

The Boston Medical and Surgical Journal

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The Massachusetts Medical Society.

THE ANNUAL DISCOURSE.

NOTE.—At an adjourned meeting of the Massachusetts Medical Society held Oct. 3, 1860, it was

Resolved, "That The Massachusetts Medical Society hereby declares that it does not consider itself as having endorsed or censured the opinions in former published Annual Discourses, nor will it hold itself responsible for any opinions or sentiments advanced in any future similar discourses."

Resolved, "That the Committee on Publications be directed to print a statement to that effect at the commencement of each Annual Discourse which may hereafter be published."

MILITARY MEDICINE: A MEANS TO PERPETUATE ITS TEACHING IN MASSACHUSETTS.*

By P. E. TRUESDALE, M.D., FALL RIVER, MASS.

"WE are no longer a young country, to be judged apart from the rest of the world," said Dr. E. H. Bradford, in his discourse before this Society in 1899. "We are to be measured by what is expected of us. This from a land of our resources would be the greatest gift to human welfare possible in human effort. The conflict of the next century," said he, "will be against ignorance, sorrow and suffering, and in this the medical profession must be foremost in strength and endeavor." In the light of our present position among nations these words embody the wisdom of a prophet.

We are all keenly interested and concerned in the part which we may exercise as individuals and practitioners in the present situation

* Delivered before The Massachusetts Medical Society, June 13, 1917.

which confronts our country. With that thought in view I wish to engage your attention upon the subject of Military Medicine and a Means to Perpetuate Its Teaching in Massachusetts. Already the whole science of medicine has been drawn into requisition, no less to prevent sickness and death of the soldiers in the camp, in the trenches and on the march, than to relieve and preserve them when wounded in battle. "It is not enough," said Mr. Chevalier in his Hunterian Oration in 1821, "that we advert to the benefits derived from surgery in the comparatively tranquil and measured course of civil life. We must not forget what it has accomplished in other and more turbulent scenes. We must turn to those seas and fields and mantling walls over which the thundering cannon has roared when fire and sword have met in awful conjunction to spur or to oppose unrelenting ambition. How many lives have been preserved, what solace and consolation have been afforded in the slow, gloomy hours of anguish by the firm and faithful hand which surgery has been enabled to stretch forth to the relief of the suffering brave."

Whenever the welfare or honor of our nation was to be maintained by battle, volunteer surgeons met the sacrifices in equal measure with other volunteer officers. The profession has never lagged in responding to the call of patriotism in the day of battle. In the Revolutionary War, Brooks, Warren, and Aspinwall were compeers of Putnam, Greene, and Knox in all the attributes of patriotism that marked the heroes of that period. Toner,¹ in an essay upon the medical profession in the Colonies

during the struggle for independence, commented upon the patriotism of physicians as follows: "When the principles of free government were being evolved and matured, no class of society or profession seemed to have deserved higher praise for its efforts to promote the result than that of the physicians."

While our European contemporaries have been facing obvious and great perils, enduring untold hardships, stanching the blood of nations and renewing man power in the face of modern warfare, we, in the serenity of our civil life, as if by some unseen messenger, are directed to join in the path of greatest service to mankind.

Heretofore the government of our country has, fortunately, not found it necessary to shape its military policy as extensively as that of the fighting nations of Europe. Without the array of military hospitals and schools of special military instruction, the United States has chosen to rely, to a large extent, upon the availability of its civilian resources for the care of the sick and wounded in time of war.

THE WAR OF INDEPENDENCE.

The earliest history of military surgery in the United States gives one a very luminous conception of the difficulties, privations, and untold sufferings that beset an army which was forced to meet, extemporaneously, all the exigencies of the sick and wounded in a war which required the aid of every citizen who had the intelligence to appreciate liberty and the courage to oppose tyranny. The army which gathered at Cambridge after the battle of Lexington was assembled without any effort of public authority. It was a spontaneous manifestation of patriotism, calling men from every station of life into immediate service. Few who thus responded believed that there would be real war. The majority of them looked forward to a compromise with the mother country, and as a result had arranged to be absent from their homes for a short period only. Physicians who came with them brought their own instruments and such medicines as they had in their offices, that sufficed during a brief period only for the necessities of the soldiers. Medical supplies of all kinds were extremely scarce and the army was ill supplied, as we learned incidentally from a resolution of Congress authorizing two surgeons who were so fortunate as to possess medicine chests, to lend them to other regiments that were not so well supplied.²

During the summer of 1777 the attention of the country was directed to the northern department under Dr. Jonathan Potts, where Burgoyne was advancing to capture or annihilate Schuyler's army. At one time the condition of affairs became so bad at Crown Point that only by prompt action was that portion of the army saved from destruction. Upwards of 3000 men were on sick report, and the losses from disease and desertion during the unfortunate campaign

in Canada had mounted to more than 5000 men. The army was in the utmost distress for want of medicines, hospitals, stores, and surgeons; and Dr. Stringer asserted in a letter to General Gates, July 24, 1776, that the men were literally dying for want of proper care and medical attention.

