lowed by a severe attack; that pain higher up between the shoulders was of better augury; and that it was to be reckoned in all cases a good sign if there were no pain in the back at all". Again, "its severity, in truth, is almost always in direct relation to the quantity of the eruption.".....It is "accompanied by sore throat; the tonsils and fauces are tumid and red; and with this sore throat there is associated.....more or less salivation, which lasts for several days. At first, the discharge is thin and plentiful; but, towards the period of maturation, it often becomes viscid and ropy, and is with difficulty got rid of by the patient. This salivation is of some importance as a prognostic symptom."....."Besides this, Sydenham regarded the ptyalism as a diagnostic circumstance; as a mark which, identified with true small-pox, a fever called by him the variolous fever; the *variole sine variolis* of De Haen and others."....."Notwithstanding this statement", says Watson, "it is difficult to believe that any such disorder as 'variole sine variolis' ever proceeds from the contagion of small-pox.".....And once again, Watson says, "this affection of the salivary glands does not so often occur in children, but diarrhoea appears sometimes to take its place." (All the italics, except those in the penultimate sentence, are those of Sir Thomas Watson.)

In such a disease as small-pox, I do not think I need apologise for not quoting a more recent text-book. At any rate, I could not quote from a more accurate, painstaking, or classical authority; and even if it were at hand, which it is not, I doubt whether a better diagnostic summary is extant.

Last January, a dressmaker brought to my wife a piece of silk which she wished her to purchase; and, in the course of conversation, mentioned, with that utter *sang froid* characteristic of the Italians in all sanitary matters, that the reason why she wished to dispose of it was, that it belonged to one of her customers whose husband had died of small-pox between its purchase and conversion into an evening dress, and, therefore, the lady had commissioned her dressmaker to dispose of it, as it was unsuitable wear for a widow.

On coming home, this domestic transaction was related to me, and I at once directed my servant to take back the piece of silk to the dressmaker, and, knowing that small-pox was at the time rather endemic in Florence, I at once revaccinated my servant, who was the only member of the family about whose protective condition I was not fully assured. The vaccination "took", as revaccinations generally do, that is to say, it was not a virgin vesicle, but caused considerable local irritation. Exactly fourteen days after the revaccination, she came home from a "festa" complaining of great pain in her back, was violently sick, and very feverish, and, about three or four days afterwards, she called my attention to an eruption on the back of her neck, chin, and lower extremities. On examination, there was not much doubt in my mind (certainly there is no doubt now) that they were true but ill developed small-pox pustules. She continued sick and sorry for a few days, yet quite able and willing to continue her work as usual. About a fortnight after this, one morning my wife said to me, "I have such a sore throat, and such a disagreeable smell in my throat, like drains". On questioning and examination, I found she complained also of a sharp pain between the shoulders, the fauces were red and slightly tumid, with no ulceration or eruption, but well marked pyrexia. On passing from my bedroom to my dressing-room, I had to pass through my son's room (a boy of twelve), and I was greeted with the very same series of complaints. "Papa! I have such a nasty smell in my throat," etc. Both mother and son continued to complain for some three or four days of the same symptoms, but, to the former was added intense salivation, so great and so much that, for two nights, she had to go to bed with a large handkerchief between her head and the pillow, which in the morning was saturated; and during the same period, and added to the foetor and salivation, there was an abundant collection of viscid secretion about the tonsils, which could be pressed out by the fingers, and was difficult to remove even by gargling. The latter was seized with sharp diarrhoea and vomiting, but suffered slightly only from morbid secretion from the salivary and tonsillar glands.

To-day I have heard that, upon the dressmaker receiving back the silk she had brought us for sale, not being able to dispose of it, and her daughter wanting a wedding garment, she bought the stuff herself from the Italian lady to whom it had originally belonged, and she and her daughter were busily engaged in "making it up", when, two days before the wedding, the bride-elect was taken seriously ill, and is now at the point of death from confluent small-pox.

