

ART. XII.—*Roman leaden sealings from Brough-under-Stainmore.* By I. A. RICHMOND.

I. DISCUSSION OF THE MATERIAL.

THE objects described in the title as lead sealings were known for some time before the late Professor Haverfield recognised* their purpose, which is exactly that of the leaden sealings used to-day by military, police, customs, postal and railway officials for sealing bales, boxes, doors or lids. They are small blobs of hard lead, alloyed† with one third of tin; usually round but sometimes oblong. Most of them retain some impression of the string or wire to which they have been applied, and all exhibit, in varying degrees of perfection, the lettered stamps with which they have been impressed. The letters usually occur upon both sides of the sealing, less commonly upon two sealings applied one to the other; in which respect they are matched by examples‡ found elsewhere, at Newstead, High Rochester, Corbridge, Chesters, South Shields and (supposedly) Felixstowe. It has long been known, however, that very much the largest group§ comes from Brough-under-Stainmore, though no comprehensive list of them has ever been published, partly because the objects are scattered and partly because

* Haverfield, *AA*³ v, 399, commenting upon *EE* ix, 1296a. This revises Huebner's opinion in *EE* iii, p. 145. Valuable analogies are given by Haverfield in *AJ* xlvii, 233, 264, see below, Appendix II.

† See Appendix I.

‡ See Appendix II.

§ First collected in *CIL* vii, 1269, 1-31, largely drawn from Roach Smith, *Coll. Ant.* iii, 197, pl. xxxii, 4-14, vi, 117-18, pls. xvi, 1-14, xvii, 1-10, and vii, pl. xv, 1-7. Add *EE* iii, p. 144; H. E. Smith, *Trans. Lancs. and Ches. Hist. Soc.* n.s. vi, 147; cf. Coote, *London and Middlesex Arch. Soc.*, iv, 50 = *Revue Archéol.* 1874, ii, 131; also *Trans.* n.s. iii, 71, now in the British Museum, and *Trans.* n.s. xxxi, 81, in the Craven Museum.

they are of little intrinsic value. Taken collectively, they have a story of some interest to tell.

Excluding a small group which cannot now be traced, as noted below, the writer has read one hundred and thirty-three sealings from Brough, now distributed in five collections. The largest group is at the British Museum, mostly in store. Smaller lots exist at the Ashmolean Museum in Oxford, at the Yorkshire Museum in York, and at the Craven Museum in Skipton. A fifth collection was kindly put at the writer's disposal by its present owner, Colonel E. Kitson-Clark, F.S.A., whose father received them from the late Chancellor Ferguson. This was a local collection, for the Chancellor got it from Dr. Simpson of Kirkby Stephen, all these particulars being recorded on the box in which the objects are kept—surely an object-lesson to private collectors! Two sealings were also sent from Miss E. Cumpston of Barton Hall, Pooley Bridge. Yet another collection was drawn upon by Roach Smith for illustration* in *Collectanea Antiqua*; it belonged to Mr. John Hill of Appleby, and contained some unique examples. In Brough itself the objects were once so common as to sell† at one penny a dozen, the price offered for melting-down at the smithy. One can only conjecture how many hundreds have been lost in this way.

The sealings were not found within the fort, though they are official documents. Local tradition,‡ which there is every reason to believe, asserts that they came from the Augill stream-bed, which runs below the fort-site. This is not difficult to understand, for the seals themselves were broken in antiquity and thrown away after use. It

* This was the basis of *Coll. Ant.* vi, pls. xvi, 1-14, xvii, 1-10; its exhibition is recorded in *Arch. Journ.* xx, 181, but its subsequent fate is not clear; according to Hübner *CIL* vii 1269, much of it went to the British Museum, and many of its unique pieces seem, in fact, to be in that collection.

† H. E. Smith, *LCHNS* vi, p. 147, "melting them down by half-pound at a time."

‡ cf. *Trans. N.S.* iii, 71; *Coll. Ant.* vi, 117; H. E. Smith, *LCHNS* vi, p. 147.

is evident that the stream was eroding a waste-heap of which they formed the main constituent; a Monte Testaccio of lead seals. This point is important, because it implies that the objects whose packing was thus registered were unpacked for storage or re-distribution at Brough. The sealings discovered at South Shields have been brought into association* there with a definite level in the excavated fort. They belong to the period when the fort was enlarged and supplied with many great store-houses, in connexion with the Scottish campaigns of Septimius Severus and his sons. This was a transitory episode: the very large number of sealings from Brough would suggest that the similar conditions there lasted for longer.

The sealings themselves are always pierced by a thin thread (*Trans.* N.S. xxxi, 81, 2) or wire, suggesting that they secured either small packages or a lock otherwise strongly fastened, upon large consignments or vehicles. They are of two types, official and private, among which the former are much the more numerous class. The official sealings bear upon the obverse the name of the military unit, auxiliary cohort or legion, which fastened up the consignment, and upon the reverse *either* a centurial stamp (variable in detail but uniform in general type) *or* official marks of which the meaning is now lost. Occasionally, the official sealing bears, on the reverse, an impression of a private signet, no doubt indicating consignment by a prominent official, presumably the commandant of a cohort. Indeed, examination suggests that most of the private seals have become detached from others, and that their appearance is probably to be regularly explained in this way. Conformably with this view, it may be noted that the private seals are not associated with the legionary obverse, but with cohorts of auxiliaries; for, in the legion, the higher officialdom was

* *AA*⁴ xi, 101.

more numerous and complicated, and an ordinary private seal would be of ambiguous reference.

