

**Notes towards the history of the medical staff of the English Army prior to the accession of the Tudors : enlarged from a paper read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872 / by William R.E. Smart.**

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### **Publication/Creation**

[London] : Printed by T. Richards, 1873.

### **Persistent URL**

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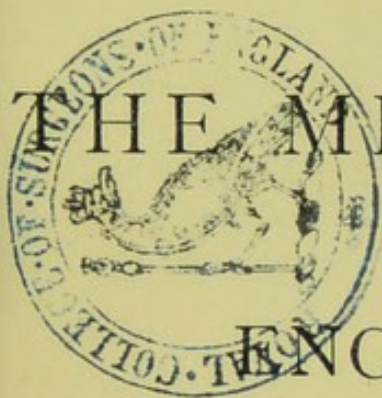


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NOTES TOWARDS

THE HISTORY

OF



THE MEDICAL STAFF

OF THE

ENGLISH ARMY

PRIOR TO THE ACCESSION OF THE TUDORS.

ENLARGED FROM A

PAPER READ BEFORE THE PUBLIC MEDICINE SECTION AT THE ANNUAL  
MEETING OF THE BRITISH MEDICAL ASSOCIATION  
IN BIRMINGHAM, AUGUST 1872.

BY

WILLIAM R. E. SMART, M.D., C.B.,

Knight of the Legion of Honor ; Inspector-General of Hospitals and Fleets.

PRESENTED  
by the  
AUTHOR.

PRINTED BY

T. RICHARDS, 37, GREAT QUEEN STREET.

1873.



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From the Author.

## PREFACE.

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IN presenting these notes in the form of a paper, to be read at a great professional gathering, it was, above all things, needful to keep within allotted space. Thus many things were omitted, not on account of being deficient in interest, but simply from want of room.

I have corrected and added to what was read at the meeting of the British Medical Association in Birmingham in 1872, and reprint it for presentation.

18, Beverley Road, South Penge Park, London,

March 1st, 1873.





## NOTES TOWARDS THE HISTORY OF THE MEDICAL STAFF OF THE ENGLISH ARMY PRIOR TO THE ACCESSION OF THE TUDORS.\*

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OUR military medical history commences with the third Roman invasion, when the Emperor Claudius, A.D. 43, landed in Kent, took command of the army of Aulus Plautius, crossed the Thames, and took Camalodunum (Colchester) by siege. In the following year the Senate decreed him a triumph, and conferred on him the title of Britannicus, to be inherited by his then infant son, and gave honours to his military followers. Amongst these was Scribonianus Largus, *medicus*, who, it may be presumed, shared in those honours and privileges, and who made for himself literary renown also. He wrote a treatise *On the Composition of Medicines*, containing about three hundred formulæ, among which it has been surmised there may have been some remedies of which he gained a knowledge in the campaign in Britain. His treatise was held in high repute, and a century later Galen introduced several of his formulæ in his writings.

A sadder reminiscence rests on the name of another Roman military *medicus* who served in Britain. In the ruins of Chester-in-the-Wall (anciently Borcovicus, a first-class station) there has been found a mortuary stone, six feet high, bearing this inscription : "Sacred to the infernal Gods. To Anicius Ingenuus, *medicus* in ordinary of the first cohort of the Tungrian Legion. He lived xxv years." This Tungrian (Tongres, *hodie*) legion was recruited on the banks of the Maese in Belgic Gaul, up to Spa, then as now famous for its mineral waters. Two of its cohorts marched north under the Emperor Severus A.D. 207, and the guardianship of Borcovicus was entrusted to its first cohort, which recorded, in a tablet that has been found, that it constructed a thousand paces of the wall.

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\* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.



We know that whatever the nationality of a Roman legion, its officers were Romans of family rank ; and this *medicus* who died so young must have been, from his name—Anicius Ingenuus—a man of good descent. In early manhood he was *medicus* of the first cohort of a celebrated Roman legion, which, consisting of 1,100 men, was of double the strength of the other cohorts. They led the van in battle, and guarded the eagle—the standard of the legion — and of them it was said by Cicero, “His divina et presentia signa venerantur.” From this incident of the regard in which the young *medicus* was held by his cohort, may be inferred the carefulness of the Romans in appointing their military *medici*, who, like our own, stood in the double capacity of physician and surgeon to their corps.

Britain was to the Romans a far more difficult possession to conquer and to hold than India has proved itself to be to us modern Britons, for throughout an occupation of three hundred years its tenure was “by the sword”. Among the Roman emperors, Cæsar, Claudius, Vespasian, Adrian, Severus, Caracalla, Constantius, and Constantine the Great, owed much of their military reputation to their services in Britain, which shows the importance of that command ; and Great Britain is indebted to Indian warfare for the training of many of her most famous generals. The sculptured stones that tell of the Roman occupation are highly treasured by modern Britons. Whatever may be the duration of our hold on India, it is open to doubt that, after a lapse of fifteen hundred years, there will remain such a sculptured testimony erected by the officers and men of his regiment to tell of their regrets and of the worthiness of any of the hundreds of medical officers who have fallen at their posts in the acquisition or defence of the British Indian empire as that which still remains in memory of Anicius Ingenuus, the young Roman military *medicus*. Happily, time, the destroyer of all things, has not erased the monument to him erected by the first cohort of the Tungrian legion.

Our Saxon forefathers were a very martial race, every freeman being a “weaponed man”, born to bear arms, dishonoured in appearing without his sword, having the inherent right of private feud, and of maintenance in just quarrels by his kindred and neighbours ; and he was bound to serve the king in defence of his kingdom for any term the occasion might require. Of their military organisation and customs, very little further than this is known.

*Leechdom*, or the art of healing, from the Saxon word *læce*, meaning, according to Ernest Schulze, a *physician*, was much esteemed in



Saxon England, and it was always combined with the priestly office. *Domesday Book* does not give us the name of a single Saxon *medicus* possessing land under Edward the Confessor ; but, among the tenants *in capite* under the Conqueror, there is the name of one Aluric possessing an estate in Hampshire. The land in his possession was also before the Conquest in that of an Aluric, a common name among Saxon landowners, and we may infer that he inherited one of his numerous family estates, if he were not the individual who had been deprived of the greater part of them at the Conquest.

The respect in which the art of medicine was held is displayed in the ecclesiastical canons of the reign of Edgar (959-975 A.D.), wherein analogies are drawn between spiritual sins and bodily diseases. Penitence is likened to medical treatment under a skilful leech, and its results to the action of a "vomit" in expelling a deadly poison ; and it is decreed that confession should be made under this formula : "I confess to Almighty God, and to my confessor, the *spiritual leech*, that", etc. These are appeals to the mind of a rude race, made through the known to the unknown, such as our missionaries may employ now : they show how closely medicine was affiliated to theology. One of the primitive duties of Christianity was the care of the sick, maimed, halt, and blind ; and up to the twelfth century the art of curing lay in the province of the church. Its *materia medica* consisted of simples ; and more cures were effected by altered regimen, by visits to holy wells, and by faith, than by medicaments, some of which were of disgusting or of revolting nature, strangely mixed up with pagan charms, magical arts, superstitious prayers, and offerings to shrines.

Our knowledge of medical affairs among our Saxon forefathers has been elucidated of late through the liberality of the government in providing editions of the literature of that age. Thus we are in possession of an interesting work on *Leechdoms, Wortcunning, and Starcraft of Early England*, collected and edited by the Rev. Oswald Cockayne, M.A.Cantab., which reflects a strong light on the personal habits, social and domestic customs and practices, and on the state of morality, prevailing among the Anglo-Saxons. We find that even in that age of darkness those who were the *literati* were also the *healers*, and that they pretended to an acquaintance with the writings of the Greek physicians. In their history of medicine they assigned to Apollo the art of surgery ; to Æsculapius the art of curing internal disease ; to Asclepias the clinical observation of maladies, and the logic or art of reasoning thereon ; to Hippocrates the teaching diagnosis of diseases ; after



whom Plato and Aristotle rendered all consistent by the theory of four temperaments, corresponding to the four natural elements.

Of their practice, we may best judge by some of their prescriptions ; thus for fever, it is recommended "to take a snail and purify him, and take the clean foam, mingle it with woman's milk, give it the man to eat, it will be well with him." No diet can excel this in its primitive simplicity. For "nyctalopia" (that is cataract) : "The men who are unable to see nothing after sunrise till he again go to his setting ; take a knee-cap of a buck, and roast it, and when the roast sweats, then take the sweat and smear the eyes therewith, and after let the blind eat the same roast ; and then take a new asses tord, and squeeze it, then let them take the ooze and smear the eyes therewith, and it will soon be better with them." These are fair examples of the Saxon materia medica used by the clerical leeches, which probably embodies the foulest charlatanry that has ever defaced the practice of medicine. We would expect to find a rational empiricism or practice based on rational experience, that leads to a reliance on specifics ; but of these there is only to be discovered an acquaintance with one—that of sulphur and tar for the itch: "Against *handworms*—ship tar, brimstone, pepper, white salt ; or wax, brimstone, and salt ; mix and smear." They knew the *acarus*.

In primitive society throughout all ages, barrenness in women and the want of virile power have been regarded as among the greatest afflictions of humanity ; and the Saxon priestly leech did not deem these matters unworthy of his study, nor indeed others which are more fitly consigned to the arcana of the mere voluptuary, the whole of which were dealt with in the plainest Saxon terms, without the decent intervention of a dead language.

