"FROM PLAIN TO ROYAL"

A Short History of the Royal Herbert Hospital From 1865-1903

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Military Maternity Hospital, Woolwich

A REPORT in 1858 by a War Office Enquiry had stated that the existing Garrison Hospital at Woolwich was over-crowded and that there were 529 patients in a building designed to accommodate only 304. In the following year the over-crowding was such that the medical administration found it necessary to erect marquees in the grounds of the hospital to accommodate "those the hospital could not contain". The impossibility of enlarging the existing hospital had brought about the decision by Sidney Herbert, Secretary of State for War, to direct that a new hospital should be designed and built to provide more beds.

The design had to be upon the principles laid down by the Royal Commission of 1857 on the Sanitary State of the Army, further developed by the Barrack and Hospital Improvement Committee of 1858, composed of the Rt Hon. Sidney Herbert, M.P. (Fig. 1), Dr. Sutherland, Dr. Burrell and Captain Douglas Galton, R.E., and finally embodied in the Medical Regulations of the Army of the same year.

Fig. 1. Lord Herbert of Lea.

The new hospital was to be sited on Kidbrook Common, "on the Western slope of Shooter's Hill, bounded on the South by the Dover Road, and on the East by the

road from Woolwich to Eltham". The total cost of the proposed new building included a purchase of land for £6,394, the cost of constructing reservoirs for softening the water supplied to the hospital £5,351, and the actual cost of the building proper £209,139. The total cost was £220,884. The designer was to be Captain Douglas Galton, R.E., cousin to Miss Florence Nightingale.

Some one hundred or more years before, in 1752, Sir John Pringle in his "Observations on the Diseases of the Army" had for the first time called to public attention in this country, the leading principles of military hospital construction.

The points upon which Pringle insisted especially were:—

"(a) Avoiding agglomeration of large numbers of sick. (b) Giving sufficient cubic space in sick wards. (c) Abundant ventilation direct from the outer air."

"When the disease begins to be frequent the sick should not be sent to one common hospital, at least not in such numbers as to vitiate the air, so as not only to communicate the infection to others, but to keep it up amongst themselves . . ."

"It would be still unadvisable to have but one common hospital, on account of the mortality that naturally ensues upon crowding together such a large number of men of so putrid a disease . . ." The disease here alluded to is dysentery, but the same principles are applicable to all zymotic diseases and to surgical cases.

"As to the disposition of hospitals with regard to preserving the purity of the air, the best rule is to admit so few patients into each ward that a person unacquainted with the danger of bad air might imagine there was room to take in double or triple the number. I have generally found those wards the most healthful, when, by broken windows and other wants of repair, the air could not be excluded."

It appeared that in France during the invasions of 1814 to 1815, the sick and wounded had been treated not only in regular hospitals but also in weather shelters, open sheds and out-houses, invariably devoid of windows or doors, hastily requisitioned to cope with the large numbers of casualties. The air had blown freely through these latter housings of discomfort and misery but the result was that the mortality in them had been one half of what it had been in the airless confines of the more comfortable hospitals.

The benefits of the sub-division of the sick were also proved during the Peninsular campaigns and more recent in 1858, in the Crimea. The low death rate in the small detached wooden huts at Balaclava towards the close of the conflict with Russia, contrasted markedly with the huge death rate among the Allied sick and wounded "agglomerated by thousands" in the large, unimproved, unhealthy Turkish buildings near Constantinople used as hospitals.

As a result of her experiences in the Crimean Hospitals, Florence Nightingale used her influence with her friend Sidney Herbert to force the authorities to appoint a Royal Commission to report on the health of the Army and to set about a reform of the Medical Services. The Royal Commission of the Sanitary State of the Army, as it was designated, carried out an extensive enquiry into the question of hospital construction in this country. It also appointed a sub-committee to examine the improved civil and military hospitals, in particular in France and Belgium. In addition it accepted a paper of evidence from Nightingale herself which contained the results of her own extensive research into every variety of hospital construction in most European countries as well as war hospitals in the East.

