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# REPORTS

OF

# MILITARY OBSERVERS

ATTACHED TO

# THE ARMIES IN MANCHURIA

DURING THE

# RUSSO-JAPANESE WAR.

(JANUARY 1, 1907.)

## PART IV.

Report of

Major CHARLES LYNCH, Medical Department, General Staff,

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## NOTE.

It has not been practicable to publish the complete report of Major Lynch on account of its length. A few omissions have been made in the body of the report and numerous ones in the appendices.

Lack of space also has prevented the printing, in all instances, of the author's acknowledgments of favors received from Japanese and other officers and officials.

The strategical map of part of Korea and Manchuria, and the map of Manchuria in seven sheets, published with Part I of these reports, should be used in connection with this report.

# REPORT OF MAJ. CHARLES LYNCH, MEDICAL DEPARTMENT, GENERAL STAFF, U. S. ARMY, OBSERVER WITH THE JAPANESE FORCES IN MANCHURIA.

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Major Lynch left Washington November 9, 1904, and arrived in Tokyo, Japan, December 9. He left Tokyo January 16, 1905, and was engaged in inspecting medical department organization in Japan until February 2, 1905, when he sailed from Ujina, the port of Hiroshima, on the hospital ship *Rohilla Maru*, and arrived at Dalny February 7. He went thence to Port Arthur, where he arrived February 10 and remained until February 14, reaching the Second Army, to which he had previously been assigned, three days later. He joined the Eighth Division of that army at Sumapu February 28, and remained with that division until March 9, being present at the battle of Mukden. He rejoined the headquarters of the Second Army March 9, and with it entered Mukden March 11, where he remained until May 10, when he went to Tiehling. On May 11 he again joined Second Army Headquarters at Chingungpu, and moved with it on June 10 to Tangshanchintai. He left the latter place September 7 to inspect the lines of communication, and sailed from Dalny September 12 on the Japanese transport *Bingo Maru*. He reached Ujina September 15, arrived at Tokyo September 21, and remained there, engaged in further inspection of the medical department, until October 28, when he embarked for San Francisco, and returned to Washington November 18, 1905.

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## GENERAL ORGANIZATION OF JAPANESE ARMY AND FIELD OF OPERATIONS.

As it is hardly within the limits of my inquiry, it is not my intention to treat exhaustively the general organiziation of the Japanese army; but in order that the work of the medical department of that army in the Russo-Japanese war may be clearly understood it is deemed desirable, as a preliminary

to discussion of that department, that a few pages be devoted to general organization and to the field of operations, therefore this report begins with the recital of some pertinent facts in reference to these.

*Officers:* Some of the older line officers of the Japanese army have had no schooling except experience, which, with the majority, has been extensive under war conditions. At present, however, great attention is paid to the military education of officers. Six local military schools, a central military school, and a military cadet school, both of the latter in Tokyo, are in operation. About one-third of the candidates for line commissions pass through all these schools, and two-thirds come to the Military Cadet School from sources other than the Central Military School. The former class spends six months in the ranks before entering the Military Cadet School and the latter one year; during this period all serve as privates. After completion of the Military Cadet School course, six months' more service is required in the grade of noncommissioned officer, after which a final examination is held and successful candidates are commissioned. The course in the Military Cadet School is wholly military in nature, and officers only are employed as instructors, but in the other schools civilians teach all the nonmilitary branches.

A few noncommissioned officers also become line officers. Such commissions are usually conferred for exceptional gallantry in action or to fill vacancies at the front which can not be otherwise provided for. It is the policy of the Japanese Government, however, to try out noncommissioned officers who are selected for possible commissions, and they are therefore commonly required to serve a probationary period of a few months in the grade of the highest ranking noncommissioned officer before being appointed as officers.

The age for entrance to the Local School is from 13 to 15 years. Three years are spent there, two in the Central School, and one in the Military Cadet School. This makes the age for entry into the service of candidates who complete the entire course from 20 to 22 years (Japanese). Those who attend the Military Cadet School only are slightly older when they become officers, and those from the ranks considerably so.

In reference to the results secured by the methods just described no further statement is required here than that Japanese line officers entering the service are well qualified physically for the duties which they will be called upon to perform, and that they are well instructed in sanitation, being fully alive to its importance in relation to the effectiveness of an army.

In addition to these preparatory schools, special-service schools, in which the course is about one year, are conducted for each of the different branches of the line of the army. The intendance and medical departments both have schools corresponding to these. The War Department has also a Staff College for the higher education of line officers, and a number of such officers are sent abroad yearly for special study. The majority go to Germany, but artillerymen are still very commonly instructed in France.

As is well known, the Japanese maintain a reserve, as well as an active, army. The former has officers belonging to both the first and second reserve. Some of these have passed from active into reserve service, receiving much or little instruction in the former, according to their date; others have had the experience of former wars; others, still, have never previously served as officers, but have been conscripts. These may come from those who have so served for their full three years or from the one-year class, and the latter may have served their year at the regular time or may have postponed it to a maximum age of 28 years. Noncommissioned officers may also be directly made officers of the reserve. Yet another class may be found, though such officers are met with in the medical and intendance departments more often than in the line. These have had no previous service or military instruction of any kind, being directly appointed as reserve officers after serving a few months' probation. All officers on the reserve list are kept abreast of their profession as far as may be by the instruction imparted at the rather frequent maneuvers for which they are called out. Physically, reserve officers were naturally not so good as a class as those of the active list, but they were by no means badly fitted to perform the duties required of them.

It should be noted that the Japanese system for the education and employment of officers leads to specialization and not to generalization. The special schools foster this, and officers who have gained the benefits of a course in the Staff College are used for important staff positions and ultimately for higher commands. They do not go back to routine duties with troops. Full advantage is also taken of the special qualifications of reserve officers in their employment. Some of these men, especially the older officers, have had no special business or professional experience which would fit them for the positions to be mentioned later, so that they can only be employed where their habit of the command of men will make them of value, for instance, as commanders of line of communication posts, or of storehouses, and in other like positions. Others of this class, and the great majority of the reserve officers who have only had conscript service, have, after leaving the active army, gone into business or practiced a profession, and are valuable on account of this experience in civil life. So bankers are given reserve commissions in the intendance department, those acquainted with foreign languages reserve line commissions as interpreters and translators, and railway and steamship men the same class of commissions in the transportation and communications department. Reserve officers called out for maneuvers are, so far as possible, employed in duties similar to those for which they will be detailed in time of war.

As surgeons are promoted under the same regulations as other officers, this subject will be treated under the head of medical officers.

The Japanese intend to use active officers principally at the front and for the more important positions on the lines of communication and in Japan. The magnitude of the recent war required, however, that many from the reserve should serve at the front, and some few exceptionally well qualified officers of this class held very important positions with the active army as well as at home.

*Soldiers.*—The ranks of the Japanese army are filled by conscription (the few volunteers may properly be disregarded here) and it is probable that during the war, with

few exceptions, all men reaching the conscription age, 20 years, who were physically able to pass the prescribed examination were taken as soldiers. Before the war this was by no means the case, however, as the number of men available yearly was largely in excess of the needs of the standing army, and at that time many were exempted from serving. After these had been excused a drawing was held to determine which of those left should be examined physicially. The men selected were then sent to the medical examiner of their conscription district, who proceeded to divide them into five classes according to their physical characteristics. *A* class, now as well as then, comprises those who are in every respect physically fitted for line soldiers; *B*, those not good enough for the line but qualified for the train; *C* comprehends men who are physically poor, but who may still be used; *D* includes men who are not organically unfit, but who at the time of examination have temporary affections which renders them unacceptable; *E* comprises men not physically qualified for soldiers and requires no further consideration. *A* and *B* classes are at once available for the standing army, *A* for the line and *B* for the train, but when vacancies do not exist for all men of one or both of these classes—and this was the rule before the war—excess men go into the hoju; *C* class men go into the second "kokuminke" or second national army; *D* class are called and examined again at the end of the year, and if then found physically qualified are taken into their proper class; if not qualified they may be called at yearly intervals, so long as they are within the limits of age, but in practice a man found physically unfit a second or third time is no longer looked upon as a possible soldier.

The following scheme shows the plan before the war and at the end of it:

[1902—Called 428,000; drawn 191,000.]

| 45,000. | 146,000, less physically unfit. |
|---|---|
| *Active army.*<br>Ages: 21, 22, 23.<br>(Students 1 year service only; all others 3 years.)<br>*Yobi (first reserve).*<br>Ages: 24, 25, 26, 27.<br>Three weeks each year, division commander determines when and for how long they will be called. Usually 6 weeks every 2 years.<br>*Kobi (second reserve).*<br>Ages: 28, 29, 30, 31, 32.<br>Three weeks each year, division commander determines when and for how long they will be called; 6 weeks in 2 years usual period. | *Hoju.*<br>Available for call for 90 days a year for 7 years; time of year is not fixed, but is determined by Minister of War. It is stated that on account of lack of money this regulation was almost a dead letter, and practically no training was given these men. |
| PRESENT LAW. | |
| *Active army.*<br>Ages: 21, 22, 23.<br>(Students 1 year service only; all others 3 years.)<br>*Yobi.*<br>Ages: 24, 25, 26, 27.<br>*Kobi.*<br>Ages: 28, 29, 30, 31, 32, 33, 34, 35, 36.<br>*First national army.*<br>Ages: 37, 38, 39. | *Hoju.*<br>To 40 years of age. |

It should be noted that the Japanese count a person as 2 years old on the first anniversary of the day of birth, so that these figures are each one year too high, according to our method of estimating age.

