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THE ARMY MEDICAL MUSEUM AT WASHINGTON.

THE medical profession has for its object the alleviation of the physical sufferings of the human race. At all times and in all places disease and death are doing their work among the populations, and everywhere the hand of the healer is outstretched to the bed of anguish. Not always wise perhaps, certainly not always successful, are such ministrations, for our knowledge of the laws of life, in health and in disease, is as yet very imperfect; but the science of Medicine is essentially progressive: with increasing knowledge comes more subtle skill, and the advances already made warrant hopefulness as to the future.

Under these circumstances it may fairly be regarded as one of the large compensations of human history that the periods of pestilence and war with which our race is scourged from time to time, serve generally to give a fresh impulse to the genius of those who have devoted themselves to medical pursuits, enabling them to make new discoveries, and to accumulate stores of knowledge which serve to increase their usefulness in ordinary times.

The unhappy struggle through which our own nation has recently passed has been no exception to this general rule. There can be no doubt that it has given a great impetus to medical study in America, and this not merely in the direction of operative surgery and public hygiene, on which its effect has been perhaps most obvious, but in many collateral branches also, on some of which a favorable influence from this source could scarcely have been anticipated.

It would be foreign to the purpose of the present article to offer even an outline of this general movement. I propose simply to sketch a single institution, the Army Medical Museum at Washington—an establishment which is the obvious offspring of the war, and which will serve as an excellent illustration of the remarks just made.

The Army Medical Museum is situated on Tenth street, between E and F, where it occupies portions of a building, the rest of which accommodates a branch of the office of the surgeon-general. This building was formerly well known to the visitors of Washington as Ford's Theatre. It is a plain brick structure, three stories high, seventy-one feet front and one hundred and nine feet deep. At the rear of the north side of the main building is a small wing which accommodates some of the museum workshops; another wing at the front of the south side contains the chemical

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laboratory and the offices of the medical officers on duty. The whole establishment is devoid of any pretension to architectural beauty, and the exterior, being painted dark brown, has a rather gloomy aspect.

The upper story of the main building is the principal hall of the museum. It is well lighted by windows in front and in rear, and by a large central skylight, which has beneath it in each floor an oblong opening, through which the light falls into the apartments below. The numerous glass cases, for the accommodation of specimens, which cover all available wall space and stand out in long lines upon the floor, are most of them constructed in the plainest manner, with frames of pine wood painted white—for use, evidently, rather than for show. The floors are of brick on iron arches, that in the museum hall being covered with encaustic tiles: the principal staircase is of iron, and the roof is covered with slate: this portion of the establishment may therefore be regarded as nearly fireproof. Unfortunately, this is not the case with the wings, for the protection of which a plentiful supply of hose is kept in readiness, and a steam force-pump is connected with the boiler of the steam-heating apparatus, for use in any emergency.

The first floor of the main building being nearly on a level with the street, the visitor who glances through the windows as he approaches the principal entrance is often struck with the number of busy clerks he sees seated at their desks or carrying record-books and papers about the room. This floor, however, has nothing to do with the museum. It is occupied by the record and pension division of the surgeon-general's office. Here are filed the records of the numerous military hospitals which existed during the war, together with the monthly sick-reports received from our armies during the rebellion, and those which still continue to be forwarded monthly from the several military posts. There are about sixteen thousand folio volumes of hospital books, and several tons of sick-reports and miscellaneous papers, all systematically filed in such a manner as to permit ready access. To this branch of the surgeon-general's office the commissioner of pensions applies for official evidence of the cause of death or nature of disability in almost all pension cases before finally acting upon them. Similar information is also continually asked for by the adjutant-general of the army and other officials. Altogether, about two hundred thousand applications from these sources have been responded to since the war, and fresh cases are still received for investigation at the rate of about fifteen hundred a month. To facilitate these inquiries, the names of the dead, so far as ascertained, have been indexed in a series of alphabetical registers, which now contain very nearly three hundred thousand names. About two hundred thousand discharges for disability have been indexed in a similar series of registers.