In the meantime affairs were not harmonious in the hospital administration of the middle department of the army. The want of supplies of all kinds caused great suffering among the troops in the Jerseys. Three thousand men who were fit for duty were detained in various hospitals because they had no shoes. The hospital stores were scanty, and all available means of supply had been exhausted. Winter was approaching and the sick were without blankets and many of them almost naked. Stoves were erected in the hospitals and all the hospital wagons employed in the transportation of fuel, so as to make up for the scarcity of blankets and clothing; but these efforts failed to check the growing discontent against the management of the medical department. The sick could not believe that their distress was the necessary result of the impoverishment of the country, and they were often allowed to believe that they suffered in order to enrich those high in authority.

The winter of 1779-1780 was very severe and the soldiers sick in tent hospitals endured many hardships. Private houses were used and the soldiers suffered from crowd poisoning. Hospital fever and dysenteries became prevalent. However, in this war of unprecedented marvels, sheer depravity in many departments of the army was unavoidable, but ingenuity and resourcefulness characterized an oppressed people. Dr. James Tilton of Delaware caused to be built a large number of log huts, built roughly so that air could freely penetrate the crevices. They were without wooden floors, the ground being hardened or baked by heat, and each hut was designed to accommodate five or six men. The fireplace was in the center of the hut and a hole left in the ridge to permit the exit of smoke. The plan was found to be very successful. The mortality from typhus diminished very decidedly, and the general results were so good as to warrant the introduction of the system throughout the army.

On September 3, 1783, peace was established with Great Britain, and two months later the American Army was disbanded. Whereupon the country was left practically without an army, and the price of a false security was soon paid. The Indians on the frontier manifested a hostile attitude. A regiment of infantry under Lieut.-Col. Josiah Harmar of Pennsylvania had already been defeated by the Indians. General St. Clair succeeded Harmar, and with a new force undertook an active campaign against the Indians. He, in turn, was defeated, losing more than six hundred killed and two hundred wounded.

WAR OF 1812.

During the period immediately preceding the War of 1812 it was apparent that in point of corps organization the medical department was notoriously deficient. No wisdom had been learned from the vexatious controversies of revolutionary days between the general and the regimental staff, inasmuch as the surgeons of the Revolutionary War had left few records of their experience. The management of military hospitals, the hygiene of camps, the diseases common among troops, and the surgical conduct of campaign were topics of which the profession of the country was entirely ignorant. When the certainty of war with Great Britain was realized, Congress hastily provided for an increase in the army and a corresponding increase in medical officers. The country at this time was poorly provided in all the essentials necessary for the formation of an efficient army. A long period of comparative peace had resulted in a decadence of military science, and the errors and hardships of the early campaigns had been forgotten. Most of the army officers who served in the struggle for independence, whose counsel and assistance were very much needed at the time, were dead or superannuated. The army organization was not a reality; the staff departments were sufficient for a force of not more than two or three regiments.

When the army mobilized at Greenbush, New York, Dr. James Mann of Massachusetts was ordered to superintend the Medical Department of this northern army. In reciting the difficulties which he encountered he says:³

"The mere organization of hospitals was the least perplexing part of duty. The illy defined powers, with which the hospital surgeons were invested, even in their own department, subjected them to many disagreeable interferences of the officers of the line. Collisions will always exist between officers of different departments of an army when their several powers and duties are not explicitly pointed out. Officers, tenacious of authority, assume as much as may be implied by rules and regulations. In addition to multiplied embarrassments, the various duties attached to the office of hospital surgeon, with those merely professional, were always so pressing, that little time was allowed to record, particularly, the diseases and medical transactions of the army, as they occurred."

In the fall campaign the sick at one time numbered 720 men at Plattsburgh. As the battle front was approaching this district and the sick could not be protected within the lines, they were transferred to Crab Island, two miles distant. No accommodations had been provided for them, and for three days they remained exposed to the wet and cold. Whereupon the surgeon in charge, Edward Purcell, had these patients transferred in open batteaux across the lake to Burlington. The hospital at Burlington was not large enough to accommodate this influx of new patients, but they were admitted, and the ill effects of crowd poisoning soon became manifest in the form of typhus and dysentery.

Early in 1815 peace became an accomplished fact, and on March 3 an act was passed reducing the entire military establishment to ten thousand men and the medical department to five surgeons and fifteen mates. Although the medical department of the United States army during this war was neither adequate nor efficient, they succeeded by unnecessary and untold sacrifices. The nation was at once satisfied to allow this important department to drop back into a state of lethargy. As in the Revolutionary War, there is ample evidence of the skill, devotion and the capacity of individual members of the profession. Hospital-surgeon Mann, Medical Director of Plattsburgh, reports from that place in November, 1814, to Surgeon-General Tilton:⁴ "In events of high importance it is seldom that the medical staff is noticed. This is discouraging to the ambitious young surgeon of the army. It may be alleged, the surgeons being non-combatants, are out of danger. This however is not always the case. During the investment of Plattsburgh by the enemy, the surgeons were constantly passing from fort to fort, or block houses, to dress the wounded, exposed to a cross fire of round and grape shot; while the greater part of the army was covered by fortifications. The cool bravery of the surgeons was noticed by the commander-in-chief." Continuing the report, Dr. Mann writes: "I feel myself bound to report, with much respect, the conduct of all the medical gentlemen attached to this army, who have at all times during this campaign performed their duty; and who, for their particular services, during and after the investment of Plattsburgh by the enemy, merit the applauses of their country."