Where medicine was in this condition, it is certain that surgery would also be debased and in darkness. Of operative surgery beyond phlebotomy there is no trace ; but of the mode of dealing with a fracture there is an instructive description in these words : "If shanks be broken, take bone-wort, pound it, pour the white of an egg out, mingle these for the shank-broken man. For a broken limb, lay this salve on the broken limb, and overlay it with elm-rind ; apply a splint again ; always renew these till the limb be healed. Clean some rind and take linseed, grind it for a brewit or paste with the elms drink ; that shall be a good salve for a broken limb."

This portrays the employment of demulcent cataplasms, of albumen (for collodion) to close a wound of the integuments, fortified with a



backing of the soft inner bark of the elm (for lint), the use of splints ; and it counsels the assiduous use of the means until the fracture has united. This assures us that the art of "bone-setter" was advanced in the Saxon age ; but the treatment of wounds was not equally regulated by common sense, judging by that recommended for man and his domestic animals, who were much cared for in this ancient leechcraft. Thus, "for wounds that swell", or become inflamed, "take furze and pound it, and lay it upon the swollen part, and it shall soon subside." Again : "If a horse or other beast be shot" (that is with an arrow), "take a seed of dock and scotch wax, let a mass-priest sing twelve masses over them, and add holy water, and put that on the horse or on what cattle soever it may be. Have the worts always with thee." This at least is certain, that the resinous covering would benefit the wounded animal, and the reading or singing the masses would bring his "honoraria" to the ecclesiastic leech.

We may infer from these receipts what means were employed in the treatment of arrow-wounds and of contusions received in battle. The alienation of the art of curing from the priestly office began in our Saxon era, when the fourth Lateran Council (993 A.D.) prohibited the regular clergy from doing any operations of surgery "involving the shedding of blood", and assigned manual operations to seculars and clerks.

Surgery, then, underwent some social degradation, which laid, however, the foundations of its freedom from priestly interference, and tended eventually to its becoming a science. Medicine was not disassociated from theology before 1131 A.D., when the sixth Lateran Council forbade monks and regular canons the study of civil law and medicine. This was in the reign of our Henry I ; and it was about that time, according to Colliette, that in France practitioners were called "myres", by which appellation they were popularly known through several centuries ; and the title appears in England in the reign of our glorious monarch, Edward III. Two derivations of the title myre have been advocated : Latin, *mirus*, admirable, extraordinary ; and Greek, *myron*, unguentum ; hence *myropœus*, an anointer ; and *myropolos* an apothecary. It is possible that this new title originated with the institution of lay practitioners, after the decree of the sixth Lateran Council ; and I am inclined to an opinion that they were a class that combined again the practice of medicine with that of surgery, as among the Romans.

About this epoch the revival of learning produced Latin editions of Hippocrates and Galen, whose works becoming familiarly known



in the west of Europe, a demand arose for the drugs of the Levant. The student of those authors obtained the reputation of knowing the laws of Nature (*φύσις*), and of being able to assist her operations, from which they assumed the new designation, "physicians"; while the change in practice from the use of indigenous simples, which every rustic could distinguish, to that of the Eastern drugs, called for a new order in the profession, to import, store, and dispense these costly and potent agents : thus arose the apothecary, whose office was previously unknown in Western Europe, and not in England before 1300 A.D.

The technical titles employed at this dawn of the modern medical profession were those of physician, mire or myre, and apothecary—the antecedents of academical titles and distinctions of the baccalaureate and doctorate, which were first conferred in France in 1140 (Louis VII), and in England in 1207, in the reign of John. The title of "Surgeon" first appeared in English history when Edward I invaded Scotland in 1299.

In addition to these subdivisions of the medical profession, there arose another in the Middle Ages out of the numerous body of the tonsorial craft, whose vocation, being centred among the communities of the shaven priesthood, obtained from it the reversion of surgery at the end of the tenth century. The barber, being dexterous in the use of cutting instruments, naturally enough assumed the position which the priest was called on by canon law to surrender ; and so long as the art of surgery was comprised in bone-setting, tooth-drawing, cupping and blood-letting, and anatomy was untaught as the basis of surgical science, his facility of manipulation and habits of rendering personal services gave the special training by which the ambitious barber might hope to obtain repute as a chirurgion. The "myre", as the representative of a higher class surgeon-apothecary, did not flourish in England as he did in France, and the doctor of medicine, who had taken the place of the ancient priest-doctor, regarded the manipulations of surgery as undignified ; thus the barber-surgeon rose into repute in the city of London, and municipal privileges being secured to his craft A.D. 1376, the corporate body gained importance, attracting to itself those who purposed to practise surgery alone.

Surgery formed its alliance with barberdom on account of manual accomplishments and civic wealth. The union was not a happy one, as surgery was impatient of the yoke, which, while conferring municipal substantial benefits, disparaged purely surgical acquirements. Yet a separation was not effected until the middle of the eighteenth



century, after union in some form or other since the fourth Lateran Council, A.D. 993. So slowly do corporate rights give way.

This cursory recapitulation of the status of the medical profession will throw light on my subject—the history of military surgery.

Nothing whatever is known of those who, in the capacity of healers, attended on our warlike kings, or followed their armies in the field, prior to the Conquest.

From *Domesday Book*, which dates from twenty years after the battle of Hastings, it is learned that there were in the train of the Conqueror two medical attendants—Gilbert Maminot, presbyter and *medicus*, and Nigellus, *medicus*—both of whom stood among those possessing estates by gift of the Conqueror.

The first of these was a cleric of noble family, whose chief—another Gilbert—was enfeoffed in the barony of Maminot of twenty-four knights' fees, and was one of the eight trusty barons charged with the maintenance and defence of Dover Castle, the most important fortress in the land. Gilbert Maminot was the king's chaplain also, and, as an ecclesiastic, he was deterred from surgery by the fourth Lateran Council edict, and therefore it may be inferred that he did not follow his military movements in the field. It is even probable that he was more in attendance on the Conqueror's queen than on himself, for we find that Gilbert the "presbyter" was tenant *in capite ex dono reginæ* of an estate in Hidincforth Hundred in Essex, and that he does not appear to have held any lands *ex dono regis* prior to his installation as Bishop of Lisieux in Normandy, which see was conferred on him by William in 1077 A.D. In *Domesday Book* he appears tenant *in capite* as "Gislebertus, episcopus Lisiacensis", for an estate in Gloucester, with which, we may infer, he was invested subsequently to his installation, while the gift of the queen was made to him previously to that, unless there were two priests, "Gislebertus" by Christian name, among the royal followers, one of whom held only clerical, and the other both clerical and medical, position in the retinue.

Nigellus\* was a layman, I believe, and his name I now propose as that of the first surgeon in English military history. He stands as the

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\* The Rev. R. W. Eyton, in his *Antiquities of Shropshire* (the model of county history and topography), states, vol. x, p. 1, that Nigellus was a clerk and physician. He does not state that he was a priest in orders, and he appears to base his opinion of his being "a clerk" solely on the fact that the estates conferred on him in Shropshire had been previously in possession of Spirtes, an eminent Anglo-Saxon ecclesiastic, who was exiled by Edward the Confessor. He asserts that Nigellus was physician to Count Roger de Montgomery in 1086 A.D.



Baron Larrey of his day, following the fortunes of the Conqueror of England. He appears in *Domesday Book* as tenant *in capite* of estates in Hants, Wiltshire, Hereford, and Shropshire, with which he must have been invested in reward of his services in the capacity of *medicus*, and, it may be inferred, in the special branch surgery, which it was not lawful for ecclesiastics to practise. His first two possessions in Hants and Wilts may have been given immediately after the Conquest in the first distribution of lands ; but the last two must have been of later acquisition, as the subjugation of that part of England was effected at a later date, and the Conqueror could not have conveyed to his followers any lands of which he was not the actual lord by conquest, and by dispossession of their Saxon owners.

It may be assumed that, as soon as William had completed the successive subjugation of the provinces, the lands were distributed among those who were present, according to the estimate of services rendered, and that these estates in Hereford and Shropshire were the reward of Nigellus on the conquest of the Welsh Marches, and that possession was given by "seizin", or on the spot. Nigellus was possessor of other estates, which, not being of regal gift, must have been by feof of the great barons, who subdivided their large grants from the king among vassals on military tenure. These estates must have been the reward of professional services to the donors ; and Nigellus, not unmindful of the church, although himself a layman, endowed the church of Monteburgh, in Normandy, with an estate of this kind, situated in Somersetshire.

From these unquestionable data, it may be inferred that the profession was well represented and well rewarded at the conquest of England ; and in them we possess the historical proof of the value placed on military services by one of the greatest generals and sovereigns in universal history, whose descendants still possess, after the lapse of eight centuries, the throne he acquired, now giving laws to the widest empire the world has known.