The second floor of the building is chiefly occupied by the division comprising the surgical records of the surgeon-general's office. Here are filed the reports made during the war with regard to the wounded and those who had undergone surgical operations, and from these a series of record-books have been compiled, in which are entered the histories of over two hundred thousand wounds and nearly forty thousand surgical operations. These have been arranged according to the nature of the wounds or operations; amputations of the thigh, for example, being entered in one set of books, amputations of the arm in another, and so forth. These books are therefore available for the preparation of the surgical history of the war. Meanwhile, they have done good service by preventing frauds in the matter of furnishing artificial limbs to disabled soldiers, for which large sums of money have been appropriated by Congress and ordered to be expended under the direction of the surgeon-general.

Besides these two record offices, the building contains also the chemical laboratory of the surgeon-general's of-

fice. This is situated on the first floor of the south wing, and is charged with the examination of alleged adulterations in medicines and hospital supplies, as well as many other investigations rendered necessary from time to time by questions which come before the surgeon-general. The laboratory has done good service both during the war and since, not merely in connection with matters pertaining strictly to the administration of the medical department, but also in a number of cases with regard to which other bureaus of the War Department have invoked the aid of the surgeon-general. The actual saving to the government resulting from the detection of attempted frauds in this laboratory has already been many times greater than the cost of carrying it on.

It has been thought proper to mention these divisions of the surgeon-general's office established in the same building, because visitors very often seem to have the impression that it is devoted to the purposes of the museum alone, and are therefore unable to understand the need for so many employés; most of whom, it will be seen, are rendered necessary by the pressure of practical business matters which have nothing whatever to do with the museum itself.

The collections of the museum are divided into six sections, as follows: I. The Surgical Section; II. The Medical Section; III. The Microscopical Section; IV. The Anatomical Section; V. The Section of Comparative Anatomy; VI. The Section of Miscellaneous Articles.

The surgical section consists at present of about six thousand specimens, of which the majority belong to the category of military surgery, though many other surgical subjects are already well illustrated. There are specimens exhibiting the effects of missiles of every variety on all parts of the body; specimens which show the different stages of the processes of repair, and the several morbid conditions which may interfere with their favorable termination; specimens derived from surgical operations of every character—calculi, tumors, and the like. The osseous specimens are for the most part preserved dry, neatly cleaned, mounted on little black stands, that they may be handled without injuring them, and duly ticketed with their catalogue numbers. A considerable number of specimens, however, from their nature, require to be preserved as wet preparations: these have been neatly dissected, and are preserved with clear alcohol in glass jars similar to those used in the medical section.

There are also three hundred and fifty plaster casts representing the mutilations resulting from injuries and surgical operations. A series of over four hundred examples of missiles extracted from wounds, and showing the effects of the percussion upon the missiles themselves may also be mentioned. Latterly, a number of interesting preparations displaying the effects of arrow wounds and other injuries peculiar to Indian hostilities have been received.

To give any detailed description of such a collection is of course out of the question; yet it may be of interest to state that there are upon the shelves 211 specimens of fracture of the cranium, including 46 cases of trephining; 10 of depressed fracture of the inner table, without injury of the outer, a rare and interesting condition on which it would be out of place to comment here; and 22 specimens of wounds by sabres and other cutting weapons.

There are 59 examples of amputations at the shoulder-joint, 138 of amputations of the arm, and 56 of the forearm; 182 excisions of the shoulder-joint, and 173 other excisions at various points in the upper extremities.

The lower extremities furnish 14 amputations of the hip, 436 of the thigh, and 161 of the leg; with 25 excisions of the hip-joint, 9 of the knee-joint, and 56 other excisions at various points in the lower extremities.