There were continued efforts toward retrenchment in the medical department during the period of peace which followed the War of 1812. Surgeon-General Lovell, whose faithful and economical administration of his department was a matter of universal commendation, appealed again and again to the Hon. J. H. Eton, then Secretary of War, for an increase in the number of officers in the medical department. His petitions were followed by recommendation from the Secretary of War to the military committee of the House that:⁵ "The Surgeon-General of the Army might be dispensed with. . . that he had no responsibilities to encounter; that his duties were essentially performed by a quartermaster of the army at New York." The subsequent controversy which followed this recommendation resulted, fortunately, in a victory for the Surgeon-General. If one's imagination were to run riot it could not overdraw the picture of demoralization in the medical department which would have occurred during the Civil War under such sinister influence.

THE MEXICAN WAR.

At the onset of the Mexican War, May 13, 1846, the army was found to be grossly inade-

quate in numbers and equipment. A call was made for fifty thousand volunteers. For the medical department one surgeon and one assistant surgeon were assigned to each regiment. Subsequent events proved that the volunteers were indiscriminately accepted, and the volunteer surgeons who entered the service with little or no military knowledge, with an occasional honorable exception, were inefficient.

In the progress of the army towards the city of Mexico the health of the soldiers was far from satisfactory. "It found in the disease of the country," wrote Surgeon Satterlee, "foes more to be dreaded than the Mexican troops." While a large proportion of the soldiers had become incapacitated on account of their unacclimated state, the great majority of the sick, as indicated by the reports of Satterlee and Trippler, resulted from hasty preparation, indiscriminate selection of volunteers and a lack of knowledge of medico-military science in the army medical organization.

However, individual examples of heroism and resourcefulness characterized the medical men of the U. S. Army in this campaign, as in former wars. Major-General Worth, in his official report of the operations of his division on the Molino said: "It is again my gratifying duty to present to the general-in-chief for commendation the names of those ever faithful and accomplished medical officers, Satterlee, Wright, Simpson, Simons, Dyerle and Roberts. Soon after the surrender of the Mexican forces at the capital, our garrison which was left at Pueblo, consisting of eight hundred men and eighteen hundred sick, wounded, and disabled in the hospital, became surrounded by large bodies of guerillas and several thousand Mexican troops. The affair assumed the importance of a siege, and lasted from the 13th of September to the 14th of October before relief was obtained." From the official report of Colonel Childs it would appear that the surgeons and their assistants in this campaign were worthy to rank among the bravest warriors in history. His report in part was as follows:

"To Surgeon Mills, Chief of the Medical Department, and to his assistants, great praise is due for their unwearied and laborious services. Left with eighteen hundred sick and limited supplies, with but six assistants, their utmost exertions were necessary to administer to so many patients. These gentlemen were not only occupied in their professional duties but the want of officers and men compelled me to make large requisitions on surgeons and invalids for the defense of the hospitals and they were nightly on guard marshalling their men upon the roofs and other points."

Surgeon William Roberts, by virtue of his skill as a medical officer and his personal bravery, became a conspicuous figure in the war. Col. McIntosh of the 5th infantry thus mentioned him in his official report of the battle of Churubusco: "His talents and zeal were not alone confined to his profession, but were displayed in a military capacity in urging on the

men to the contest." Dr. Josiah Simpson, in a short narrative presents a final picture of this brave officer marching gloriously to death in the charge on the Molino. All the officers of one company having been shot down, Dr. Roberts took command and was mortally wounded in the assault. He was struck by a musket or escopet ball on the temporal ridge of the frontal bone, about two inches above the left supra-orbital arch; the ball glanced, fractured and carried away a portion of the frontal bone, leaving the brain exposed. Abscesses which formed in the cavity of the cranium caused his death. In the army reports there is evidence that Dr. Roberts possessed unusual attainments as a surgeon as well as a soldier, and among the unique figures which have adorned the medical department of the army, he ranked with Warren, Brooks, Jones, Fuller and Trowbridge of the previous wars.

THE CIVIL WAR.

At the outbreak of the Civil War the medical corps consisted of a surgeon-general, thirty surgeons and eighty-three assistant surgeons. Promotion, being by seniority of service, could not follow as a result of high qualification. "The tendencies of this system," wrote Jenkins,⁶ "repressed the promptings of professional ambition and favored contentment in the dry path of old routine."

A special commission of medical men presented a bill to Congress which became a law on April 16, 1862, introducing new features of the greatest value into the organization of the medical department, besides greatly increasing the number of medical officers. One feature of the law provided for the selection, according to merit and eminent qualification, from the whole number of medical officers in service, whether of the regular or volunteer army. This was said to have been the first instance in which legislation inspired the ambition of members of the medical staff by associating their achievements with the rewards of a laudable ambition. As a result of this law, Dr. William A. Hammond, an assistant surgeon, became surgeon-general of the army. He introduced liberality and promptness in the purveying department; he substituted airy and ample hospital buildings for old hotels and seminaries, and raised the scientific standard of admission into the army medical service.

Approximately 12,000 medical men who served the country with remarkable credit were mustered into service between April, 1861, and the close of the war, for an army of 2,213,365 men. In the annual report of the Surgeon-General for 1865 he says:

"In conclusion I desire to bear testimony to the ability, courage and zeal manifested throughout the war, by the officers of the medical department under all circumstances and upon all occasions. With hardly an exception they have been actuated by the highest motives of national and professional pride

and the number who have been killed and wounded bears testimony to their devotion to duty on the field of battle."