On hearing this, the true sequence of the chain of facts now narrated flashed across my mind; and it would have done so, I think, before, but, as I must honestly confess, I did not know, or had forgotten, that sore throat and salivation are diagnostic of variola; nor do I now know, nor does Watson mention, that the smell or taste

(whichever it can be called) of drains—in other words, subjective foetor of the fauces—is also diagnostic. Is it? Again, if it were wanted, no stronger evidence could be given of the protective power of cow-pox, not indeed against small-pox, but against the serious and fatal consequences of small-pox. It has often impressed itself upon my mind that the profession and its press would have done more to convince the public mind of the necessity of vaccination, and given a stronger checkmate to the crazy antivaccinators, if it had been more clearly impressed upon them that vaccination does not necessarily protect against small-pox, but against the severity and fatality of it; that, just as any one may have a recurrence of any eruptive fever, so one may have first cow-pox, and then cow-pox *unmodified in essence, but in circumstance*; in other words, small-pox.

It is a somewhat curious coincidence that my two sisters were carefully vaccinated as infants, and, about twelve years afterwards, both took small-pox from a servant. One had about half-a-dozen pustules, and the other none. In the present instance, I have no doubt, nor do I think my readers will have any, that the three recent cases I have recorded, are also veritable cases of "*variole sine variolis*". I trust that the imminence of the present epidemic in England will furnish an apology and a reason for the appearance of these notes.

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NOTES OF A VISIT TO THE MILITARY HOSPITALS OF THE CONTINENT.

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III.—GERMANY.

WHEN a soldier "falls sick" in Germany his name is entered in the company's sick-book, which is laid before the surgeon on his visit to barracks. If the complaint be trivial, the surgeon writes opposite the man's name, "Fit for duty"; if sick, the nature of his disease, and whether he is to be confined to barracks, or sent to the lazareth. If removed to hospital, his name is entered on an admission-card, with the number of his regiment, battalion, company, and several other particulars, and on the back an inventory of his clothing; and without this card he will not be admitted. He is either marched or carried to hospital. This card can be used at least six times, and, as the service of the German soldier with the standards only extends to three years, usually suffices for his whole military career: it is a kind of regimental record of his diseases or admissions to hospital.

Upon his arrival at the lazareth, he is seen by the Oberstabsarzt, or senior staff-surgeon, in the consulting-room of the hospital, who distributes the patient to his proper division, and causes his name to be entered in the admission and discharge book. His name is also entered in the daily diet-sheet (*Haupt-Diät-Verordnung*) for the information of the superintendent or commissary of the hospital. His regimental clothing is taken into store, he receives a bath, and next assumes the blue and white striped hospital dress, proceeds to the ward, when the assistant-surgeon enters the particulars of his case and disease in the medical case-sheet (*Journal-Blatt*); this is hung at his bed-head, and kept up daily; in the case of acute diseases, the temperature is recorded for the information of the Stabsarzt, or visiting staff-surgeon, who is accompanied by the Assistenzarzt or Unterarzt, to whom the necessary directions as to diet and treatment are given. A bedside cupboard contains the patient's clothes, medicaments, etc. In the centre of each ward are a few chairs and a table, at which the convalescents are allowed to amuse themselves, playing at cards, etc. In some hospitals is a separate ward, where the men are allowed to smoke. The counterpanes are white; and sisters of charity, or deaconesses of the Order of St. Elizabeth, usually supplement the ordinary hospital attendants. As only the non-commissioned officers are allowed to marry, there are no women's and children's hospitals. In Berlin, the sick of the garrison will shortly be treated in two lazareths, capable of holding in the aggregate 1,120 patients.

The diets are prepared in copper boilers or closed ranges, and consist of soup, meat, and brown bread for the less severely sick, and small loaves of white bread, and chops or roasted meat, with various "extra portions", for the graver cases. Breakfast (*Frühstück*) is taken at 7 A.M., dinner (*Mittagessen*) at noon, and supper (*Abendessen*) at 7 P.M. Extras, consisting of "portions" of wine, beer, porter, tea, milk, etc., seem to be sparingly given, but can be ordered without restriction if required. In the hospital with three hundred sick, only twenty-nine of the patient were on extra diet.

