s. 4d. A sweep for a gate 68 lbs. 3 doz. "ryngles" for the doors 8s. the doz. 12 "ryngles" for the doors at 8d. the "rengle." 380 "roves" [*discs of iron upon which the ends of nails were clinched, in this instance apparently studding the castle gate*] 162 lbs. at 3d. Roves 86 lbs. at 2d. Latches and catches for 6 doors 16d. apiece. A lock for the store house door 6d. A lock and key for the store house of the westernmen [*masons from the West*] 12d. A lock and key for the store house for the limekiln above St. Eanswith's Chapel 6d. 6 locks for the King's Castle 3s. 9d. 2 plate locks for the Castle 25s. 3 stock locks for the Castle 10s. 8d. 14 stock locks at 2s. One great stock lock 6s. 8d. A lock for the "utter gate" 13s. 4d. A lock for a falling door 20d. A "skomer" [*melting pan*] for the plumber 7 lbs. A skomer for the plumbers

10 lbs. at 2*d*. A knife for the plumber 4*d*. A casement 5*s*. 5 casements 25*s*. 2 chambers for the "portyngale base" [*small gun*] 16 lbs. at 2*d*. Iron for "gostook" [?], the which the Alman [*the German engineer, Von Hashenperg*] advised, 132½ lbs. A "barthe" for the chimney 10 lbs. A sweep 44 lbs. Crampets for the sweepes and staples 26 lbs. A sweep for a gate 68 lbs. 3 grates for the sinks 41 lbs. at 2*d*. A pair of tongs, a fire pan, a rake with 2 andirons 37 lbs. at 2½*d*. Sm. 7*s*. 8½*d*. A frying pan 4 lbs. 6 "takke-hooks for flesshe." 8 vanes at 5*s*. The great vane 10*s*.

Repairs.—The smith in addition to supplying tools and the requisites for the Castle had, necessarily, to keep the tools in repair; his monthly accounts—the highest of which amounts to £44 14*s*. 4*d*.—are largely composed of items such as the following: Helving of hammers and axes; trees [*handles*] for shovels; mending of shovels; trees and rydds [*hinges*] for the plumbers' pan 5*s*.; sharpening of 900 masons' irons, or points, at 10*d*. the 100, Sm. 7*s*. 6*d*.; battering [*i.e. forging*] of 2 sledges [*great hammers*] 2*s*.; battering of 5 score and 8 hammers at 2*d*., Sm. 18*s*.; battering of masons' axes 2*d*. each; steeling* 39 hammers at 6*d*. each. Steeling of 15 masons' axes 3*s*. 9*d*.; steeling 33 masons' irons or points at 3*d*. each; "shettyng of a twybble" [*sheeting, i.e. steeling of a twibill or mattock, which had one end like an axe, the other like an adze*] 4*d*.; "shettyng" of a great bar, 4*d*.; mending of a pair of "cobyrons" [*cob-irons*] 5½ lbs.; mending of 2 iron rakes for the limekiln at St. Eanswiths, 8*d*.; mending of bolts for the ordnance 6*d*.; repairing of the King's Artillery, that is to say 24 "sheff" of arrows at 12*d*. the "sheff," 24*s*.

Nails are so well represented that I accord them a special paragraph; they are generally found as "empcions," or purchases, and were bought in London, at Wye fair, and other places, but the larger kind are supplied by the smith. The following are among the many entries: 200 of "small tacke nayle" 4*d*.; 4 *mil*. [*thousands*] of "sprygg," bought at Hythe, 2*s*. 8*d*.; 2 "some" [?] of "sprygg" 10*s*.; 2 ditto at Wye fair, 11*s*. 4*d*.; 1 ditto at London 6*s*. 8*d*.; the prices following are *per mil*.: threepenny nails 1*s*. 8*d*., 2*s*. 3*d*., and 2*s*. 6*d*.; fourpenny nails (spent in making wheelbarrows, bosses, and mortar tubs) 2*s*. 6*d*. and 2*s*. 8*d*. at London, 2*s*. 10½*d*. at Wye; fivepenny nails 4*s*. 2*d*.; sixpenny nails 5*s*. and at London 2*s*. 8*d*.; eightpenny nails made by the smith for the plumber 4*s*. 9*d*.; single tenpenny nails at London 5*s*., at Wye fair 4*s*.; double tenpenny nails at London 10*s*., at Wye fair 8*s*.; "latesse nayles" 2*s*. 6*d*. *per* 100; rivet nails 3*s*. 4*d*. *per* 100; 50 "great broddes" 6*d*.; 100 "small broddes" 4*d*.; great nails to nail the lead upon the wall 18 lbs. at 2*d*.; 1000 "tyn nayles" [? *tin-coated*] 6*s*. 8*d*. *per* 100, Sm. £3 6*s*. 8*d*.; 500 "great tyn naylys" 285 lbs. at 4*d*., Sm. £4 15*s*.; 500 ditto 252 lbs. at 4*d*., sm.

* This steeling appears to have been not merely tempering, but the welding or combining of steel with softer metal, for in the first month's accounts a bundle of steel is bought and "spent in hardening of hammers," and in the fourth month hammers and points are "battered and steeled with the King's steel."

£4 4s.; "tynne nayles called fyve stroke nayles" 145 lbs. at 8*d.*, Sm. £4 16s. 8*d.*; 427 "tynne nayle" for the castle gate 213 lbs. at 4*d.*, Sm. £3 11s.; 730 great nails for the gate 3½ cwt. and 3 lbs. at 4*d.* the lb., Sm. £6 11s. 8*d.*

Tin.—We have above several instances of "tin nails" which seem to have been used in studding the principal gate or gates; in the smith's account we read also of two "uprights" for a window "tynned;" and as there is a purchase of 79 lbs. of tin at 4*d.* it would seem that the great nails and uprights were coated with the white metal, for appearance sake, or to prevent corrosion.

Brass is mentioned four times: In the seventh month, William Ryve of Canterbury delivers to the clerk of the storehouse and to John Pallmer, master carpenter, 8 pieces of "brasses" for the draw-bridge, weight 2 cwt. 51 lbs. at 3½*d.* the lb., Sm. £4 0s. 2½*d.*; in the eighth month, 2 iron bolts weighing 9 lbs. are made for setting in brasses of the castle gate; in the same month there is the purchase of 4 "shevers" [*? pieces*] of brass weighing 44 lbs. at 3½*d.*; and in the twelfth month, a kettle of brass weighing 6 lbs. at 7*d.* is bought "to temper glue and rosin with."