The Royal Commission recommended the following principles to be observed in the construction of all future military hospitals:—

(a) The cubic space per bed to be 1,200 feet at home, and 1,500 feet in tropical climates.

(b) In the construction of new hospitals the adoption of separate pavilions with lateral windows on opposite sides and natural ventilation.

(c) The use of Parian cement, or other impervious material, for walls and ceilings.

(d) Sufficient provision for warming and lighting the hospital.

(e) The introduction of waterclosets and sinks with efficient sewerage by impervious drains free of the buildings; the closets and sinks to be cut off from the hospital by a ventilated lobby.

(f) The provision of suitable lavatories, baths and laundries.

(g) The use of stone or fireproof material for staircases and landings instead of wood.

(h) The introduction of proper cooking apparatus.

Pringle's principles were endorsed by the Commission. It was then left to Galton to embody in his design for the new hospital at Woolwich all the finest points of the civil and military hospitals both at home and abroad. Provision was to be made for 620 patients in separate pavilions. Each pavilion was to be no larger than a regimental hospital, and each was to combine all the sanitary advantages of one such hospital. The figure of 620 was ten per cent of the actual strength of the Woolwich Garrison and considered a suitable one. There were to be a further 28 beds and a small number, presumably contained in an isolation ward, for "itch patients".

Included in the principles laid down for the design there was to be accommodation for the following officers:—The Governor or Commandant, the Principal Medical Officer, the Orderly Medical Officer, the Apothecary or Dispenser, the Purveyor or Steward, the Paymaster or Treasurer, the Chaplain, the Captain of Orderlies and the Superintendent of Nurses.

In addition the following personnel were to be accommodated:—The Assistant Apothecaries, the Female Nurses, the Wardmaster and the Ward Orderlies.

Where the area of ground did not permit or where quarters already existed within moderate distance, certain officers were to be accommodated out of the hospital. It was stressed that there would be a need for certain officers to be "on the spot" at all times. The extent of quarters to be provided for officers in particular was to be on a scale as allowed in barracks and no senior officer was to have fewer than two rooms and servant's accommodation. The Governor's accommodation is alluded to later.

Galton added in his report:—

"The Principal Medical Officer should have his office within the buildings, but his quarters may be away from it. There should be office accommodation for the Registrar either in or adjoining the Principal Medical Officer's office. There ought to be quarters in the hospital for at least one orderly medical officer. A room for medical officers should be provided for meetings, consultations, etc; likewise a waiting room for patients, a receiving room and a surgeon's room.

The Dispenser should also have a quarter in the hospital, to be in readiness for night calls. The Purveyor and Paymaster should also have officer's and clerk's rooms, but not necessarily quarters in the hospital. The Chaplain's quarters may be either within the precincts of the hospital or at a convenient distance.

The Captain of Orderlies should always be quartered within the administrative part of the hospital, as also the wardmasters and orderlies. In case of sickness among the orderlies they would be placed in the ordinary wards.

No wardmaster, assistant wardmaster, or orderly should sleep in a sick ward. He should have a bed in the room adjoining the ward, or, in the case of orderlies, in a separate room, affording 600 cubic feet per man, placed in the administration area. The sleeping accommodation should be so placed with regard to the Captain of Orderlies' quarter, and non-commissioned officers' quarters, that proper order and discipline may be kept up. The Captain of Orderlies' quarter should be so placed that he can with facility pass to any part of the hospital when he may be required on emergency.

The Superintendent of Nurses and nurses, should be quartered within the administrative part of the hospital, but their quarters should be cut off entirely from the remainder of the administration. They should include linen nurses' and servants' room, store room, small scullery, bath, sink, and two waterclosets, as well as a light and airy room as sick nurses' infirmary, and a small room adjoining for women attending on sick nurses. The whole of this part of the establishment should have one outer door communicating with the hospital proper".