Thirty-two surgeons were killed in battle and nine by accident. Eighty-three medical officers were wounded in action, ten of whom died. Four died in rebel prisons, seven of yellow fever and two hundred and seventy-one of other disease, making a roll of honor of 406 names of those who are commonly considered not to be exposed to the dangers and chances of war. Some conception of the amount of work done by the medical officers during this war may be gleaned from the report, which states that 1,057,423 cases of wounds and diseases occurring among white troops were treated on the field and in the regimental and post hospitals. In the medical and surgical history of the war in the Surgeon-General's office we find that of 304,369 deaths during the war, 44,238 were killed in battle, 49,205 died of wounds; 526 were suicides, homicides or executions; 186,216 died of disease; and 24,184 died of unknown causes. It is worthy to note that approximately 60% of all deaths was due to disease.

The willingness on the part of Secretary of War Stanton to respond promptly and in full measure to the demands of the Surgeon-General, together with the ability of these two officials to cooperate intimately and in the most skillful manner, contributed greatly to the success of the medical corps.

There were many noble specimens of a surgical character developed during this carnage of a nation. Letterman became distinguished for the perfection of a trained ambulance corps. Flint and Gross revolutionized field surgery, and their methods have been copied by all civilized nations. Hammond encouraged scientific investigation, fostered army medical societies, established a museum of pathology and promoted a compilation of the medical and surgical history of the war,—movements of unprecedented value in the direction of medical progress. Barnes, as Surgeon-General, established the right of medical officers to command within their own field of action; White, a hero, was slain on the battlefield of Antietam; and Wood, Porter, and a host of others might be mentioned.

The Surgeon-General attested the respect and gratitude of the medical staff to the Secretary of War in his report for 1866:

"It is a matter of just pride and congratulation to the medical profession throughout the civilized world that your deep interest in the health and hygienic conditions of the army, your constant vigilance and most liberal assistance in all that could in any manner conduce to the greater comfort and welfare of the sick and wounded, and your official recognition of faithful and meritorious service by officers of this department, have been responded to on their part by redoubled exertions, unflinching devotion to duty and an *esprit de corps* that secures to it professional talent of the highest order. Letters from the most eminent surgeons and physicians in Europe, in acknowledgment of publications from this office, do

not express more astonishment of the magnitude of the war, than admiration of the unvarying support and encouragement extended to the Medical Staff under your administration of the War Department."

There are few pages in the history of the United States more splendid and significant.

THE SPANISH WAR.

The military peace establishment which followed the Civil War declined in force up to the crisis with Spain in 1898. The appalling list of sick in the summer camps during the Spanish War and the deplorable condition of affairs at Santiago were the inevitable consequences of a medico-military policy that had become mouldy. Under tents in the hospital yards of Boston, as many of you remember, there lay scores of ghastly bodies of the sick from squalid and unsanitary training camps. Authorities agree that haste, lack of preparation and the service of amateur medical officers were fundamentally responsible for the 2000 deaths in camp and the hordes of sick men. Lieut.-Col. Munson, in a recent editorial in the *Military Surgeon*, under the title of "Then and Now," discloses a situation during the Spanish War which was a discredit to a nation exhibiting a form of government which, though serene in times of peace, presented a crooked path to safety in a conflict of arms that was anything more than a feeble war. For it must be remembered that in this war we were fighting a nation which had traditions, but was incomparably inferior to our own in men and resources. He calls attention to the fact that a number of very good physicians were appointed from civil life as Corps, Division and Brigade Surgeons, and that not one of them had the most remote idea of the duties of these offices and resented assignment to the immediate care of the sick, which duty alone they were qualified to perform. "A thousand things were wrong and very little right, except the stout hearts of the good old soldiers," wrote Munson. "These did their duty and died after winning the war. Their comrades of the camp died, too; not in the fierce charge or stubborn retreat, but in rotten, ill-managed bivouacs, immobilized in their own infectious filth. Our President then postponed, even as our President now was forced to postpone the fateful declaration of war, because he knew we were not ready. But the people demanded action no matter the cost and—they paid the bill."

NEGLECTED EXPERIENCE CONFRONTING REALITY.

The value of history is to be found in the lessons that it teaches. A knowledge of military affairs that is particular is not required for the student of history to autopsy the dead periods in the military policy of the United States. Legislating the army and its medical arm into a grossly inefficient body for any emergency has been a conventional practice after each war, for more than a century. Every era of peace has been characterized by re-

trenchments and comparative inactivity until a condition akin to scurvy has systematically characterized the war department during such intervals. At the close of the Revolutionary War it was felt by the people that the immense armies of Europe were chiefly used to preserve the balance of power on the continent or to overawe the people, and were considered unnecessary in a republic separated from all possible enemies by a broad ocean. In his farewell address to the American people Washington admonished them always to maintain suitable military establishments for adequate defensive positions. His importunities were not heeded and the army was disbanded. The result, as previously detailed, was a few short dark pages in the history of the nation. Thomas Jefferson, in commenting upon the risk of relying always upon soldiers trained in emergency, warned the country in the following words: "It proves most forcibly the necessity of obliging every citizen to be a soldier. This was the case with the Greeks and Romans, and must be that of every free state. We must train and classify the whole of our male population. We can never be safe until this is done."