A series of 225 fractures of the thigh in which conservative measures have been attempted must also receive notice; and special mention may be made of 86 sequestra, or portions of dead bone

extracted from stumps after amputation, of which 73 are from the thigh. Some of the latter series of specimens are very remarkable, several of them being from six to eight inches long, and a few even exceeding the latter extraordinary dimensions. After amputation in the continuity of the long bones, especially in military surgery, it not unfrequently happens that the death—or necrosis, as surgeons term it—of a portion of the shaft of the bone ensues. A process of ulceration is then set up, by which the dead portion is separated from that part of the bone which still retains its vitality. Simultaneously, a formation of new bone takes place beneath the membrane covering the shaft, so that when ultimately the dead sequestrum loosens and is drawn out, a hollow mass of living bone, which is slowly filled up by natural processes, remains, and secures the full length of the stump. This process was not fully appreciated at the beginning of the war. Instances are well known — and doubtless many others have escaped observation—in which, on account of the recognition of dead bone in the stump after amputations in the continuity of the long bones, second or even third operations were resorted to, which might judiciously have been avoided had the operators been as fully acquainted with the natural processes in such cases as all may now become by the study of the specimens of the museum, or of the descriptions of them which have been published.

As a matter rather of popular than of surgical interest, mention must also be made of a shelf in this series on which stand, side by side, specimens derived from the mutilated limbs of seven general officers. Need it be said that no critical eye could distinguish them from the similar mutilations of subalterns or of private soldiers? Nevertheless, it is not uninteresting to know that the specimens mentioned are here with the full approbation of the distinguished gentlemen whose wounds furnished them. As a memorable example, when at Gettysburg the gallant leader of one of our army corps was struck down by a fragment of shell, which shattered the bones of his leg to such an extent as to render amputation necessary, the first thought of the sufferer after the shock of the operation was of the museum at Washington, to which he ordered the broken bone to be sent, in the hope that his misfortune might prove the gain of fellow-soldiers in the future. With such examples, no humbler individual has ever found fault with the preservation of fragments of his own mutilated frame for this sacred purpose.

Altogether, it may safely be asserted that in the illustration of military surgery this section not only exceeds any other surgical museum in the United States, but surpasses any similar collection hitherto made in the Old World—a fact which has been frequently and willingly admitted by foreign savants well acquainted with the subject who have visited Washington.

The medical section consists of eleven hundred and fifty specimens, the majority of which illustrate morbid conditions of the internal organs in fever, chronic dysentery and other camp diseases. Since the war, however, the number of preparations which exhibit the morbid anatomy of the diseases of civil life is constantly increasing, and a number of pathological pieces have been received which relate to the disorders of women and children, malformations and monstrosities. The specimens in this section are almost all preserved in the wet way. Carefully dissected and arranged with a view to the most advantageous display of the several points which each is designed to exhibit, they are preserved in alcohol in ground-stoppered glass jars. A glass hook is attached to the under surface of each stopper, and from this the preparation is suspended. Such stoppered jars permit the specimens to be taken out for examination, and are therefore a great improvement on those merely covered with bladder which have been so generally used for such purposes: they have, besides, the advantage of diminishing considerably the loss of alcohol by evaporation. The catalogue num-

ber of each is printed on a parchment label, and tied upon the neck of the jar with tape. Written labels, merely pasted on, are apt to fade or separate from the jar.

Most of the specimens in the medical and surgical sections of the museum were contributed by surgeons connected with the army. But since the war, as the institution has become better known throughout the country, physicians and surgeons in civil life are beginning to send specimens. It is beginning to be very generally felt that there is no place in the country where such objects are more likely to be permanently preserved, or where they can be more serviceable for future comparison and study.

The microscopical section contains rather more than four thousand specimens, most of them prepared in the museum. They embrace numerous thin sections of diseased tissues and organs, suitably mounted for microscopical study, as well as a great variety of preparations exhibiting the minute anatomy of normal structures. They include also a reasonable number of test objects and miscellaneous microscopical preparations of general interest. The most important feature in this collection is the attention which has been bestowed to secure permanency. Methods are employed by which the most delicate preparations of the soft tissues are mounted in Canada balsam, in such a way as to retain their most minute details and to secure their indefinite preservation. The museum will therefore be spared the mortification of seeing its most valuable microscopical objects perish in the course of a few years, as has happened in so many collections where less stable methods of mounting have been employed.