Lead, Solder, and the Plumbers.—In the third month's account 4 cwt. of lead at 4s. 8*d.* the cwt. is purchased, where is not said; but why should the King have bought the metal when at Horton Priory, which he had seized, he had it near at hand? There was no buying of lead after this month. A record of spoliation is the ledger entry that 13 loads of lead—about 9½ tons—came from the dismantled Priory, carriage, only, paid; part of it was carted all the five or six miles; part to Hythe Haven only, and thence by boat conveyed to Sandgate.

Thomas Hall, the chief plumber, and Stephen his servant, appear in the same third month, and use the lead to "yote" hooks in doors, loop hooks, and windows; for the same purpose they also use "sowder" [*solder*], the price of which is 4*d.* the lb. In the sixth month Thomas Acon—called Serjeant Kon in one account—is serjeant plumber, and is at work with 4 assistants; 24 fadders of lead are cast, weighing nearly 12 cwt., for which the serjeant receives 3s. 3*d.* the fodder. The fodder seems here to have been a piece, neither measurement nor weight, though to-day the term implies 21 cwt. of lead; in these accounts, 8 fadders in one place weigh more than 12 in another. In the seventh month, lead is prepared for three round towers. In the fifteenth month, solder is bought to solder the leads and the joiners' glue-pots. Cisterns of lead are mentioned, and in the eighteenth month lead is cast, and laid for the gate house and counter-mure, and for the lantern, taberts, pipes, and sules; and in the same month as much as 292 lbs. of solder is used or purchased.

We have no further reference to the plumbers' work although during the last four months 3 or 4 were constantly employed; they had generally 7*d.* a day, the "serjeant," when not paid by the piece, had 10*d.* In the last month, they mended with solder "certain places in the lead where it was broken by reason of paving."

Calkers.—There were also at work in the latter months 6 to 8 calkers, who, besides 6*d.* a day, were allowed their meat and drink; in the sixteenth month, there is this entry: paid to "John Brown vyttlar for mete and drynke for the calkers by the space of 12 days at 21*d.* the week." Sm. 19*s.* 6*d.* Tow also appears in the accounts; 40 quarters of tow to calk with, at 5*d.* the quarter, are bought at Hythe, and 190 lbs. at 1*d.* the lb. Red lead is paid for at 2*d.* the lb.

Plasterers.—Seven were at work during the final month; their daily wage being 7*d.*

Laths came from Warehorne, Bromley Green, Ashford, and Canterbury, all 12 or 13 miles distant from Sandgate. The price was 4*d.* to 6*d.* a hundred; the best is called "harte" [*? heart*] lath; 535 hundreds are entered in the accounts.

Hair for plastering. Of this, 615 bushels at 1*d.* were bought, chiefly at Canterbury.

"*Thromes*" [*weavers' waste*] were bought to the amount of 8 lbs. at 1½*d.* from two weavers.

Paviors were employed at a daily wage of 7*d.* during the last three months; their work is not described further than that Thomas Lambert, pavior, is in the last month paid 20*s.* for paving three rooms "by great," *i.e.* fixed price.

Painters.—Three painters are mentioned in the accounts of the last three months; we should like to learn where they applied the many colours named, but the wish is not gratified. The materials and paints are generally, though perhaps not always recognizable, in the old spelling; I give them as found: paynters' oyle, 2*s.* the galonne [*a great price*], whytte leade, redd leade, orkement, sprunse oker, generall, dorry, rossett, blank pln., byse [*blue*], vermylyon, verde-grese, bytnose, Spanysh white, blacke, florey, pyngke, synaplake, sylver [*leaf*] 3*s.* the 100, fyne golde [*leaf*] 6*s.* the 100, with the latter we fancy the castle vanes made resplendent; bought at Canterbury 35 bushels of glover's shreds at 3*d.* "to make size for the painters;" 12 pots 6*d.*

Glazing.—Of this there is mention only in the last account, *viz.*, "payde to the glasyers for glasing of certen wyndowes w'n the castell, 35*s.*"

Empcions [*purchases or disbursements*].—We have already drawn on this account, but there are yet interesting items which I will extract as concisely as possible: To John Swainton of Alkam for carriage from St. Radegunds of 4 loads of wheelbarrows, handbarrows, bosses, hods, and mortar-tubs, 4*s.* To Rychard Panter of Canterbury, smith, a sheaf of steel 10*d.* and a bundle 4*s.* To Thomas Fagg of Buckland for carriage of 2 loads of iron from Canterbury 4*s.* Baskets, generally bought in London (whence the purchases were brought by sea to Sandgate, Dover, or Hythe), for carrying lime, 4*d.* each, small ditto 2½*d.* Crossbanded baskets 5*d.* each. Long ditto 7*d.* Tays for carrying chalk to the limekiln 4*d.* each. Pails 2*d.* and 4*d.* each, and 18*d.* the dozen. Skopetts [*skippet*, a small round wooden vessel with long handle for lading water] 2*d.* each. Forks for handles of bosses, 15*d.* a load.

Sieves 2*d.* and 3*d.* each. A bushel to mete sea-coal 20*d.* 2 "great clystys" [*clists?*] and a round "batt" [*? vat*] and 2 other "clystys" of ash 14*d.* A great tub made of a malmusay [*malmsey*] butt 12*d.* A casket to carry the King's money 4*s.* 2 cocks of 2 cisterns 7*s.* 4*d.* A great rope for the Castle weighing 80 lbs., at 1½*d.* a lb., 10*s.* 2 hand ropes weighing 7½ lbs. at 1½*d.* 66 ropes for scaffolding 15*s.* 4*d.* 40 pieces of scaffold ropes at 2½*d.* A rope for the "gyn" [*engine*, for raising guns] 66 lbs. at 1½*d.* Canvas for the "hale" [*tent*] 10 ells at 5*d.* Lines for the hale and for the works to range them with, 18*d.* A line of 80 fathoms and 10 for to mete the wall of the Castle 18*d.* A line and thread for the pavilion 4*d.* 12 "plombe-rewlys" [*plumb-rules*] to plumb the walls with, at 2*d.* the plumb. 30 "plome rewles" 5*s.* Carriage of 3 doz. "trowells and plombe rewles with squyres" [*squares*] *etc.*, from London to Sandgate 2*s.* 12 squares 3*s.* A "grene stone" [*grindstone*] 2*s.* 4 seams of fine lime and sand at Canterbury 16*d.* To Thomas Edwards of London for "pytche" 53*s.* 4*d.* 2 barrels of pitch at 8*s.* 8*d.* 4 barrels of tar at 4*s.* 4*d.* 20 lbs. glue at 3½*d.* 3 cwt. of "roosen" [*rosin*] 11*s.* 26 lbs. tallow at 1*d.* 20 lbs. of "candell" at 1½*d.* 4 stock brushes 2*s.* 4*d.* 4 hand brushes 1*s.* 6*d.* "Ynke, and papyr" 3*s.* 4*d.* "Papre and ynk" 5*s.* 4 queyers of papir ryall" 2*s.* "A reyme of papyr" 2*s.* 8*d.* 10 "quyers of paper ryall" 5*s.* "Perchement" 4*d.* 9 fardels of "velym" for coverings of the paper books [*probably the original covers of the ledger*] 2*s.* 8*d.* 28 books bought of Thos. Cornell [London] by the great [*fixed price*] 50*s.* A large canvas bag to put books in, 6*d.*