"With regard to nurses, the regulation regarding the number to be appointed is as follows:—

A nurse is to be appointed for every ward, or set of wards, excepting for venereal or convalescent wards, and no nurse is to have charge of fewer than 25 sick. But in a properly constructed hospital a nurse could very well take charge of 60 sick on one floor. A nurse would occupy a nurse's room in every pair of wards wherever possible, and the remaining nurses, including the superintendent's linen nurse, would be accommodated in the administration".

It would be a gigantic task to list and describe the essentials in Galton's design report and readers are recommended to attempt to digest for themselves this treasure trove of administrative reasoning and architectural good sense. The plans, having been examined by Herbert, were then passed by him to Nightingale for review, as her practical experience was reputed to have been "of great assistance in the design".

On the 30th March 1865 Galton, in his capacity as Under Secretary of State for War, penned a minute to Sir Edward Lugard the Permanent Under Secretary. It began "The Herbert Hospital is all but complete and will, I suspect, be ready to hand over to the Purveyor in the course of a few days". The hospital was not, however, ready for occupation and some weeks prior to his report Galton had himself taken part in an official inspection of the new hospital and had found that the eastern pavilion and other portions of it were tottering and unsafe because of subsidence. It appears that Galton had been well aware difficulties would be experienced in the preparation of the foundation. He had advocated that the concrete should be "composed of perfectly clean gravel or ballast, free from loam, clay, vegetable, or other foreign substance or matters, with the proper proportions of sand and small stones, and unslaked ground, fresh well-burnt

stone lime from Dorking, or other of equal and approved quality, in the proportion of six parts of gravel to one of sand and one of lime measured dry".

It was to be "well compounded, brought to a proper consistency, mixed just before and as it is required for the works, thrown into the trenches while hot, and distributed in even surfaces from a height of not less than 6 feet from the level of the concrete". It was "to be well saturated with water in layers, not exceeding 12 inches in each layer, and to be completed and brought to a level surface before another layer is commenced".

Galton has also warned that the variations of the surface and the inequality of the soil, the depths, widths and thicknesses of concrete, shown on his several drawings, might prove inadequate to ensure a perfect foundation.

The "Times" reported the official inspection on the 7th February 1865 under the headings of "Military and Naval Intelligence" and was scathing in no uncertain terms about the expenditure of some £300,000 of public funds and the lack of foresight and planning which had resulted in the drainage being laid below the deep layer of concrete and rubble of the foundations instead of above it. The inspection had occupied a period of nine days. The committee concerned resolved at length to recommend that the eastern pavilion and other portions of the building should undergo partial reconstruction. It declared that the contractor was in no degree responsible. The pavilion was evidently "needed" or propped up with a view of forming a new and more sound foundation.

There is no information as to the immediate success of this procedure but within 2 years the hospital was showing added signs of dilapidation and rents had appeared in the outer walls and throughout more of the pavilions. This state of affairs was again assumed to be due to the imperfect drainage and the unsettled base, legacies of the original misconstruction of the artificial foundation.

On Saturday, 7th September 1867, the "Times" newspaper reported that the hospital was undergoing "underpinning" as an emergency measure "to stop yielding of the foundation" and "the total destruction of the new building". The paper reported a visit to the hospital by Lord Dalhousie "to convince himself of the fact that the building was in a perilous state" despite denials by the officials at the hospital at that time. The paper went on to say "Since the appointment of Colonel Gosset, the new Commanding Royal Engineer, the buildings have been excavated and surveyed. The work now in hand has been undertaken by a civil contractor, and about 30 or 40 men are employed in excavating to the base, driving galleries under the foundation, needling the walls and underpinning them with barks of timber 12 inches square and Portland cement concrete. The work is superintended by Mr. Jones, one of the senior clerks of the works in the Royal Engineer Department, whose experience has brought into use a most available method of forcing in the concrete by means of a peculiar species of screw-jack which is placed horizontally and operates on the last layer, about 12 inches thick, with a pressure of about 20 tons. About £1,500 is stated to be the estimated cost of this work, which, it is hoped, will render the building perfectly secure".