An unbroken line of leading statesmen and soldiers, from Washington to General Leonard Wood, have petitioned the nation in favor of universal service. "We should never again be found to be willing for war but not ready for war," said Dr. Wood, before the Senate Committee on Military Affairs, in exposing the depravity of our common needs for defense, after the world's greatest war had been two and one-half years in progress. Presenting still other truths which common sense has placed beyond contradiction, he said: "Its lessons as to equipment, development of arms and munition are an open book to the world. No amount of money and no amount of effort can purchase time and make good its loss." On this same occasion this commander referred to the enthusiasm commonly manifested by our people over some new form of torpedo or a general discussion of the organization of our reserves, but he indicated their failure to grasp what should be the main thought,—that it takes a long time to prepare the absolute necessities for war. "People fail to appreciate," continued Dr. Wood, "that these common necessities must be gathered in times of peace, and the organization of all our resources should be engaged in maintaining the supply once war is upon us."

These thoughts are not new, but they are more solemn just as we realize that we have not chosen to depend upon an intellectual preparation of our own. It may be that our over-refined spirits have become habituated to a state of ease and a sense of security as the result of long freedom from war's perils. Consequently there has developed among us a repulsion and loathing for the whole business of war now that it has degenerated to a level of bloody ruthlessness, fiendish ingenuity and insensate cruelty.

This is confirmed by the fact that our military policies have been screened and approached only with the widest margin of political safety. In no war of the last century have the lessons of inefficiency served to increase the pace of our sluggish war machine. Now we find that war with all its ramifications, so profoundly hated by us and so long repudiated as an anachronism, actually confronts the nation.

When England declared war in 1914, Mr. Britling, imbued with patriotism, went to London to offer his services. He had no idea what arm of the service to go into. He wanted to help; that was all. He wanted to do whatever the government thought he was best fitted to do, whether it took him to France or kept him in London. For two days he wandered about seeking information. He found no disposition to welcome him. His own keen determination to do something for his country was blunted by a perplexing "how?" At last, tired and disgusted, convinced that the nation at large must take hold of the government it had so long neglected, he returned to his home in the country still unassigned for duty. There are many Britlings in America, but happily for American zeal they do not go as far afield nor run amuck. The man who volunteers soon disappears from his old haunts. The surgeon is accepted with a promptness that is unnerving. Few of us are any better prepared than Mr. Britling, but willing men among us are not found adrift.

THE ISSUE.

Now that we are embarked upon war; now that the proverbial appeals of the pacifists are at least temporarily shunted; now that we no longer dare trust in a divine Providence which singularly in this war had not seen fit to stand by weak nations; now that the old *apparatus belli* is forced into the hands of our young men, college men largely, who, though questioning momentarily the sagacity and far-sightedness of their elders, sign up and enter the crusade with a vengeance;

"So nigh is grandeur to our dust,
So near is God to man,
When duty whispers low, Thou must,
The youth replies, 'I can.'" *Emerson.*

Now that these young men have gone, many of them to exchange their places in the class album for records on the roll of honor; now that some have publicly appealed for a fair chance, not necessarily to live, but to die to some purpose, to die with the thought that what they give, life itself, may not be entirely in vain, may we not ask for a fair chance to meet this human price of war? We are chosen to construct and reconstruct the builders and destroyers of nations. Is it any less imperative and urgent that we are properly instructed in the ground principles of military medicine? Should the physician be expected to bolt his practice and outstrip the wind? "An officer of the line may soon learn

the duties of the field and a surgeon be amply qualified for his profession, and both of them be worse than useless in the army," wrote Surgeon-General Lovell, after the War of 1812. "For there can be little doubt," continued he, "that where one man has died from improper medical treatment, ten have been destroyed from want of knowledge of the many duties peculiar to the army surgeon." The wise counsel of the "lamented" Lovell has been proclaimed again and again for a century, but never heeded.

The fundamentals of our education have been directed along avenues for success in practice, teaching and research. Individualism and independence prevail almost without margin. We glory in the liberal exercise of that principle, charity, and in the breast of every physician there dwells hope, yes eagerness, to contribute something to the welfare of mankind. But the average American physician has recognized no duty to the State. Never until war times arrive is he enlightened upon the subject of national service. Until within a few years our government has not been interested, helpful nor solicitous of the welfare of medical men except in war periods. The martial element in a man's position who must respond to the "tap of the drum" and the "word of command" for a lifetime has not appeared to be congenial to the tastes nor tributary to the progress of men of study and science.

So it is apparent that medical men in the aggregate and the nation have not existed for each other. Surely the heroic men of science, who have gone to their death through a desire to aid mankind, would have it otherwise. Donnelly, who volunteered to fight typhus among the Serbian soldiers and died of that disease in that service; Ricketts, who gave his life for humanity and science while investigating Mexican typhus; McClintic, who died in his early manhood from the Rocky Mountain spotted fever while investigating that disease in the Bitter Root Valley of Montana; and Lazear who, like the ancient Roman who thrust his hand into the devouring flame, calmly let a mosquito remain on the back of his hand until it had inserted the organisms of yellow fever, from which this physician died,—these men and hundreds more of such martyrs in humanity's service would have us enlightened, booted and spurred for the task ahead.