Officers, Clerks, and Expenses.—For the first nine months, Thomas Cocks and Richard Keys were the Commissioners for the work, that is to say from the 30th March until the 7th December 1539. These Commissioners do not sign the accounts which officially emanated from them; every page of the ledger, during the nine months, bears the confirmatory signatures of Stephanus de Hashenperg, *ic.*, William Baker, Mayor [*of Folkestone*], Robert Lynsted, warden [*master-mason*], John Pallmer, carpent. [*master-carpenter*], Edward Inmyth, jurat, Thomas Medley, jurat, John Lambert, clerk of the check, and Thomas Warren, clerk of the call. During the subsequent period so many signatures were not considered necessary.

After the first nine months, and during the other ten, Cocks no longer appears as Commissioner. The ledger does not show his remuneration, nor that of the engineer Von Hashenperg, who perhaps received his pay direct from the King's minister. The salary of Richard Keys appears in the summary on the last page of the ledger. He claimed £110 8*s.*, for 552 days' service, at the rate of 4*s.* *per diem*.

Von Hashenperg, who wrote his name in the Latin form, was a German. As Steven von Hassenperg (and Hashenperg) he is mentioned, as Master of the Works, in the accounts for the repair of the Castle at Carlisle in the year after the completion of Sandgate Castle. (Add. MSS. 6362 f. 3, and 5754 ff. 90—92, the latter reference is to three receipts for salary at 4*s.* a day). The let-

ters, *ic.*, following his name, were a puzzle to me, until interpreted by Mr. Bickley of the MSS. Dept. Brit. Mus., whose willing assistance in reading the old record I desire gratefully to acknowledge. By him the initials are read "*ic.*" for *iconomus*, which the Glossary of Du Cange mentions as in use for *oeconomus*, manager or director. Von Hashenperg is in this ledger twice referred to as "the Alman," and at Carlisle also he was called "Stephen the Almayn." It is not probable that he remained at Sandgate after March 1540, when he ceased to sign the accounts; but his connection with the work seems to have been continued as "the devisor" or designer. In the twelfth month, the master-carpenter and the master-mason go to London "to know the devisor's mind concerning his work in the Castle of Sandgate;" in the thirteenth month and subsequently "the devisor's clerk" is mentioned; and in the eighteenth month, we find certain expenses at Folkestone allowed to "Mr. Stephyn the devisor," the ledger clerk thus avoiding the difficulty of writing the foreign name.

At the beginning of the tenth month, as has been noticed, Reynold Scott, Esq., became Surveyor or Comptroller of the work, while Richard Keys continued to be Paymaster or Accomptant. On the last page of the ledger the Surveyor appears as Sir Reynold Scott, Knight, and is awarded a fee of £50. The accounts of the tenth month are signed by Scott, Von Hashenperg, Pallmer the master-carpenter, and Lynsted the master-mason; after the twelfth month the German's signature drops out, but the other three are continued to the end.

The overseers and clerks figure more numerous in the lists of the first period than in those of the second; but this is owing merely to the transfer of some of their names to the lists of the workmen with whom their duty lay. In the twelfth month and onwards, we find six clerks and one purveyor; the latter, employed from the commencement of the work until its finish, was Thomas Elgar whose duty was to "make provision for timber, lime, carriages, and other necessities for the King's Castle at Sandgate." The six clerks were John Lambert clerk of the check, Thomas Warren clerk of the call, Thomas Busshe clerk of the ledger, Francis Diggs the paymaster's clerk, John Shotford the devisor's clerk, and John Strogull "Mr. Scott's clerk for registering and writing of his books." John Strogull was a witness to Sir Reynold Scott's will, which gave him an annuity of £5. (*Memoirs of Scott Family* by J. R. Scott, 1876, pp. 179, 183). The clerk's pay generally was *8d. per diem*.

The "expenses" of the officers furnish us with a good deal of interesting information, especially in regard to the transport of the money to Sandgate for the monthly payments. I cannot do better than give some of the items under this head *verbatim*.

In the second month, two horse hires from Folkestone to the Downs* for the Alman, at 12*d.* the horse.

* The Downs are mentioned three times in the ledger, it being evident that "the three castles that keep the Downs," *viz.*, those of Walmer, Deal, and Sandown, of which Mr. Elvin has lately given so good an account, were built at the same time as that of Sandgate.

In the third month, Mr. Keys asketh allowance for himself and his three men for riding to Dover for money to pay the workmen and labourers by the space of a day and a night 6s. 8d. To Thomas Busshe for his expenses riding by the space of sixteen days, to press masons out of the West Country at 12d. the day, 16s.

In the fifth month, expense of William Baker of Folkestone, jurat, for certain business concerning the King's great works at Sandgate: A horse hire and for horse meat and man's meat riding to Chartham for trowels 12d.: Two times riding to the Downs to have certain communication with master-comptrollers there concerning the use and custom of freemasons and hard-hewers 2s., etc. Master Keys asketh allowance for riding to the King's Grace for money to Guildford and to Farnham, and there at the King's Grace's pleasure for the space of 23 days for him and his four horses, and for conducting the said money to the King's Castle of Dover, at 6s. 8d. the day, £7 13s. 4d.* Paid to John Colley for his expense for himself and his horse for carrying a letter unto the Lord Privy Seal [*Thomas Cromwell*] being at Grafton [*Grafton Royal, Northants*] by the assignment of Mr. Cocks, the said John being out the space of 11 days, every day 12d., 11s.

In the sixth month, Richard Keys asketh allowance for riding to the King's Grace for money to Grafton, and there at the King's pleasure by the space of 24 days for him and his three horses, and for conducting of the said money to the King's Castle of Dover at 6s. 8d. the day, £8. Carriage of a "gonne" [*gun*] from Dover to the King's Castle at Sandgate 6s.