In his original minute to Sir Edward Lugard, Galton also thought it both pertinent and prudent to raise the question of the administration of the new hospital and he wrote "It seems necessary for the discipline of a General Hospital that it should be under a Military Officer". It should be stressed here that he made no suggestion that the officer should have been a qualified medical man. Galton, however, showed an astuteness in his next suggestion that the Herbert "should be used for the training of

successive commanding officers so as to have some ready at hand to take up the Offices of Governors of any General Hospital in time of war". He advised that the said officers "should be regularly changed every one or two years" and "by this means a sufficient number to afford selection would soon be provided".

Galton went on to propose that "a sum of £350 a year in addition to military pay be given to the Governor", to cover all allowances except the quarters which are allotted to him". In passing this minute to his superior the Secretary of State for War, Earl de Grey and Ripon, Sir Edward Lugard indicated his concurrence with Galton but stressed that the term of appointment as Governor should not be less than three years, for he opined that there would be "great difficulty" in obtaining "Good men" for shorter periods, supposing that "men of that rank" were "generally married" and that family disturbances would occur. Lord de Grey and Ripon approved the principles and made known "his proposals" to the Treasury in the spring of that year.

In respect of the appointment, it appears that a certain retired officer Lieutenant-Colonel Henry John Shaw, applied for the post of Governor on the 9th April 1865. Shaw was certainly not a medical man and it has been shown that as a Captain he served in the Nottinghamshire Regiment of Foot in 1842. Promotion eventually brought him to the rank of Colonel in 1863. He retired by selling his commission and was placed on half-pay in February 1864.

It was not until the 10th October 1865 that Shaw was invited to call upon Sir Edward Lugard at the War Office. It must be said in all fairness, that despite the initial wording in Lugard's minute to a scrivener called Talbot, which began "Better now write to Colonel Shaw in reference to his last application and inform him of the terms of the appointment . . .", there is no evidence that the application had in any way been delayed in the pipe-line or had been lost in the desk trays of the War Office, but that the application had been subject, not only to the application to the Treasury and that department's reply, but in particular to Galton's final report on the building.

Shaw was given supreme control over all matters connected with the condition, efficiency, discipline, the providing of supplies, of medicines, the hiring of labour, transport, equipments, or materials; when necessary, the execution of repairs and sanitary improvements, maintaining a sufficient supply of stores and equipments for present use, or to meet prospective requirements by requisition or purchase. He was responsible for the finance and expenditure of the hospital, and for the proper administration of the different departments. He could suspend officers, subject, however, to appeal to the Secretary of State for War, except in the case of the medical officers and the superintendent of nurses, in whose cases appeals would lie to the Director-General of the Army Medical Department and Superintendent General of Nurses respectively. In order to keep up the general superintendence required, the governor was provided with an office and clerk's room in the administrative block, overlooking the main court of the hospital, and between 50 and 60 yards distant from the centre of the hospital. His quarters, consisting of six rooms, were on the floor above, and had a similar outlook. He was also provided with a servant's room or kitchen in the basement. The office and quarters were connected with the hospital by an iron corridor with a glass roof.

It would appear that Shaw must have taken up his appointment very shortly after his interview with Sir Edward Lugard. It would appear also that his duties were to be extended beyond this formidable list, for on the 30th December 1865, a letter from him

to the Under Secretary of State for War indicated that the Garrison Brigadier was preparing to designate him as the Senior Administrator of all the hospitals at Woolwich and in this letter Shaw was obviously seeking authorisation to comply with Brigade. On the 17th January 1866, Sir Edward wrote to Colonel Shaw "In reply I am to acquaint you that Earl de Grey and Ripon has been pleased to approve of the Female, as well as the Auxiliary Hospitals, being placed under your control and supervision, in addition to your duties as Governor of the Herbert Hospital". The Female Hospital was in fact the "Garrison Female Hospital", now known as the Military Maternity Hospital, located between Mill Lane, the Woolwich New Road of today, and Gunner Lane.