The most important change in conscription shown in the above table is that by increasing the period of the reserve four years, from 33 to 37, about 160,000 additional men were made available for service. All men up to the age of 40 years are available under the new law, but this was a polit-

ical move rather than one to increase the effective strength of the army, as Japan desired to publish to the world that her forces consisted of 800,000 men, with military service, and of 2,400,000 men, without such service.

It has already been mentioned that *C* class men form the second national army, which would expect to be called if the first national army was exhausted. The remainder of the physically available men of military age, without military training, constitutes the territorial army. So far as known, neither of these classes has been called upon during the recent war.

In the early part of the war the Yobi was called under the colors, going in to fill vacancies in the active army. It is possible that some of the younger men from the Kobi were used for this same purpose, but other soldiers belonging to it were called for special Kobi organizations, where the great majority of them were found. Just how deeply the reserves and the hoju were cut into, the Japanese will naturally not disclose, nor, for the purpose of this report, is it necessary to state more than two facts: Men between the ages of 20 and 36 could be found in the ranks by the end of the war, and the physical standard of the army was well maintained; the few volunteers less than 20 may again be disregarded.

From what has already been said, it has been seen that soldiers are divided into two main classes, the line and the train or service corps. Line soldiers may become hospital soldiers or may go into the intendance department, and the medical department has certain other soldiers, as will be seen later, but the true line of demarcation is between the line and the train soldier. The former has his own work to perform, all of which is in connection with actual combatant duties, and the latter furnishes supplies, etc., for the former. Line soldiers are not diverted to other duties; their business is to fight, and every energy is devoted to teach them to do so. The train soldier, on the other hand, has his own special duties, and he is made proficient in these and in these only.

*Civilian employees.*—The Japanese had a great deal of difficulty with Japanese civilian employees in the Chinese-

Japanese war, as such men were not amenable to discipline and, from their careless habits, were extremely prone to disease. At the beginning and throughout this war many civilians, with "Hannin" rank (assimilated rank) have been employed as interpreters, etc., but at the beginning of the war it was considered advisable to use as few of the mechanic and coolie classes as possible outside of Japan, though from necessity in some of the armies numbers were always employed. As the demands of the front increased it became necessary to employ more and more Japanese civilians on the lines of communication, and the railway and telegraph services fell largely into their hands. Chinese were also hired in large numbers, especially for teamsters and coolies. It must be remembered, however, that, under the Japanese system, dependence at the front is not placed on the civilian teamster, but that such positions are filled by train soldiers.

It may be well here to call attention to the fact that in the Japanese service money furnished for the army is for the purpose of the war and is not divided into a number of different appropriations, with consequent difficulty in accounting for expenditures. Great liberality is manifested in hiring civilian labor, etc., when necessary, nor is special authority required for making expenditures, which are of routine character. In order that the various departments may not raise prices by bidding against each other for labor, etc., the military administrator of a district fixes prices to be paid and no one is allowed to exceed these. At times, such as in battle, when prices can not be fixed, needed labor is hired without limit as to amount or price, these being left to the judgment of the commanding officer of the organization concerned.

*Patriotism and Discipline.*—Consideration of the Japanese army would be very incomplete without some reference to the high order of patriotism manifested in it. This was seen in all ranks of the army and in the Japanese civilian employees, as well as in the officers and soldiers. Military discipline in Japan is rather peculiar to western notions. While disobedience of orders is almost unheard of, the relations of officer and soldier are close, in fact are rather those of parent to child than those of our military ideal. This same

spirit pervades the Japanese nation in regard to their Emperor, who is looked upon as the head of the family, as well as the ruler. The calling of a soldier is held in high esteem, and after men are once made acquainted with their duties, it is impressed upon them that proper performance is only what is expected of every true soldier of Japan. There is little nagging or interference with men in small details, the system aiming rather to set certain tasks for them and to allow them to accomplish these, as far as may be, in their own way.

*Organization.*—Japan has a Minister of War, who is charged with the duty of controlling the military administration and of superintending the various military organizations, including the officers, soldiers, civilian officials, and employees. In the War Department five bureaus are established: (1) Bureau of Personnel; (2) Bureau of Military Affairs; (3) Bureau of Administration; (4) Bureau of Medical Affairs; (5) Bureau of Legal Affairs. The chief of each of these bureaus has direct access to the Minister of War.

The three staff departments of importance for the purposes of this inquiry are the medical, the intendance, and the department for transporation and communication. The first will be discussed at length later; the second has three subdivisions—pay, construction, and supplies. The allowance of intendance (pay) officers is much more liberal than with us, they being detailed to regiments, field medical organizations, hospitals, etc. This department assumes the duties of construction performed by our quartermaster's department. The supplies furnished by it consist of food and clothing. The department for transportation and communications, which, in peace, operates under the War Department, having a director there, is transferred to Imperial Headquarters in war. It is not, however, a staff department in the sense of the two first mentioned, as officers do not hold permanent positions in it but are detailed from the line as port, transportation commanders, etc.

A Commander of Military Education is also detailed for control of that branch of army administration.

In addition to the War Ministry, the Japanese have a General Staff, the chief of which is charged in general terms with the duty of conducting all matters in reference to mobiliza-

tion and strategy. General Staff Headquarters is apparently merged into Imperial Headquarters on the outbreak of war, the Chief of the General Staff acting as Inspector-General of the lines of communication with any garrison (general lines of communication) established abroad under him, as are also the inspectors of the lines of communication of the separate armies, so far as certain of their duties are concerned.

The unit of organization in Japan is the division. The entire empire is divided into thirteen division districts, the headquarters of each of which is at a different place, except that two are located at Tokyo—the First and the Guards. The commanders of these divisions are lieutenant-generals, appointed by the Emperor. These commanders, although they receive directions from the War Department, the Chief of Staff, and the Commander of Military Education, have large powers within their own commands, controlling all the military organizations there and the conscription. They report directly to the Emperor in person, as well as making written reports to the above-mentioned departments.

The headquarters of each division has the following departments: (1) Staff Department; (2) Aid-de-Camp Department; (3) Judge-Advocate Department; (4) Administration Department; (5) Medical Department; (6) Veterinary Surgeon's Department.

The division is complete in itself, with its reserves, stores, transportation, etc., and may at once be mobilized in the event of war—perfect, so far as the Japanese table of organization is concerned. Each battalion has its own light transport (pack ponies), which follows immediately in rear of its unit. The heavy transport of the entire division (carts) is united to march in its rear. Thus there is no long train to hamper the fighting troops. In the light transport nothing is carried except what is needed during action. This comprises ammunition, engineer tools, etc., and battalion medical supplies for the temporary dressing station. The 40 pack ponies, carrying the supplies of the sanitary company, are placed immediately in rear of the division to which they belong. The heavy baggage train of a division is required to remain 4,000 meters in rear and camps independently. It consists of 1,600 carts and is divided into two

sections, one of which keeps 4,000 meters in rear and the other from 6,000 to 8,000 meters. The composition of the sections varies; when an action is expected, the ammunition and the field hospitals move up, and the food falls back. At least two field hospitals are found in the first section. In battle pack ponies from a battalion come back to the train for more ammunition, etc., and food, cooking utensils, etc., are hurried to the front as soon as soon as darkness comes, the carts then being returned to the train to be loaded for the next night. There are also changes between the empty carts and the full ones in the two sections, and the former are sent to the rear for fresh supplies. These may be secured from a depot or from hired Chinese carts, which may constitute a train in the rear, separate from the regulation division train.

The divisions maintain their home organization in war as well as in peace, the mobilized units being sent to the front, but a division immediately replacing the one leaving. This new division is called literally "the division replacing that which has gone to the front." It has the usual division organization, and not only conducts its own affairs, but also serves as reserve to the division which it has replaced and is intrusted with all home matters pertaining to it. Thus, at the home division, soldiers of the division district are collected and trained for ultimate forwarding to the front to fill vacancies in the division there. Soldiers coming home report at division headquarters and are returned through the home division. Sick are sheltered and cared for in division hospitals. Soldiers' records and accounts are kept at the home division, and most supplies are divisional, being sent out from and returned to its headquarters. This organization is an excellent one, not only making administration easy and effective, but there is great esprit de division found throughout the army.

As the war went on the 13 original divisions and the other troops mobilized—to be spoken of immediately—did not prove sufficient in numbers for the work in hand and other divisions were organized. It is the general opinion that there were 15 divisions in the field at the battle of Mukden, and probably as many as 18 at the time Sakhalin was taken, and the Japanese forces were increased in northern Korea, in the

vicinity of the Tuman River. These extra divisions are believed to have been raised by the different division districts contributing battalions, squadrons, batteries, etc.