Most of the units which occur are represented upon many sealings. The greatest number is assignable to *Cohors VII Thracum*, represented upon forty-six roundels, by the abbreviations $\overline{\text{CVIIT}}$, $\overline{\text{CVIITR}}$ and $\overline{\text{CVIITRA}}$. Next in order follow the private seals, of which twenty are known, nine being associated with *Cohors II Nerviorum*, a unit which occurs seventeen times, with abbreviations $\overline{\text{CIINER}}$, $\overline{\text{CHIINER}}$, $\overline{\text{CIINRVIO}}$. There are thirteen examples of the Second Legion, stamped $\overline{\text{LEGII}}$ or $\overline{\text{LIIA}}$. *Cohors VI Raetorum* is represented by four examples, as $\overline{\text{CVIR}}$, and *Cohors VI Thracum* by one instance of $\overline{\text{CVIT}}$, and four of $\overline{\text{CVITR}}$. *Cohors I Batavorum* appears twice, as $\overline{\text{CIB}}$. Four other units appear upon one sealing each, as would be usual at almost any other site than Brough (see Appendix II). These are *Cohors V Pannonorum*, as $\overline{\text{CVP}}$; *Cohors II Lingonum*, as $\overline{\text{CIIL}}$; *Legio VI Victrix*, as $\overline{\text{LEGVI}}$; and *Ala Sebosiana* as $\overline{\text{ALA SIIB}}$. There remain to be added three Imperial seals, one bearing the legend $\overline{\text{IMPÑ}}$, the other two an Imperial head, of which one is moulded in a seal-box of pear-shaped type. While it is likely enough that the single examples will be supplemented by future discoveries, the present list is sufficiently numerous to establish the point that, whatever units were occasionally represented at *Verterae*, to give Brough its Romano-British name, the most frequent were the seventh cohort of Thracians, the second cohort of Nervians, and the Second Legion.

Admitting, then, that the sealings are waste-products from an opening and re-distribution of packages, it becomes evident that a concentration of inflowing material is in question; for a re-distribution of commissariat or pay would have involved, supposing that unsealing were necessary at all, the stripping of sealings

of a common type. That opposite condition happens to be aptly illustrated by the South Shields sealings. There all the examples* belong to one of two types, an Imperial seal, and a seal of the cohort which garrisoned the fort, while the granaries which contained the supplies there stored still exist. At Brough, the reverse process appears to operate, sealed material from very diverse sources being unpacked and presumably concentrated for conveyance towards the central administration.

The methodical procedure thus implied is not out of harmony with military usage. Indeed, it will remind many of two points noted by Vegetius,† in his fourth-century edition of earlier sources. "Some recruits" he observes "are chosen for their ability in shorthand and skill in making estimates and calculations: for the accounting of a whole legion, whether in duties, strength or finance, is daily entered in the books, with almost greater precision than the corn-supply or civil multiple-entry accounts. The daily watches, even in peace-time; the night watches and field-duties, in all centuries and their subdivisions, are done in turn; and to prevent unjust allocations of duties or leave, the names of all who have served their turns are noted on the books." The special scribes for this kind of work are noted in another passage‡ as "the *librarii* (booking-clerks), so called because they enter in the books the accounts relating to the soldiers."

In these sealings, the careful accounting is implied by the very act of sealing, while the orders given to each subdivision of the unit are obviously reflected in the reference of not a few examples to the centuries of a cohort. It is evident that now a commander and then a unit with commander's countersign, here the whole unit and there a detachment from it, were sending in material which had to be carefully checked. This was not

* *Ibid.*

† Vegetius, *De re militari*, ii, 19.

‡ *Op. cit.*, ii, 7.

correspondence; official letters were indeed carefully sealed, but in wax, as the many seal-boxes for protecting the wax prove. The strong lead seals, as now, are for bulkier material. We are therefore entitled to assume that the objects thus sealed were something which the units in question had to collect.

Bearing this assumption in mind, it may be remarked that there can be little doubt as to the nature of one class of material. The second cohort of Nervians, known to have been stationed* in the third century at Whitley Castle, sent in something from a *metal(lum)*, as one type of their reverse stamps indicates. Hitherto, no cogent proof has been provided for the use of the famous Alston lead-mines in Roman times.† Doubtless the subsequent working, continuous from early medieval times at least (*Trans.* N.S. xi, 259ff.), has obscured all traces at the adit mouths, even if the unhappy labourers, probably condemned criminals, ever saw the open air at all. But the stamp *metal*, from the garrison of this very district, provides the required documentation; further, the product thus stamped must have been either lead or its by-product, silver. Mines or quarries, however, were crown property; and the raw material, commonly collected under military supervision, went to the Emperor's agents, the *procurator Augusti* or his men.‡ This observation therefore sheds some light upon the identity of the collecting agency. It is also to some extent reinforced by the three Imperial seals, one lettered and two bearing an emperor's head; for these, appropriate enough in an Imperial agency, might well represent a consignment from headquarters, situated somewhere east overland.

* *Trans.* N.S. xi, 359, plate, correcting C. 310 (*L.S.* 741); cf. *EE.* ix, p. 566.

† *Trans.* N.S. xi, 259 ff., for the early history of these mines. Mr. R. G. Collingwood reminds me that lead ore (galena) and fluor-spar were actually found in the fort at Whitley Castle (*Trans.* O.S. i, 11, *Arch. Ael.* ser. I, iv, 36).

‡ Hirschfeld, *Die kaiserlichen Verwaltungsbeamten*, edn. 2, 159-60. For military work, cf. *Tac. Ann.* xi, 20; *CIL* xiii, 2612b, from Britain with *legio XX* recorded; in quarries, cf. Hirschfeld, *op. cit.* 164.