In the seventh month, Mr. Keys asketh allowance for riding to London to Master Bryan Tuke† for money by the space of 11 days for him and his three horses, and for conducting of the said money unto the King's Castle of Dover at 6s. 8d. the day, £3 13s. 4d.

In the eleventh month, for writing of the commission signed by the King's Grace 3s. 4d. Paid to Cope, my Lord Chancellor's servant for writing and sealing of the commission 9s. 4d. Reynold Scott, Esquire, and Richard Keys, Commissioners, ask allowance for their costs riding for the King's money to the Castle of Dover with six men for one day, expenses 6s. 8d. Expenses by Richard Tayler to press men in the West Country: First, horse-hire from Canterbury to Rochester 12d. Item from Rochester to Gravesend 4d. Item from London to Basingstoke 40 miles 2s. 4d. Item from Basingstoke to Andover 18 miles 12d. Item from Andover to

* The inconvenience, waste of time, and cost of getting money at this bankless period is here exemplified. The paymaster occupies 23 days in getting the cash, and his expenses amount to a sum which to-day would figure as about £70, or about 1½ per cent. of that month's pay.

† A similar journey was made by Mr. Keys in the eighth month. Sir Bryan Tuke had been a Secretary of Cardinal Wolsey; he was afterwards successively a Groom of the Chamber, Master of the Jewel House, and Ambassador to France. His daughter Mary became the second wife of Sir Reynold Scott. *Memorials of the Family of Scott*, p. 184.

Nunney 33 miles 20*d.* Item for the hire of a horse there for the space of six days 2*s.* 4*d.* Item from Nunney to Salisbury, homeward, 12*d.* Item from Salisbury to Andover 10*d.* Item from Andover to Basingstoke 12*d.* Item from Basingstoke to London 40 miles 2*s.* 4*d.* Item from Gravesend to Canterbury 16*d.* Item his expenses by the space of 18 days at 6*d.*, 9*s.* Sm. 24*s.* 2*d.* John Pallmer asketh allowance over and above his wages for going into the Weald to choose timber by the space of 7 days at 4*d.* the day 2*s.* 4*d.*

In the thirteenth month, Master Keys asketh allowance for his charges riding to London and thence to Hampton Court to obtain a warrant of the King's Grace for money for his works at Sandgate, and for the safe conducting of the said money to the said works by the space of 25 days for himself and his three servants with their horses at 5*s.* the day, £6 5*s.*

In the fourteenth month, Nicholas Hunt asketh allowance for himself and his horse for riding into the Downs at the commandment of Master Keys and Master Scott for certain workmen 12*d.* John Colley asketh allowance for going from Sandgate to Rochester with the King's letters 4*s.*, and for 2 horse hire going with the King's prisoners* by the space of 3 days 4*s.* Paid to Thomas Warren for his costs and charges riding to London about the King's business for to buy certain stuff, that is to say nails, rosin, glue, scaffold ropes, with other necessaries for the Castle, for him and his horse by the space of 12 days over and above his wages at 6*d.* the day, 6*s.*, and for riding to Dover at sundry times for to fetch stuff from the ships, and to provide carriage to carry the said stuff to the Castle of Sandgate, 3*s.*

In the fifteenth month, Mr. Keys again goes to the Lord Privy Seal at London for the money, and repeats the journey the next month; and in the eighteenth month, Thomas Warren goes to London at the commandment of Master Scott to help to save-conduct the King's treasure.

In the nineteenth and last month, paid to a poor man whose name is Thomas P'gate, for the hire of certain ground for to lay the King's timber, and also to make pits for sawstages with other necessaries for the space of one year and a half, 20*s.*

The last page of the Ledger.—"The charge of Rycharde Keys, Paymaster of the Castle of Sandgate, £5368, *contra quo* the whole payment of the 2 books [*shown in a summary of the amounts paid in each of the 19 months. The addition is*] £5412 3*s.* 2½*d.* whereof defalk [*abate*] £40 8*s.* for the riding costs of the said accomptant allowed in diverse particularities in the books of parcels because the same is allowed after in a special letter, *etc.* Q. Rem. £5371 15 2½"

The necessary fees of the Paymaster Comptroller, Master Comptroller, and others:—

"The fee of Rycharde Keys, Accomptant, being Paymaster, *etc.*, from the 30th day of March Anno

* Query workmen who had misconducted themselves.

30 ^{mo} unto the second day of October Anno 32 ^{do} by the space of 552 days both days included at 4s. the day.....	110	8	0
The expenses of the same Rycharde riding 8 several times, taking for every time so riding 17s. as in the like cases is allowed unto Anthony Archer, Paymaster of the work of Dover	6	16	0
The fee of Sr. Reynolde Scott, Knight, Comptroller of the said work from the 7th day of December Anno 31 ^{mo} unto the said 2 nd day of October Anno 32 ^{do} by the space of 300 days inclusive, after the rate of 3s. 4d. the day	50	0	0
The fee of Thomas Rolffe, Auditor.....	5	0	0
	<u>£5543</u>	<u>19</u>	<u>2$\frac{3}{4}$</u>

[5543 19 2 $\frac{3}{4}$
5368 0 0]

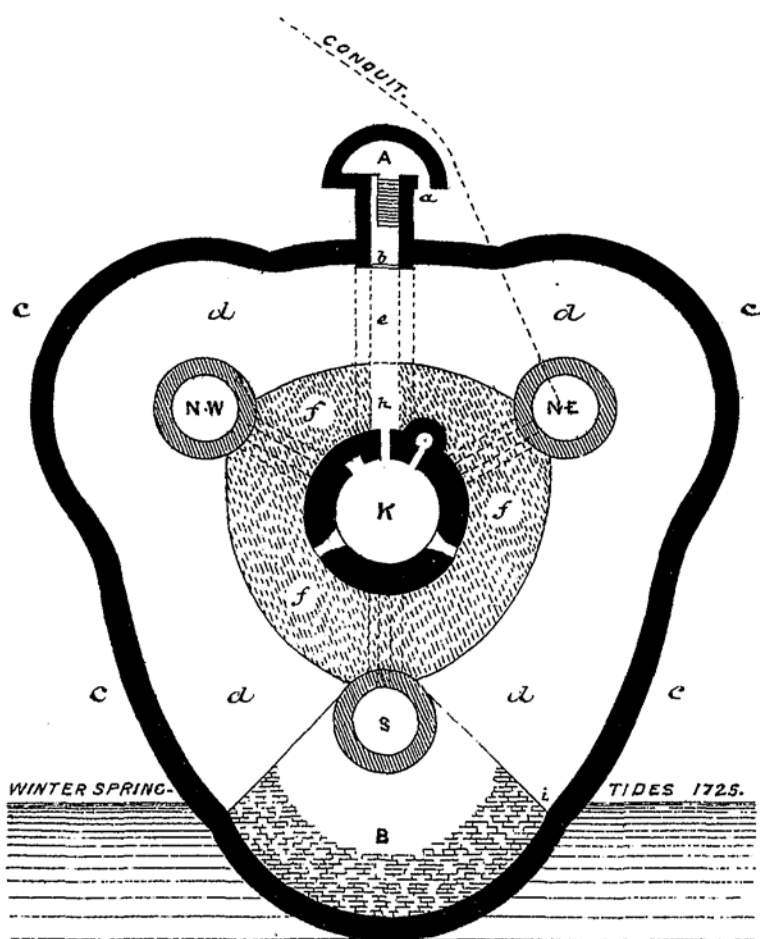
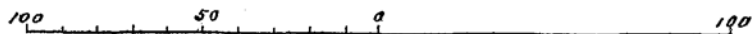
And so he is in superplusage 175 19 2 $\frac{3}{4}$