Another feature in this section of the museum is the success which has been attained in the direction of photo-micrography. Processes have been devised by which the most delicate microscopical preparations can be successfully photographed with any power under which they are distinctly visible. Enlargements to a magnifying power of four thousand five hundred diameters have thus been attained in the case of the most difficult test objects, with sufficient distinctness to permit the photographs themselves to be again enlarged five or six diameters, attaining thus a magnifying power of over twenty thousand diameters. For the practical purposes of anatomical and pathological research, however, powers varying from four hundred to one thousand diameters are generally sufficient, and a considerable number of photographs of normal anatomical preparations and of thin sections of diseased tissues, as seen under these powers, have already been prepared. In conducting the experiments which rendered it possible to produce these representations, the writer has been so fortunate as to arrange methods and arrive at results which have commanded the serious attention of all those who have made attempts in the same direction, whether in America or in Europe. He has been so fortunate as to demonstrate that this mode of reproducing microscopical objects can be employed with an ease and facility which had scarcely been hoped, and with a degree of success which had not previously been obtained. The most subtle markings on the most difficult objects — such as the Podura scale, the Grammatophera Subtilissima, the Surirella Gemma, and the nineteenth band of the new Nobert's plate—have been reproduced by him with the same precision as the wing of a fly or the leg of a spider; and the exactness of these representations have won the fullest confidence for those which exhibit the structural details of sections of inflamed tissues or of morbid growths. Lately, he has shown that the light of the sun is not indispensable for the production of such pictures—that the electric, the magnesium or even the calcium light can economically be made to answer every purpose by those who live in unfavorable climates, or by amateurs who can only command leisure for work in the evening. Occasional experiments in this direction had previously been made, but he believes that he is justified in claiming for the museum and for him-

self priority in demonstrating that it is possible to produce by these methods, with comparative ease, photo-micrographs which fully equal, and under certain circumstances even excel, the best that could be done by sunlight. The collections of the microscopical section, with the working-rooms connected with them, are on the second floor of the museum building.

The anatomical section embraces a number of skeletons, separated crania and other preparations of the anatomy of the human frame. What has hitherto been done in this direction must be regarded merely as an indication of the course intended to be pursued in the future. But an important step has already been taken in the collection of human crania with a view to ethnological study. It was thought that the opportunities at present afforded by the military service for the study of the ethnological characteristics of the Indian races of the country were too important to be neglected. The collection commenced since the war in accordance with this idea soon assumed respectable proportions. The authorities of the Smithsonian Institution transferred their collection of crania, several hundred in number, to the museum, in exchange for Indian weapons, utensils and other curiosities of which they were making collections. A still larger number of crania were contributed by medical officers, who selected them from Indian burial-places, or found opportunities to disinter the remains of former races entombed in those curious mounds which have attracted so much attention in the Western States. This collection already embraces nearly a thousand crania, chiefly from the Indian tribes and the mounds, though the Polynesian islanders and some other races are already represented by a number of specimens. Attention has already been paid to the study of this collection. A small room has been fitted up well provided with balances, callipers, goniometers and other instruments of precision used in investigations of this class. Already eight hundred and ninety-seven of the crania have been measured and their peculiarities recorded, ready for publication in a manner which will enable them to be compared with those in other collections, and thus to serve as an important addition to our knowledge of this interesting subject.

The section of comparative anatomy has been added since the war. The means at the disposal of the museum have not permitted a very rapid growth. The subject of comparative osteology was selected for primary attention, and the work has been limited for the present to the animals attainable by the officers stationed at our various military posts. Extensive contributions could readily be secured, but the work is limited by the fact that the cleaning and mounting of the skeletons and crania is the duty of the same assistant whose business it is to prepare and mount specimens for the surgical and anatomical sections. Nevertheless, such has been the industry of this gentleman that over a thousand skeletons and crania are already placed on exhibition, including skeletons of the buffalo, deer, grizzly bear, walrus, sea-lion, and a number of other American mammals, together with birds, reptiles and fishes. Even with the present slender means, in a few years this collection will become an important aid to the study of comparative anatomy in America. Special attention has been paid in this section to the anatomy of the horse, and a respectable number of preparations have already been placed on the shelves. The officer in charge of the surgical section has also commenced collecting specimens of the surgical diseases of this noble animal. It may be hoped that these collections will serve in the future as the foundation for a wise consideration of the problems of veterinary medicine and surgery in our army.