It may next be recalled that, although the bulk of the sealings are more reticent as to what they registered, all come from the same waste-heap. It is therefore legitimate to regard the whole collection as a homogeneous dump, ultimately derived from the same office or store, and for this reason it would appear not incorrect to extend the procuratorial reference from the part to the whole. It is obvious, on the other hand, that the whole reference can hardly be to mining; for a common reference would render it difficult to account for both the number of units and the variety of stamps. Indeed, before considering the function of the sealings, this point deserves consideration in further detail.

It has already been noted that the bulk of the work was divided between three units, *cohors VII Thracum* (46 sealings), *cohors II Nerviorum* (17), and *legio II Augusta* (13). Then come two units representing about one third of this activity, *cohors VI Thracum* (5) and *cohors VI Raetorum* (4); and the list ends in a trickle of single instances, so thin as to appear almost casual. *Cohors I Batavorum* has two sealings, as also the Imperial offices; *legio VI Victrix*, *ala Sebosiana*, *cohors II Lingonum* and another unit, perhaps *cohors V Pannoniorum*, are represented by one apiece. From this list two points emerge. It is evident that the whole garrison of Cumbria is not represented; three main bodies were mainly engaged, the rest had much less regular connexions, if any at all, with the same office. Secondly, whatever the nature of the work, it was evidently not a regular duty, such as district tax-collecting, shared by all the garrisons. The incidence of the sealings represents the allocation of special duties within special districts; some of these were manifestly a regular routine, while others were much less regular, as if they were casual cases, occurring from time to time.

Returning then to the reverses of the seals, not only does the special nature of the duties become plain, but it is also

evident that there was a difference between them, calling for a different organization. To take first the unit whose activity is known in one phase at least, the *cohors II Nerviorum* works with the mining-stamp; it sends in a considerable amount of its material countersealed by a high official, doubtless the commandant; it works also in centurial units, and on one occasion employs a stamp FIT, also used by *legio II Augusta*. At first sight, it might appear that so many variants merely reflected the normal and varied everyday activities of a unit; but if that were so, we should expect all the units to be represented by a very similar number of sealings, with reverses of the same character. That this is not the case, is immediately apparent on comparison with the remaining units represented by numerous seals. *Legio II Augusta* either despatches the consignment—*exp[edit]*—or marks it with the stamp FIT, noted above. The material thus treated evidently needed less careful checking or lent itself to more straightforward handling. The sealings of *cohors VII Thracum*, on the other hand, exhibit a limited number of plain centurial reverses, but are mostly distinguished by a very elaborate series of countersigns. Of the simpler examples, TVD is matched elsewhere, on a sealing of the Second Asturians; while CAD, here in combination, occurs singly on the Sixth Raetians' stamp. The more complicated examples, however, belong to a much elaborated code, in part best matched by the *officinae* of mints,* but obviously applicable to any system demanding exactitude in classification. It is evident that the Seventh Thracians were handling a special and elaborately controlled product, whether pecuniary, manufactured or raw. If the quarters of the cohort were known, it would be easier to guess at the nature of the material. Now-a-days, a Cumbrian would think of plumbago or barytes.

Considering then the identity of the controlling official,

* cf. Mattingly, *Roman Coins*, 221-2.

his functions at least now appear somewhat plainer. It is evident that the conditions controlled by him were special ones, not applicable to all districts covered by the auxiliary cohorts, but operative in three only, in one of which legionaries were working. In addition, there were much rarer and perhaps quite exceptional cases, in which the same official had dealings with a wider circle of units, acting through their detachments. As to the standing of the official, the connexion with the mines and the authority to act not merely as forwarding-agent but as clearing-agent, is unequivocal evidence. It must be assumed that he was an Imperial finance-officer, connected with the procuratorial administration. On the other hand, the exceptional nature of his duties emphasizes that he was not concerned with the regular taxes, collected by soldiers in the frontier districts; nor with import-duties or fair-tolls, also so gathered.* The nature of the duties, as well as the standing of the official, follow from the *metal(lum)* stamp, which shows with what one part of them was connected. The man was a procurator's agent, who cleared for the district, through his *statio*,† as the office was called, all the exceptional products handled therein. One of these products was covered by the term *metallum*; and the association of the district from which it came with important lead-mines, renders it reasonably certain that the product thus sealed was lead or silver associated therewith. But the fact that the term could be of a very wide application,‡ covering almost any kind of pit, as gravel-pits, chalk-pits or salt-pans, shows that in the other instances it is not necessary to assume a connexion with lead-mining alone. Equally certain is the connexion of

* As centurion Olennius among the Frisii, Tac. *Ann.* iv, 72. The Her-munduri but no others, *passim et sine custode transeunt*, Tac. *Germ.* 41; the Tencteri, *inermes ac prope nudi sub custode et pretio*, Tac. *Hist.* iv, 64.

† cf. CIL iii, 3953, *statio Sisciana*. The British *statio Deventia* of the *Ravenna List*, 424, 15, is somewhere in Cornwall and perhaps connected with tin-mining.

‡ Criminals *damnati in metalla* could be sent either to mines, quarries or salt-pans.

the soldiery with this kind of work, whether in the capacity of labourers or overseers of the condemned criminals. It will be well to recall* both the notorious yet not exceptional case of soldiers working a silver-mine in Upper Germany, and also the remarkable series of quarry-records on the products of Egypt, Africa and other provinces. With these in mind it becomes easier to see how the bulk of the Brough sealings could represent the consignments of produce from very diverse sources to one central official, who canalized the revenue or the stream of supplies on the way towards headquarters.