In addition to the 13 divisions, at the outbreak of war, there were 2 independent brigades of cavalry, 2 independent brigades of artillery, 19 battalions of fortress artillery, of which 15 were joined in a regiment, 1 railway engineer battalion, and 1 battalion of telegraphers. The 2 independent brigades of cavalry had each 2 regiments of 3 squadrons, and the 2 independent artillery brigades had each 3 regiments. In addition, from the second reserve or Kobi, the Japanese hoped to make 76 battalions of infantry, 17 squadrons of cavalry, 19 battalions of artillery, 13 engineer companies, and 13 train companies—that is, they desired to put in for each division, from these Kobi troops, 4 to 6 battalions of infantry, 1 squadron of cavalry, 1 battalion of artillery, and 1 train company, or practically a brigade to each division. The total of Kobi troops was about 80,000.

Coincident with the outbreak of the war, the various divisions and separate brigades were aggregated into armies. Five such armies, or, as they might perhaps be more properly called, corps, were present in Manchuria at the time of the battle of Mukden. This does not include the Japanese forces in northern Korea, the number of which was carefully concealed. The ordinary allowance of divisions to each Manchurian army was three, but this was not absolute, neither were the divisions composing an army always the same. For example, at the time of the battle of Mukden, the Second Army had four divisions, while at least one other army had but two. The divisions of the Second Army at that time were the Third, Fourth, Fifth and Eighth. The Sixth division, which had formerly been with it, had been assigned to another army. Later, further changes took place, the Guards Division coming to the Second Army sometime in June from the First Army, with which it had been since the beginning of the war, and other divisions being shifted from army to army. The Kobi troops were organized as separate brigades under the army commanders. A certain amount of artillery also belonged to the army. In the battle of Mukden the Second Army is said to have had one regiment. Each army

had its own lines of communication, with its own commander. All the armies in Manchuria were under the command of Manchurian army headquarters. Any estimate of the number of soldiers Japan had with the colors by the end of the war can be little more than the veriest guesswork. From 700,000 to 800,000 seem to be the figures generally fixed upon.

The methods for obtaining supplies for this great body of men were excellent. Medical department supplies will not be referred to now, as they must be spoken of with more detail. The Japanese have a great arsenal in Tokyo, which employed 30,000 persons at times during the war. This has a few branches located in other cities. The arsenal manufactures guns, rifles, ammunition, carts, saddles, ordnance equipment, etc., in fact everything required by the army except food and clothing. Manufactured articles go to division depots generally, but a few, such as the soldier's water bottle and his ration can, are delivered to the intendance department for issue. The latter department has great depots in Tokyo, with branches located at other places. In its food depot, in the former city, food is prepared for field use and is also purchased. The intendance department also operates shops in Tokyo in which cloth is made and where clothing, including shoes, is manufactured and bought. Articles other than food are commonly distributed to the troops through divisions. Naturally, from both the arsenal and the intendance depots, articles were sometimes sent directly to Manchuria. Transport was commonly assembled at the division headquarters, but many animals for the various purposes of the army were finally purchased in China.

In the recent war the War Department may be said, generally speaking, to have controlled military affairs in Japan, while Imperial Headquarters regulated those abroad. At home the railways, whether government or private, were placed entirely at the disposal of the department of communications and transportation for any use they might require of them. Their control was vested somewhat in station commanders, though these officials depended on the railway officials for the operation of the trains. The two great ports for the embarkation of troops, supplies, etc., from Japan, and for the return of sick, prisoners, troops, etc., were Ujina and

Moji, each of which had its own port commander, who acted as station commander as well. The port commanders held very much the same relation to the ships' captains of the various subsidized liners used by the army as do the companies' agents in time of peace. Shimonoseki Straits, on which Moji is located, is such a poor harbor, on account of its swift current, that Ujina was used more and more as the war went on. The statement was made there that 90 subsidized transports were in commission in September, 1905. Supplies for the front were turned over to the department of communications and transportation, which usually sent them by rail to one or another of these ports, where they were sheltered in large storehouses. Ujina had been previously used as the port of embarkation for a Japanese army abroad, and a good deal of work had been done to fit it for this purpose. Besides the storehouses, water is laid on to the dock, and shops are maintained in time of peace with a number of skilled workmen. The fittings of the subsidized ships are stored in these shops, and workmen from them change a ship so that either men, animals, or stores may be transported. This is done with great expedition, and stores are carefully separated so that no confusion arises in unloading ships on arrival at their destination.

Abroad, in Manchuria, Liaotung garrison—really the general lines of communication of all the armies there—had its own commander, who was under Imperial Headquarters, Marshal Yamagata, Inspector-General of the lines of communication. As stated, the inspectors (commanders) of the lines of communication of the separate armies also received certain orders from Imperial Headquarters. The idea, both in the establishment of Liaotung garrison and putting certain of the duties of the inspectors of the lines of communication of the separate armies under Imperial Headquarters, was, of course, to free the commander of the forces at the front so that he might devote all his attention to the latter. At the various stations on the lines of communicaion, both in Liaotung garrison and of the lines of communication of the separate armies, station commanders, under their proper commander, also executed their special duties. The operation of the railway in Manchuria was, naturally, wholly in the hands

of the army. Early in the war, when Liaotung garrison was first established, its area was limited, but with the advance of the armies north it was gradually extended. Immediately preceding the battle of Mukden its northern line was just south of Liaoyang. By July 1 it had included Mukden, and by September 1, Tiehling.

As soon as the Japanese had captured Dalny and Yingkow those ports were made their Manchurian bases, to which soldiers and supplies came from Japan and from which they were sent to the front. The Japanese say the Russians were very kind to them in building the excellent docks at Dalny, without which it would have been extremely difficult for them to have carried on the war, and this point after its capture was always their principal port, under its new name—Tairen. Stores for the army in Manchuria were nearly always consigned to the main Manchurian storehouse at Tairen, from which they went to its branches in other towns and finally to the individual armies. The Manchurian Railway led north from Dalny, with a branch to Port Arthur and another to Yingkow. The main line passed through Tashihchiao, near Haicheng, Liaoyang, Mukden, through Tiehling, and near Kaiyuan, on its way to Siberia. As it fell into the hands of the Japanese, they were compelled to change its broad gauge to their narrow one.

The country near Dalny is much broken, while farther north wide flat plains are found, of wonderful richness for agricultural purposes, on which the Chinese inhabitants raise large crops of kaoliang (sorghum), beans, poppies for opium, tobacco, etc. Farther north, 20 or 30 miles beyond Tiehling, mountains, or rather broken foothills, are again encountered, which are not nearly so rich. There are some large towns in Manchuria, notably Liaoyang and Mukden, but the majority of the population is gathered in small villages, from which the inhabitants go out to till the fields in the vicinity. The ground over which most of the battles of the Second Army were fought is very flat, though it is somewhat broken here and there by sand dunes and Chinese graves, and by streams, which had cut deeply into the alluvial soil, so that their banks afford good shelter from fire, for which purpose they were extensively used, as were also the mud walls of Chinese villages.

The climate of Manchuria is hot for a short time in summer, when it is also wet. In winter the temperature falls to about 15° F. below zero in the south, but as the humidity is low then this is not severely felt, except when there is a wind, which is not a common occurrence near Mukden at this season, though in the vicinity of Dalny there are frequent bitter gales. In the wet summer the roads are almost impassable for wheeled vehicles at times, as the Chinese have never constructed good highways, nor do they need them, as they work in the fields during the summer and haul their produce to market in the winter, when nature makes good roads over the entire country. There are thousands of Chinese carts in Manchuria. These proved of the greatest value to the Japanese, who employed them liberally to supply their long line, which, it will be remembered, at the end of the war extended some 40 miles north of Tiehling, from the Mongolian border on the west about 100 miles to the east. Even with all the Chinese carts, during the summer of 1905, the energies of the Japanese were taxed to the utmost in furnishing their armies with materiel and food.

## MEDICAL SERVICE PROPER OF THE JAPANESE ARMY.

### PERSONNEL.

*Medical officers, active list.*—These are of three classes: First, graduates of the imperial universities; second, graduates of other medical colleges; and, third, license holders. Both universities and medical colleges are governmental institutions, whose graduation certificate confers the right to practice medicine in Japan. Others than graduates from these schools are required to pass an examination before the Home Department, which then, in the case of successful candidates, grants certificates, permitting the recipients to practice medicine. There was formerly a much larger number relatively of the last class of physicians in Japan than is the case at present, and, as a matter of fact, in the army they are still most numerous as medical officers, while graduates of the imperial universities are fewest—not more than 10 per cent of the total number. At present the majority of military surgeons entering the army are recent graduates either of the medical schools or of the universities, in both of which the course is four years. At the former appointments are made on recommendation of the faculty in the second year of the course only, but in the latter this recommendation may be made at any time. After such an appointment has been received it carries 10 yen per month in the colleges and 15 yen in the universities, the candidates entering the service immediately on graduation. Graduates may also be appointed immediately after graduation, and then have the same status as though the appointment had been received during the course, but this method seldom seems to be followed in practice. The law provides that practicing physicians may be taken after examination, but none now enter in this way, and the law permitting it will probably be repealed, as the medical authorities of the War Department believe that only failures in civil life are thus secured.