Closets and urinals are on each landing in proportion to the number of inmates; the baths are generally in a separate room or build-

ing, and in the passages are basins and spittoons. The wards are warmed by the German earthenware stove, which gives out a good deal of heat. In each hospital are two classes of sick attendants, waiters or waiters, and orderlies of the sanitäts-corps. The former wear a canvas dress, are sometimes civilians, and look after the cleaning of the wards, passages, etc.; whilst the others accompany the surgeon during his visit, administer medicines, apply minor dressings, poultices, etc. During the annual drills and manœuvres, a large proportion of these men are withdrawn from the hospitals in order to be present with the train-battalions, or the staff-surgeons who accompany the troops.

The mortuary is detached, and in the enclosure is a barake or wooden hut. The greater number of these huts date from the wars of 1866 and 1870-71; they are intended for the reception of the wounded, and are capable of containing from twenty-eight to thirty patients each. They are ventilated by means of an elevated ridge along the roof with louvered sides. All of these have opposite doors and windows. Heated by means of an iron stove, they remain equipped with their proper quota of iron beds, stretchers, and ward-utensils, when unoccupied.

During the annual drills and manœuvres, the Stabsärzte accompany the battalions; the Oberstabsarzt, or senior staff surgeon, with a proportion of the assistants, remaining in charge of the hospital, to which the sick are sent back by train. If too far from the lazareth of the garrison to which their regiment belongs, they go to the nearest military hospital. The slighter cases are treated in camp. As a rule, the percentage of sick on such occasions is very small. During the autumn manœuvres of 1876 near Berlin, in one of the regiments, only three men required hospital treatment, and ten medicine in the field. In inclement weather, catarrhal and bronchial affections mostly prevail. During these manœuvres, the men rise very early—4 or 5 A.M.—and are soon miles away from their last bivouac. The hospital and professional returns are few. An admission and discharge book is kept, from which at the end of the month is compiled a monthly sick return (Kranken-Rapport). This is sent through the division-surgeon to the corps surgeon-general, in whose office is made a quarterly summary for the general Stabsarzt of the army. A monthly report is also compiled by the commissary or superintendent from the diet sheet. A daily distribution of sick, for the purpose of dieting them, goes each morning to the hospital superintendent.

Since 1868, the Oberstabsarzt in charge of each garrison lazareth occupies in the hospital, under the general officer of the district, exactly the same position as does a colonel in his regiment. He is responsible for everything in the establishment, over which he is given a supreme control. He distributes the sick, supervises their treatment, consults with the medical officers, and controls the intendant, or superintendent, whom he may suspend if necessary, and who has under him charge of all the stores and equipments. Everything appertaining to the treatment, lodging, and equipment of the sick is in charge of the military surgeons, and no attempt at a dual authority is allowed. The pharmacies are in charge of apothecaries under the Oberstabsarzt.

Each year, the senior staff-surgeon in charge of the regiment accompanies the general, his aide-de-camp, and the civil commissary, in their visit to the villages of the district from which the regiment receives its quota of recruits. All young men who have completed their twentieth year are examined, as well as those put back on the last inspection, and, if found fit in every respect, are drafted into the battalion to go through their three years' military training in the active army. If too weakly and insufficiently grown, and not found likely to improve upon the third annual examination, they are finally excused, and are only called up for duty in the fortresses in the event of war. Feebleness of constitution and physical defects or deformities are the chief causes of rejection. A lad, eighteen years of age, well developed, and with a good chest, would be allowed to serve. Large numbers of the infantry are not more than four feet ten inches in height; small, active, broad-shouldered, hard-marching fellows. These small men are preferred by German officers, who say they are more easily drilled, and capable of bearing a greater amount of fatigue. During the last war, the pea-sausage after a few days was tired of, but proved to be most palatable when made into soup and eaten with bread. Fresh meat was always sought after. The soldier is paid three thalers (nine shillings) a month, and carries sixty to seventy pounds. The spiked helmet is a soldierly headpiece, but rather heavy; the tendency of late is to make it smaller. This helmet is worn by medical officers, the only distinctive mark of the profession being a small figure of Æsculapius on the shoulder knot.

Each soldier has a parade, working, and Sunday uniform. He prefers beer for his ordinary drink; if that cannot be obtained, wine; and, least of all, spirits. During the Franco-German war, half a bottle of wine was issued to each man daily when it could be obtained, and

was, in the opinion of German surgeons, a good practice. During the first year, the Prussian soldier is at drill incessantly, he therefore learns it; the next year he becomes perfect in it; the last year he learns discipline. He is now supposed to be a soldier, but not before.