The place of Brough in the scheme is more intelligible when the nature of the operations is understood. As a point of concentration, the choice is an admirable one, for Brough is in touch not only with the north-west, but with southern Westmorland and north Lancashire. The single sealing of the *ala Sebosiana*, stationed at Lancaster,† gives a hint in that direction. To any official who desired to be in close touch with the north-west and on the direct line of communication with York, the natural centre of administration for the north, Brough provided the best vantage-point. There all traffic concentrated for the long and lonely crossing of the Pennine, carefully guarded by its convoy-station at Maiden Castle. Even to-day, anyone travelling by road to Barrow or Carlisle from Durham or north Yorkshire, chooses a route passing through Brough.

The date of the activity thus represented is intimately bound up with the stations of the respective cohorts. If it were known where these were in garrison at a given time, it would be possible to construct a map of the area

* Tac. *Ann.* xi, 20, Ems, CIL iii, 25, CIG 4713e, *mons Claudianus*, Arabia; CIL iii, 75, Egypt; CIL iii, 12286i, Euboea. Bruzza, *Annali dell' Istituto*, 1870, no. 258, 1; CIG iii, p. 1191 ff.

† CIL vii, 287; the dating suggested by Atkinson (*JRS* xii, 72) and Dessau (*ILS* 2548) is during the *imperium Galliarum*, see above, art. 1. CIL vii, 451, from Stanhope in Weardale, may suggest that the *ala Sebosiana* once occupied Binchester, where lay a similar cavalry garrison, cf. C. 423, 427, 429.

in relation with Brough; and perhaps, as noted above, to arrive at the special activities in which the units were engaged. But not very much can yet be done in this way. Once again, *cohors II Nerviorum* affords a starting-point. This unit* was at Wallsend and at Chesterholm during the second century, and only reached the Brough district in the third century, when it was at Whitley Castle under Caracalla, and adjacent to the famous sources of lead. This creates a strong presumption that the epoch of the seals is the third century, with which the style of the bearded Imperial head, probably Caracalla, also agrees. *Cohors VI Raetorum* may have been at Aesica† under Marcus and Verus, but not during the third century, when it was transferred to a post as yet unknown. On the other hand, *cohors I Batavorum* was at Carrawburgh‡ under Maximinus (A.D. 237), and at Carvoran and Castlesteads at other times. *Cohors II Lingonum*§ was at Ilkley during the second century, and at Moresby later. *Ala Sebosiana* was at Lancaster|| about A.D. 258. The list is not very helpful. If the sealings belong to the third century, there may be a link with Carrawburgh and Lancaster; but the units in question were not in close contact with the office. Of the troops in close connexion, neither the Second Legion, nor, above all, the Seventh Thracians, reveal their whereabouts. It may only be observed that this was not the first legion¶ doing special work in Cumberland.

* Wallsend, *EE* ix, 1159; Chesterholm, *C.* 701; *EE* iii, 103, vexillation at Carrawburgh.

† *EE* ix, p. 594 wrongly rejects *C.* 731, where . . . *I Raetorum* is read. In *AA*⁴ xii, 197, E. B. Birley suggests *VIII*, on the basis of *C.* 1269, 19, but the latter is a mistaken reading. In view of *Trans.* n.s. xxxi, 81, *VI* might suit.

‡ *C.* 621; also building at Carvoran, *C.* 777; possibly at Castlesteads, *C.* 886 = *EE.* ix, p. 604.

§ *C.* 208, Ilkley; *C.* 359, Moresby.

|| See note on p. 113.

¶ At Carlisle, tiles of *Legio IX Hispana* (*EE* ix 1270), *Legio II Augusta* (*EE* ix 1268b) and *Legio XX Valeria Victrix* (*EE* ix 1271c) have been found, the first in a building, the second together in a grave. Tiles of the Ninth (*Trans.* n.s. xxii, 456) and Twentieth (*Ibid.* xvi, 290) Legions have been found at Scalesceugh, with remains suggestive of their manufacture (*loc. cit.*).

The nature of the material dictates that these notes must be concerned with the terms of the problem rather than its solution. In recapitulation, the points established would appear to be as follows. The sealings are the waste-products of an office which not only received regular quotas from three concerns with which it was in close touch, but acted also as a clearing-house for occasional matters. The nature of the materials handled remains for the most part obscure; but one of them had to do with mines supervised by a cohort stationed in the Alston district, and was therefore probably lead. It is also evident that the materials are diverse, for they are handled and countermarked in a very different manner by the several units which deal with any quantity of them. Thus, they may be taken as products of different kinds from three different areas, while the association of one with *metal(lum)* identifies the receiving official as a representative of a *procurator*. Admitting too that many of the terms remain quite obscure, we must nevertheless concede that the sealings give a very remarkable, if not unique, picture of the relations between the military districts and a receiving-office of the Treasury. It is known that these districts did not yield a profit; Appian, who was well informed, doubted* whether the whole province of Britain brought in more than it cost. Yet the machinery for extracting whatever seemed possible in dues or products was evidently in existence; and the Brough sealings must be taken to provide an unusual picture of the manner in which it was applied in Cumbria, and the meticulous accuracy with which it worked. The effect upon those who study the picture may, indeed, be as if, expecting a representational statement, they had been