It would appear that the Herbert Hospital was in the course of being furnished in September 1865 and a local newspaper, the *Kentish Independent*, reported on the 9th of that month that "The War Department ships *Thames* and *Inkerman* have been engaged in conveying upwards of 500 tons of hospital furniture from the stores at the Tower and Sheerness, and the transfer of patients will take place in a few weeks". The reporter appeared to criticise the new hospital and spoke of its "many disadvantages for the habitation of invalids".

It would appear also that Authority had had second thoughts about the usefulness of the hospital and its absolute necessity when there must have been urgent need for good and up-to-date barrack accommodation. "An estimate has been entered into with a view of ascertaining the additional amount of expenditure required for its conversion as a military barrack, which it is stated would entail an outlay of upwards of £50,000.

This it appears, at once decided its fate in favour of the original intention of its designers, and, well or ill adapted, the experiment is ordered to be entered upon without delay". So the Herbert Hospital took on the function for which it was designed and patients from the Royal Artillery hospital were moved into it. The move was reported by the *Kentish Independent* on the 4th November 1865.

Of almost comical interest is the extract from the "*Times*" of 17th October 1866, which stated "Miss Shaw Stewart and eight attendant lady nurses from the Royal Military Hospital at Netley have taken up quarters in the Female Infirmary at Woolwich, and for some days past they have performed a portion of the day duties at the Herbert General Hospital, attending on the invalid soldiers, dispensing medicines etc. The inmates complain, however, that they are unnecessarily deprived of the privilege of having their wants attended to by nurses of their own sex provided by the well-organised Army Hospital Corps, to whom they have been accustomed; and it appears to be generally considered that the introduction of lady nurses is an innovation from which no benefit can possibly be derived. It was stated yesterday that the number of patients in the Herbert Hospital amounted to about 300, and that 19 in 20 had been understood to have expressed a dislike to the attendance of female nurses being thrust upon them contrary to their desire".

The first Royal visit to the hospital was by Queen Victoria and took place in 1900. A "*Times*" correspondent wrote on the 22nd March of that year "It is with almost pathetic interest that we mark that the Queen is now for the first time to visit the Herbert Hospital, which was connected with three persons who were linked together, not only in the important work of the sanitary improvement of the Army, but with ties of strong friendship. Lord Herbert has long since passed away, and this month marks the first

anniversary of the death of Sir Douglas Galton, the designer of the hospital; Miss Nightingale is the only remaining link, and she is too ill to be present at a function for which they had all ardently longed. It had been the dearest wish, especially of Sir Douglas Galton and of his cousin, Miss Nightingale, that they should have the invaluable sanction and the glorious halo of a visit from her Majesty to crown their work”.

It would appear from notes written by the Commanding Officer, Colonel J. H. J. Cross of the Royal Herbert Hospital in July 1964, in preparation for the institution's centenary the succeeding year, that the Royal title had been conferred by Queen Victoria following her visit in 1900. This has now been proved to be incorrect in view of two pieces of documentary evidence. The first is in the form of an admission card made out to a certain Mr. Gorwood on the occasion of a second royal visit, this time by Edward VII and his Queen, Alexandra, on the 16th February 1903 (Fig. 2).

Fig. 2.

The second piece of evidence consists of extracts from proceedings of two successive Courts Martial on Army Forms A.10, the first dated 19th March 1903 and the second dated 21st July 1903. The offence concerned in the first consisted of “Drunkenness on duty” at the Herbert Hospital on the 8th March and the offences concerned in the second were “Breaking of our barracks at the Royal Herbert Hospital” and “Striking his superior officer . . . at the Royal Herbert Hospital”, both on the 11th July 1903. It would therefore appear that Edward VII gave his consent to the title “Royal” being conferred on the hospital somewhere between his visit on the 19th February and the 11th July 1903.