While the medical profession acknowledges its obligation to be prepared for this species of public service, and its members hold themselves ready for the duties of the field whenever their country calls, the country, in turn, must reciprocate the benefit by indicating its purpose to elevate the profession and cooperate with medical schools in providing the necessary resources to make the student conversant with the military contingencies of his vocation.

It is my purpose, therefore, to urge that you subscribe to a plan which should have a far-reaching influence in the education and training

of medical men to measure up to the demands of war. Briefly, it involves the foundation of a chair in military medicine in our largest medical school. The need presents itself now as visible and vital. The task of converting the medical profession almost overnight from civilian practitioners into all the mysteries of medico-military science is proving to be stupendous. Some conception of the nation's requirements may be gleaned from reports indicating that with the first 500,000 men will march the entire trained medical personnel of the nation and 2000 additional volunteer medical officers. The next 500,000 troops would be at the mercy of an additional 3500 green medical officers. An army of 5,000,000 men would require the services of 35,000 medical officers. Should there be great naval activity this fighting department would need medical officers in equal proportion to that of the army. There are 147,000 physicians in the United States and nearly, if not every one, was graduated from his medical school and hospital without hearing reference to this possible contingency.

Capt. Mahlon Ashford, in a recent article⁷ on organization and training of military men, says: "It is a great task to gain the attention of the vast and diverse audience composed of American physicians; an even greater one to convince them of any general necessity for a military education or military service of any character for American doctors in time of peace." The compelling want of a change of spirit, he indicates in the report of Sir A. Keough, Director General of the British Army, in speaking of the expansion of the British Medical Service in this war: "The burden of responsibility thus placed upon the medical profession could not have been assumed but for the preparation made in peace, for the nucleus of trained officers in so large an army medical corps as the country now possesses would have been too small had the old conditions prevailed. As it was, the country was able to take the field with a larger number of experts in administration than it has ever before possessed, but this meant that owing to the magnitude the war so quickly assumed, nearly all the officers of the medical corps were required to give their attention and their energies to administration, leaving to specially selected experts the technical work which the care of the sick and wounded required. Hence the appointment of consulting surgeons by whom all subsequent surgical development can be determined. The internal organization of the medical units; the formation of cadres for the battalions; the establishment of hospitals at home and the formation of those abroad; the provision of doctors, nurses, drugs, instruments, dressings; the equipment of ships and trains. If to these is added the mass of work connected with the supervision of recruiting for the new armies, their housing, and the sanitation of camps and barracks, some idea

will be gained of the scope and relation of medicine to the art of war, and the part played by medical men will be realized."

In respect to its medical arm, it is apparent that the British Empire has heeded the lessons of the Crimean War. Bullets killed thousands in that great conflict, but disease, in its silent approach, swept off tens of thousands. Baudens,⁸ in his account of the expedition to Crimea, says: "General Yussuf had resolved by a night attack to fall suddenly upon the troops assembled around Babadagh, but at the moment the order for departure was given, at about six o'clock in the evening, five hundred men lay stretched upon the earth, unable to rise. Cholera had fallen like a thunderbolt upon the expeditionary column. At eight o'clock there were one hundred and fifty dead and three hundred and fifty dying. The pestilence continued its ravages, and the expedition had to be abandoned."

Before the Crimean War, England, like the United States today, had but one chair in military medicine in the whole country, yet she numbered many brilliant surgeons within her realm. As in former wars, she had enlisted the services of such distinguished surgeons as the Hunters, the Coopers, Bell, and Guthrie, so during this period of the Crimean War she secured the aid of Paget, Simpson, Ferguson, Erichsen, Spencer Wells, and a host of others. In this war, however, the one outstanding figure, whose distinction was unparalleled, was Florence Nightingale. Prior to her departure for the battlefields, she had made a tour of study of the hospitals of England, and found their sanitary management was deplorably deficient. She journeyed to France, Germany and Italy for instruction, and in the large military schools and hospitals of these countries she equipped herself with a knowledge, the application of which gave her a position of pre-eminence among the brilliant ornaments of a great profession. At this time there were professorships in military medicine in Paris, Mentz, Lisle and Strassburg. Cardinal Richelieu in his period had established a military hospital in every fortified city of the kingdom. From the conduct of France in the present war you will agree that the foundation in medico-military medicine, established by Richelieu, and advanced by Ambrose Paré, Percy and Larrey,—still lives to secure the pillars of that nation's preservation.

It was a saying of Frederick the Great that fever cost him more than seven pitched battles; and it has been an axiom with most military leaders that more campaigns are decided by sickness than by the sword. Dr. Hermann M. Biggs, who has recently returned from France, has stated that 86,000 soldiers have had to be removed from the trenches because they were incapacitated on account of tuberculosis, and that the alarming increase of the disease in the army was largely due to imperfect medical examina-

tion of recruits, which allowed those who were affected to pass.

No more phrases are necessary to prove that the soldier is a costly piece of national property. He is not made in a day. It takes time and about \$1200 a year to develop in the recruit the proper attributes of a soldier, and no species of property suffers more from neglect and inattention. For his well-being the medical officer is immediately responsible from the time the recruit is mustered in until he is discharged from service. The art of keeping the soldier efficient is the all-important factor in war.