Finally, there is a section of miscellaneous articles, which includes models of hospital barracks, ambulances and medicine-wagons, a collection of surgical instruments, samples of artificial limbs, and a variety of other articles of interest.

Perhaps it will not be out of place if I add here a few words with regard to the large number of visitors who avail themselves of the opportunity to see the museum, which is open to the public from ten to three o'clock daily.

For several years some twenty thousand persons have annually registered their names in the books kept for this purpose. Among these visitors are not only practitioners and students of medicine, whose object is to add to their professional knowledge, though, as might be expected, this class is numerous as well as welcome: the ordinary sight-seers seldom overlook the museum in their tour of the public buildings of Washington, and private soldiers, as well as officers of every grade, are frequently to be seen engaged in examining the specimens.

Military visitors take generally the deepest interest in the museum, as a storehouse of knowledge which may at any moment prove of service in connection with questions involving their own lives or limbs, and many of them have already shown their appreciation by contributing valuable specimens.

Among the medical visitors, those from foreign countries must be particularly mentioned. Many of them have crossed the ocean chiefly or solely to visit this establishment. Most of the civilized countries of the world have sent medical commissioners to study the museum. These gentlemen have spoken in the most flattering terms of its importance, both during their visit and in writings published after their return to their native lands. Some of them seem to have been particularly struck with the free access given to the general public and to private soldiers, who in less enlightened communities would be excluded from such an institution. An anecdote will illustrate the surprise felt in certain quarters.

Among the visitors in 1865 was Dr. H. von Haurowitz, imperial privy councilor of Russia, and inspector-general of the sanitary service of the imperial Russian marine. This gentleman, on his return home, published an octavo work on the sanitary service in the United States, in the course of which he gives a description of the Army Medical Museum. After completing his account of it, he says:

"While I was being shown through it, I observed a young soldier who kept close to us and accompanied us several hours. I took him for a student of medicine, and supposed he was making use of this opportunity to gain instruction. But when he was questioned he answered that he had only come to look for the bones of his younger brother, who had fallen before Richmond. His comrades had told him that the bones of all brave soldiers were preserved here. He was now on his way home, and wished to be able to tell his mother that he had seen poor John's bones, and that all was right. He went away quite sad when he was told that poor John's bones were not there." *

Neither the writer nor his colleague, both of whom accompanied the distinguished Russian during his visits to the museum, have any recollection of this incident; but as they recall the fact that a number of private soldiers were in the hall at the time, they are not disposed to dispute the accuracy of the narration.

The several sections of the museum have been placed by the surgeon-general under the immediate supervision of the two medical officers in charge of the record divisions of his office, already mentioned. These officers are Doctor George A. Otis and the writer of this paper. The first-named gentleman has charge of the division of surgical records and of the surgical, anatomical and miscellaneous sections of the museum: the writer has charge of the record and pension division, of the medical and microscopical sections of the museum, and of the section of comparative anatomy.

The foregoing outline will serve to give an idea of the character of the collections of the Army Medical Museum. No further explanation is neces-

* *Das Militärsanitätswesen*, etc. Von Dr. H. v. Haurowitz. Stuttgart; 1866. Page 181.

sary to make the usefulness of such an institution apparent to the educated medical man. Yet very intelligent non-professional visitors so often ask, What is the use of it all? that the present article would be incomplete if this question were ignored. What is the use of it all? What good is to be expected from this laborious and painstaking collection of mutilated and diseased fragments of the human frame? Why should they be so carefully put away into bottles or locked up in cases, and such efforts made to secure their permanent preservation? Such questions have often been asked in regard to this and other pathological collections, but it is not difficult to give a satisfactory answer.