This was the history of the construction of the Royal Herbert Hospital. Its once idyllic location is recorded in the lines of Robert Bloomfield.

"To hide me from the public eye,
To keep the throne of reason clear,
Amidst fresh air to breath or die,
I took my staff and wandered here;"

"Sweet health, I seek thee! hither bring
Thy balm that softens human ills:
Come on the long-drawn clouds that fling
Their shadows o'er the Surrey hills;"

"Here, Thames, I watch thy flowing tides,
Thy thousand sails am proud to see;
And where the mole all silent glides
Dwells peace—and peace is wealth to me".

Bloomfield suffered much ill-health and spent many restful and happy days at Woolwich, residing it is believed, in the vicinity of Nightingale Vale, some three hundred yards from the present day Military Maternity Hospital and some six hundred or so from the present Royal Herbert Hospital. The vale was named after the abundance of the feathered choiristers to be found in Brook Hill Park, and not as one might have thought, after the demure, inflexible and ruthlessly reforming "Lady of the Lamp".

Woolwich has given birth to more than its share of penmen, some combining this art with swordsmanship, and rates in all grades of precedence Richard Lovelace, born in 1618 and later distinguished both with rapier and quill. Equally famous however, and one would like to believe known to most senior school-children, and wielding only the pen, was William Wordsworth. Wordsworth did in fact live for some time in Nightingale Vale, and was able to wander in the beautiful grounds of Brook Hill Park. He became enraptured with the nightingales "and the full choir which woke the leafy groves". He wrote:—

"So many nightingales: and far and near,
In wood and thicket over that wide grove
They answer, and provoke each other's songs
With skirmish and capricious passagings:"

His neighbour and friend Edward Quillinan, originally an officer of the 3rd Dragoons, was also no mean poet. He too was enchanted by the nightingales and found time to set aside his duelling pistol and pick up a pen to write about them.

Such was the "green and pleasant land" of Woolwich and the environment of Shooters' Hill during the nineteenth century, but one can no longer romanticize. Brook Hill Park has been long built upon and every present day, Nightingale Place at the junction of the Vale, engorges and then vomits out a perpetual stream of diesel-burning juggernaut lorries, noisy, rusting "bangers" and multi-dented once sedate family saloons. The picture is very much the same at the cross-roads of Shooters' Hill with Academy Road.

History

Woolwich itself smacks of wonderful history but it would be beyond the scope of this paper to try to present the whole story and readers are referred to the fascinating

"Record" by Vincent mentioned in the bibliography. The writer, however, will attempt to whet the readers' appetites with "carrots" gleaned from the two volumes concerned.

Certainly flint instruments recovered from the dry water-courses would indicate that Stone Age man inhabited the land around the creeks and streams which emptied into the Thames at Woolwich. The unpolluted river of that time was, no doubt, a good source of fish and as late as 1701, the parish officers' were known to be rewarding persons one shilling for every otter caught or killed, as these animals were playing havoc with the salmon abounding in the river. For certain the river banks afforded suitable landing places, not only for inhabitants, but also for marauders and pirates.

Woolwich had undoubtedly been a Roman settlement and convincing remains of that time had been found during original excavations at the Royal Arsenal. The presence by workmen finding, at the junction of Wickham Lane with Kings Highway, a leaden coffin containing a female skeleton, which was identified and dated by authority as being from a body interred around 200 to 400 A.D.

The long, straight highway over Shooters' Hill to Dover remains part of the Roman road called Watling Street. It would appear that the Romans preferred to climb up and down hills, from the summits of which they could regularly observe the countryside, rather than cross the level plains. Shooters' Hill was certainly a site for a fortification or observation post, with other prominences along a line through Abbey Wood to Erith, and others through Dartford Hill, Windmill Hill at Gravesend and Chatham.