Graduates of the colleges and universities serve a probationary period of four months with a regiment before they receive commissions, and license holders spend one year in the army medical school and then have the same four months' probation. There is an examination at the end of the course at the universities and schools, and license holders have their own examination for preliminary qualification and admission to the army medical school. Both, after the four months' probationary period, come before a board made up of the surgeons of a division, which, in the case of successful candidates, recommends that they be commissioned. As far as possible, admittance to the service is based on the recommendation of competent observers and not on examination. The limits of age for medical officers entering the service are from 20 to 35 years. Graduates of the imperial universities are commissioned originally as first lieutenants and all others as second lieutenants. The four months' probationary period with the regiments, spoken of above, completes the medico-military education of surgeons. After they receive their commissions, no examinations are held for them.

According to Japanese standards the army secures good material for medical officers, but private practice presents superior attractions to a great many of the higher class men, and the army is not quite so popular as the navy, though there is not a great difference in choice between them, in the estimation of candidates for the public medical services.

Medical officers on the active list are promoted exactly as are all other officers. The regulations in regard to this provide both for selection and for promotion by seniority. The minimum time for promotion from the grade of second lieutenant to first lieutenant is two years; this is by seniority only. In advancement from first lieutenant to captain one half are selected and the other half are promoted by seniority; two years is also the minimum period for this. To major and the higher grades, selection is the only method employed. The minimum service in each grade, to entitle an officer to promotion to the next above, is as follows: Captain to major, four years; major to lieutenant-colonel, three years; above this, two years in each rank, except in that of major-general, for which three years' service is required for promo-

tion to lieutenant-general, the highest grade in the medical department. War service counts double for promotion and pension.

It is impossible to determine how far merit is considered in selecting candidates for promotion, but a graduate of an imperial university has a great advantage over all other officers, and, as in other branches of the Japanese army, a member of a samurai family is always shown much more consideration than a man who springs from the common people. It is the policy of the present Chief of the Medical Bureau of the War Department to limit promotion to the grades above major to graduates of the universities. The most important posts in the field are given to such graduates, and they also command the base hospitals at home. Holders of medical diplomas from high-class medical schools abroad are said to be treated, in the matter of assignment and promotion, like university graduates. The method of promotion above outlined of course creates in the medical department a specially favored class, which consists almost wholly of graduates of the imperial universities. These should be the best men, they are certainly best qualified by education on entrance, but the system followed can not but stifle effort among nongraduates of the universities, as they have so little to hope for in the way of promotion and assignment.

The number of military surgeons on the active list at the outbreak of the war is reported to have been 1,076. This was a liberal allowance, which was based on the requirements of war and not merely on the number needed for the care of patients during peace times. The division organizations are maintained in peace as well as in war, and a permanent garrison hospital is operated at each division headquarters, to both of which are large medical staffs detailed. The further surplus is provided for principally with the infantry regiments, which have ten surgeons, with a major as chief in peace, the major going out in war in command of a field hospital, and a captain becoming regimental surgeon.

*Reserve medical officers.*—With all the large surplus of medical officers of the active army in time of peace, this is not believed adequate for a war, and a reserve is main-

tained, which is stated to have had 2,317 officers at the beginning of the recent contest. Reserve medical officers are of three classes: First, those who have passed into the reserve because they have not attained a certain rank in the active army at a certain age and those still physically qualified, who have passed out of the active army for certain other reasons; second, those who have served their conscription, of which they have six months as ordinary soldiers and six months under the medical department, receiving instruction in reference to medical matters and then an examination. Successful candidates have three months' more service, similar to the probationary period of the medical officers on the active list, then another examination, and, if they pass this, they go into the reserve as medical officers. Such men usually postpone their conscription period until they have completed their medical education. Medical students, who draw numbers compelling them to enter the army as conscripts, may, however, be excused from all but one year of such service on condition that after graduation they become reserve medical officers. Third, those who are taken in as reserve officers directly during a war. These receive from two to four months' instruction. This constitutes their probationary period, one-half of which is spent in a regiment and the other half in a hospital. At the front, in case of need, division commanders are also allowed to appoint noncommissioned officers and privates, who have licenses to practice as physicians, as reserve surgeons on probation. The rank given reserve officers in this war on original appointment was, as a rule, that of second lieutenant, but graduates of the imperial universities were made first lieutenants, and a few experienced men of high attainments were commissioned as captains. Officers of the reserve are promoted by selection from one rank to the next higher one. The same period of service is required of them to permit promotion as of officers on the active list. In peace, when they have completed the required period of service in any grade, they are called out to maneuvers for promotion, and successful candidates, after an examination, are forthwith advanced to the next higher grade. In war, those qualified are promoted after having had the requisite length of service.

In the recent conflict, the active list was slightly augmented in numbers, but the great increase came by the appointment of new reserve officers, and many reserve medical officers were necessarily employed at the front.

*Instruction of medical officers.*—The army medical school is conducted for the active list only. It has two classes of students: First, medical officers selected for special courses; second, candidates for commissions, who hold the certificate of the Home Department, having passed the required examination, and who take the course to fit them for medical officers of the army. The regular course at the school, that given to the latter class, consists of: (1) A general sketch of the Japanese military system and organization, for which the instructor is a major of cavalry or infantry, or some other officer specially qualified to teach the subject; (2) Regulations of the Medical Service; (3) internal medicine; (4) surgery; (5) hygiene; (6) bacteriology. As stated, this course is one year in length, and the other for surgeons is four months, with an extension of four months when required, and may be along any special line of medico-military interest, such as hygiene or surgery. Surgeons on the active list, on probation with a regiment, study: (1) Field Service regulations; (2) individual drill; (3) mounted squad drill; (4) Regulations of the Medical Service; (5) Infantry Regulations; (6) hospital service (object lessons), and the course for reserve surgeons, newly appointed, is on the same lines, though it is less extensive. Reserve surgeons, in time of peace, are instructed by means of maneuvers, to which they are called out every year or every two years.

The Japanese medical department authorities consider that special training and experience are essential for military surgeons. Reserve surgeons were not used, as a class, for the more important administrative positions; for those which they were called upon to fill, their training at maneuvers is believed to have proved of great value. The Japanese state that the services of the third class of reserve surgeons—those without previous training—have proved very unsatisfactory, not only because of their lack of knowledge of military matters, their unwillingness to conform to the army

medical supply table, and their susceptibility to hardships, but also for the reason that they did not have the confidence of officers and soldiers generally, which resulted in little heed being paid to their advice and recommendations on the subject of sanitation.

No civilians are employed as surgeons with the army during war or peace; that is, no contracts are entered into with civilian physicians according to our method.

The ability manifested by the medical officers of an army may preferably be considered under three heads: First, as part of the body military; second, as sanitarians, and, third, as practitioners of medicine and surgery. The Japanese medical officers proved themselves preeminently able in respect to the first. Until about forty years ago Japan had no organization for the care of sick and wounded, and patients received only the chance treatment of a comrade, the helpless solving all questions as to their care by committing hara-kiri. The present excellent organization of the medical department may therefore be regarded as one of the marvelous advances which Japan has made during this brief time. This organization is not, of course, original with the Japanese, Germany having been the model most nearly followed, as in army organization generally, though France, which was at one time Japan's military teacher, was partially responsible for it. It can not, however, be said that either country was slavishly imitated in the Japanese organization, which, on the contrary, has many features all its own. The Japanese medical department has not only been peculiarly successful in picking out the good and in rejecting the bad in organization, but their administration and their methods for the utilization of all means at hand were also admirable. As sanitarians the Japanese medical officers also did good work. The place which sanitation is given in the studies of the Japanese physician is relatively much more important than with us, so that medical officers entering the army are fairly well informed on this subject. They also have their attention particularly directed to it during peace. The recent war, too, is the third in which Japan has been engaged within the past few years, and her medical officers, always keen to observe and to profit by their observations,

have benefited largely by their experience in the sanitation of armies under war conditions. Bad sanitation in the Chinese-Japanese war was responsible for a long roll of deaths and disabilities, and the lesson, though a bitter one, was well learned. The ability shown in the practice of medicine and surgery by the medical officers of an army is, of course, mainly dependent on the current medical teaching of the country in question. This subject will be discussed more fully when all the physicians and surgeons which constituted the medical talent of the Japanese army have been spoken of, but mention should be made here of the fact that the important administrative duties which the Japanese medical officers were called upon to perform did not apparently lead them to neglect the study and practice of medicine and surgery. In time of peace the large size of the Japanese army affords them opportunities for practice rather superior to those of civilian physicians, and it is believed that they take full advantage of these. The Japanese medical officers displayed great gallantry in the recent struggle, fully sustaining the reputation they had previously acquired, and devoted themselves to the care of their patients with praiseworthy unselfishness.

*Personal equipment.*—In the field the Japanese medical officer carries nothing under the regulations except a metal case for instruments, which is small enough to put in the pocket. He wears the inevitable side arms of every Japanese officer and not infrequently has a dispatch case.