* Appian, *Bell. Civ.*, Introduction, 5, ἐς τὴν βρετανίδα νῆσον περασάντες τὸ κράτιστον αὐτῆς ἔχουσιν ὑπὲρ ἡμισυ, οὐδὲν τῆς ἄλλης δεόμενοι. οὐ γὰρ εὐφορος αὐτοῖς ἐστὶν οὐδ' ἦν ἔχουσιν.

supplied with one in cubistic terms; but it does not in the end change the implications of the statement. The picture does not include the regular payments to the Treasury, which doubtless went directly to a more central clearing-house; but it shows that the Imperial Government thought it worth while to station at Brough an official* to deal with the special products of the district. Doubtless there was more than one such office in northern Britain; if this one dealt with the north-west, there were probably others for the centre and the east. To guard against the obvious temptation to think of the post as exceptional, it is only necessary to recall that the discovery of the Brough sealings is due to a highly exceptional circumstance, the erosion of the waste-heap by a stream. Even so, the sealings were only noted because the lead had a market-value in a remote Westmorland village.

2. DESCRIPTION OF THE SEALINGS.

In the following description, some abbreviations are used to denote collections and sources.

BM = British Museum; AM = Ashmolean Museum; CM = Craven Museum, Skipton; YM = Yorkshire Museum, York; KC = Kitson-Clark collection; C = *Corpus inscriptionum latinarum*, vol. vii; CIL = *Corpus inscriptionum latinarum*; CIG = *Corpus inscriptionum graecarum*; EE = *Ephemeris epigraphica*; CA = *Collectanea Antiqua*; AJ = Archaeological Journal; LCHNS = Transactions of the Lancashire and Cheshire Historical Soc., New Series.

The warmest thanks are due, to six curators or owners of collections. Without the facilities kindly accorded by Mr. C. F. C. Hawkes, of the Department of British and Mediaeval Antiquities, British Museum, the examination

* Mr. R. G. Collingwood, who has kindly read through my paper, observes that a procuratorial office suggests a large clerical staff, and that among such staffs Greeks or Easterners are at least possible. This might explain the occurrence of a Greek tombstone (*Trans. o.s. viii*, 205) at Brough, to Hermes of Commagene. Greek inscriptions in the military districts commonly represent an educated element, often doctors.

of the largest collection could not have been made. Some little puzzles were not, however, elucidated until the smaller collections had been examined, through the kindness of Mr. D. B. Harden, of the Ashmolean Museum, Oxford, Mr. W. E. Collinge, of the Yorkshire Museum, York, Mr. L. North-Duffy, Hon. Curator of the Craven Museum, Skipton. Colonel E. Kitson Clark and Miss E. E. Cumpston also generously sent for examination their own collections of sealings.

Cohors VII Thracum, 46 examples (Fig. 1A, 1-21).

The name is certain from no. 7. Four groups are worth special note.

(a) 1-3 are variants of the reverse TVD, to be compared with the similar stamp of *cohors VI Thracum*, and also *EE ix 1296d* = *AA³ vii, 179*. The abbreviation is therefore of more than local significance, and probably stands for some general official term.

(b) 4-8 seem to represent extensions of 4 to 5, and 8 to 6 and 7, and are evidently concerned with the same sort of classification.

(c) 14-16 resemble the kind of system used in fourth-century mints, but doubtless traditional (cf. Cohen, *Méd. Imp.* vi, 56-7, 100, 228-9, 365, 403). It is the most complicated system apparent upon the sealings, and implies at least a triple group of categories.

(d) 17-21 are centurial marks, indicating the organization of work in subdivisions of the cohort, as Vegetius, *De re militari*, ii, 19, already quoted. The examples are distributed as follows: 1, BM 4; 2, BM 2, AM 1, KC 1 = C. 1269, 15 = CA. iii, pl. 32, 6; 3, BM 1, AM 1; 4, BM 1, cf. CA. vi, pl. 16, 3, a blundered representation; 5, BM 1 = CA. vii, 15, 2; 6, BM 1 = C. 1269, 17 = CA. vi, pl. 16, 2; 7, YM, 1; 8, BM 1; 9, CM 2, KC 1; 10, BM 1, no reverse; 11, BM 1, cf. RC, on a mummy-seal recorded CA. iii, 97; 12, BM 1; 13, BM 2; 14 BM 1; 15, BM 3 = C. 1269, 19 = CA. iii, pl. 32, 8; 16, BM 4, AM 2; 17, BM 4, AM 2, KC 1 = C. 1269, 18 = CA. vi, pl. 16, 1; 18, KC, 1; 19, BM 1; 20 BM 1, AM 1; 21 BM 2.

Legio II Augusta, 13 examples (Fig. 1B, 1-5).

The legion is clear from 1-3; its title from 4 and 5. It may be suspected that in 2 and 3 the reverses are blundered versions of 1, and it is natural to suppose that EXP stands for *exp(edit)*. The reverse of 4 is known by itself (BM 1, cf. CA. vii, 15, 3), but has probably become detached. In 5, a centurial mark may be suspected at the end of the line, rather than a blundered S.

The examples are distributed as follows: 1, AM 1 = C 1269, 1; 2, BM 4 = *LCHNS*, vi. pl. 2, 3, YM 1 = CA. vi, pl. 17, 2; 3, BM 5 = CA. vi, pl. 17, 1; 4, AM 1; 5, CM 1 = *Trans.* N.S. xxxi, 81, cf. CA. vii, 15, 7.

Cohors II Nerviorum, 18 examples (Fig. 2A, 1-7).