After the completion of the great event on which all the subsequent history of England turns, "we know", as Hallam tells us in his *History of Europe during the Middle Ages*, "that the Conqueror distributed this kingdom into about sixty thousand parcels of nearly equal value, from each of which the services of a soldier were due. He may possibly have been the inventor of this politic arrangement". The service due to the king was limited to forty days in the year, after which it was continued at the expense of the crown. As military service was thus rendered feudal and but of short duration, medical services, it may be in-



ferred, were of the same nature, and if any were required they were provided by the great barons for their feudal contingents. Doubtless the Norman kings were attended by their selected professors of the art ; but as the privy expenses of the courts of these kings have not come down to us, nothing whatever is known of them. As, however, in their next appearance in our history they continued to be of continental extraction, so it may be inferred they were so in the blank interval.

The next page of military medical history opens in the reign of Edward I, at the commencement of the fourteenth century. The Crusades had taken up the interval since the Conquest, beginning in 1096 and ending in 1291 A.D.; and it would appear that so late as the third crusade (Richard and Philip) these fanatical expeditions were unattended by any professors of medical and surgical knowledge. This can scarcely be wondered at when we reflect that, as concerns their spiritual wants, they were without special advisers, each crusader being provided before setting out with the consecrated elements ; and as the functions of the priestly office were thus superseded, so were those of the leech by relics and amulets. Probably direct intercourse with the Saracens may have caused respect for their superior medical attainments and practice, as the celebrated Arabian school was then at its climax and the works of Rhazes and Avicenna were in high repute. It may indeed be credible that in a warfare where courtesies were not unknown, the surgeons in the suite of Saladin, and his humane brother Saphadin, may have afforded their aid to the wounded in the camp of Cœur de Lion. Although the crowned heads of England were not represented in the Crusades like those of France, yet their scions and their great nobles brought together large contingents, conducting them on French principles rather than by any independent nationality. Among the traditions of the Crusaders, we find that Robert, eldest son of the Conqueror, was distinguished by his many acts of bravery and chivalry in the Holy Land, which he left in consequence of a severe wound. On his return he landed at Brindisi, and tarried in South Italy to have his wound cured by the famous professors of Salerno. While under treatment, he received a wound of the heart from a fair Norman, Princess Sibylla of Apulia, who may have done the nursing, which was common in those days, as it has again become in our own, and he made her his wife. He must likewise have gained the high opinion of those who treated his wound, as the professors of Salerno passed over the Norman dukes who had acquired Southern Italy, to render to him



the honour of the dedication of their famous "Regimen Sanitatis Scholæ Salernitanæ."

Richard I was the only English king who undertook a crusade. He did this with a large army and fleet, but the chroniclers say nought of medical attendants either in this or in the fleet of Philip of France; and Ducange, in his notations on Vinesauf, who was with Philip, makes this the ground for doubting that there were any. Our own Roger of Hoveden tells us that the English expedition was detained at Rhodes owing to the sickness of the king. Soon after landing at Acre, both Richard and Philip were seized with a disease, "*quam Arnaldiam vocant*, of which they lay near to death, and they became bald; but by the mercy of God they recovered from their weakness, and became stronger and more resolute in God's service". This happened in June 1191. About a year later, after his miraculous exploits in the recapture of Jaffa, Richard fell ill again; and, in broken health, he left Palestine in October 1192 A.D.

There can be no question of the mutual respect that existed between Cœur de Lion and Saladin; and it is well recorded, that on the plain of Jaffa Saladin sent presents of fruit and of cooling snow to ameliorate the sufferings of his adversary; and with that fact in view it is credible that skilful Arabian physicians may have been sent to advise on his treatment. It is certain that if Richard were without a military physician in his train, he must frequently have felt the want of such a follower. This was the darkest age of surgery when, after being cast off by the church, which then alone cherished the lights of science and learning, it had not yet taken the first step in advance of the capabilities of those who deemed it their most elevated duty to shave the crowns of the priesthood.

It has been believed that the mighty Cœur de Lion perished from mal-treatment of the revengeful arrow-wound he received at Chaluz; and, as our accurate historian, Strutt, gives it, "If that ancient rhymer, Robert of Gloucester, is to be believed, the Duke of Austria, who imprisoned our King, having fallen from his horse and bruised his foot, his physicians declared that if it was not immediately smitten off he would die; but none would undertake the operation till the duke took a sharp axe and bid the chamberlain strike it off, and he smote thrice ere he could do it, putting the duke to most horrid torture."

When Edward I was proclaimed King of England in November 1272, he was absent in the Holy Land on the eighth and last Cru-



sade, in which he was to have co-operated with St. Louis of France, who unhappily met his death by dysentery before Tunis in 1270, on the outward voyage ; and, from the silence of the Sire de Joinville on the point, there is ground to doubt his having had a medical attendant near him. Prince Edward of England would appear to have been situated better, as there was at hand an English surgeon to treat the murderous wound dealt him by an assassin at Jaffa in June 1272. Our contemporary chroniclers are silent on the romantic story of Eleanor sucking the poisoned wound inflicted on her husband. Carte, who is a very national English historian, giving his authorities, states : " The assassin, drawing a poisoned dagger, attempted to stab the prince in the belly, but the prince, endeavouring to parry it with his arm, received there a deep wound, and, striking at the villain's heels with his foot, seized the dagger and plunged it in his heart, though in wresting it violently from him he gave himself a wound in the forehead. The wound in his arm appearing very dangerous and likely to gangrene, the prince thought fit the next day to make a will ; *but the black flesh being cut away by an English surgeon*, it was healed in a little more than a fortnight, though not so thoroughly but he felt from time to time exquisite pain, and the scar which was left dropped some moisture continually for several years, till it was again laid open and then entirely cured." From this evidence, we may judge it to have been a punctured wound involving the bone, and the primary operation a deep incision or two for the relief of inflammatory tension. That a sinus remained, leading to an exfoliation that required a second incision for its removal, is the easiest way to account for the remoter consequences. The romantic stories of poison and suction may be altogether dispensed with, as they are unnoticed by the contemporary historians, Thomas Wikes and Walter Hemingford, who make no allusion to any influence resulting from her presence, unless prejudicial to the sufferer and compromising his recovery ( *V.* Appendix B ).

This incident affords proof that Prince Edward had with or near him in Palestine, in the year 1274 A.D., a skilful English surgeon, whose name, unhappily, is lost to fame, but his art must tend to exalt our traditional ideas of the condition of practical surgery in that age. I think that this unknown individual has a fixed claim as an English army surgeon worthy to be remembered for having been instrumental in saving the life of the grandest of our Plantagenet kings.

King Edward the 1st having experienced personally the value of surgeons in the field and in the camp, it is not likely that he ever forgot



the lesson. There are no records of the military economy of his expeditions into Wales, nor of his first expedition into Scotland in 1298, when Falkirk was the great field of slaughter; but his second invasion affords to the inquirer its invaluable record of costs in the wardrobe accounts of royal expenditure A.D. 1299-1300, that form the starting-point of our economical history. It may be apprehended that it is only from the absence of similar accounts of older date that we remain ignorant of an earlier like organisation. Where money is recorded to have been paid for services rendered, we have landmarks of history at least as certain as the face of a medal or coin, the presentation of which has sufficed to set at rest many a disputed point. With this wardrobe account before us, we cannot hesitate to fix the year 1300 A.D. as a date when an army medical service had actual existence among us. There are charges in the marshal's (war-office) expenditure for a physician and his two juniors (*valetti sui*), and for two surgeons, with one of whom there were two assistants (*socii*). Some of these, as well as an apothecary, are introduced in the household accounts on some heads of expenditure, in a manner showing the distinctions then matured between military and household medical services, or camp and court. The names and qualifications and ranks of the individuals are as follows.

John de Kenle.....	Phisicus regis .....	Miles simplex.
John de Shireburn....	Valettus suus .....	Scutifer.
William de Rigethorn.	Do. ....	Do.
Philip de Belvaco ...	Cirurgicus regis .....	Miles simplex.
Edmund de Baunton.	Socius suus .....	Scutifer.
One, name unknown..	Do. ....	Do.
Master Peter.....	Cirurgicus .....	Scutifer simplex.
Peter or Perroto .....	Apotecarius reginæ.	

Thus, we learn that in A.D. 1300, the professional distinctions of physicians, surgeons, and apothecaries, were recognised at our court, and it seems to me doubtful whether the last two names on this list were or were not of the same person. *Valettus* is an abbreviation of *vassalettus*, a diminutive of *vassallus* holding lands by military tenure under a feudal baron as tenant *in capite* from the king. The designation was applied to youthful aspirants of rank, even to those of noble families, who served in the retinues of the kings, princes, or great feudatories, before obtaining knighthood.

With regard to emoluments: The physician De Kenle, and the surgeon De Belvaco, appear to have received the pay of simple knights, two shillings a day, when knights bannerets were paid three shillings.



The assistant-physicians, de Shireburn and de Rigethorn, and the assistant-surgeons, de Baunton and his nameless associate, had one shilling a day, like mounted lancers, and vinteners, or sergeants of twenty footmen. In addition, the surgeon was repaid for expenditure on medicine and appliances in the field or at the court, and the physician was allowed one shilling a day subsistence-money when absent from the courtier's table on the king's service.

Physicians, surgeons and their assistants, were allowed the keep of horses for their conveyance, but pack-horses seem not to have been allowed to the assistants. The army practice was to begin daily pay on the date of presenting the charger for valuation, after which its loss or injury was compensated if it happened "*servicio regis*"; and, in other cases, when that could not be strictly proved, compensation was made "*ad elemosynam*". These rules applied to all alike on the marshal's roll. Thus, the king's physician was paid "*ad elemosynam*" for a horse dead at Greenwich, and the king's surgeon was paid for three horses dead in Scotland, "*servicio regis*", and for one, "*ad elemosynam*", which he seems to have lent his assistant, Baunton, to carry his baggage on the march.