Whether Edmund the Saxon and Anlaf the Dane or Alfred and Guthrum ever contested the summit of Shooters' Hill, a position which could never have been neglected by the crudest of strategists, is a matter only for speculation. For certain again, there are records of an immense Danish army having landed on the Kent coast in 865 and looting, pillaging and killing for the next four years throughout that region. For certain also, is the historian Lambarde's recording in 1510, that in those times part of the boundary line between the Saxon and Danish kingdoms was the road over Shooters' Hill.

The ecclesiastical chronicles indicate that there was a parish church at Woolwich under the care of the Holy Fathers of Lewisham in 964 A.D. As an official and exceptional document claiming a certain amount of reliance, the Domesday Book, compiled by assessors for their Norman Lord and master, William, provided the best and most exclusive early records of Woolwich (Fig. 3). It is this book that one has to turn to note that the name of the town was listed as "Hulviz" and interpreted as "The dwelling on the creek", a subtle and satisfying reasoning.

There are some thirty variations of the name Woolwich and the original remains both doubtful and obscure, yet excitingly open to both reasonable and wild speculation. It can be assumed that the word "Hulviz" was very much a preferable replacement in Norman for the Anglo-Saxon rendering of Wulewic, Woldwich or Wolwich. The first syllable "Hul" sounds not unlike "Wul" in a dialectical way. It should be impressed upon the reader that the Norman language, basically Norse, was not far divorced from Anglo-Saxon. The hybridization by the lingua franca would have brought about a change from Wul to Hul or Oul.

The Norman compiler of this part of the book seemed likewise to prefer viz, the second syllable to the Anglo-Saxon wyc, wic or wich. The interpretation of Wul, and of

Fig. 3.

Wold, one has a choice of "wood", "weald", "slope" or "plain", whereas Wol was Anglo-Saxon for "plague", "disease" or "gloom". The second syllable vic or wyc denoted anything from "street", "village", "camp", "castle", "house" or "place of work".

There appears to be little other early history of Woolwich apart from incidents set aside in ecclesiastical chronicles, such as the declaration of Edward I as Lord of Eltham and Woolwich, until the reign of the Tudors. At that latter time Londoners knew Woolwich as "a pleasant little village, a days sail from the Tower". It was within the manor of Eltham and the hunting parties of Henry VIII would invariably ride across the manor from his palace at Greenwich in search of stag. In Hollingshead's chronicles the "Merry Monarch" was recorded as being in the habit of "a-maying" on Shooters' Hill (Fig. 4).

Shooters' Hill was always a favourite haunt of cut-throats and cut-purses. Travellers were continually in jeopardy. Road improvements over the hill were no remedy and as early as 1313, in the reign of Edward II, an order was made for "enlarging the highway" on "Shoter's Held" which was "a place of great dread to travellers, owing to the narrowness of the road over it and the lurking-nests of robbers in the woods and coppices". Travellers were very relieved if they managed to arrive at a village between Shooters' Hill and Bexley Heath, where they considered themselves "well and safe" at the end of part of their journey. The village was given the name of Well-End and is now called Welling.

Note the position of the apostrophe in Shoter's as opposed to its present position in Shooters'. It is believed that Shooters' Hill derived its name from the archers, who practised their craft year after year, throughout the ages, on the slopes of the hill.

Fig. 4.

In the 18th century, appointed trustees with power to execute works and levy tolls resolved to reconstruct the road altogether, but the work apparently on the existing road was confined to the slope towards London. The old road from the crown to its eastern foot was abandoned and laid out after much woodland had been cleared, a little to its southern border. Dick Turpin, a commonplace miscreant, was known to have frequented the district and the hill road.

In the 16th century a signal beacon would be lit on the summit of Shooters' Hill in dangerous times, linking other signal fires on the Gravesend hills and Macauley refers to these in his "Armada".