pr. p. [*probatur per*] WALTERUM MILDEMAIE,
Auditozem."

The Castle.—The examination of the ledger has perhaps left with us the impression that the quantity of material used in the building was, in proportion to its size, great, and its cost excessive; for bearing in mind the difference in money value, we mentally adapt the total of the account, £5544, to its present equivalent, and using nine as the multiple (which is, I think, rather under than over the mark), we have as an approximate equivalent £50,000. We remember, moreover, that this amount did not cover the whole value of the materials, for a portion of which, to wit the Caen stone and lead derived from the dismantled Priory of Horton, and the timber felled in its woods, the King did not pay. The Castle, however, exhibited a great deal of building in a contracted area, and was in fact a triple building; while the masonry designed to resist an enemy's cannon was necessarily massive, the walls of the central tower, or keep, being eight feet thick, and the outside surrounding wall at least seven feet. The remnant of the edifice now casually seen, in appearance little more than a martello tower of somewhat greater bulk than its neighbours, and but the inner core of what once existed, fails to impress the passer-by with due appreciation of its former size and importance. And indeed it must be a matter of regret to the people of Sandgate and Folkestone, that a building which at the beginning of the century was the historical and picturesque object of the locality; to Sandgate the venerable structure which had existed upwards of two centuries before the creation of the town, its one only edifice that possessed the dignity of age and the associations of history; to Folkestone a feature which lent itself in no small degree to the beauty of the

PLAN OF SANDGATE CASTLE.

SCALE OF FEET.



W.L.R.

western prospect as seen from "the Plain" overlooking Sandgate, should have been swept away, or reduced to a modernized fragment, at the present day commanding but little notice. It is my wish now, however, to represent the Castle as completed in October 1540.

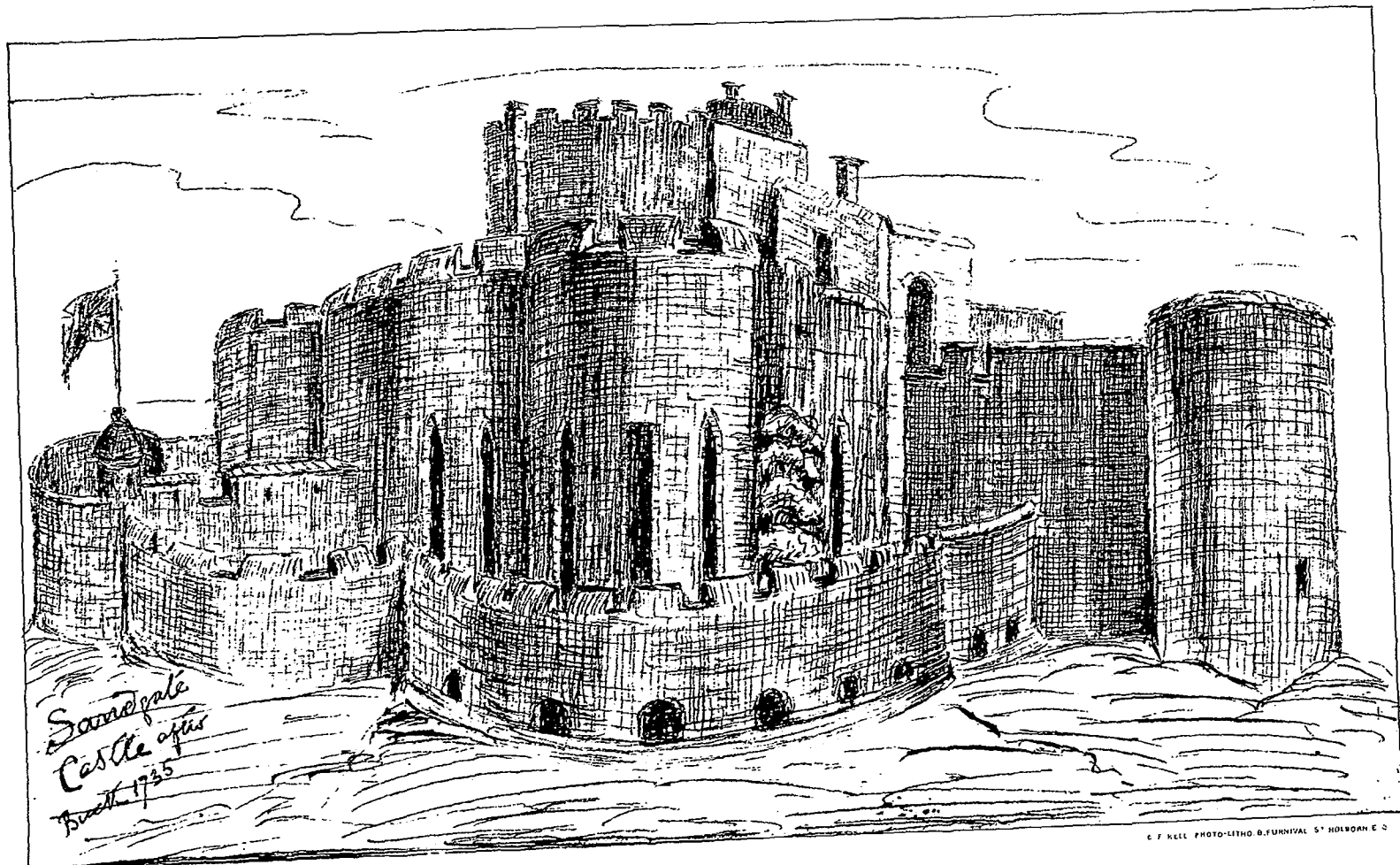
The ledger little helps imagination, though we are grateful for its mention of round towers, counter-mures, loopholes, portholes, casements, great gates, ditch, drawbridge, lantern, and vanes; we must search for old illustrations, and happily they are not wanting. First, we have the map of 1725, before noticed, in which we get a plan of the Castle to the small scale of 200 feet to the inch, too small indeed to allow full delineation, yet advantageously affording us the environments to a considerable extent on either side. The solitary position retained by the Castle two centuries after its erection is here shown; four little buildings only, forming perhaps but two tenements, appear fifty yards from the walls on the west; while the Enbrook which supplied the fort with water, the "gate" or pass through the hills by which the inland country was approached, the lower track, now the turnpike road, along the margin of the sea to Folkestone, and the demarcations of the tide clearly indicating the perilous situation occupied by the Castle, are the interesting features of this map.