*Allowance of medical officers—their official relation to commanding and other officers.*—The profession of medicine is held in high esteem in Japan, and it is generally realized that the increase in the Japanese population, and consequently much of her present power, have been due to modern methods of sanitation and of treatment of disease. In the belief that the army should participate in the benefits which accrue to the population generally from such methods of sanitation and treatment, and realizing that, in order to accomplish anything effective, it is primarily essential to provide medical personnel in sufficient numbers, the authorities have done so. The public generally are imbued with the same feeling, and sentiment induces them to believe that

the most liberal medical personnel will only provide the attendance which the officers and soldiers of Japan merit. There is nothing spasmodic in reference to this in Japan. The responsible authorities know by experience what they will require in medical personnel, and the people are quite willing to leave the matter to them, only holding them responsible that there shall be no fiasco at the beginning of a war nor at any other time. Of course the only reasonable way to create an organization for war is to make the necessary arrangements in time of peace, and this was done, from the knowledge and experience of the authorities, but by the will of the people. Though the medical personnel provided was liberal in comparison with standards established in the past, lack of physicians and surgeons did not permit it to be as large as that contemplated by the Japanese regulations, and the tendency in Japan is to have in future the standard provided by regulations or even a more liberal one.

Officers generally in Japan are informed on the importance of the medical department as a part of the body military and its true functions with an army, and are also instructed in sanitation. Medical officers do not attempt to dictate to commanding officers—far from it—but they do perform those duties laid down for them in regulations: "The medical department is charged with the duty of looking after the health of the army and of caring for the sick and wounded. This will include all matters which must be carried out in effecting the above-named purposes," nor are they hampered in the performance of such duties. Each man is a specialist in Japan, with little or no tendency to work in lines other than his specialty, and while the instruction which line officers receive in sanitation makes them very solicitous for the good health of their troops and generally painstaking in measures which properly fall to them for preserving it, they do not enter into any contest, as accomplished sanitarians, with medical officers. Due weight appears to be given also to the opinion of medical officers on any contemplated movement of troops, of which they are informed and for which they take part in conference. The final decision, as in all other military matters, of course, rests with the commander. Any friction between officers of different branches of the service would be entirely contrary to Japanese ideas

of patriotism, and all officers work harmoniously in the grooves fixed for them by regulations.

*Apothecary officers.*—Such officers, which we do not have, are found in the Japanese service. The limits of age for their appointment are the same as those for surgeons, and they are chosen and commissioned in practically the same way, coming from either the universities or schools, or from among the licentiates of the Home Department. Students receive an allowance, as do medical officers. Apothecary officers serve a four months' probationary period, about one month at a regiment and the rest at a hospital. The subjects taught in this course comprehend (1) hospital service, (2) surgical instruments, and (3) military sanitary chemistry. During this period they, like surgeons, are treated as officers, but also, like them, have the rank between that of special sergeant-major and sergeant-major. They are appointed to the grade of second lieutenant and are advanced, as are surgeons, except that they can not obtain a higher rank than colonel. There is a reserve of apothecary officers, members of which are called out for maneuvers, as is the case with surgeons. In the present war it has been necessary to commission new reserve apothecary officers. At the outbreak of the war, 96 apothecary officers are reported to have been in active service and 404 in the reserve.

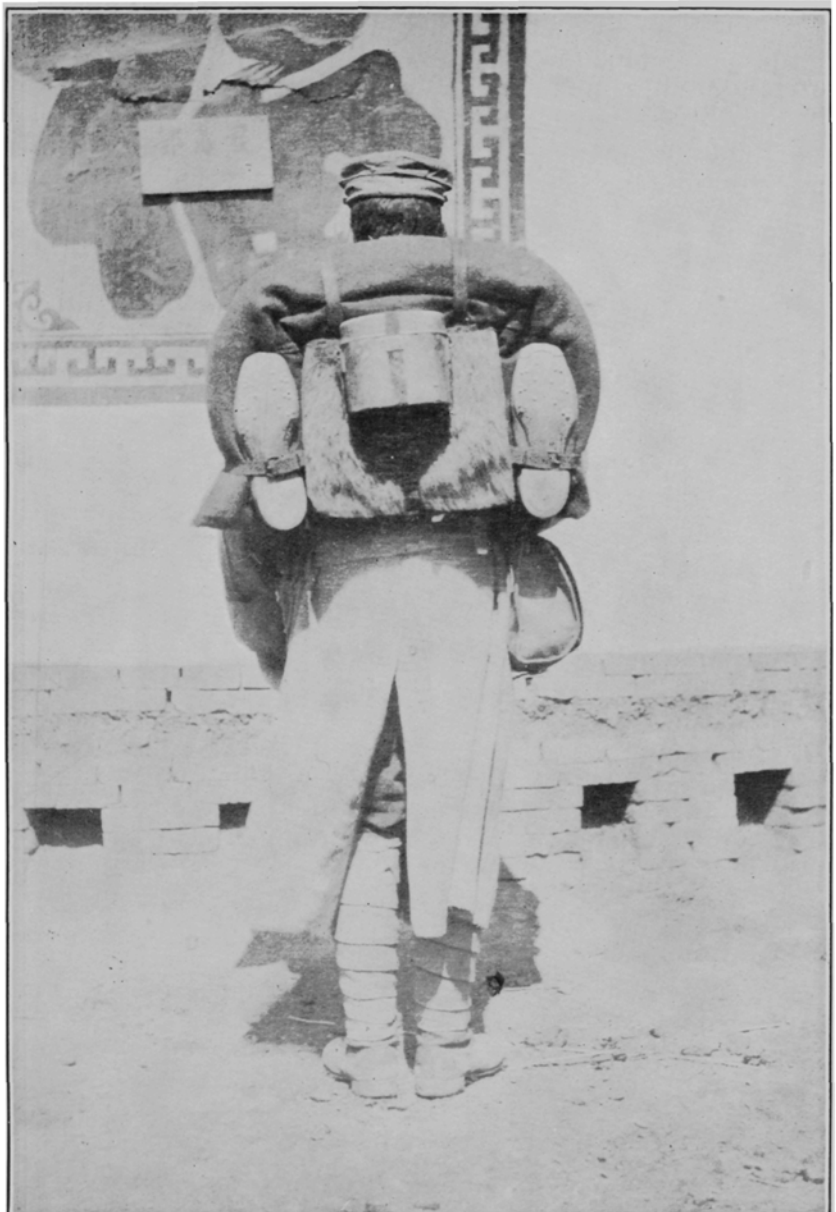
Their duties, as prescribed in the Medical Department Field-Service Regulations, are care of medical supplies, preparation of medicines, oversight of chief nurse and other nurses, necessary chemical examinations, and care and repair of apparatus and instruments, with the exchange of those which have become useless. Thus, it will be seen, they have many duties performed by the first-class hospital sergeants in the United States Army, with somewhat broader functions. Very careful analyses are made of all drugs bought for the army and also of food supplies, when this is necessary, and it is here that these officers perform their most valuable duties. The Japanese do not use very many tablets, so that preparation of medicines is much more complicated than with us, and apothecary officers spend practically all their time in the dispensaries and storerooms, leaving the superintendence of work of the nurses in the wards to the medical officer in charge of them. Usually the apothecary

officer of a hospital is in charge of the photographic work, and some of them make excellent pictures of professional interest. They are always subordinate to a medical officer, except in supply depots, in which they may be in charge, or if the depot has several departments, in charge of their own section. In the main supply depot at Tokyo they manufacture many of the medical supplies for the army. So far as can be judged, they are competent pharmacists, and they certainly labor early and late in their dispensaries. There is some difference of opinion in Japan as to the necessity for commissioning such officers, but it is difficult to see how they could be dispensed with unless medical officers performed many of their duties, or the class of men taken as chief nurses was decidedly better educated in pharmacy than is the case at present. As will be seen at another place in this report, the allowance of apothecary officers in some of the large hospitals was a very liberal one, though, with the Japanese method of careful local examination of drugs and of dispensing, it is not thought to have been too great.

*Dentists.*—Dentists are not provided for under the Japanese Medical Service Regulations, but in practice some dental attendance is furnished the army at government expense. It was stated that some high-class dentists were employed and sent to the front, but there certainly must have been very few of these. In a conscript army, such as that of Japan, however, there was no particular difficulty in selecting fairly good men from the ranks. These, at first, had no instruments, but this was remedied after a time in some of the divisions by obtaining a suitable outfit from Japan. At best the plan was a makeshift, and as it was not possible to take many dentists from the troops, the few selected devoted nearly all their time to officers, and though soldiers were by no means excluded from dental care, under the circumstances it was only possible to give it to them in urgent cases. At reserve hospitals a few dentists were employed, and some voluntary dental aid was given soldiers, mainly by the professors of schools and universities.

*Soldiers.*—Until after the Chinese-Japanese war there were no medical department privates in the medical organizations of the Japanese army, all such places being filled by military employees. This did not prove satisfac-

1. JAPANESE SANITARY SOLDIER IN WINTER UNIFORM, WITH FULL EQUIPMENT.



2. REAR VIEW, JAPANESE SANITARY SOLDIER, WINTER UNIFORM AND FULL EQUIPMENT.

tory, however, and a change was made, though there is no hospital corps at present in the sense in which the term is used in the United States. The following grades are provided for soldiers of the medical department: (1) First-class chief nurses, rank of sergeant-major; (2) second-class chief nurses, rank of first-class sergeant; (3) third-class chief nurses, rank of second-class sergeant; (4) nurse (kangoshu), first-class private; (5) assistant nurse, ranking under third-class private (kangosotsu).