Another head of expenditure elucidates the status of these medical officers. The "*Roba*" list presents to us the clothing or uniform allowances paid to those on the marshal's roll and royal household. The first scale was an annual allowance of sixteen marks, or £10:13:4 paid to bannerets; and the second scale, eight marks, to simple knights. The king's physician, De Kenle, and his surgeon, De Belvaco, receiving the second scale, indicates their social position at court and in the army to have been with rank of knighthood.

The "*valetti*" of the physician and the "*socii*" of the surgeon are not named on the "*roba*" list; but they appear on the pay list as "*scutiferi*," or esquires.

Pietro, "*cirurgus*," was of inferior rank to De Belvaco, "*cirurgus regis*," and his name appears among those of the courtiers, "*scutiferi simplices*," receiving only £2 a-year for uniform. As this "*cirurgus*" does not appear as such until A.D. 1302, and as Pietro, or Pierrot, "*apotecarius reginæ*," is named in 1300 and 1301, and not in 1302, I am of opinion that they were the same person. Having come from France with the young Queen Margaret, he was probably the first apothecary introduced into England, where he may have found his to be an inconvenient title,\* and have changed it for the better known one

\* Previous to this, the title "*Apotecarius*" was not unused in England, but it had



of surgeon. There is evidence of his having been at York, in waiting on the Queen, in the summer of 1300, but no evidence of his being in Scotland.

To comprehend fully the relations of these men with the army invading Scotland, it is needful to be acquainted with the king's movements. The feudal system was in full operation, and he had ordered his barons to assemble with their vassals at Berwick in the autumn of 1299 A.D., he being at the same time under contract to marry Margaret, the sister of Philip, King of France. The marriage was celebrated in Canterbury Cathedral on the 8th of September, and the queen was left at St. Alban's on the 2nd of November. Edward joined his army at Berwick on the 20th December, when his barons protested against any warlike operations at a season when the roads were quagmires. The castle of Stirling was abandoned to its fate, and the army dispersed until the summer of 1300 A.D., when it reassembled at Berwick, and, under the king's command, made some ineffectual incursions of Galloway.

The "wardrobe accounts" show that De Belvaco, "cirurgus regis," with his "socii," was present with the army in the fall of 1299, and that De Kenle, "physicus regis," was then at Caversham, by the king's command, in attendance on his daughter, the Countess of Gloucester, in childbed. In September and October, 1301 A.D., the "valletti" of De Kenle were with the army in Scotland, and thus we know that the medical staff of the army in 1200-1300 A.D., comprised both physicians and surgeons.

This is an outline of the *personnel* of the earliest recorded medical staff of the English army with its rank and emoluments. It was established by Edward I, worthily styled the greatest and most glorious of the Plantagenets, who may have been conscious of having owed his life to the skill of an English surgeon when in the Holy Land. In comparing the estimate set on medical services at various periods of history, it is of interest to note that the physician and surgeon of the army then received the same daily pay as the Admiral of the fleet—the first of that rank in English history—and their subordinates the same as the captains of the ships composing the fleet.

F. Grose tells us in his *History of the English Army*, vol. i, p. 238,

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a much more lofty signification, being applied to the king's treasurer or keeper of the chest or depository. Madox, *Hist. of Exchequer*, vol. i, p. 79, states that Bishop Nigellus of London paid King Henry II the sum of £400 for the patent of Apotecarius, king's treasurer granted to his son Richard Nigellus.



that "In the Wardrobe Account of the pay of the army raised against the Scots by Edward II, A.D. 1322, many of the Welsh corps have an officer styled *medicus*, but whether by that term a physician or a surgeon is meant seems doubtful, as the word *medicus* is sometimes used for both a surgeon and an apothecary. None of these physicians or surgeons is charged to the English levies. And to the Welsh they seem to have no regular proportion to the number of private men—a corps of 1,907 men having only one, and another of 968 having two; the wages of all, except the two last named, was sixpence per diem each, those which were raised in the king's land in Cardiganshire had only fourpence each per diem."

It is easily understood that the Welsh levies, being of the unmixed old English stock, would be attended by *medici* of their own race knowing their language, and as they were all in receipt of pay direct from the king's treasury, so their *medici* would be specially named in the Wardrobe Account. With regard to the English levies, they were at that time entirely feudal, serving forty days in the field in England at the cost of their feudal lords, who were distributors to them of the king's pay after those forty days had expired or on embarkation for foreign service, and there are no baronial muster-rolls extant to show the ranks and offices of their retinue and followers, amongst whom there must have been surgeons. That their absence from the royal muster-rolls may be accounted for in this manner is evident from a document of later date, supposed to have been written *temp.* Richard III or Henry VII, which Grose adduces from the collection in the College of Arms, MS. i, 8, fol. 85, in which, after a list of the "Apparell for the field of a baron in his Souvereyn" (the King's) "Compeny, or for a baneret, or a ryche bachelor," is given that of the "officers necessary" to his retinue, "a chappellyn that to the mass belongeth, harberours" (quartermasters), "purveyours for your stable and for your vitayles, a barber, surgeon, etc.;" and in the retinue "of a knight or esquire of fair lande—a barber with his basin, with a store of towells," no allusion being therein made to a surgeon.

As the muster-roll of a baron, *temp.* Richard III, contained "a surgeon" as well as "a barber," who possibly were represented by one individual, we may conclude that the same provision existed in the great wars of the Plantagenets, when the dignity of the great barons in the field was at its acme.

The list already given of the medical attendants on Edward I, A.D. 1300, was that of the king's own medical and surgical staff, and



doubtless the great barons had each his own staff with his contingent of fighting men, otherwise there would have been a very inadequate provision of surgical aid for those great armies. At the best it must have been very inadequate to meet the wants of the wounded, but its insufficiency would be less felt when serving within the four seas, where friendly monasteries were always at hand with their barbers and other lay-brethren to afford aid, than in foreign service.

The next page of the history of the English army lies in the reign of Edward III, the glorious grandson of Edward I. It embraces the wars of that monarch for the crown of France, by claim through his mother as daughter of Philip IV, and is filled with the records of Crecy, Calais, and Poitiers, and of the great naval victories of Sluys and Winchelsea, but it closes with the surrender of all the hereditary possessions of the Plantagenets in France. In these wars the very principle of feudal service was undermined, and the army and navy of England first became "royal services" in the pay of the king, as it was not possible to carry on such wars on the feudal principle of forty days' service in the field.

The muster-roll of the great army with which King Edward invaded France in 1346 is extant; but with regard to its medical staff it is silent, except that the "Welsh," or British, who appear therein for the first time as a distinct body of troops in the continental wars, under the banner of the Black Prince, had an attendant physician of their own race.

Frøissart makes no mention of any distinguished surgeons, nor does he allude to any services of members of the medical profession. It is inconceivable, however, that so large an army, whose stay in France was protracted, and which was greatly harassed by sickness, could have been less considered and provided for in this particular than was the army of the king's grandfather in the invasion of Scotland, A.D. 1300. It is more probable that the great barons who brought their contingents for the king's service, receiving the pay for their followers, had the engagement of surgeons, among others, in their own hands; and thus, as we know nothing of the economy of those separate contingents, we must ever remain in the dark concerning the medical affairs of the great army that won Crecy. Although physicians and surgeons of the English army do not appear in the muster-roll of Crecy, A.D. 1346, yet it is incredible that there was no medical or surgical staff present, as we learn from a wardrobe account of the eighteenth year of Edward III, A.D. 1345, by Walter Wentwayt treasurer of the household,



MSS. in possession of F. Grose, that in that year wages were accounted for to "one surgeon of the household troops, four doctors and one surgeon for the army in North Wales, and two doctors and one surgeon for the army of South Wales."

Such being the case in A.D. 1345 for an army of occupation within the four seas, it is inconceivable that an army on foreign war service could have been left unprovided with physicians and surgeons.

This omission of details may probably be accounted for in one of the great features of the revolution in military affairs brought about by the invasion of France by Edward III, which, in calling for the prolonged service of troops, rendered the barons contractors to the crown for the services of their followers, and the receivers and distributors of their wages from the date of embarkation.

The king's pay delivered to them seems to have been for fighting men only; but in addition to wages there was a royal allowance, or gratuity, termed "*a reward*," of 100 marks, or £66 : 13 : 4 per quarter for every thirty men-at-arms, and under special circumstances this was augmented to "one and a half," or £100 per quarter, and to "double reward," or £133 : 6 : 8 per quarter for every thirty fighting men. It is remarkable that these "rewards" were given at the expiration of a quarter for services rendered, while the wages were due at the commencement of the quarter for ordinary service to be performed.

I think there is evidence that this payment was made from the date of the invasion of France by Edward III, and I conceive it possible that the pay of the baronial surgeons may have been derived from it (V. Appendix D).