Of the many kinds of hospital to be seen in Germany, the isolated pavilion, complete in itself, capable of holding thirty patients in wards at each side of a central hall, or in a single ward, with ridge ventilation, tiled floor, double windows, a brick framework, elevated basement, and opposite windows, heated by hot-water pipes, and, having a summer verandah at one end, appears to combine the greater number of good points in hospital construction. The greater number of the blocks at the new Templehof Lazareth near Berlin are similarly constructed. The blue and white tiles have a very pleasing effect to the eye.

The active army of Prussia upon a peace establishment numbers some 360,000 men, divided into sixteen army corps located in the different provinces. This large force is in the medical charge of the "Sanitäts-Officier-Corps", who are embodied into a military medical division, "Militär-Medicinal-Abtheilung", under the general Stabsarzt of the army, who has the rank of lieutenant-general. The other officers of the corps are fifteen general and corps-surgeons, one hundred and ninety-nine senior staff-surgeons, three hundred and forty-four staff-surgeons, three hundred and eighty-four assistant-surgeons, with a number of under surgeons and student volunteers. Each grade of officer has a specific charge. The senior staff-surgeons are in charge of the regiment and garrison lazarets, the staff-surgeons of the battalions or barracks, and the assistant-surgeons are mostly employed in the hospitals. The senior staff-surgeon of a division is the division-surgeon, through whom returns go to the corps surgeon-general, who is chief of the medical staff of each army-corps, which is decentralised and complete in itself in every respect without reference to any other army-corps. The total of medical officers is—one corps surgeon-general, one assistant, one staff-apothecary, two or three garrison-surgeons, two division-surgeons, thirteen senior staff-surgeons, twenty staff-surgeons, twenty-eight assistant surgeons, two or three under surgeons; total, seventy-six.

The medical reserve of the Prussian army consists of two classes of officers—the "General-Aerzte à la Suite des Sanitäts-Corps", of which Professor Langenbeck is the senior; and the "Landwehr Surgeons", of which force Dr. Esmarch is Surgeon-General. The actual strength of this corps in 1873 was as follows:—Generals-arzt, one; Oberstabsärzte, twenty-two; Stabsärzte, three hundred and thirty-two; Assistenzärzte, nine hundred and forty-eight. The appointments are honorary ones during peace. The third reserve are the medical aid societies, who are never employed in the first line; and, behind all, are the great civil hospitals of the country, and their medical personnel. Decorations of honour (Ehrenzeichen) are liberally bestowed upon the senior medical officers. During war, the autumn drills and manœuvres, and when proceeding with troops on the march, officers of the Sanitäts-Corps are mounted.

The foregoing is a mere sketch, which, if space permitted, might be extended to much greater length. I would only say in concluding, that the German medical service is to be chiefly admired for the strong professional tone and unity of sentiment which prevails; its simple organisation and returns; the perfectness of every detail; the decentralisation of medical corps, as units complete in themselves; and the complete control given in all things medical to the sanitary corps.

In closing these sketches, I must express my obligations to Drs. Dietrich, Ullmann, Krüger, Schnier, and my friend Dr. Tellerbeck, of the German Army; Dr. Rammel of Vienna, and Dr. L. Hendrickx of the Belgian Service.

THERAPEUTIC MEMORANDA.

THE ADMINISTRATION OF PHOSPHORUS.

THE marvellous power which phosphorus possesses over trifacial neuralgia is likely to be doubted by many who prescribe the drug in the solid form of pills. Phosphorus pills generally pass through the system unchanged: a circumstance which may, perhaps, account for the want of success which is sometimes met with. Previous solution in tolu balsam or other solvents does not lessen this tendency; and to obtain the real action of the drug, we must give it in the form of a draught. Now, we have no good pharmacopoeial preparation of this invaluable drug; but the homeopaths prepare a solution of a fairly reliable and uniform strength of one per cent. Accordingly, I am now always in the habit of directing my patients who require phosphorus to take their prescription to a homœopathic chemist, who makes it up