The nurses with troops (kangoshu)—and this class was found in the Japanese organization prior to the Chinese-Japanese war—are a part of the regimental strength. In an infantry regiment, for example, such privates are taken in the proportion of one to each company. After conscription this man serves for one year, performing the duties of an ordinary soldier. He then goes to a division hospital, where he receives four months' instruction in nursing and two months' practice; this latter period may, however, in some instances, be at a regiment. After this he serves the remainder of his conscript service, a year and a half, as a nurse with a regiment, going then into the reserve. The private designed for a nurse from the next year's conscription goes through the same course, and so on, year after year. It will be noted that there is a six months' period, during which two nurses are on duty with a company—that is, the last six months of the conscript of the earlier year and the first six months of the conscript of the later year.

The assistant nurses (kangosotsu) are of quite another class. They are men who are not physically fitted to perform the duties of ordinary soldiers, as they fall below the requirements in some respect. They have quite as much or usually a little more intelligence and education than the ordinary conscript. Forty are taken in each division yearly; they serve one month with a regiment, receiving the instruction of a soldier, and three months at a division hospital and then go into the reserve. In this war kangosotsu have been permitted, if they showed that they were qualified to be promoted to kangoshu, to receive that grade.

Chief nurses are promoted from kangoshu only. After a nurse private has received his hospital instruction and practice, specially well qualified men receive further instruction

to fit them for chief nurses, to which grade they may be promoted after a minimum of three months, though the period is usually a year. They then return to their regiments for the remainder of their conscript service and go from them into the reserve. Chief nurses may also be taken, when they are exceptionally well qualified men, for seven years' service. They may elect to serve seven years, when entering the service, or may so elect after they have qualified as chief nurses; in either event, they pass through the course of instruction described above. Some chief nurses also remain in the active army after completing their three years' conscript service. Qualified privates may, on the termination of their three years as conscripts, make application for reengagement as chief nurses. Such candidates for medical noncommissioned officers receive about eight months' additional training in a hospital.

The teaching, so far as nursing is concerned, is wholly given by the medical department and is under the direction of the chief surgeon of a division hospital, captain surgeons, apothecary officers, and chief nurses being directly responsible for it. The instruction of assistant nurses, as will be appreciated from its brief duration, can not be extensive. Their primary military training consists of (1) reading; (2) explanation of Imperial Instructions for the Army; (3) instruction in rank and uniform of officers; (4) military salute; (5) gymnastic exercises and drill. Their course in nursing comprehends (1) summary of Medical Service Regulations; (2) summary of Geneva Convention; (3) summary of anatomy; (4) nursing; (5) application of dressings.

The nurses (kangoshu), under instruction at a division hospital, are taught with the candidates for medical department noncommissioned officers. The division surgeon appoints the instructor, usually a captain surgeon, and the chief of the hospital, chief nurses as assistant instructors; the latter officer is held responsible for the training and education and superintends the work of all the instructors. In case the practical work of nurses is given with a regiment, the senior surgeon on duty with it reports on them to the instructors. Candidates unfitted to complete hospital training, on account of ill health or for other cause, are sent back

to the regiment and replaced by other men. An examination is held at the end of the term of instruction and practice, and report is made to the chief surgeon of the hospital on the results. The latter then gives successful candidates certificates. The candidates for noncommissioned officers are instructed in the same way; with both, the ordinary training course is given and also special lessons for those best qualified to profit by them. Examinations are held, as a rule, every six months, with a report of the results to the division surgeon. A special text-book is provided for privates at a hospital, but some of their work is practical, consisting of application of simple dressings and of the care of patients. With chief nurses more advanced instruction is given, of the same general character, but with special reference to operating-room work; another book is provided for this. Chief nurses also receive careful teaching in clerical work. Neither nurses nor chief nurses are given drill for carrying patients.

Little can be said in favor of the methods pursued by the Japanese for the scientific training of either their chief nurses or nurses. This does not mean that they are not good soldiers, however. Under the Japanese regulations for the aid of wounded on the firing line, they are often exposed to terrible fire, and, according to all available reports, they have always behaved with the greatest gallantry in succoring their companions. In the hospitals they are faithful in the performance of their duties, and do not drink to excess nor take for their own use articles provided for the sick. As with the Japanese generally, their police is excellent, and the chief nurses perform their clerical duties rapidly and well. They are especially weak in operating-room work and do not perform their duties in the wards with any great degree of intelligence, though they strictly follow orders given them.

After a man passes into the reserve his instruction is by means of maneuvers, to which he is called out at regular intervals. The same man does not go to maneuvers on successive years, probably not oftener than once in three or four years. Maneuvers pertain to division administration and occupy about one month. This refers to the medical maneuvers, which are not a part of the general maneuvers. In the medical maneuvers an attempt is made to give as good an

imitation of war as possible; the various field stations are established, and men are collected and carried back to them just as if they were wounded. It is believed by the Japanese that in the recent war such maneuvers have proved their value for the training of the subordinate medical personnel.

In war a good part of the nursing service of the Japanese army is still performed by civilian employees; the volunteer civilian nurse is termed kanbionin. They are found both in the grades of noncommissioned officers and privates (assimilated rank). There is, of course, no large body of trained civilian nurses in Japan, and the great majority of employees are necessarily taught after being hired for the army. They perform such duties as they are able from the moment of their employment, undergoing instruction at the same time. The duration of this instruction naturally varies with the different grades, but, in general terms, may be said to be from one to four months.

Chief nurses and nurses may be employed with troops and with any of the medical department organizations. It is customary to have at least one chief nurse with each medical department organization in order that he may regulate the administration under the surgeon. Kangosotsu may be employed anywhere with medical department organizations, except at the front, where they are only used with field hospitals, which have a large number. Civilians are utilized only at the base and on the lines of communication. A great number of chief nurses, nurses, and assistant nurses have necessarily came from the reserve in the recent war. Such men were employed with the same organizations as were those from the active list.

In addition to civilians hired for duties in connection with administration and nursing, many others were employed in Japan for the various positions in a hospital not connected therewith, such, for example, as mechanics, laborers, boys, etc. Under the Japanese system a free rein is given to the employment of coolies, and in Japan many such have been in service, as has also been the case in China, the Chinese being used there.

While civilian nurses were, as a rule, wholly untrained when they entered the service, men for such positions could

generally be obtained in Japan in any required number, and the Japanese regulations permitting their free employment, when needed, proved of the greatest value to the medical department. The same may be said in reference to the employment of civilian personnel for the less technical duties connected with medical department organizations. This allowed soldiers, nurses, and civilians instructed in nursing to be used exclusively in positions for which special training was needed. In Manchuria shortages were not allowed to occur at the front, but at times the Japanese did not have enough soldier nurses available for the lines of communication. This was remedied in the latter part of the war by allowing civilian employees to be sent to Manchuria in greater numbers.

*Equipment of conscript force.*—The equipment of chief nurses and nurses in the field is similar to that of the infantry, without firearms, ammunition, intrenching tools, and bags for sand. Both carry the bayonet, slung in a sheath at the side. A pouch is also provided for each medical department soldier. These differ for the chief nurses and nurses. Chief nurses also carry a brass receptacle for boiled water. This is oblong in shape and is placed in a leather case, much like the cartridge box, and is hung from the belt to the rear. In addition, a few articles are carried in the knapsack. With the Japanese cavalry, sanitary soldiers use the cavalry equipment and their own equipment, as given above. Sanitary soldiers are not mounted, except with the cavalry.

The Japanese authorities state their battle losses in medical personnel for the entire war to have been as follows:

| | Killed. | Wounded. | Total. |
|---|---|---|---|
| Officers | 19 | 104 | 123 |
| Soldiers | | | 450 |
| Total | | | 573 |

Thus 2.5 per cent of the 4,517 medical officers who took part in the campaign were killed or wounded. This would give a rate of something like 10 per cent of casualties among the surgeons who actually served at the front and a much higher one among those who were on duty with the infantry,

which suffered more from the fire of the enemy than any other branch of the service.

It is not thought that the Japanese here take account in their battle casualties among soldiers of any except those serving as nurses or chief nurses, so if other soldiers on duty with the medical department were included the medical department losses would be much increased.

### OTHER OFFICERS AND SOLDIERS EMPLOYED WITH THE MEDICAL DEPARTMENT.

Officers from the line or train command a few of the medical department field organizations, under the direction of division or line of communication chief surgeons, as the case may be. Line and train soldiers, under line, train, or medical officers, are also found in several such organizations. A few words will therefore be said here in reference to the position, training, etc., of such officers and soldiers, though minute description and discussion of the medical department organizations in question will be postponed till later in the report.