The age was one of general progress and of consolidation of Normans and British into the English nation, and yet there are no tangible proofs of progress in the manner in which the fighting men were cared for when wounded or sick. Our national records prove that the king esteemed very highly the medical services rendered to himself in England, and was bountiful in rewarding those who performed them, and this makes the silence of chroniclers on this point the more unaccountable. It is observable that in the wars of Edward I for the subjugation of Scotland, both medicine and surgery were well represented in the field, and its professors had a very respectable status assigned them; but subsequently to that there would appear to have been a falling off from that high estate. It is noteworthy of that era that it corresponds with the transition that surgery everywhere underwent in



passing into the hands of the barbers, whose social standing laid them and their mixed calling open to depreciation or even to contempt.

It happened, however, after the lapse of a century, when the barber-surgeons had by experience and education laid a broad line of distinction between their two vocations, that the superior division of them, by proving their utility on the field of battle, had the honour, as military surgeons, to bring about the *renaissance* of the profession of surgery, and to lay the foundation of its present honourable position: so much at least is due to those of them who served in the wars with France.

The first half of the fourteenth century was the era of the moulding of our profession into its present form. Our universities were established and granting degrees in medicine. Physicians were men of such education as to make them masters of colleges and teachers of the natural sciences, and to lead to their employment on diplomatic missions which had been mainly the province of churchmen.

Gilbertus Anglicus had written his work on medicine, that proves him acquainted with the writings of the Greek and Arabian physicians, which he condensed before A.D. 1220.

John Arderne, the first English writer on surgery, lived at Newark 1349 to 1370, when he settled in London, obtaining celebrity in both places by his treatment of fistulous tracks. His work is entitled "A Treatise on Fistula in the Fundament and other places, and Impostumes causing Fistulæ." He was a self-taught man, like Frère Jacques.

Anatomy was taught at Bologna, 1315 (under prohibition from Rome), and soon afterwards at Montpellier and Paris. The father of modern surgery, Guy de Chauliac, laid its foundations in France, and a college of barber-surgeons was instituted, 1371. In England the barbers were obtaining corporate strength in the city of London, where supervision by one of their order was instituted in 1308 A.D. Another step in advance was recorded in 1354, when, by order of the municipal council, a prior and three surgeons of the city were directed to make inquest of the results of treatment, by John le Spicer of Cornhill, of a severe wound of the jaw, and they reported that it had become "apparently incurable through want of skill" on the part of that practitioner, whose name is suggestive of his being an apothecary and not a surgeon.

In A.D. 1369 three master surgeons of the city were sworn at Guildhall to inspect and superintend the practice of barbers; and in consequence of surgery (minor) being pursued as a calling by unknown



barbers from the country, and by women, an order was given, A.D. 1376, that two master barbers of the city should examine barbers, and that none not possessing their licence should be admitted to the freedom of the city. Thus we see that in England surgery was fostered in its infancy by municipal rules rather than by state laws or charters. The facts concerning the *master surgeons* of the city of London point out emphatically that there were then professors of the art who were not mere barbers, and there is a military instance proving that these were in high repute.

In the year 1344 Robert, Count of Artois, conducted an English army in Brittany, and took the fortress of Vannes, which was shortly after retaken. Froissart relates—"Sir Robert was sore hurte, and scapped hardly untaken. He taryed a season in Hennebon, and at last he was counsayled to go into England to seke helpe for his hurtes ; but he was so sore handled on the sea, that his soores rankeled, and at last landed, and was brought to London, and within a short time after he dyed of the same hurtes and was buried in London in the church of Saynt Paule, with great honour." This instance shews that in 1344 the skill of the master surgeons of London was famed.

Guy de Chauliac, who flourished at Avignon and Lyons in the reign of our Edward III, in classifying the surgeons of his day, states that those who attended the armies were chiefly Germans, who used charms, potions, oils, and wool in their practice; and we have no means of judging whether the English army surgeons were more enlightened or not. It is not likely that they were, as such practice with boiling oil for gun-shot wounds, under the belief of their being poisoned wounds, continued until Ambrose Paré demonstrated the fallacy which had so long occupied the minds of all army surgeons.

There is another military incident of this period, the record of which will be found in Rymer's *Fœdera*, which may be adduced as the first known instance of a medical board to decide the question of capability to serve. It happened after the battle of Poitiers, A.D. 1356, that a question arose between Sir Denys Morbek, Knight, and Bernard de Troyes, Esquire, as to which of them King John of France had surrendered. The issue was left to the ordeal of battle; and before King Edward III departed for France, in 1359, he directed that the disputants should appear before him wherever he might be on the next Candlemas, to fight their duel. Before that arrived, Sir Denys declared himself unable to proceed, and thereon the King's Council ordered a survey of his person, the particulars of which are very clearly reported



in the official document, a letter patent bearing the sign manual. Sir Denys was visited by a knight, the Dean of Lichfield, and two clerks of the chancery, who recited to him the circumstances of the appeal to arms made by Bernard de Troyes at Sandwich prior to the king's departure into France. To this he replied stating his incapability of following the king, through his illness, which confined him to bed. "And in order to know better the truth that the said Denys did not feign, they caused him to expose his body, arms, hands, and feet, and after seeing these it was the opinion of the surveyors, and also of the notaries, physicians, surgeons, and all others present, that on this account the said Denys was, by his disease in body and limbs, so wasted, broken down, dried up, and debilitated that he could scarcely recover, unless God wrought on him a miracle.

"And the said Denys made oath to the same on the Holy Gospels, and also Master John Paladyn, Mire, and John of Cornhill, Surgeon, examined thereon, swore on their oath on the Holy Gospels, and on their honor, and on peril of their souls, that the said Denys was so enfeebled by the said disease that he could not help himself, nor move foot, leg, arm, or hand without aid."

Concerning this event Barnes states, in his *Life of Edward III* (p. 519), that the French King wished that Sir Denys alone should have the honour of his capture; and the chivalrous Black Prince caused secretly to be delivered to him 2,000 nobles, and (to end this matter once for all) when the next year King Edward had determined the cause in his behalf, the prince gave him 5,000 crowns of gold more as a reward for that service, all prisoners valued above 10,000 crowns belonging not unto him who took them but to the prince.

During the next five years Sir Denys received small sums from the Exchequer, and after his death the widow\* who had nursed him made application to it for the expenses of his last days and burial. Such was the end of a brave soldier, to whom a King of France was said to have given his gauntlet in token of surrender.

The part of the medical profession in this business is interesting to us, as it shews most clearly that about the era of Crecy and Poitiers pro-

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\* *Calendar of State Papers*, Issue Roll of reign of Edward III, an. 37, 3rd March (1364): "To Mary Rous prosecuting at the King's Council the claim of Denys de Morbek, who asserted that whilst he lived that he took John of France in the war at the battle of Poitiers. In money paid to her of the king's gift in aid of her expenses, £3 6s. 8d." N.B.—There are other payments on these rolls relating to this affair.



fessional opinion was made the turning point for decision of a question of military honour and discipline, and that the process was guarded by very strict forms.

With regard to Master John Paladyn, Mire, and John of Cornhill, Surgeon, it may be asked—Were they, or had they been, army surgeons, as they were engaged on this essentially military decision?

Master John Paladyn was styled “our physician” by the king.

John, of Cornhill, was probably a master surgeon of the City of London, like Master Paschal, Master Adam de la Poleterie, and Master Davidde Westmorland, whose names appear in 1354 A.D. I consider it possible that men of that class may have derived their eminence from service with the king’s army, just as we know that the great Ambrose Paré—who made for himself, two centuries later, the reputation of Master Surgeon of Europe—divided his time between service in the field and his barber-surgeon’s shop in Paris.

Of the state of medical practitioners in London in the reign of Edward III we have the direct evidence of Chaucer, father of English poetry, in his *Canterbury Tales*.

“With us ther was a Doctour of Phisike,  
In all this world ne was ther non him like  
To speke of phisike, and ofurgerie :  
For he was grounded in astronomie.  
He kept his patient a ful gret del  
In houres by his magike naturel.  
Wel coude he fortunen the ascendent  
Of his images for his patient.  
He knew the cause of every maladie,  
Were it of cold, or hote, or moist, or drie,  
And wher engendred, and of what humour,  
He was a veray parfaite practisour.  
The cause yknowe, and of his arm the rote,  
Anon he gave to the sike man his bote.”

In this there is the combination of physician, surgeon, and astrologer, who was also a good linguist, skilled in the writings of the ancient Greek and Arabians—a master in science and literature, as well as in medicine and surgery. The moral grandeur of his character, when surrounded by much that was degrading to that of his companions on the pilgrimage, is delicately wrought out in the purport of his exquisitely told tale, where “men may see how sin hath his merite.”

“The worm of conscience may agrise  
Of wicked lif, though it so privee be,  
That no man wote thereof sauf God and he.”

Whether Chaucer formed this flattering ideal at court or in camp, or in both, we may not find. At the former, Master John Paladyn, the



king's physician, was before him; and in the camp he, as a man of letters, would have associated among such as "speke of physike and of surgerie" from their equality of rank as "vassaletti." His military service seems to have been rendered in 1360 A.D., at the age of thirty-two, when ardent minds are most open to receive lasting impressions, and to form types of character with mental record for later use. The pilgrimage took place in 1383 A.D., and these inimitable types of English mediæval personages were given to the world at a later date. Certainly our profession may take pride in Chaucer's ideal attributes, as they show, at least, the respect in which its professors stood in his day; and military surgeons may assume that men of that stamp then served in war, and that Chaucer may have discovered his type among them when he was serving in France in 1360.