Are we not, therefore, justified in the fullest measure in making an appeal that the opportunities for instruction in military medicine which have been denied us, be given unsparingly to all succeeding generations of medical men?

We look upon our own emergency preparation, consisting of an interrupted course of lectures at Harvard Medical School, in a spirit of sorrow. Thankful for the instruction that was given, our feelings are, nevertheless, mixed with disappointment, uncertainty and anxiety. The "fighting edge" among men is less easily acquired in the fourth and fifth decades of life than it is in the formative years. To be deep rooted, the spirit of national service should be inculcated when the mind is plastic. A life that is moulded and fixed in peaceful enterprise recoils at the thought of new formations for war.

A place for medico-military instruction in all of the recognized medical schools of the country has been recently advocated by many recognized authorities. Dr. Franklin H. Martin, representing the Council of National Defense, and Dr. F. F. Simpson, of the Advisory Committee of Civilian Physicians and Surgeons on Medical Preparedness, have encouraged the medical schools to introduce courses in Military Sanitation and urge the students to participate in them. Capt. Mahlon Ashford in his Welcome Prize Essay, published in the *Military Surgeon* for February, 1917, presents incontrovertible facts to indicate that the proper place to begin the instruction of medical men for military emergencies is the medical school. "Here," he writes, "we can reach every potential doctor, not an occasional one, as under the present system. . . and the period of medical student life is the one time when the physician can interest himself in acquiring military essentials with least personal and professional sacrifice."

Lieut.-Col. Munson, in the course of frequent editorials in the *Military Surgeon*, advocating some plan of military instruction in medical schools, urges that every candidate for a state license should pass examinations in military sanitation. Thus far let us grant the principle that in the curriculum of every medical school there should be a department devoted to military medicine, surgery and sanitation.

In the National Defense Act of 1916 all rep-

utable schools and colleges are encouraged to have military training for their student body. Yet Dr. H. D. Arnold, as Dean of the post-graduate department at Harvard Medical School, informs us that in July, 1916, he was unable to obtain an army officer in New England or elsewhere, either on the active or retired list, to give a course of lectures. It obviously required ingenuity and determination on his part to obtain Lieut.-Col. Chamberlain for a period of six weeks during the present year. In a department of the medical school curriculum for which so much importance is now and will continue to be justly claimed, should its mechanism be hampered by the vagaries and uncertainties of political administration? If all medical schools recognized by the American Medical Association, seventy in number, adopt courses in military medicine, the demand for instructors will always be pressing. The personnel of the department must be left in some measure, at least, to chance. Unless all precedents fail, the proverbial demands for economy in periods of peace will be met with retrenchments; and unless we are approaching the millennium the same nightmare of "public opinion" will be flaunted in Congress to curtail, or inhibit, the real value of the Department of Military Medicine in the Medical School. In order to prevent such embarrassments, and to establish a department for instruction in military surgery upon a high standard and there perpetuate it, there should be an endowed chair. The occupant should be selected by the faculty of the school, and retained or dismissed according to their judgment of his capacity. That intimate coöperation between the school and the Surgeon-General's office would obtain at all times, is not to be gainsaid. But the assurance that the military department in the medical school would continue its function in peace times is the principal justification for its foundation. Only by the endowment of a professorship can this be secured. In so far as I can ascertain, there is but one professorship in Military Surgery in the United States, that held by Col. Louis A. LaGarde, M. C. U. S. Army, retired, in the New York University. There is not an endowed chair in Military Medicine in this country.

It is my hope that the Massachusetts Medical Society will initiate and sustain a movement to establish a Chair in Military Medicine at Harvard Medical School. For the successful prosecution of this method of dealing with our new obligation in this important field of education, the current war period is most opportune. The watch-word of today is "preparedness," but in peace times every known resolution to prepare for possible war has suffered from blight. The nation now exhorts us to plant seeds of everything useful that grows. The seeds for enlightenment of future generations of medical men should be sown today. We know that the selection of the seeds and the soil and the grangers

settle the question of the harvest. If we may call upon the friends and patrons of the healing art to aid us in producing the seed, Massachusetts, which sprung from a seed that resolute men planted on the shores of the American wilderness, will furnish the soil and the grangers. A fund of one hundred thousand dollars is needed. With the indication for its beneficent purpose so clear cut, there could be no more auspicious occasion than this upon which to render our appeal. If this war does not open men's ears to the bigger lessons, what will? Nobody remains in this great society, at least, who needs to be convinced of the incompetence of medical men for impending service; neither does anybody remain to be convinced that we are face to face with the most powerful and fiendish war machine known to history. Conviction, then, should lead to action, for is not this war compelling the peoples of the whole world to listen, to admit the truth, however bitter, and set their house in order as for the day of wrath?

This society has a record of hard work, well done for more than a century. Its leading function under its charter is to provide well-educated physicians and surgeons adequate to the wants of the community. It was founded by men who voluntarily relinquished their employments and the joys of home that they might aid in securing the freedom of their country. Adams, Holten, Warren, Holyoke, Baylies, Tufts, Rand, Bartlett, Danforth, Dexter, and sixty others, having just "emerged from physical vassalage," lost no time in constructing the pillars of this institution. Their prudence and sagacity are as easily traced in the archives of science as in the cabinet or on the field. The public estimation of the Massachusetts Medical Society was manifested at one time through the government of the State by a grant of a township of land⁹ in order to extend its beneficent work among the people. In every period since the Revolution one may find within its ranks the names of eminent physicians and surgeons, who were distinguished as philosophers, scientists, teachers, civilians and soldiers.