The plan of the building—which, enlarged and supplemented with details of the yet existing curious entrance-tower, I present—approached in some degree to a trefoil figure, although the outline of the walls had other curves than thus implied; two foils or segments formed the base on the north or landward side, and one salient foil faced the south, *i.e.* seaward. The dimensions were about 200 feet north to south (the projecting entrance-tower not included), and about the same from east to west at the base or widest part, while the circumvallation measured about 650 feet; the area covered was about three-fifths of an acre. Vol. xi., *Illustrations of Kent*, Brit. Mus., Add. MSS., 32,363, contains, among other things, an interesting collection of Sandgate pictures, made both before and after the great alteration and demolition of the Castle in 1806. From this source we can fairly derive a knowledge of the building as it appeared on its completion, and thence down to its transformation in the above year, and afterwards. There is no view in the collection older than one of 1735 from Buck's *Antiquities*; the next, of 1762, is from Grose's *Antiquities*; both these old drawings, and indeed the others met with, are probably best digested *cum grano salis*. Buck's picture imparts to the Castle an amount of sombre and venerable dignity, which we would fain hope is not exaggerated in the same degree as is certainly the site here represented as an eminence of acute elevation above the sea, on which, and to this no exception can be taken, ride stately vessels flying their flags. Grose's view, smaller and less important than Buck's, shows the edifice standing, as the letterpress describes, on the edge of the beach, which, however, falling rapidly seaward, gives sufficient prominence to the position. Fortunately these two pictures are

taken from opposite points, Buck's from N.E., Grose's from N.W. Then there are two small engravings published in 1801 by Edw. Harding, Pall Mall, both from easterly but different points. One, taken from the Folkestone road descending into Sandgate, is pretty in both foreground and distance; an old post-chaise of 1801 is travelling down the hill, and by the roadside sits, seemingly in defiance of vagrancy laws, the gipsy woman of the time boiling her pot on a blazing fire, while the Castle and hamlet appear indistinctly picturesque in the distance. Harding's other view bears a somewhat suspicious resemblance to Buck's, is taken from the same point, and with equal absurdity perches the Castle on an acute conical hill; but showing clearly the parts of the building on its east side, this picture may with advantage be used for description conjointly with Buck's, while for the west side we must turn to that of Grose.

To assist our inquiry we have also two valuable reported surveys of the Castle, made in 1616 and 1623, which name some of the apartments and enable us, partially at least, to conjecture their situation; the first of these surveys is with the *State Papers*, the second is the *Harleian MS.* 1326.

It was a triple building, or one in appearance presenting three distinct tiers of increasing elevation, rising one within another, the walls of each tier being surmounted by a parapet crenellated for artillery; in Harding's engraving the muzzles of the guns appear in the embrasures. The outer surrounding wall was at least seven feet in thickness, and with its crenellated parapet formed the first and lowest tier seen in the pictures. This outer wall, at a height not much above the level of the ground without, was pierced with openings (ten of which on the N.E. side are shown in the pictures), somewhat wide on the outside so as to afford range, but narrowed inwardly and then secured with iron bars, the making of which we notice in the ledger. These openings appear to be the "portholes" mentioned; they probably lighted chambers used by the gunners or for stores, and above was a platform on which guns could be planted and fired through the embrasures of the parapet. Between the range of low buildings skirting the outer wall and the inner second tier of the Castle ran an open passage, apparently "the ditch" heard of in the ledger, into which opened doors from the basement of the building. This fosse or passage seems to have been cut short or crossed by a wall which terminated "the principal bulwark or battery" (so called in the report of 1623), forming the southern or seaward segment in the plan of the fort, the level of which battery was considerably above the lower range of building we have noticed. At the S.E. bend of the surrounding wall, where adjoined "the principal battery," or "gun-platform" as termed in the map of 1725, a turret rose, surmounted by a flag-staff, from which, in both pictures serving me for description, flies the National Ensign. The gun-platform, or "mount upon the outward wall next the sea," is said in the report of 1616 to have been 100 feet in length and 18 feet in breadth; in the plan of 1725 eight guns are



E. Kennett del.

SANDGATE CASTLE, IN 1735; FROM BUCK'S VIEW.

E. F. KELL PHOTO-LITHO B. FURNIVAL S^r HOLBORN E.C.

mounted on it. The western side of the Castle was doubtless much like the eastern side, which has had our attention. Grose's view of it shows the southern battery, the guns mounted and pointing to sea; he also shows a tall isolated shaft, which seems temptingly to offer itself as a mark to the guns of an enemy's ship, and may have been for ventilation and to carry off the smoke of artillery discharged in the lower chambers of the fort, as described by Mr. Elvin, *Records of Walmer, etc.*, p. 162. In Buck's view several chimney-like erections appear above the roof of the keep.

The inner buildings of the Castle rose high above the buildings which skirted the outer parapeted wall, and thus formed, as seen in the pictures, the second tier. The plan of this inner portion of the structure was triangular, the three sides outwardly convexed, the angles occupied by circular towers or bastions, the full diameter of those at N.W. and N.E. being about 29 feet, and of the S. tower about 32 feet. The survey of 1623 mentions the N.W. and N.E. "bulwarks," the roofs of which are covered with lead, and in the N.W. (probably in both) was a room used for gunners' lodgings, beneath which a "cellar." These "bulwarks" were perhaps the above-mentioned towers, of which the basements or "cellars" yet remain, with, in each case, a passage communicating with the basement of the keep; but it may be more consistent with the nature of bulwarks to suppose them to have formed part of the outer wall at its N.W. and N.E. segments. On the flat roof of these towers, 20 feet diameter within the parapet, guns were probably mounted, and we are shown by the plan of 1725 that at the bottom of the N.E. tower was a "well," fed by an underground conduit, 80 yards in length, from "a spring," probably the Enbrook, beyond the Castle walls.