The next names that come prominently forward in the medical history of our army are those of Master Nichol Colnet, Physician, and Master Thomas Morestede, Surgeon, to King Henry V, who were both present with the king in the great battle of Agincourt. Their engagement to serve marks a grand epoch in military medical affairs, in the formation of a surgical staff entirely under the control of Thomas Morestede.

In preparation for the expedition to France, a new system was inaugurated by indentures or legal instruments drawn up between the king on the one part, and the Dukes of Clarence and York, the Earl of Salisbury, Lord Scrope, and Sir Thomas Tunstal, severally, on the other part, to attend the king with contingents of their vassals and freemen in the war on king's pay. And similar instruments were drawn up between the king and his physician and surgeon to afford him their professional services for one year; the physician to take with him three mounted archers or men-at-arms in his suite; and the surgeon, twelve men of his own profession and three archers likewise.

In Rymer's collection, there are two documents styled "Petitions of Thomas Morestede", which show that difficulties arose both previous and subsequent to the drawing up his indenture. One of these is dateless and unsigned, as if it were the draft of a petition, referred to the Lord High Chamberlain; and from its tenor it would seem to have been preliminary to his indenture of contract to serve with the army about to proceed to France. In it he prays, first, for a Commission under the seal of the Lord High Chancellor, empowering him to impress within the franchises of the City of London, as well as beyond them, those of his calling whom he might wish to select to serve with him in the king's army; 2. For an indenture under the privy seal of



his engagement "to serve in the expedition as a *man-at-arms*, having the same wages, or *wages with regard*, as others of that rank, having in his company fifteen persons, of whom three shall be archers and the others of his calling, each of them having the same wages as archers of the army ; 3. That the indenture with him might be drawn out after the form due to esquires. There are some interesting points in this, tending to prove that the barber-surgeons of London were unwilling to accept service with the army, and that impressment was called for ; that it was contemplated to give the inferior rank of man-at-arms to the chief surgeon, until he stipulated for that of an esquire, which was still much lower than that of knight, borne by the chief surgeon in the army of Edward I, two centuries earlier. It was due to the vigilance and self-respect of Thomas Morestede that these concessions were secured to the surgical staff of the army in the early dawn of our modern profession. He attempted more than this in his second petition, dated within a month of signing the indenture, in which he asked "for money wherewith to purchase and provide medical stores and necessaries for the whole duration of the expedition, for the appointment of a staff of orderlies, and for the means of transport."

Of these requests, the last was alone granted ; viz., one car and two pack horses for conveyance of all the requisites of his office, which would seem to have constituted the ambulance of the brave but disease-stricken army that won the battle of Agincourt when despised by the adversary on account of its impoverished and sickly condition. These petitions from Morestede evince his capability as an administrator if the means had been granted him ; but it is even to be feared that at Agincourt the want of surgical instruments, as well as that of surgeons, was felt ; for when the king was about to take a fresh army into France the next summer, he ordered his surgeons, Thomas Morestede and William Bredewardyne, to impress without delay, in the City of London or elsewhere, as many surgeons and makers of surgical instruments as shall be necessary and fit for the expedition, thereby admitting the inadequacy of the provision in the preceding year.

The scale of pay of the army was rated as at Cressy in 1346.

	£	s.	d.		£	s.	d.
For a Duke.....	0	13	4	<i>per annum</i>	243	16	8
„ Count or Earl	0	6	8	„	121	3	4
„ A Banneret .....	0	4	0	„	73	0	0
„ A Knight .....	0	2	0	„	36	10	0
„ A Scutifer (esquire)	0	1	0	„	18	5	0
„ A Mounted Archer	0	0	6	„	9	2	6
„ A Foot Soldier	0	0	3	„	4	11	3



But for the last grades the scale differed for services in Gascony or France; the above being received, together with rations and forage, whilst in the adversary's territory; and increased pay, without rations or forage, while in the king's dominions in England or Gascony, where a scutifer with four horses received gross pay of forty marks, or £26 : 13 : 4 *per annum*; and a man-at-arms with one horse, £13 : 6 : 8 *per annum, pro ratâ*. By comparison of these scales, it may be inferred that the net personal pay for the military services of a scutifer when Agincourt was fought was one shilling, and that of a man-at-arms 6d. a day, that the daily rations of a man were valued at 2d., and the forage of a horse at 1d. a day; but it must be borne in mind that in actual weight of silver the shilling of that time was equal to 2s. 9d. and the penny to 2½d. of ours, and that twelve shillings was the price of a pipe of French wine. The physician Colnet, and the surgeon Morestede covenanted for the pay and allowances of "scutifer" for themselves, and for those of "mounted men-at-arms" for their followers. They all participated likewise in a monetary allowance of 100 marks, or £66 : 13 : 4 to every thirty men, or £2 : 4 : 4½d. per man, quarterly, whilst serving in the enemy's territory.

For the gains of war in booty and ransom, their covenants were the same as those of all the leaders, excepting the Duke of Clarence, in whose indenture ransoms are not mentioned. Of all booty, one-third was the king's, together with all gold, silver, or jewels exceeding the value of ten marks—£6 : 13 : 4; and should the physician or surgeon or any of their suite capture a king or any princes, or chiefs, they were to be given up to the king, who should make reasonable satisfaction to the captors.

It is worthy of point that these covenants for military services were made only with the great leaders and the chiefs of the medical staff, who were made the receivers of the wages of all their followers for distribution, and each held a deposit of the king's jewels as security for pay. This was not acquitted so punctually by our Plantagenet kings as it is in our day, as we read in Sir E. Ellis's *Historical Letters* (vol. i, 2nd ser., Letter xxxi) that in 1423, a year after the death of Henry V, Sir Thomas Rokeby petitioned the Duke of Gloucester, Protector, and the King's Council, "that by endenture, he went to France with his retinue in the 4th year of the reign of Henry V (A.D. 1417) for a yere, and was detained there from yere to yere until four yeres was nere spended and passed, for the whilk time a great part of the wages is behind and nowth paid him to his great hindering and annentifying."



His petition was granted. Let us hope that, if Thomas Morestede and men of his calling were detained thus from their barber-chirurgeons' shops in the City of London, they were treated better than Sir Thomas Rokeby was.

Morestede was an eminent member of our profession ; he was Surgeon to three of our kings—Henry IV, V, and VI—and, as Henry V died of some surgical malady, it is probable that he was then in attendance on him at Vincennes, A.D. 1422.

Morestede retained his influence at court after the restoration of the House of York, as we find that in the first year of the reign of Edward IV, A.D. 1461, a charter of incorporation was granted to the barber-surgeons of London, securing to them corporate rights under the protection of the medical Saints Cosmo and Damien ; and this was effected through the influence of Thomas Morestede, surgeon, and Jaques Fries or Fryle, and William Hobbes, physicians, who served in the army of Edward IV.

Now, as this charter of incorporation of the barbers of London was the progenitor of all subsequent charters to the companies of Barber-Surgeons (Henry VIII), Surgeons (George II), and College of Surgeons (George III), it may be asserted that Thomas Morestede, chief of the surgical staff at Agincourt, used his influence at court beneficially to the profession in its surgical branch.

I have not found any particulars relating to my subject in the reign of Henry VI, when large armies were kept up in France.

With regard to the medical staff of the army in the reign of Edward IV, Grose informs us (at page 239, vol. i), on the authority of an original indenture in the State Paper Office, that in the fourteenth year of his reign, A.D. 1475, the following physicians and surgeons engaged to serve in Normandy and France for one year :

Master Jacobus Fryle (Qy. Fries), king's physician, for wages of 2s. *per diem*, and two servants at 6d. *per diem* for each.

Master William Hobbes, physician and surgeon of the king's body, for 1s. 6d. *per diem*.

Surgeons, every one at 12d. a day : Richard Felde, Richard Elstie, John Smith, Richard Brightmore, Thomas Colard, Richard Chambre, and Simon Coll.

Other surgeons at 6d. *per diem*, for their attendance in the same service beyond the sea ; William Coke, Richard Smythys, John Stanley, John Denyse, and Alexander Ledell.

Grose notices it as remarkable in its being the same number as the



medical staff that went to France with Henry V. It is as noticeable, also, that the pay of the chief surgeon was increased from 1s. to 1s. 6d. a day, and that of the twelve surgeons serving under him, seven were paid 1s. a day like the chief surgeon of Henry V's army. This was after the lapse of half a century since the battle of Agincourt. The expedition achieved no glory, and returned after exacting a large sum of money from the King of France. For the first time the inferior officers of the medical staff were placed in two divisions, which may be regarded as the prototypes of the surgeons and surgeon's mates of a later period. Of these the first seven were paid the same wages as the chief surgeon serving at Agincourt, and the five juniors the same as his assistants had been paid.

To complete the main object of this paper, I recapitulate the names of military medical men that have appeared on the pages of the history of our country prior to the accession of the House of Tudor.

A.D. 43.—Scribonianus Largus, who attended on the Emperor Claudius in his campaign in Britain.

A.D. ....—Anicius Ingenuus, surgeon of the 1st Cohort of the Tungrian Legion, who died at Chester-in-the-Wall.

These are connected with the Roman period of the history of Britain.

A.D. 1066.—Gilbert Maminot, presbyter and medicus, and Nigellus, medicus, who came over with William the Conqueror.