*Sanitary companies.*—Sanitary companies have a comparatively large number of line and train officers and soldiers. Their commanders and the commanders of their two litter bearer companies usually come from the infantry, though sometimes they are taken from the train. The question of the detail of line officers to the sanitary company is rather a different one from that of putting them with the other medical department field organizations where they are found, as with the former, the Japanese believe that a line officer, from his superior knowledge of tactics, will be better able to choose locations for dressing stations, and there are no tactical problems in connection with the latter. So far as could be observed, there was absolutely no tendency to detail line officers with the sanitary companies who were not equal to other line officers in military ability; in fact, such officers might come directly from a battalion on the firing line to a sanitary company, or vice versa. However, if any tactical knowledge was required in locating dressing stations it was hardly manifest, though a military genius could probably only have jammed them into the nearest

practicable Chinese village to the front, without reference to artillery positions. Moreover, in practice, division surgeons usually gave such close directions in regard to where dressing stations were needed that little opportunity for a choice of site was permitted their commanders. The only special instruction in peace which the commanders and the other line or train officers with such companies can have in regard to them is at maneuvers, as such companies are only formed then. It is hardly probable, of course, that officers with such companies, in war, would have ever been attached to them at maneuvers.

The regulations for training litter companies were promulgated in War Act 40, March 28, 1896. The object, as stated in that act, is to show certain soldiers how to carry wounded in the battlefield. It provides, moreover, that noncommissioned officers and privates of infantry and artillery will receive the necessary training. The number of soldiers to be trained each year is as follows: In an infantry regiment, one sergeant or corporal for a regiment, one lance corporal for a battalion, two privates and a trumpeter for a company; in an artillery regiment, a sergeant or a corporal for a regiment or an independent battalion, a lance corporal for a battalion, and a private for a company. The order requires that brave and strong men be chosen; the selection of noncommissioned officers is left to the regimental and battalion commanders, and of privates to the company commanders. As a rule, good men are chosen for litter-bearer companies, but not the best, as they naturally are wanted for noncommissioned officers of regiments. The instructors are appointed by the regimental commander. The following subjects are taught: Simple anatomy, general treatment of wounded, artificial respiration, how to check hemorrhage, dressing wounds, organization of litter company and drill of litter company. The duration of the training is from two to three months, and it is completed every year before the first inspection. Men taken for training are excused from guard and some other duties, and if it is necessary for any man to be relieved from the instruction, his place is filled as soon as possible. The regimental commander makes an inspection at the end of the instruction and gives certificates

to those qualified, reporting their names to the division commander. Afterwards occasional practice is indulged in for soldiers so trained. A lieutenant-surgeon or second lieutenant-surgeon and one or two chief nurses act as instructors, and examiners at the conclusion of the work, reporting the results to the senior surgeon of the regiment, who is responsible for superintending the training. As with Japanese instruction and drill generally, several hours, both morning and afternoon, are devoted to this work. After litter company soldiers pass into the reserve they are called out for maneuvers, together with those training in the active service, but it is not customary to so call artillerymen. The chief surgeon of the division is required to inspect and to criticise the service of the litter companies during maneuvers and to report on it at their conclusion to his division commander and to the Chief of the Bureau of Medical Affairs of the War Department.

There is no doubt but that the methods pursued by the Japanese in selecting these men result in a sturdy body of soldiers, who are competent to carry wounded for long distances. They are also from the fighting class and willingly undergo great dangers in collecting patients from the field, though in this latter particular they are not superior to the nurses, who, in fact, actually come from the same class. Their training in aiding the wounded is not nearly as good as that of the nurses, to whom, in practice, they leave almost everything except the actual bearer duties. In the recent war it was not possible to secure all the men required for litter companies from those who had received instruction, while in the active army, and some absolutely untrained men were taken, and extra litter bearers were added, at least in the Second Army, by the detail of train soldiers. Neither does it appear that the Japanese utilized their opportunities during the war for training litter bearers as fully as might have been done.

The equipment of such soldiers corresponds to that of the infantry, without the rifle, etc. Dressing pouches, of a model similar to the nurses' pouches, are carried by the bearers.

*Company bearers.*—Company bearers are selected, as a rule, from men on the active list who have had the training

above specified. This was not absolute, however; some untrained men were used for company bearers in the artillery and infantry, and they were also detailed in organizations for which they were not provided under the regulations. The supposed difficulty of obtaining company bearers during an action, on account of the unwillingness of company commander to permit such men to leave the firing line, was not apparent in the Japanese army. It would be preposterous to believe, of course, that a company commander would take company bearers out of a fight when, in his opinion, their services were absolutely necessary there, but the Japanese certainly desired to get the wounded back and out of sight of the other men as quickly as possible, and almost universally advantage was taken of the services of the company bearers to accomplish this.

*Department for transporting patients and division medical supply depots.*—The two other medical department organizations where both officers and men of the line were regularly employed were the department for transporting patients and the division medical supply depots. In the former, when reserve officers were used, they were of the younger class and were active in the performance of their duties. Greater difficulties were experienced in the division supply depots, where a number of the old reserve officers who were in command did not always sufficiently appreciate the necessity of expedition in supplying the front, moreover some of these officers had passed the active age required for such positions. The men employed in these two organizations and some of those in the sanitary companies were train soldiers, without medical department instruction, nor did their duties require such training. The field hospitals and the Sanitary Reserve Personnel also have soldiers of the train, who serve under the command of the medical officers in charge.

In some of the battles of the war the number of wounded at certain points was so great that the medical department was unable to remove them, and regimental or brigade commanders sent whole companies, under their own officers, to collect and to carry them to places of comparative safety.

While the greatest harmony always apparently prevailed between the line officers in command of the medical department units and the medical officers subordinate to them, and

the other medical officers of high rank, who directed their operations, there is little doubt but that the Japanese would have preferred to have had medical officers, if they had been available, for commanders of the department for transporting patients and for the division medical supply depots. As has already been stated, the tactical questions in the location of dressing stations put the sanitary companies on a different footing, and these seem so much more important to the Japanese than they do to an observer that it is hardly probable that they would put medical officers in command of these units even if they could obtain them as easily as they can line officers.

### INTENDANCE DEPARTMENT IN ITS RELATION TO THE MEDICAL DEPARTMENT.

Officers of the intendance department and their assistants, who are noncommissioned officers of the same department, perform an important rôle in the medical organizations of the Japanese army. Intendance officers are assigned to nearly every medical organization, where they purchase food, medicines, instruments, etc., hire transportation, and pay personnel and patients. All this is done under the orders of the medical officer in charge of the special organization concerned, who himself estimates for the money required for the various purposes and only gives it to the intendance officer as needed for current disbursements. This method serves to take a great deal of the burden of administration from the shoulders of medical officers, as intendance officers keep all the money accounts and procure the supplies, examining them on receipt to find there are no shortages in delivery. In the field intendance officers were constantly busy procuring food, and went long distances to make purchases when such articles could not be bought locally. The regiments even have intendance officers so that in emergency medical supplies may be purchased, with the approval of the regimental commander. It should be noted that intendance officers only act as purchasing agents and do not at all dictate what the purchases shall be, this devolves wholly on the medical officer in charge of an organization, who also determines whether the quality of medical supplies, food, etc., is satis-

factory. Troops are paid every ten days in the Japanese army, and patients in hospital usually bring a certificate from the regiment, giving their last date of payment, so there is no delay in giving them their money. When men return to their regiments, or rather divisions, from a hospital, if railway fare is involved, this is furnished by the hospital intendance officer. The officers of the intendance department assigned to medical department organizations nearly always belonged to the reserve, and were frequently business men in civil life. It is believed that the intendance department was well qualified to perform the duties which fell to its share with the medical department. Certainly, having intendance officers at medical department organizations enabled the latter to conduct their own affairs without calling on other departments for assistance, and fixed responsibility as could have been done in no other way.

### DEPARTMENT OF COMMUNICATIONS AND TRANSPORTATION IN ITS RELATION TO THE MEDICAL DEPARTMENT.

The above-mentioned department has already been rather fully discussed in reference to the army as a whole; a few words will, therefore, suffice to describe its peculiar relations with the medical department.

At the beginning of the war, with regiments, battalions, batteries, squadrons, etc., transportation was furnished for all medical department personnel and their regulation supplies, which accompanied them. This was also the case with the medical department field organizations, so far as was practicable with the available sea transportation. It was not, however, always possible to send all such organizations with their divisions; for example, at Nanshan, there was some shortage in the field hospitals of the Second Army. This was very soon remedied. In rail or sea transportation, a medical department organization was never split up, nor was it separated from its regulation supplies. This was the case at the beginning of the war as well as afterwards, when new organizations were sent out.

Medical personnel, sent to Manchuria during the course of the war, either to fill "death holes," as the Japanese call vacancies caused by casualties at the front, or for the lines of

communication, were forwarded from their divisions to one of the points of embarkation, usually Ujina, and thence were transported to Manchuria, either by transport, or by hospital ship, when it was necessary to relieve pressure for accommodation on the former. Medical supplies for Manchuria were turned over for shipment to the department of communications and transportation, which brought them to Ujina or Moji by rail and placed them in separate storehouses, afterwards promptly consigning them to the Manchurian storehouse, by transport, not by hospital ships, whence they went by rail and cart transport to the branches of this storehouse and finally to the army storehouses.