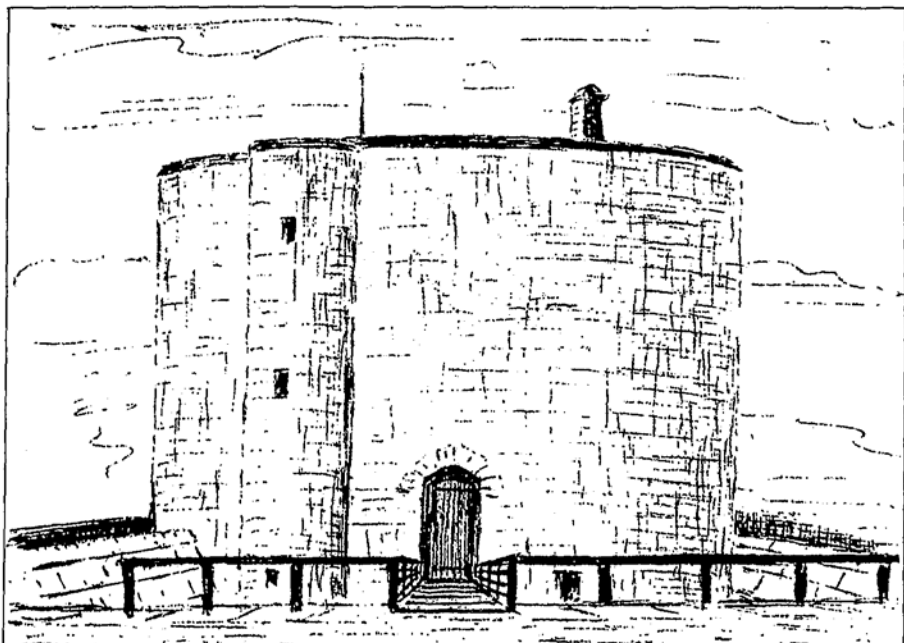
The second and inner tier (which encompassed and communicated with the third and innermost portion or keep) being of two stories had space for many apartments, the principal of which was doubtless "the Queen's Lodgings," thus designated in the survey of 1623, and in that of 1616 as "the Queen's Chamber," a sure proof of Queen Elizabeth's visit, which will afterwards, as an important event in the Castle's history, have our attention. Also are named "the Parler" and "a room going into it," the kitchen, the bakehouse, and the powder room; besides these there must have been several other chambers. To locate those mentioned and now not existing is impossible; the situation of the Queen's Lodgings is only so far defined in the report as it is shown to have been under the leads, that is in the apparent second tier of the Castle. On the flat roof of this second tier probably guns could be mounted and fired through the embrasures of the parapet; and lighting the apartments Buck shows seven tall narrow windows, generally lancet-headed; the windows, however, or rather the lighting of the several parts of the edifice, and more particularly the keep, to which we now come, is a subject of somewhat perplexing conjecture.

The keep (as for distinction it is convenient to call the central core of the Castle, although as it was not isolated the term perhaps

is questionable) is referred to in the survey of 1623 as "the Middle Tower." Rising considerably above the surrounding range of building it forms in the pictures the third and highest tier. It will be understood that the keep consisted of three stories, two of them remain, the uppermost has been removed; the inner diameter was, and is, 30 feet, the thickness of wall 8 feet. Its middle story, the now existing upper story, was, I think, from the indications afforded, "the Hall," named in the 1616 survey; the area is now divided, but originally may have formed one spacious circular apartment, 30 feet in diameter, with doors opening from it into the surrounding chambers, now swept away. This I like to think was the hall of good proportions which received the Queen; here she may have dined with her suite, or leaving it to them she may have retired to her lodgings opening therefrom. The upper story, now gone, I think, contained what in the survey is designated "the Great Chamber over the Hall;" modern accounts say it was here the commanding officer had his quarters. Both surveys mention its windows with ruined lintels (the twice-mentioned defect leading to the identification of the room referred to), and that of 1623 speaks of four windows in it, and of an equal number in the story below, *i.e.* the hall, if my conjecture be right. The lighting of the hall (or the apartment in the middle story whatever may have been the purpose it served) is, as I have already said, a perplexing question; possibly open bays in the wall of the circular chamber may have admitted light from some of the tall lancet-headed windows we have noticed in the outer range or tier; or perhaps the outer range of apartments did not entirely enclose the central chamber, which may thus have been lighted by windows on its southern side (of which we have no direct view) left unenclosed for that purpose. There is mention of a lantern "on the top of the Castle," which seems to have given light to "the Stairs;" but though it may have served the topmost story of the keep, as well as the four windows mentioned, the lantern is not likely to have benefited the chamber below. The roof of the keep, surrounded by an embrasured parapet, was covered with lead, and on it was a timber platform for artillery. Allowing 10 feet for the story now removed, the original height of the Castle was probably about 50 feet.

A turret, yet existing, $5\frac{1}{2}$ feet inner diameter, and half projecting from the wall of the keep on the north side, contained the stairs which afforded communication from the basement of the Castle to its summit. There may have been other stairs, and these perhaps in the square projecting building seen in the pictures at the entrance on the north, forming apparently a porch, and rising to a height now much below the top of the keep; in each of the two walls visible (north and east) there is a window, and these windows being graduated in height seem as if they lighted a staircase which may have led directly from the entrance to the top story, and perhaps to the roof.