A.D. 1299-1300.—John de Kenle, physicus; Philip de Belvaco, chirurgicus; John de Shireburn, William de Rigethorne, physici-adjutores; Edmund de Baunton, and another, chirurgici-adjutores; who composed the medical staff in the invasion of Scotland under Edward I.

A.D. 1415.—Nicol Colnet, physicus; Thomas Morestede, chirurgicus, with twelve coadjutors—names unknown—who composed the surgical staff present at the battle of Agincourt, A.D. 1415.

A.D. 1416.—Thomas Morestede and William Bredewardine, who were the chief surgeons of the army in France, having under them as many junior surgeons as they considered to be required.

A.D. 1475.—Master James Fryle, physician; Master William Hobbes, physician and surgeon, with a staff of twelve surgeons, whose names are given on the preceding page.



## APPENDIX A.

*POSSESSIONS OF NIGELLUS, MEDICUS.*

As *tenant in capite* he had twenty-three holdings direct from the crown. Of these, six lay in Wiltshire, one of them, Stratone, having not less than 3,000 acres ; ten in Herefordshire, one of which was free from tax bestowed "servitio regis;" two in each, Shropshire and Worcester ; and one in each, Kent, Somerset, and Gloucester. From all save one a rental was due to the crown, and out of them Nigellus endowed the church of St. Marie de Monteburg, near Cherbourg, with an estate of 500 acres in Somerset, "ex dono Nigelli," besides making that church tenant of 400 acres in Wilts. Several of his estates were church-lands, and others had belonged to Spirtes, the ecclesiastic, who was banished by Edward the Confessor after having been his favourite ; not less than sixteen of them possessed demesne-lands, and four lay near towns, Dover, Gloucester, Wieh in Worcester, and Awnebury in Hereford.

In addition to the manor houses and demesne-lands, there were eighty-three farms with outhouses and tenements for labourers, eight mills, and about sixty cottages, all having proportionate arable lands and pasturages ; and there were also salt-pits, fisheries and ponds, enclosures for capturing wild animals, and rights of fattening swine in the forests. In total, there were about eighty hides or 8,000 acres of taxable land, held by Nigellus from the crown, and this was generally of excellent quality, judging from the number of ox-teams employed in ploughing, together with the frequent references to pastures. It appears, likewise, that in addition to those crown-lands, held by him in chief, he was possessed of four estates of nearly 1,800 acres in Shropshire allotted him in fee by Count Roger de Montgomery.

Perhaps since his day no medical practitioner has ever held so many broad acres of English soil. Certainly the donors had acquired them easily.

Besides these landed possessions, Nigellus had allotted to him four houses in the town of Southampton. *Domesday Book* records that the crown possessed forty-seven dwellings within the town, and that these were conceded free from taxes, according to custom, to individuals.

The list of these begins with high Norman ecclesiastics, who each retain one house ; then follow Norman nobility, with one or two houses each, Count Moreton alone of them holding five, most likely by virtue of his office ; then come the names of officials, including Aiulf, chamberlain, four ; Turstin, chamberlain, two ; Nigellus, medicus,



four ; Stefan, steerman (chief of the shipping), two ; and Turstin, machinator (engineer), two.

As these allotments of houses hold no abstract relation to the rank of the individual it must be inferred that they were regulated according to his function ; thus, the chamberlains having charge of household goods and supplies, and perhaps the entertainment of the king's officers passing to and from Normandy, would require much space, and so also the chief of the shipping and the military machine maker, would do so in their degree, as heads of departments.

But the allotment to Nigellus, medicus, of four houses, when bishops had but one each, would seem to indicate that, in connection with his office, he was provided with accommodation for others, who could have been none other than those requiring medical care, sent away from the army to re-embark and return into Normandy.

If that supposition be correct, there may be assigned to these four houses the character, if not the title, of *the earliest military hospital in Norman England* ; and it seems somewhat strange that after eight centuries there has been built not far from it, at Netley, the principal army hospital of the kingdom for the lodgment of sick and disabled soldiers sent home from the distant possessions of England scattered from Honduras to Japan.

#### APPENDIX B.

##### CONTEMPORARY HISTORIES OF THE WOUND RECEIVED BY PRINCE EDWARD.

THOMAS WIKES, canon of Osney, near Oxford, who lived in the reign of Edward I, writes thus : " Porro familiares \* \* \* de salutis remedio desperantes ; evocati statim medici in arce peritissimi vulnera sua congruo medicamine fomentabunt, mundique Redemptor in se credentium qui vera salus est, qui, ut ait Propheta, vere languores nostros tulit et dolores nostros portavit in corpore suo super lignum, tam efficax et optimum gratiæ suæ concessit antidotum, ut vulnera sua quæ cunctorum judicio censebantur incurabilia, modico tempore curarentur."

Walter Hemingford, canon of Gisborough Abbey in Yorkshire, who lived in the reigns of the three Edwards, wrote thus concerning the same event : " Vocantur ergo Chirurgici, et medicamenta imponunt. Sed post dies paucos, videntes denigrescere carnem, mussitaverunt



inter se, nec erat lætitia in populo suo, quod ille perpendens dixit eis : Quid est quod mussitatis, nonne sanari possum? Dicite mihi, nec timeatis. Et ait unus natione Anglus, Curari potes, sed oportet te dura pati. Et ille : Si passus sum, quidem fuero, numquid sanitatem promittis? Et ait : Promitto quidem, et sub pœnâ capitis mei. Et ait : Committo ergo me tibi, et expete quæcunque volueris. Et ait : Numquid sunt aliqui ex Magnatibus in quibus confidis? At ille nominavit multos ex circumstantibus. Circumsteterunt enim eum Magnates plurimi cum uxore suâ. Et ait duobus primo nominatis. Domino scilicet *Edmundo* et Domino *Johanni de Vescy*; Numquid et vos diligitis Dominum vestrum, et dixerunt utique. Et ait : Tollite ergo mulierem hanc, et non videat Dominus ejus, quousque dixerō vobis : Tulerunt ergo eam flentem et ejulantem, et dixerunt : Sine domina, melius est quod tu effundas lachrymas, quam quod lachrymetur tota terra *Anglicana*. Mane autem facto incidit denigratam carnem brachii sui et projecit ex toto, et ait : Confortare, quoniam promitto tibi quod infra xv dies manifestabis te, et equum ascendes. Tenuit quod promisit, et admirati sunt universi."

These authorities are published in Gale's *Rerum Anglicorum Scriptores*, and they are of the highest value as contemporary reports of an event which must have been of the highest national interest. They concur in admitting the gravity of the wound, the extreme solicitude of the prince's followers, and the presence of surgical aid; but with regard to the cure they differ, one assigning it to a divine miracle, and the other imputing it to a surgical operation. It is remarkable that such difference of opinion should have existed between two mediæval ecclesiastics, of whom the latter was evidently a rationalist.

Neither of them entertains the romantic story about the princess Eleanor, and the last even suggests that the surgeon looked on her presence as hurtful to his royal patient. The whole story cannot be read without admiration of the decision and force of character of the English surgeon, and of his confidence in the resources of his art.

## APPENDIX C.

### PAY OF MEDICAL STAFF.

TAKING the scales of wages of artificers and labourers at various epochs in the middle ages, there can be no question that military ser-



vices were well requited. The commonest foot soldier received a daily pay equal to that of the working mason, carpenter, or smith; the archer as much as the hind, or manager of a farm; and the mounted archer, or man-at-arms, more than ordinary mass-priests, or household chaplains of the nobility. It is remarkable how little change there was in the scale of pay of the army between the beginning of the fourteenth and the end of the fifteenth centuries. The positive data concerning medical pay are few, being limited to the dates of the invasion of Scotland by Edward I, A.D. 1300; the invasion of France by Edward III, 1346; and the invasion of it by Henry V, 1415.

Of the first what is known applied to the ordinary medical officers of the royal household, with supernumeraries for the occasion as assistants to the physician or surgeon; and concerning their emoluments, I consider that we cannot take those above the assistants as exemplifying the scale of military pay, because their superiors who engaged their services were in receipt of their ordinary wages as courtiers. It is not to be credited that even at that early period there were no others in surgical capacity connected with the army; and, without proofs to the contrary, we may presume that there were such in every feudal baron's contingent, if it were only for the self preservation of the baron. If there were such, their pay and position would probably have been the same as those of the assistants on the royal staff, although there is an incident of the next period that seems to show that being attached to the king's own levy caused a decrease of emolument.

Analysing the medical staff of King Edward I in 1300, it is found that his physician and chief surgeon ranked with knights, drawing £36:10 a year, and clothing money £5:6:8, with forage for four horses; and that the physician at least, if not the surgeon also, was dieted in the household at a valuation of £18:5 a year, raising the physician's emoluments to the value of £50:1:8 a year. As this latter item comes out only incidentally in the wardrobe accounts, there is reason to assume that the king's surgeon was, by custom, entitled to a similar privilege of messing, which would give to each of them an appointment worth £1,250, while without it the surgeon's emoluments were equal to £841:13:4 *per annum* of our standard value of the first half of this century prior to the late increase in price of all the commodities of life. Political economists are agreed on the point that to estimate the comparative value of money on the true basis of what it will purchase, it must be multiplied by twenty-five for the reign of



Edward I, by which the relative values given above are arrived at; and by sixteen for the reign of Henry VI.

