

tion. Our readers will find the whole of this paper not only interesting but extremely instructive; we must confine our quotations to a few prominent topics. Fifteen cases of fractured patella were treated during the year, all except one being transverse, and the result of muscular action. "In most cases Malgaigne's hooks were employed with very good result; but in the other cases, which were simply raised on a single incline, the results were almost as good." Four cases of tetanus occurred, two of which recovered, one under the use of turpentine by the mouth and conium suppositories, and the other being treated with hypodermic injections of atropia and morphia. Twenty-three cases of pyæmia are reported, only one recovering; this was a case of what we have elsewhere given our reasons for calling *urethral or genital fever* (ordinarily called *gonorrhœal rheumatism*). "The treatment consisted in the administration of full doses of quinia, with the sulphate of iron and extract of conium, together with generous diet, when the patient was able to take it, and stimulants."

One case of ovarian disease was submitted to operation, death following on the fourth day. Three elaborate tables are appended to the report, and give (1) the number and nature of cases admitted during the year, (2) a tabular account of the cases of compound fracture, and (3) a tabular statement of the various operations performed during the year. These tables appear to have been a very carefully drawn up, and will be of permanent value for purposes of reference.

We have still to complain of the want of an index to the volume.

J. A., Jr.

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ART. XXVI.—*Planches Descriptives du Matériel des Ambulancés; ouvrage basé sur l'Exposition Internationale organisée à Paris en 1867, par les Sociétés de Secours aux blessés, et pour lequel ont été mis à profit les meilleurs modèles actuels.* Par le Docteur E. GURLT, Professeur de Chirurgie à l'Université de Berlin, Chevalier de l'Ordre Royale Prussien de l'Aigle Rouge, Membre de la Société Médicale, de la Société d'Obstétrique, et de la Société des Sciences Médicales et Naturelles de Berlin. Membre Correspondant étranger de la Société Impériale de Chirurgie de Paris, Membre Correspondant de la Société I. R. des Médecins de Vienne, de la Société Physico-Médicale d'Erlangen, de la Société des Médecins Badois pour le Développement de la Médecine Légale, etc. etc., et Membre du Comité Central Prussien de Secours aux blessés Militaires, délégué par celui-ci à l'Exposition à-dessus mentionné et Membre Honoraire de la Société Patriotique Autrichienne de secours aux blessés, aux veuves et aux Orphelins Militaires à Vienne—xvi. planches lithographiées en couleur. Berlin, 1868: Th. Chr. Fr. Enslin (Adolphe Enslin).

THE author of the above is Dr. E. Gurlt, Professor of Surgery in Berlin, and recently a delegate from the "Central Prussian Committee of Succour for Wounded Soldiers" to the International Exhibition organized at Paris in 1867. Dr. Gurlt's work is itself a magnificent contribution in furtherance of the philanthropic objects of the International Congress. It consists of two parts, an atlas of sixteen imperial folio coloured lithographic plates, and an accompanying German and French descriptive text of eighty-seven quarto pages.

In the preface the author states, that at present no treatise exists which affords any proper or accurate description of the *matériel* and apparatus necessary for the care of the sick and wounded in time of war; and to remedy this deficiency his work is prepared. It is based upon designs executed at Paris, under the author's supervision, by M. Grund, an engineer sent thither for that purpose by the Prussian Minister of Commerce and Industry.

The most useful and remarkable objects and inventions collected at the Paris Exhibition are represented in these plates on a scale so large, and with such indications of materials by colour, as may enable competent mechanics in any country to construct the objects themselves from these diagrams. In the first

four plates of the atlas the Prussian and Austrian arrangements for conveying wounded troops by railroad are figured. The cars employed were either freight cars or first-class passenger cars, and were fitted up with cots or hood-litters hung from the side of the cars, and from central posts. In the Austrian cars the cots were suspended by leather straps; in the Prussian, by straps and gutta-percha rings to prevent jarring. From the diagrams furnished, the Prussian cars appear to have been somewhat better arranged than those of their late opponents. Each train of wounded was furnished with an extra car properly arranged for the preparation of food, for the dispensing of medicine, and for the accommodation of the sanitary personnel. The platforms of the cars were connected by bridges with hood-rails, thus permitting ready and safe communication from car to car on the part of the attendants of the trains.

In Plate IV. certain details are given regarding the arrangement of our American cars employed for the transportation of wounded during the late rebellion.