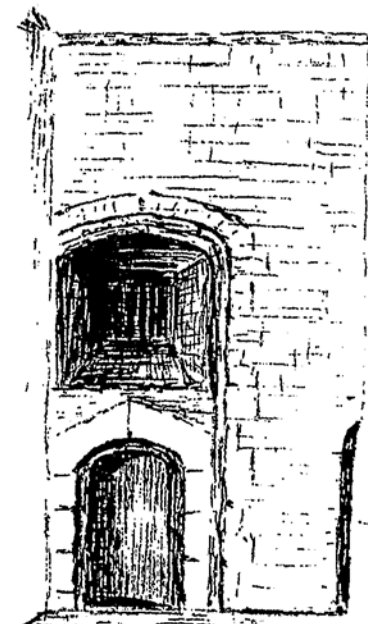
It yet remains to notice the gate-tower and drawbridge on the northern and landward side; the first is yet intact, and being



Sandgate Castle the Keep from North



Entrance Stairs & Landing



The entrance Door

E. Kennell del.

C. F. KELL PHOTO-LITHO. O. FURNIVAL ST. HOLBORN E. C.

SANDGATE CASTLE.
THE KEEP (FROM THE NORTH) AND THE DOORS AND STAIRS AT THE ENTRANCE.

peculiar will be best understood by reference to the plan. The gate-tower is semicircular, projecting 11 yards forward from the Castle's outer wall, and its gate or door is not as might be expected in its front side to the north, but in the rear of the semicircle, and as it were round the corner. Here entering an arched door 4 feet wide we are in a small semicircular room, which, with a similar chamber above, constituted, I suppose, "the Porter's Lodge;" and turning "right about face" we see a flight of steps, 13 in number and 6 feet wide, which ascending we traverse a landing 12 feet long, $8\frac{1}{2}$ feet broad, and reach a massive gate fronting the door into the keep, but 47 feet distant from it. Before proceeding we turn again to the staircase we have mounted and perceive a shallow recess in the wall, formed, there can be no doubt, to receive a "falling door," such as the ledger mentions, by which the stairs could be closed, the hooks for hinges yet remaining; we see also the return-landing, $2\frac{1}{2}$ feet wide, by which the porter reached his upper chamber in the gate-tower; and again facing the Castle we discover the hooks of another gate now removed, inner to that yet existing. Of the space between the gate and the keep, now levelled up, we can scarcely tell how much of it was formerly open ditch across which fell the drawbridge; the ditch may have been 20 or 25 feet, but in an existing plan of Sandown Castle the drawbridge is no more than 11 feet in length. It appears, however, from the pictures and from the plan of 1725 that the walls were continued across the ditch from the gate to the keep, so that between the walls we imagine a pit spanned by the drawbridge when lowered. We may think the access to the Castle little befitting the dignity of the great Queen who visited it; yet entering the small door in the basement of the gate-tower, ascending the toilsome staircase of 13 steps, passing through the great gate, and crossing the drawbridge, we must suppose Queen Elizabeth to have reached the Castle. She would then pass through the range of building now swept away, and by the yet existing door, only 3 feet wide, she would enter the central circular hall in the keep, an apartment of no mean dimensions; or before reaching the hall her Majesty may have been conducted to her lodgings in the outer tier by a door to the left off the entrance-passage.

A few references to the Plan will I hope assist the foregoing description. The Plan is drawn from that of 1725, and from the Ordnance Survey of 1851. The original portions of the Castle yet remaining, *viz.*, the Gate-Tower, the Keep, and the Outer Wall, are shown black.

"A" The Gate-Tower, of two semicircular stories forming the Porter's Lodge, and entered by the Tudor-headed door "a"; ascent by stairs to the gate "b," yet *in situ*: "c" the outer wall remaining, but lowered, the buildings formerly along it, and the parapet, now removed; the wall where now seen is 7 feet thick, but, doubtless, portions of it were stronger; its height on land side 12 feet: "d" site of ditch between the outer wall and buildings and the portion of Castle "f" now demolished. "B" marks the

original Gun Platform, considerably above the ditch, and probably reached by stairs, or from the Tower "S." At "i" seems to have been the turret and flag-staff shown in Buck's picture of 1735: "e" shows where the drawbridge crossed the ditch now filled up: "f" buildings of two stories, now removed; in the upper story were "the Queen's Lodgings," and other apartments, the flat roof forming a platform within the crenellated parapet. At "h," where the Castle was entered, the building appears in Buck's picture to have been carried higher, and perhaps contained a staircase. "K" marks the Keep, entered by a door 3 feet wide. It was of three stories, two of which remain, *viz.*, the basement, and the story shown on Plan, with fireplace, two windows, and door into the circular stair-turret projecting from the wall of the keep. Queen Elizabeth may have dined in this apartment, which was 30 feet in diameter, but is now divided. Above it was the third story, now gone, the modern domed roof occupying its position, whereon remains the central iron pivot and circular traverse for a gun; a parapet 8 feet thick, and 4 feet high, surrounds the present roof. From the basement chamber of the keep three passages, dotted on Plan, $34\frac{1}{2}$ feet long, 3 feet wide and 7 feet high, communicate with the Towers, N.W., N.E., and S., which towers may formerly have had doors into the ditch. Of the three towers only the lower portions now remain; originally they rose as high as the buildings "f," but they are now reduced to the ground level under which they are vaulted, and in each is a pillar of masonry to carry the weight of a modern gun planted above. For the same purpose a pillar in the keep rises from the basement to the roof. The keep is at present 40 feet high, and allowing for the story removed it may have originally been about 50 feet. A dry fosse, 20 feet wide, and 10 feet deep, now surrounds the keep, occupying the site of the former buildings "f"; a wooden bridge spans the fosse, and gives access to the old door into the keep. A dotted line to the north of the Castle indicates the underground conduit, possibly still existing, by which water was brought to a "well" or reservoir at base of the N.E. Tower.

I have yet briefly to refer to the transformation of the Castle, involving its demolition to a great extent, which was effected in 1806.

The Castle demolished and transformed. The outside surrounding walls were left standing but lowered, and the embattled parapet removed, the rebuilding of the damaged seaward segment causing some alteration in the contour. The central keep was spared but diminished in height by the removal of its uppermost story; all the surrounding buildings were swept away, and the débris used in levelling the area between the outer walls and the keep; round the latter a fosse 20 feet wide, spanned by a little wooden bridge, was left; the three passages radiating from the keep to the three towers remain; but these towers with the exception of their lowest and now underground portions are demolished. The ancient guns were replaced by more powerful ordnance to the number of ten

pieces ; and these instead of being mounted only on the seaward segment of the wall were also placed at intervals along the S.E. and S.W. sides of the fort. In addition, a similar gun was mounted on the new roof of the keep, and to carry the gun a central pillar of masonry was built from the basement to the roof. An underground magazine, consisting of three arched chambers, was constructed beneath the newly formed esplanade between the keep and the gate-tower, which latter, as already said, probably remains as in 1540 ; the drawbridge, however, and the ditch it spanned are things of the past ; and the uninformed visitor walks on level ground from the gate to the old keep, which, diminished, he has perhaps taken to be merely one of the martello towers observed along the Kentish coast-line. These towers, indeed, were built at the time of the Castle's transformation, and its uniformity with them was evidently designed.

I desire here to express my obligations to Mr. R. J. FYNMORE of Sandgate for much valuable assistance in connection with the subject of this paper, and to Mr. E. KENNETT for the sketches which accompany it.—W. L. R.