" And eastward straight from wild Blackheath the warlike errand went
And roused in many an ancient hall the gallant squires of Kent.
Southwards from Surrey's pleasant hills flew these bright couriers forth;
High on bleak Hampstead's swarthy moor they started for the north."

The sites of the Kentish beacons can be seen on Lambarde's map of 1596. At a later date telegraph signals replaced the beacons.

Shooters' Hill was also famous for its mineral wells, the water of which had distinct purging qualities and was imbibed by no less a personage than the diarist John Evelyn in 1699 and was used as a source of the crystalline Epsom Salts by well-known drug firms of that period.

As an arsenal or armoury, Woolwich had found its place in history by the reign of Elizabeth I. In 1585 the Queen found it necessary to repair her storehouses and

"workehouses" at the "Tower of London, at Rochester, at ye shippes in harborowe, at ye shippes at seas, and at Woolwich" (Table I).

Table I
Storehouse repairs at Woolwich

Weapon	Number	Weapon	Number
Bowes to be repayred	76	Arrowes, lyvery	30 shefe
Shurbowes	2	Arrowes decayd	160 shefe
Crossbowes	2	Long bowe arrowes with	
Bowestaves	6,019	fierworkes	24
Shurbowes	47	Musket arrowes	22
Wrecke of bowstaves	983	Same to be new feathered	24 shefe

The armoury, storehouse and workshops in Elizabethan times were established at Woolwich and an estimate for the building of "the office of Thordinaunce for the seas" totalled £113—6—8. Thordinaunce was derived from Thor, son of Odin, god of war but is now abridged to The Ordnance.

Camden, in his "Britannica" of 1695, described "Wolwiche" as the "Mother Dock of England" because of her contribution to ship-building. Certainly a dock and building yard existed at Woolwich as early as 1512 and there is no doubt that the King's great ship "Harry Grace-a-Dieu" was the first of a long line of large ships to be constructed in the yards, helping to establish and maintain the naval supremacy of Britain until the 20th century.

The Dockyard was enlarged in the reign of George II in 1734 and the keel of Kempenfeldt's "Royal George" was laid there in 1751. In its later days the dockyard saw the fitting out of Franklin's "Erebus" and "Terror" for the South Polar expedition of 1854. Among the Royal embarkations that featured in the dockyard history were those of Victoria and her consort Albert. It appears that they were there several times boarding successive Royal yachts *en route* either to Scotland or to Coburg on the continent.

The end of the Dockyard as a ship-building enterprise came in 1869, when most of the machinery and some of the buildings were removed to Chatham. Terrible distress prevailed as a result, amongst the families of the workpeople, and owners of houses in the Dockyard district suffered financial loss. The recession caused the emigration of some 2,300 persons to Canada.

The Army and Woolwich

Prior to 1661 no major garrison troops was stationed at Woolwich, despite the fact that the town had become important as a centre for artillery and other stores of war under the Master-General of Ordnance and the Master-Gunner of England. It is known that there was a Master-Gunner at Calais in 1347, one year after Crecy, when gunpowder and ball had been used.

In November 1658 James II, being "very well satisfied of the exceedingly usefulness and advantageous execution of that sort of Artillery, now in practice according to the modern art of war", decided to pay more attention to his Army's fire power and gave an order to Woolwich to recase its mortars and to provide bombs, carcasses and grenade shells.

The Regiment of Artillery was established as a separate unit in the Army in 1716 at Woolwich and included among its officers two surgeons. In 1775 the erections of the Royal Artillery Barracks was commenced, and completed in 1782.

The Royal Artillery Hospital, afterwards known as the Ordnance Hospital, was built in 1780 and was opened for the reception of patients in April of that year. It was calculated to have a capacity of two hundred beds. In 1806 it was enlarged to accommodate 700 men and it appears that it continued to serve most military needs until the Herbert Hospital was erected. There was in addition, a Royal Marine Infirmary built in 1859 to replace an older hospital of 1815.

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