In Plates V. to VIII. plans of various ambulance wagons are delineated. The first of these is that invented by Dr. B. Howard, of New York, late Assistant Surgeon U. S. Army. The advantages of this model of ambulance are, in the opinion of the author, the following: The lightness and excellence of its construction; the use of double springs; the employment of India-rubber to lessen the shock and jarring; the supports furnished to injured limbs, and the arrangement of the reservoirs of water. Its disadvantages, on the other hand, he considers to be due to the inability of the front wheels to turn under the box of the wagon; the absence of backs, and of feet to the litters; the inaccessibility of some of the seats, and the little space allowed for the accommodation of the legs of the occupants of the stretchers on the floor of the carriage. In Plate VI. the details of the ambulance known as the "Rucker Model" are set forth. As is well known to many of our readers, this form of ambulance was built under the direction of Brevet Major-General Rucker, of the Quartermaster's Department, at the Government shops in Washington, and has been recommended as the U. S. Army regulation ambulance. It is a modification of, and an improvement upon, the Wheeling or Rosecrans ambulance, so generally used during the rebellion, and so familiar to all army surgeons. In the opinion of Professor Gurtl, the Rucker ambulance possesses the rare advantage of great capacity; serving, as it does, to transport at the same time four wounded at full length, and two seated. He objects, however, to the front wheels not running under; to the difficulty of placing the wounded in the ambulance; to the absence of backs to the litters; and to the want of elastic supports to diminish the jar or shock during transportation. He thinks, however, that these deficiencies have been overcome in the construction of this ambulance as modified by Dr. Thomas W. Evans, the well-known American dentist at Paris.

The plans of Dr. Evans's ambulance are given in Plate VIII. Judging from these representations this ambulance would seem to be a very perfect one; whether it would prove altogether satisfactory in active service, we cannot, of course, tell. We have seen many forms of ambulances which appeared to offer every advantage on paper, or even on a first inspection, but which proved utterly inefficient when subjected to the rough test of a hard campaign, upon mainly or corduroy roads, over open country, or in mountainous regions. We are therefore inclined to look with distrust upon all models of ambulance and transport wagons which are in any degree complicated in their arrangement; and we must regard all such as successful, only when their success has been proven by actual use. Judging from the plates of the Evans ambulance before us, we doubt the strength of its running gear. Possibly this might prove amply sufficient for a campaign over the well-constructed roads and level plains of Belgium or France, but we greatly fear that this same vehicle would go to pieces, or be hopelessly stalled in a Missouri clearing, a Tennessee swamp, or the unfathomable depths of "a Virginia mud."

The model of ambulance to which the commission of delegates from the international societies awarded the first prize is that of Baron Mundy, of Vienna, and of M. Locati of Turin. The construction of this vehicle is evidently patterned somewhat after the American type; but we doubt much whether the

alterations are improvements, while the arrangement of the running gear would seem to unfit the ambulance for service over a rough country.

In Plate VII. we are presented with the details of the ambulance of the Swiss army, a vehicle of such extraordinary and ponderous make that we can scarcely bring ourselves to credit its progression at any other than a snail's pace. Remembering, however, that it is to be used in a country where the lumbering diligence still holds place, we will try to believe that it too may answer its purpose; but we hope that it may be long, ere Switzerland shall be called upon to test in active service, the merits or demerits of this most wonderful of all transport wagons.

We do not propose to enter here upon any lengthy criticism of the varieties of the ambulances which Professor Gurlt has figured. We would only, however, say, that an experience somewhat extended has taught us that the essentials of a good ambulance for use in time of war, are lightness, strength, and simplicity of construction, and capacity. It should be so light, that, when loaded, it can be drawn by two horses; so strong, that it can be used upon any road, or over open country, in all weathers. The front wheels should be sufficiently large, and the running gear should be so arranged that the carriage may be readily extricated from those inevitable ruts and mud-holes which, in the rear of every marching army, beset the unwary driver. It should, moreover, be of such simple construction that, if broken, it can be mended by the army blacksmith.

Its capacity should, we think, be estimated by the number of wounded it can carry seated; or the number seated in addition to two at length in litters on the floor. We have no faith in any upper tier of beds for either the very sick or badly wounded. It is difficult to load them; their occupants are in an uncomfortable and dangerous position; and the wagon is rendered top-heavy, and liable to be upset upon rough roads.

From all of these considerations we are inclined to think that the Wheeling ambulance, somewhat modified so as to run more easily and steadily, and to be productive of less jarring to its occupants (results which we believe have been attained in the Rucker model), is, perhaps, of all others best suited to the rough vicissitudes of active service by day and night, in all weathers and climates, and over mountain roads as well as upon the rolling prairie.