But for the reasons assigned, we may set these highest rates aside as not due to simple military services, and rely with perfect safety for that standard on the lower scale of the pay of the "assistants" engaged for the expedition. These ranked with "scutifiers" of the army, or esquires, receiving the pay of £18:5 a year, the equivalent of £456:5 in the first half of this century, and to considerably more at present, with forage for a charger. They were able to maintain their position well on their wages, as, according to Hallam (*History of Middle Ages*, 8th edition, vol. ii, p. 432), "In the reign of Edward I an income of £10 or £20 was reckoned a competent estate for a gentleman". This was an exceptional period, when the medical staff was better paid than at any subsequent period of our military history; and it establishes the most important fact of such an organisation at so early a date. In face of it, it cannot be imagined that the great English armies that conquered in France, were ever allowed to be without some provision for attendance on the sick and wounded. History is dumb on the point, until Henry V was preparing his great expedition, when probably the arrangements made by him were supported on experience rather than guided by records. I have ventured to explain this silence, on the supposition that each baronial contingent had its own medical staff, by private arrangement between its commander and the medical men, nothing whatever being recorded of their contracts with any of their followers. No other reason has been offered that will go so far as this to explain the remarkable circumstance that the great muster-roll of Cressy, which gives the baronial contingents only in aggregate, makes no reference to surgeons, except of a single "medicus" attendant on the Welshmen under command of the Black Prince.

The military affairs of England had not relapsed into the condition of the first Crusade, and it cannot be contended that the armies of Edward III went into the field totally unprovided, as they must have been if nothing is to be believed where history is mute.

It is, indeed, likely enough that, under a system of baronial provision, which was in some measure a subsidiary corps, there would be a falling from the precedents of a former monarch, and this may have been contemporary with a decline in the social position of those who undertook the practice of surgery; still it is proved that in the City of London there were "mires" or physician-surgeons, and master-surgeons as well as barber-surgeons, and their services were procurable, but cer-



tainly not for the wages of fourpence a day, or £6:1:4 a year, specified for the only Welsh medicus referred to on the muster-roll. We are thus driven to the confession of inability to state in what way, from what source, or to what amount, the surgeons who served under Edward III were remunerated.

The third epoch premised is that of Henry V, whose *indentures* with his physician and surgeon to form a medical staff are documents of the highest value, as they form a turning-point, not only in military medical history, but that out of which grew up the scientific and stately profession of surgery of our own day.

The fathers of that profession, who stood round the standards of Henry V and Edward IV unfurled in France, were content with a lower scale of rank and pay than that given by Edward I.

Nicholas Colnet the physician, and Thomas Morestede, the chief surgeon in the field of Agincourt, held the rank of *esquires* only; each had a body-guard of three mounted archers, and drew the modest pay, while in Gascony, of £26:13:4, the equivalent, by the multiplier sixteen, of £426:13:4 of the first half of this century; and when in the enemy's country they received £27:2:9, the equivalent of £434:4:6, with forage for four horses. And the barber-surgeons of their staff received in Gascony £13:6:8, equal to £213:6:8; and in France £26:13:4, equal to £426:13:4 of our age, together with forage for a horse.

This scale of pay was not a mean one, as Sir John Fortescue, the chief justice, has recorded that in that age "£5 a year, or £90 of our day, was a fair living for a yeoman", a class of whom, to use the words of Hallam, "he is not at all inclined to diminish the importance".

After sixty years had elapsed since Agincourt was fought, when Edward IV invaded France, there was a rise in the pay of the medical staff, from whose *indenture* we learn that the physician received wages of £36:10, the equivalent of £582; the chief surgeon, £27:7:6, equal to £438; the senior assistants, £18:5, equal to £292; and the juniors, £9:2:6, the same as £146 of the first half of the nineteenth century, showing a striking resemblance to the rates of wages of the deputy-inspectors-general, the staff-surgeons, and the junior surgeons of the army in our day; that of the assistant-surgeons alone having undergone any marked increase relatively to what was paid the young barber-surgeons of the reign of Edward IV.

In addition to these wages, each was entitled, in the enemy's coun-



try, to a "regard" at the rate of £8 : 17 : 9 a year or £142 : 4 of our currency.

Between the reigns of Edward I and Henry V there was a decided decrease in the wages or daily pay of the medical staff, but that seems to have been compensated by the *regard* given when in the field, established by Edward III.

The whole evidence is to the effect that the daily pay remains, comparatively, the same as it was in the days of Edward IV. The gain to the medical staff has been in another direction, by the institution of half-pay when unemployed or temporarily disabled, of retired pay when unfit, and of pensions to widows and children, none of which existed at that time. These are contingencies from which all may not derive benefit; but they are inseparable from a permanent military service, and they have to be provided for by keeping down the *daily wages* as nearly as possible to the ancient standards.

#### APPENDIX D.

##### *REGARDS, OR REWARDS AND OTHER ALLOWANCES IN ADDITION TO DAILY PAY.*

GROSE states (at page 284, vol. i), "Besides the daily pay there was an additional *douceur* styled *regards*—this was a kind of perquisite to the commanding officer, or chief contractor with the crown, for every body of men, to enable them to keep a table for their officers, and to provide for the different contingent expenses. The quantum of this allowance differed according to the nature of the service or country in which the troops were to be employed; the usual sum was at the rate of 100 marks per quarter for every thirty men-at-arms, which amounted to nearly sixpence a day each. Sometimes we meet with a stipulation for a regard and a half, and sometimes for double regards and double wages."

This then, I conceive, may have been the financial margin out of which the baron or "commanding officer" may have paid the entire wages of the surgeons attached to his contingent or, *in part*, by private agreement, if they were borne on his muster-roll among the men-at-arms without there specifying their special vocation. I am not aware that any direct proof of this can be drawn from any documents relating to the army; but it must be inferred from that magna charta of the



royal navy, the *Black Book of the Admiralty*, which compiles the ancient laws and customs of the sea, and then embodies those established by the Inquest of Queneborough held by commission of Edward III in A.D. 1375.

In the sixth article of the more ancient laws it is established that the admiral "shall have for *reward* of thirty men-at-arms, at the end of each quarter of the year, 100 marks." This had reference to the fighting men or army embarked, being about fivepence three-farthings a day per man of them; while for the mariners there is assigned, by article 10, a smaller reward of sixpence a week to each in addition to their wages.

From this it cannot be doubted that the "regard" was paid in the time of Edward III for all soldiers alike, when embarked for sea service, or on foreign service in an enemy's country; and from the fact of its existence prior to A.D. 1375, it may be believed to have existed for the armies that fought at Crecy and Poitiers in A.D. 1346 and 1356.

Grose makes allusion (at page 240, vol. i) to a customary allowance, without assigning a probable date to its origin. It seems to have been a voluntary gift from the troops to increase the surgeon's wages, and for the purpose of supplying medicines and appliances for their benefit. This practice existed also in the Royal Navy, where it was not discontinued until the year 1805; the navy deriving it from the army.

He writes of it thus. Besides the king's pay, it seems as if the surgeons of former times, as well as those of late, received a weekly stoppage from the private men. This may be gathered from the following description of the duties of a military surgeon written in the time of Queen Elizabeth. "That every souldier, at the paye daye, doe give unto the surgeon 2d., *as in tymes past hathe been accustomed* to the augmentation of his wages, in consideration whereof, the surgeon ought readilie to employ his industry uppon the soare and wounded souldiers, not intermedlinge with any other cares to them noysome. Regarde that the surgeon bee truely paid his wages and all money due to hym for cures, that by the same hee maye bee able to provide all such stuffe as to him is needful."

As this was written in the time of Queen Elizabeth, as a *custom of times past*, it may be relegated to a period prior to that of the Tudors, when the king's pay was found too small to attract the barber-surgeons of London into the royal services, and it became necessary to impress them.



It may be imagined that the soldiers, alive to their own wants and interests, voluntarily agreed to this defalcation to supplement the meagre pay the surgeon received from the king. We know that the seamen of the navy, who then paid the weekly 2d. to their surgeons, agreed after the defeat of the Armada to a further defalcation of 6d. from their monthly pay to provide for the wants of their maimed and disabled men, to save them from beggary and destitution, thus instituting the celebrated Chest at Chatham, which through the seventeenth century was the only aid of seamen disabled in the wars and cast aside from further service; which continued to do the same office, in part, through the eighteenth century, notwithstanding flagrant malversations of its resources; and, on its abolition in 1814, handed over the munificent sum of £1,355,400 towards effecting the same purposes, which in our age are recognised to be the duties of the State.

Prior to the era of the Tudors, there was no Royal Navy, its office being exacted from the merchant shipping; consequently there was not even the shadow of a naval medical staff. As it loomed out of the obscurity of the past, it bore all the features which have been shown as belonging to the army in the latter part of the middle ages. It was composed of the barber-surgeons, whose wages and rewards were the same as those of seamen, supplemented by the voluntary 2d. from each seaman, per week, as was the practice in the army.

On some future occasion, it shall be my endeavour to trace the successive steps by which the medical department of the navy has risen to its present stage of efficiency.



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discussion of the problem. It is shown that the  
problem is of great importance in the theory of  
the differential equations of the second order.  
The second part of the paper is devoted to a  
detailed study of the problem. It is shown that  
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