The name is clearest from 4. The most important stamp is undoubtedly the reverse of 1, which reads *metal(lum)*, of which the significance has already been discussed (see above, p. 115). No less interesting is the association of stamps of this cohort with private seals, nos. 1-3 (see below, p. 100), as if to show that its commandant was personally responsible for some of the consignments. 3-7 is a centurial group, in which 5 is said to be from Felixstowe, but probably in error.

The examples are distributed as follows: 1, BM 3, YM 1, KC 1; 2, BM 4, cf. C. 1269, 8, 9 = CA. vi, pl. 16, 5, 6; 3, BM 1 = *LCHNS*, vi, pl. 2, 2; 4, YM 1; 5, BM 1 = C. 1269, 5, where the provenience is probably wrongly stated; 6, BM 1, reverse illegible; 7, BM 4 = CA. iii, 32, 4; 8, *ob.* [C]II NER, the ER ligatured, *rev.* QAS under cross and crescent and over palm, sent by Miss E. E. Cumpston of Barton Hall.

Cohors VI Thracum, 5 examples (Fig. 2B, 1-2).

Although this cohort is relatively rare, and its post unknown, there is no doubt about the reading of its stamps. One is a centurial stamp the other has the abbreviation TVD described above (p. 117).

The distribution is as follows: 1, BM 3, KC 1 = CA. iii, pl. 32, 9 and vii, 15, 6 = C. 1269, 11; 2, AM 8, cf. CA. vii, 15, 5.

Cohors VI Raetorum, 4 examples (Fig. 2B, 3).

Only one stamp is known, but the reading seems reasonably certain. The cohort may be mentioned upon an Aesica inscription (see above, p. 114). The reverse legend CAD is accepted as against *Trans.* N.S. xxxi, 81, no. 3, 4, our nos. 4 and 5, after careful examination.

The distribution of examples is as follows: BM 2, CM 2 = C. 1269, 10 = CA. vi, pl. 16, 4.

C.V.P. (Fig. 2B, 4).

This single example might be taken to refer to *cohors V Pan-nioniorum*, but the unit is not known elsewhere. There is no doubt as to the reading, though the absence of a stroke above what would be, on this view, the numerical sign raises a doubt as to

COHORS VII THRACVM. A.

¹ CVIIT TVD *	² CVIIT TVD *	³ CVIIT TVD
¹ ⁴ CVII MC TR *D*	⁵ CVII M TR CAD	⁶ CVII MV TR CAD
⁷ CVII MD TR TAD	⁸ CVII + RA MC	⁹ CVII TMD BLANK
¹⁰ CVIITR TMF BLANK	¹¹ CVIITR RC TR *D*	¹² CVII VR TR *D
¹³ CVII OCT *TR *	¹⁴ CVIITR ZABT >>>>	¹⁵ CVIITR ZABD >>>> #
¹⁶ CVIIT {IT >>>> D*	¹⁷ CVIIT PER >>>> }	¹⁸ CVIIT PER >>>> }
¹⁹ CVIIT IVLS >>>>	²⁰ CVII AR TR D }	²¹ CVIIT PR >>>> }

LEGIO II AVGVSTA. B.

¹ LEGII EXP	² LEGII EXI	³ LEGII TX
⁴ LIIA FIT	⁵ LIIA MFS	

FIG. 1.

whether the reference is to a cohort at all. The reverse, on the other hand, appears to be definitely of centurial type. It may be compared with *AA*² xiii, 362 = *EE* vii, 1152c from Chesters.

Cohors I Batavorum, (Fig. 2B, 5, 9).

Two stamps are known. The first, now lost, is recorded in *CA.* vi, pl. 17, 7, and is evidently a centurial stamp. The second was kindly sent for examination by Miss E. E. Cumpston, of Barton Hall, and is of the same general character, though the meaning of the final D remains unexplained. Miss Cumpston tells me that it was found at Kirkby Thore, but no other example is known from that site.

Cohors II Lingonum (Fig. 2B, 6).

BM 1 = *CA.* vi, pl. 16, 12. The sealing is somewhat damaged, having been attached with a square-stemmed nail to the object which it registered. Roach Smith thought to detect a palm-branch below the lettering. The reading is not doubtful, and the expansion as *L(ingonum)* seems certain.

Legio VI Victrix (Fig. 2B, 7).

KC 1. The obverse is certain, the reverse far from sure. There is, however, no doubt as to the identity of the corps. It used to be thought (*Trans.* N.S. xvi, 290) that tiles of this legion came from Scalesceugh; but it is now much more likely that those recorded as fragments were broken examples of the stamp *VIII*, see above, p. 114 note. It may be expected, however, that the Sixth Legion did generally in the Cumbrian area whatever the Ninth had done before it, though it is plain that the Second Legion also did much.

Ala Sebosiana.

CA. vii, pl. 15, 4 = *EE*, iii, p. 144. Reading, *ob.* *ALA S(I)IB.* *rev.* *VAL DEC*, i.e. *Ala Seb(osiana)* and *Val(erii) Dec(uria)*. This is not now to be traced, but is exactly analogous to the centurial seals, as applied to the decurions of a cavalry regiment.

Sealings registering Imperial property, 3 examples.

1, Legend, *IMP*N, *BM* 1.