Each year many of its members pay the universal debt, and among those who have departed since the last anniversary meeting, two, at least, were familiar and esteemed figures before this audience. It is most fitting that we should pay a tribute of gratitude and respect to the memory of our former president, Dr. Charles F. Withington, who conducted these exercises one year ago. His name is worthy of distinction among the men who have labored in the service of this organization. We may be thankful for his tactful courage, which could fight and win. With it he gave a tone and direction to public opinion. Zeal, courage and industry characterized every phase of his career, and freely do we pay homage to his life, which steadfastly toiled for our common good.

Aside from the product of genius, the great-

est achievement of life is the effulgence of a noble character. In that relation we think of Dr. Walter J. Dodd. In his death we may chronicle the passing of a martyr in the cause of science. Beyond the moral influence of that sacrifice is the outstanding example of character that withstood serial assaults of painful disease with no apparent abatement of his good nature. He was most able in the eye of the profession, but humble in his own. Stoic fortitude prevailed in Dr. Dodd's daily life, and his character is an example to all mankind. Wherever it is known, and the circle is wide, it heartens men in vivid recognition that usefulness without selfishness is the example among men which a whole world craves to imitate today.

Mr. President and Fellows: Today the opportunity presents itself for us to do something material to commemorate the faithful, yes, the liberal services of these men. In the avenues of their wisdom, from Holyoke to Withington, the people of this Commonwealth have safely confided for one hundred and thirty-six years. The events in their lives not only bring home the sensation of a common loss, but carry with them a hope that we may be more forcibly reminded of our common interest and the needs of safeguarding the priceless legacies of our deceased worthies.

This opportunity to establish a Chair in Military Medicine in Massachusetts for the conservation of their gifts is a rare privilege, which comes to us only while our country is over-spread with the gloom of war. The Surgeon-General has given his approval of the plan, and the coöperation of the medical department of Harvard University is assured. Let us then, inspired by the heroic sacrifices of the men of the past, and prompted by a common knowledge of our present needs, rise to the occasion and promote this contribution, to the lasting honor of our Society, to the credit of our Commonwealth, and for the elevation of the standards of our service to the Nation.

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Original Articles.

GASTRIC AND DUODENAL ULCERS.*

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IN his oration on surgery before the American Medical Association in June, 1900, my

* This paper takes the place, and is based on the material, of one read by the author's father, the late William L. Rodman, A.M., M.D., of Philadelphia, before the Surgical Section of the Suffolk District Medical Society, at Boston, Dec. 15, 1915.

father first advocated excision of the ulcer-bearing area of the stomach for the cure of gastric ulcer. He urged it as theoretically ideal, preventing as it does future hemorrhage, perforation, hour-glass stomach and malignant degeneration. This seemed, for the times, radical surgery, since medical men generally were still treating gastric ulcers without the help of surgery and practically everyone believed that it was only a small percentage, at the most one quarter, of the total number of cases, that came within the surgical domain.

Since 1900 rapid strides have been made in gastric surgery, made possible by physiological, pathological and clinical progress, a large part of the latter being due to the development of the Roentgen-rays as an accurate method of diagnosis of the gross lesions of the stomach, so that today surgery can and does cure the majority of gastric and duodenal ulcers, if the surgeon is called in time to prevent the complications of hemorrhage, perforation, hour-glass stomach, and malignant degeneration; and even 30 per cent. of gastric carcinomata are being cured in the hands of the Mayos, because excision of the ulcer-bearing area has come to be recognized as the operation of choice since it removes the ulcers in the stage where it is impossible to differentiate early cancer. This can be done only by the microscope. Progress such as this is most encouraging, since approximately 75,000 people die annually in the United States of cancer, and about one-third of these, of cancer of the stomach.

Etiology. Despite the work of many investigators the cause of gastric ulcer still remains undiscovered. It is manifestly impossible to discuss each of the many interesting theories that have been advanced. One of these, infection, appeals generally to clinicians accustomed to treat the same process in other parts of the body due to this cause. It is easily conceivable that such infection may occur from the appendix, tonsils, or mouth, as has been suggested. The work of Rosenow, Steinharter, Turck, Singer, and others, lends weight to the opinion that infection may be the direct exciting cause, although others have failed to produce typical ulcers by infection (Wilensky and Geist, Caller and Thalheiner). That there are other factors involved seems probable. It is reasonable to suppose that the action of the gastric juice has something to do in the conversion of a "peptic" into a chronic ulcer. Here again laboratory workers disagree. There is evidence that such is the case (Bolton) as well as that which seems to prove the contrary (Dragstedt).

The diagnosis of ulcer, either gastric or duodenal, is not ordinarily difficult. "Indigestion" and pain in relation to food intake are still recognized as the leading clinical symptoms of both types of ulcer, gastric and duodenal. In the former, pain comes on from a half to one hour after eating, while in those suffering with duodenal ulcer, pain is worse on the empty stomach