It is not chiefly their use as an aid to elementary medical instruction that makes such collections desirable. Were this the only purpose, the work might safely be left in the hands of the medical colleges, each of which, according to its means, endeavors to get together a small educational museum for the purpose of enabling the student to realize the didactic instruction of the lecture-room and the books. The aim of pathological museums is broader and deeper. Their true object is to subserve the more accurate study of the nature of morbid processes by investigators who are already out of educational leading-strings. Specimens bearing upon disputed points or upon subjects incompletely understood accumulate and increase in number year after year, with carefully recorded histories of the cases, until series are formed that serve for comparison, and for a more exhaustive study of the questions involved, which not unfrequently decides the dispute or solves the difficulty.

The connection between the results of such studies and the choice of the best method of treatment is perhaps most obvious in surgery. For example: any intelligent person who examines the unequaled series of over four hundred and fifty specimens of gunshot fractures of the thigh-bone preserved in the museum will have little difficulty in realizing their importance in connection with the vexed question of amputation for this injury. He will only need to examine a few of the specimens from cases in which injudicious efforts were made to save limbs, and life was lost after protracted suffering for months or years, to understand the duty of preserving these mute witnesses. If he happens to remember the grave differences of opinion existing among our military surgeons during the late war as to the proper cases for this operation, and the efforts made in certain quarters to compel a false conservatism in all cases and at all hazards, he cannot but feel thankful that the results of that dreadful experience exist in a tangible form for future guidance. Many similar examples might readily be cited from the surgical domain.

On the medical side, although the connection between morbid anatomy and the treatment of disease is less easily understood by the non-professional mind, it is none the less intimate. Our modes of treatment are so bound up with our notions as to the nature of the affections with which we deal, and these notions are so dependent upon the state of our knowledge of morbid anatomy, that improved methods of dealing with disease have in the past invariably followed every advance in this knowledge, whether in the direction of establishing firmly the connection of symptoms with anatomical alterations, or in the direction of that better acquaintance with the nature of the alterations themselves which is attained only by the aid of the microscope.

The importance of the Army Medical Museum in this primary practical direction is well shown by the frequent appeals which are beginning to be made to it in medico-legal investigations, and by physicians and surgeons who seek for guidance in individual cases of difficulty.

Another use of pathological museums is too important to be overlooked. They serve as valuable aids in enabling new generations of medical men to identify with certainty the descriptions

of their predecessors, and thus to utilize their experience. The continual improvements introduced into medicine are accompanied by continual changes in medical language, and it would be easy to quote cases of comparatively recent date in which the introduction of a new term was followed by a most unfortunate confusion of ideas, which the existence of a few well-preserved specimens of the same condition would have completely obviated.

The establishment of the Army Medical Museum was undoubtedly suggested by a most pressing need experienced at the commencement of the late war. There were at that time but few persons in the United States who had any experience whatever of military surgery, and there was no place in the country to which the surgeon about to devote himself to the military service could turn for definite information or guidance beyond what he could obtain from foreign works. It was natural that conscientious men, many of whom had never seen a gunshot fracture in their lives, should feel a grave regret that there was no place where, before assuming their new responsibilities, they could obtain a more realistic knowledge of the details of military surgery than they could possibly gather from books and pictures alone. This led to the commencement of the collection at Washington at a very early period of the war. The policy pursued till the close of the struggle was to attempt only the collection of specimens illustrative of military surgery and of camp diseases. It was determined that any future war should find the country in possession of a collection which should offer a rich field for the acquisition of the peculiar knowledge necessary to fit medical men for service with troops in the field. It was resolved that the experience acquired should not remain merely the individual property of the participants, but should be handed down in a tangible form for the benefit of the future. How well this task has been performed a visit to the museum will show.