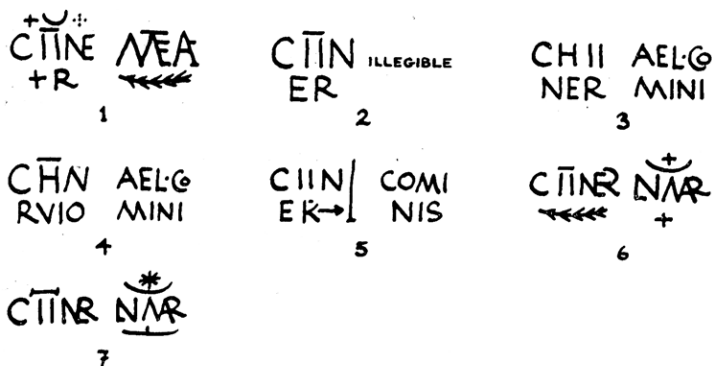
2, Bearded imperial head, facing left, *BM.* 1 = *LCHNS*, vi, pl. 2, 10. This was once enclosed in a pear-shaped seal-box; perhaps Caracalla, A.D. 211-18.

3, Laureate head, bearded, left, *LCHNS*, vi, pl. 2, 12, otherwise unknown.

Private sealings, 20 examples.

A small group of eight private sealings, exactly like those of signet-rings, have been noted, out of which three examples are used as reverses for the similar sealing of *cohors II Nerviorum*. The

COHORS II NERVIORVM. A.



OTHER UNITS. B.

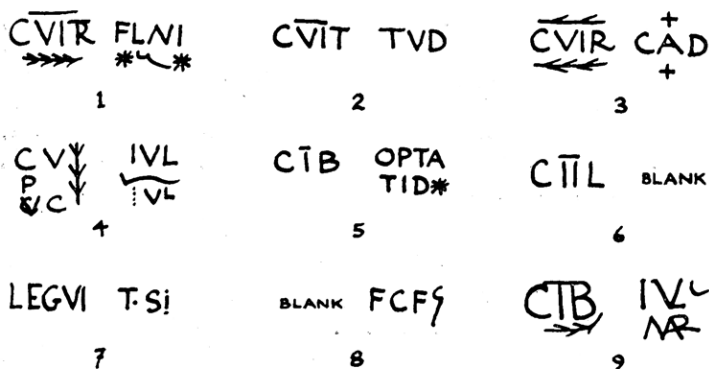


FIG. 2.

assumption is that these were seals of the commandant, and that those unassociated with cohort-sealings also belong to commandants of this or other units. Three examples at Oxford and one at the British Museum were illegible to the writer.

The legible examples may be described as follows:

- 1, A two-legged mask, walking right. BM 4, associated with CĪNER, (cf. fig. 2A, 2).
- 2, A bird standing right. BM 4 = CA. vi, pl. 17, 4, associated with CĪNER, (cf. fig. 2A, 2).
- 3, Zeus enthroned, left. CA. vi, pl. 16, 6, not now to be traced, associated with CĪNER, (cf. fig. 2A, 2).
- 4, Standing goddess, right. BM 2.
- 5, Horseman proceeding right. BM 1 = CA. iii, pl. 32, 4, CA. vi, pl. 17, 3; not now to be traced.
- 6, Eagle with thunderbolt, facing right. BM 1, KC 1 = CA. vi, pl. 16, 14.
- 7, Prancing figures opposed. BM 1 = LCHNS vi, pl. 2, 11.
- 8, Stag, facing right. KC 1.

Sealings of uncertain reference, 21 examples.

A limited number of sealings are not self-explanatory. It may be suspected that most of these have become detached from cohort-sealings, cf. 2, 5, 6.

- 1, IVBD, BM 1 = CA. iii, pl. 32, 10.
- 2, PERT, over cross and crescent, BM 1 = C 1269, 26, cf. LCHNS, vi, pl. 2, 6, may be connected with fig. 1A, 17, 18, 21.
- 3, IVP, BM 1.
- 4, LVS, BM 4 = C. 1269, 28.
- 5, FCF, followed by centurial mark, BM 1, KC 1.
- 6, FIT, BM 2 = CA. vi, pl. 16, 13 = vii, pl. 15, 3.
- 7, MID, BM 1 = CA iii, pl. 32, 12.
- 8, Q, followed by a small F, BM 1.
- 9, VID, BM 1, cf. no. 7.
- 10, VSD, BM 14, cf. CA. vi, pl. 16, 11 = C. 1269, 30.
- 11, CS, BM 1, KC 1.
- 12, GER, BM 1.
- 13, AL over XX, BM 1 = LCHNS, vi, pl. 2, 6.
- GS, separated by a small I, BM 1.
- 14, ATV, over AV preceded by a cross, BM. 1 = C 1269, 21 = CA, vi, pl. 17, 9.

APPENDIX 1.

Analysis of the sealings.

By the kindness of Mr. C. F. C. Hawkes two illegible sealings from the British Museum collection were submitted for analysis to Dr. J. A. Smythe, of the Department of Metallurgy, Armstrong College, Newcastle-upon-Tyne. Dr. Smythe makes the following report, for which we are greatly indebted.

Brough sealings. No. 1, Lead, 72.90% Tin 27.10%. Total, 100.00.

No. 2, Lead, 69.97%, Tin 29.83%. Total, 99.80.

Remarks: the composition of both is close to that of plumbers' solder, 67% of lead, and 23% of tin. The melting-point of lead is 327° C, and of tin 232° C. The mixture of the two metals in the proportion lead 37 to tin 63 has the lowest melting point of all the alloys of lead and tin, viz. 183° C, and it melts at constant temperature: this is the tin-man's solder. All other alloys of the two metals melt over a range of temperature, this being, for plumber's solder, 70° C (viz. from 253° to 183° C). Throughout this range the alloy is mushy or pasty.

The reduced melting-point would be an obvious advantage in preparing the seal; while the additional hardness, over that of the constituent metals, acquired by the alloy would be useful in its preservation. It is possible, too, that the pasty condition would be an advantage in making the impression.