In the space devoted to hand-litters we are presented with figures of several of the more useful varieties of stretchers and field-cots. Some of the simplest of these closely resemble those known in our service as Smith's stretcher, and the Halstead folding hand litter. Others, however, appear to be too complicated and delicate for the rough usage to which they are unavoidably subjected in field service; for we would say of the stretcher, as we have said of the ambulance, the more simply and strongly constructed, the longer will it last, and the more fully will it answer the purpose for which it is designed.

The litter on wheels is a variety not known—or, at least, not used in this country—but which appears to be popular in the European services. The Swiss wheelbarrow litter, and the Prussian litter with two side central wheels, are examples of this type. These might, we think, be useful under certain circumstances—as, for example, upon level ground, or where the force of carriers is deficient—but more especially, it seems to us, in large field or general hospitals.

The folding operating table, so largely employed during the rebellion, and which accompanied the Anteuvieth medicine wagon, is represented in Plate XII. In our judgment it answered every purpose, and it contrasts most favourably in its simplicity with the Tobold, a Prussian field operating table figured beside it.

The succeeding plates furnish representations of Toselli's portable apparatus for the manufacture of ice; of the hospital knapsack of Dr. Collincau, of Paris; and of different forms of support, French, German, and American, to be used after the performance of resections of the elbow-joint. The collection of artificial limbs is illustrated by those of Béchard, De La Hayrie, and Beaufort of Paris, of Nyrop and Ibsen of Copenhagen, and of Palmer of Philadelphia. Of the artificial leg of the latter, the author, at page 65, says: "Cette jambe arti-

ficelle se distingue par sa simplicité, sa légèreté, et sa solidité. Elle est préférable en cela à bien des appareils semblables."

The combined knife and fork, for the use of those persons who have lost an arm, and which we believe was designed by that gallant soldier, Kearney, is introduced to us as that of M. Danninger, of Vienna. Its origin is, however, credited to an American source.

In Plate XIV. the arrangement of the Swiss medicine wagon (*fourgon d'ambulance matériel*) is given in detail. The Federal army, we are told in the text, possesses thirty-two of these wagons, one of which is issued to each brigade of 2800 men. The contents of the wagon designed for the establishment of a field hospital are as follows: thirty beds, cooking utensils, meal, coffee, wine, brandy, medicines, instruments, bandages, splints, plaster of Paris, operating table, camp-stools, hand-litters, flags, and divers tools. The wagon is heavy, entirely too heavy to suit our American ideas, and is drawn by four horses driven by postillions.

The coffee-kitchen wagons of J. Dunton, of Philadelphia, are fully described and figured. In the opinion of Professor Gurtt, these kitchens, so modified as to prepare the soldier's daily food, might with great advantage be employed for the every-day march of a command, especially when in face of the enemy.

The series of plates under our notice are concluded by a representation of Bache's apparatus for the measurement of recruits, a fac-simile of the card of identification presented to each soldier by the Christian Commission, and a series of diagrams illustrative of the U. S. A. hospital tent, and of the means of heating and ventilation adopted in the American temporary pavilion hospitals.

In bringing to a close our hasty analysis of this admirable work of Professor Gurtt, we would again express our high appreciation of its value. In our opinion the author is entitled to great praise not only for the able manner in which his voluntary labours have been accomplished, but also for the spirit of humanity which has prompted the publication. In an artistic point of view, the work—*atlas and text*—is a splendid contribution to military surgery, and one which we feel confident cannot fail to exert a decided influence in furtherance of that most humane of all objects—the rendering of succour to sick and wounded soldiers.

J. H. B.

ART. XXVII.—*A History of the Medical Department of the University of Pennsylvania, from its foundation in 1765. With Sketches of the Lives of Deceased Professors.* By JOSEPH CARSON, M. D., Professor of Materia Medica and Pharmacy in the University of Pennsylvania, etc. 8vo. pp. 227. Philadelphia: Lindsay & Blakiston, 1869.

THE history of the University of Pennsylvania has a national as well as local interest, from the early date of its origination, and the connection with it of men of illustrious public reputation, such as Dr. Franklin and Dr. Rush. Nor are the reasons hard to discern which have, in the past, drawn more attention, and more widely gathered patronage, to its medical than to its academic department. It is well, therefore, that from time to time the history of the Medical Department should be fully recorded. This has been done twice by Prof. G. B. Wood; in a valedictory discourse in 1836, and in a communication to the Historical Society of Pennsylvania, published in the third volume of its *Transactions*.

For fidelity and carefulness of statement, and maintenance of the dignity of the Institution, as well as for skill in literary execution, the task of extending and continuing this record could have been confided to no better hands than those of Professor Carson. Because of the responsibility of his connection with the University, however, we are obliged to miss some elements of interest possible to such a work, in which history and biography are commingled. If history is most instructive when most complete in its conveyance of facts, and