After the war was over, however, larger views gradually prevailed. It was found that the machinery necessary for the care and enlargement of the collection of military medicine and surgery could, without any additional outlay, be used for the foundation of a general pathological museum. There are many reasons why this extension should be given. There is no considerable general collection of the kind in America. In medicine, in surgery and in microscopical anatomy alike, the possessions of the museum already far excel all that has yet been done in these directions on our continent, and from the nature of the case it is not likely that if the medical department of the army should be prevented from discharging this duty the task would be performed by any other hands. What has hitherto been done in this way has been chiefly the work of the medical colleges. But none of these institutions are richly endowed, and the cost of the glass jars and the alcohol alone has been in the past, and will probably be for many years to come, sufficient to prevent any medical school from accumulating an extensive collection of the kind. On the other hand, the total additional outlay to be provided for by the government in consequence of the existence of the museum is so small that it may fairly be regarded as insignificant in comparison with the good to be attained. The building is already the property of the government, the officers and attachés all belong to the army: no extra-duty pay, no special allowances of any kind are awarded to any of them. It will hardly be credited by any one who visits the establishment that the total sum asked for and appropriated annually for its support is only five thousand dollars, yet such is the literal fact; and on this slender stipend in the brief period of a few years the medical department has succeeded in building up an institution which may well be regarded with national pride. What will be its character should the same good work be continued without interruption for a quarter of a century?

Besides the benefit to be derived from the mere existence of the museum, and

the access there willingly afforded to those who desire to study its collections, the medical department has endeavored to extend its usefulness by the exchange of specimens and of photographs of specimens, and by publications. The very first efforts of this sort were made even during the progress of the war, when a large number of photographs of specimens of instructive surgical operations, with accompanying printed histories of the cases, were distributed to the various medical directors in the field, for the information of the surgeons under their charge. Since the war a large number of photographs of this class, with many others of medical and microscopical specimens, have been given away, not merely to medical officers of the army, but also to medical societies, libraries and medical colleges, as well as to foreign museums and other institutions, the publications of which have been received in exchange.

Still more extensive has been the labor done during the same period in the direction of publications.

The works on medical and surgical subjects issued by the surgeon-general's office since 1865 cover over sixteen hundred quarto pages, and five thousand copies of each work have been distributed to the medical officers still in service, to those who having served during the war are now engaged in private practice, to medical colleges and societies, to libraries and to medical journals throughout the United States, to European institutions and to medical investigators in various parts of the world.

It has long been a subject of complaint among American investigators that their labors have been ignored, or that at best their practical deductions have been used without acknowledgment by European scientists. No such complaint can be made with regard to the work done in the Army Medical Museum and other branches of the surgeon-general's office. Whether it is merely that the times are changing, and that American labors in every department are earning more general recognition in Europe, or whether it be true that the members of the medical profession, notwithstanding all the accusations of selfishness and prejudice which have been flippantly brought against them, are after all more cosmopolitan in their modes of thought and more generous in their recognition of foreign fellow-laborers than the students of other branches of science, is a subject into which it is not necessary to enter. The writer wishes, however, to express his sense of the kindness which has characterized the opinions and criticisms published in foreign countries with regard to the works of his fellow-laborers and himself, and to say that in the numerous cases in which foreign writers have borrowed facts, illustrations or deductions from their publications, he remembers but few instances in which generous acknowledgments have not been made.

It seems proper to add in this place that the medical volume and a large part of the surgical volume of the first part of the medical history of the war, the publication of which has been ordered by Congress, will be laid before that body during the present session, and that although a work of such magnitude must necessarily occupy much time, every effort is being made by the two officers entrusted with its execution to complete the task in as short a period as is consistent with accuracy.

Such, then, is a brief sketch of the Army Medical Museum, and of the scientific labors in the direction of medicine and surgery undertaken under the auspices of the War Department, and the direction of the surgeon-general in connection with it.

It will not be forgotten by the reader that Ford's Theatre, which the museum occupies, was the scene of the assassination of the lamented Lincoln. What nobler monument could the nation erect to his memory than this sombre treasure-house, devoted to the study of disease and injury, mutilation and death?

J. J. WOODWARD.