APPENDIX II.

The Brough sealings have at present so few exact parallels that it may be well to catalogue existing examples. The *tesserae*, discussed by Rostovtseff in his treatise *Römische Bleitesserae* (*Beiträge zur alten Geschichte*, Beiheft iii, 1905), are of lead, but of quite different type and purpose. The same function is, however, performed by the leaden identification-disks attached to marble consigned to Rome from the Imperial quarries in Africa (*CIL* xv, 7921-33, 7937-9); and also by the leaden tags of A.D. 198-209, attached to payments of arrears to the Imperial Treasury at Lugdunum and stamped *anabolici* (*CIL* xiii, 10029, 43a-d). The connexion of both the groups with Imperial property is not irrelevant in a consideration of the Brough collection. More exact parallels are provided, as Haverfield notes (*AJ.* xlvii, 264), by two groups of sealings, from Africa and southern France. The African group (*CIL.* viii, 10484, 2-6) are connected with Philippeville, the ancient Rusicade, and have been noted to bear impressions of "helmed soldiers in combat, griffins, Victories, radiate bearded heads of Imperial type"; among these which are inscribed two (2d, e) bear the legend RVSICADE, while nos. 3-6 bear a single private name. The connexion with Imperial and public property is evident, while the single private names might be thought to belong to slave officials. The collection from southern France (*CIL* xii, 5699, 12a-v) is of unknown provenience, though it belonged to Froehner. It includes many private seals with reverses of cryptic lettering, but it is difficult to connect these twenty-one examples with any particular establishment, whether public or

private. Finally, two further groups noted by Haverfield at Trier and Mainz are quoted below, in connexion with the Imperial sealings from Richborough which they resemble.

Turning then to the British examples apart from the Brough collection, four groups connected with Imperial property are worth attention.

(1) Combe Down. A recumbent stag, facing right, lettered P B R S, CA. vii, 68 = EE iv, 707. The building in which it was found yielded the inscription CIL vii, 62 recording that it was a *principia*, or official headquarters, and had been rebuilt by an assistant *procurator*. The inscription has obvious analogies in the London tiles (*Anc. Mon. Comm. Report, Roman London*, p. 176), which probably refer to *procuratores Britanniae*:* The stag is reminiscent of a private sealing (n. 8) recorded above (p. 122).

(2) Felixstowe. 1, A diademed head, left; 2, A bull, standing right, lettered PB; 3, a trooper, galloping right, CA. iii, pl. 32, 1-3. The first seal plainly refers to Imperial property. The second, though bearing a different animal, is of the same class as the Combe Down example. The reference of the third is not clear, but its affinity to the familiar reverse upon fourth-century coins will not be missed, and suggests an official reference. The connexion of CIL 1269, 5 with Felixstowe seems due to confusion; Huebner notes that it was sent to him by John Evans, whose collection came from Brough, and it was passed on by him to the Ashmolean Museum.

(3) South Shields. An important group of thirty sealings, partly Imperial, and dated to A.D. 198-209, and partly of the garrison, *cohors V Gallorum*; described, AA⁴ xi, 101-2, cf. EE iii, 318, EE iv, p. 209. The reference of these sealings to convoying of Imperial property, unpacked and re-distributed from this fort, which is filled with storehouses, is of obvious importance in considering the Brough examples. It is clear, however, that the reference of the South Shields sealings is to the Scottish campaigns of Severus and his sons, while the Brough collection is hardly to be connected with any special occasion, but rather with routine duties. The differences are thus as illuminating as the resemblances.

* Mr. R. G. Collingwood points out to me that in the Royal Commission's report, *loc. cit.*, the view that *p* may stand for *portitores* is favourably considered. Since then, the discovery in London of a writing-tablet officially branded, as "issued by the *procuratores* of the province of Britain," suggesting as it does the existence there of procuratorial headquarters, makes more probable the restoration *p(rocuratores)*.

(4) Richborough. Two sealings, laureate head of Constantinus I, right, impressed CONSTANTINVS PAVG, CA vi, 120 = EE vii, 1149. To be compared with the first sealing from Felixstowe. The connexion with Imperial property or documents is self-evident. Haverfield (*AJ.* xlvii, 233) notes parallels from Trier and Rheinzabern.

The reference of the remaining examples to Imperial property is not clear; yet they are obviously official sealings.

(5) Chesters (Cilurnum). *EE* vii, 1152*c*, = *AA*³ xiii, 362, a decurial sealing of *Ala Augusta*; in addition, a sealing resembling the South Shields imperial type, but not from the same matrix, is recorded in the latter source only, and is now in Chesters Museum, no. 881. An actual signet-ring bearing a similar device comes from Castlesteads.

(6) Corbridge. *EE* ix, 1296*a-d*, one sealing of *Legio VI*, two sealings of *legio XX* and one of *cohors* or *ala II Asturum*. A doublet of *c*, now at Corbridge, is to be added. No doubt the sealings have a connexion with the use of Corbridge as a store-base.

(7) High Rochester. *EE* vii, 1152*a, b*, = Watkin, *AJ.* xxxvii, 146, now in the Blackgate Museum. The readings adopted in *EE* seem correct, but of uncertain significance. The sealings are, however, of official type.

(8) Newstead. *EE* ix 1296*e* = *A Roman frontier-post*, 309, pl. lxxxii, 19, now in the National Museum of Antiquities, Edinburgh. After examining this sealing, I read CIIINER, under crescent, the NE being ligatured; presumably *C(ohors) III Ner(viorum)*.