Besides the duties of this department in connection with transportation of medical department personnel and materiel it also furnished trains and ships for patients. As these are of more interest in connection with the latter department, their detailed description will be postponed for the present.

Under such an organization as the Japanese, the medical department is made absolutely responsible for everything in connection with the care of sick and wounded as far as possible; in fact, the only other department on which it must depend for aid to any extent, outside of its own organizations, is the department for communications and transportation. Fortunately for the army as a whole and for the medical department as a part of it, the Japanese department of communications and transportation was thoroughly competent. The Japanese have not that familiarity with and ability in operating railroads that they manifest with ships, to be sure, but they managed to run their railroads sufficiently well to get up their personnel and supplies promptly, and their large fleet of instantly available subsidized ships proved wonderfully effective. There was very little confusion in shipping medical personnel and supplies, and there were no losses of such property, and it was not mixed with articles belonging to other departments. Neither was there apparently any shortage of medical supplies at the front on account of prior necessity of getting up food and ammunition. This was true even during the latter part of the war when the Japanese were compelled to work their single-track narrow-gauge railway, with small cars, to its utmost capacity.

## VOLUNTARY AID.

Voluntary aid is extremely well organized in Japan. In fact, the methods by which the energies and money of the people are utilized to advantage in this direction might be safely accepted as a model by any nation.

At the forefront of the organizations for aiding sick and wounded soldiers is the Red Cross Society of Japan, which is such a powerful organization that it hardly brooks competition in its own field.

The object of the Red Cross Society, as stated in its articles of association, is to care for the sick and wounded at the seat of war. It may also undertake the relief of injury or disease caused by natural catastrophies or other disasters. The fact that its primary aim is that of caring for sick and wounded soldiers in war should be noted. Nothing is allowed to interfere with this. General charitable work is not undertaken by the society, and what is accomplished in this direction is incidental, mainly as a means for training its personnel. Neither do public calamities play more than a secondary part with it. Relief work in them, according to a statement made by the Red Cross, is only undertaken, first, to respond to the humane wishes of its patron, Her Majesty the Empress; second, to exercise the relief staff of the society under difficult circumstances; and third, to utilize the occasion as a means of propaganda for Red Cross work and of making the inhabitants of the country take an active part in it. The society does not appropriate funds for the relief of distress in public calamities, but local sections, in case of need, are permitted to use their personnel and supplies temporarily, being enjoined to see that this does not interfere with the real service in time of war. Aid in such cases is administered through the relief corps of the society, entirely at the expense of the local sections concerned.

The origin of the Red Cross Society was in the "Society of Benevolence," founded during the civil war in Kagoshima in 1877. The Government having subscribed to the Geneva Convention in 1886, the society connected itself with the International Society of the Red Cross at Geneva, changed its name to "The Red Cross Society of Japan," revised its regulations, and in 1887 participated in the "International Con-

ference of the Red Cross." During this same year a plan for participation in war was arranged with the Minister of War, and a beginning was made in collecting necessary funds for this purpose. Not much was accomplished, however, until the Chinese-Japanese war, when the aid given the army medical department by the Red Cross met with imperial and popular approval, and the number of members, and coincidently the funds, increased rapidly. After the war there was no pause in this, and in 1904 the society had over 900,000 members, nearly one forty-fifth of the entire population; the last publication of the Red Cross gives the number of members as 1,035,000. The total income for 1903 was more than 2,965,300 yen, and early in the war the capital was reported to be 8,418,018 yen.

Under the new civil code of Japan, promulgated in 1898, a legal status was given the organization, which is now incorporated as a juridical person under that code. "It is under the special patronage of their Majesties, the Emperor and Empress, and has as its honorary president a Prince of the Imperial Family, who is accustomed to take an active part in promoting its interests."

The members of the society are of three classes, viz: Honorary, special, and regular. The government is vested in a standing council, which is composed of thirty counselors elected by a general assembly of the members resident in Tokyo; the names of those elected must be approved by the Emperor. The affairs of the society are taken charge of by eight to ten managers, who are elected by the standing council from its own members. One such manager is elected president and two, vice-presidents. The Emperor also approves the names of these officers and those of the managers.

The standing council meets monthly, or oftener, to discuss and to decide upon society affairs; the execution of their decisions is left to the managers. The president directs the general affairs of the society, appoints commissioners, and engages employees. He presides at the general meeting and at the meetings of the council. The vice-presidents assist the president and take his place in the event of his disability.

Three controllers are elected by the general assembly and are approved by the Emperor. They keep watch on the

finances of the society and report to the general assembly if they find anything wrong.

" Besides the headquarters in Tokyo, in Hokkaido, the 47 prefectures and Formosa are instituted local sections, whose personnel consists partly of the officials of the local governments and partly of the functionaries ad hoc of the society. They are assisted in their work by a council composed of members who are influential citizens in the locality. The bureaus are established either in a portion of the local government office itself or in separate buildings belonging to the society. In the cities and districts, or subdivisions of the prefectures, there are instituted local committees, and the mayors are nominated their chiefs, just as the prefectural governors are nominated chiefs of the local sections. The cordial support of the Government has thus enabled the society to make use of the Government machinery for the completion of its organization. This fact has been a great factor in the rapid growth, the prestige, and the effectual building up of the society."

While the society is actually governed by its standing council, its acts are subject to the approval of three of the cabinet ministers. " They are subject to the approval of the Minister of the Imperial Household in order that they may conform to the wishes of the society's Imperial patrons, and they must be passed upon by the Ministers of War and sometimes of the Navy in order that they may be consistent with the needs of the public service.

" The military control over the society is exercised by the Chief of the Medical Bureau of the War Department. To render this effective, a staff officer and an army surgeon are detailed as counselors of the society By such an arrangement the proper spheres of the official medical corps and that of the society are clearly demarked, homogeneity of methods and materials is secured, and good understanding and harmonious cooperation are vouchsafed.

" Noteworthy points about the Japanese Red Cross organization are its very high degree of centralization and its close relations with and willing and unquestioning subjection of all matters of policy to the views of the Government department with which it collaborates."

In time of peace the Red Cross organization is principally occupied in gaining new members, collecting funds, and, of great importance, in training its working personnel. The working personnel of the society consists of administrators, managers, clerks, chief physicians, physicians, pharmacists, women chief nurses, women nurses, men chief attendants, men attendants, and stretcher bearers. Special regulations now govern the recruitment of this relief staff. These require all applicants to be of good physique, to be exempt from military service, to be of good moral character, etc. As the administrators are appointed on the outbreak of war or of political disturbance, no special qualifications are fixed for them beforehand. Special qualifications are required, however, for all the other positions. Persons appointed become the reserve physicians, attendants, etc., of the society. Each is required to take a vow, a solemn oath, to keep himself or herself for a fixed number of years, different in the various classes, ready to respond at any time for service with the society in time of war, political disturbance, or for instruction in maneuvers, etc. The number of years over which the vow extends differs with the position. It may be extended on expiration, if the physical condition of the applicant warrants this. If the age limit be reached before the vow period is over the individual is dismissed, unless, on physical examination, he is found capable of further service. During the continuance of a war or a political disturbance a person may be held by the society even if the period of his vow has expired. For keeping the vow, independent of any service rendered, the managers, physicians, pharmacists, attendants, and stretcher bearers in reserve receive small detention fees. The chief nurses and nurses receive nothing, as they have a fine field for employment on account of their training, which has been a great expense to the society.

Whenever members of the reserve personnel, under vow, are called to render service in time of war, etc., or are summoned for maneuvers or instruction, they receive a fixed amount, the so-called " departure money," and their expenses for traveling, besides the salary, which is much better than that paid to members of the Army medical service. Length of service and difficult service both command additions to

salary, and pensions are paid for illness contracted or wounds received in consequence of service.

No technical training is given administrators, managers, and clerks, as they do not require it, nor do pharmacists receive any, as the number required is so small that they are easily obtained from professional druggists.

In the case of physicians, the society makes a contract with some of the students of the imperial universities and pays the expense of their education on condition that they becomes reserve physicians of the society on graduation. Then they are usually attached to the central hospital of the society, where they are required to practice under the supervision of Baron Doctor Kashimito. After a certain number of years some of these physicians are sent to Europe to perfect their studies. A great many physicians are, however, obtained after graduation from schools other than the imperial universities and from licentiates of the Home Department. This latter class has a special course of lectures which are given from time to time, usually in the central hospital of the society. The president nominates chief physicians from among the reserve physicians.

Candidates for nurses are taken from women between the ages of 17 and 30, who become, after an elementary mental examination and a physical examination, student nurses of the headquarters or of a local section. They have three years' training, either in the hospitals of the society, where such exist, or by a specially instituted training board. Local sections, at their own expense, are permitted to intrust the education of their student nurses to the hospital of the society, or even to private hospitals. A small fee is paid each student nurse, and uniforms and other articles are loaned to them. Those passing the examination, at the termination of their three years' course, are taken up at once as reserve nurses of the society under vow. Six months' supplementary training for the better prepared of these nurses is required in the central hospital of the society to fit them for chief nurses. During the period of peace the nurses accept private employment. To regulate this a board is in existence at the central hospital in Tokyo.

Candidates for attendants come from men between the ages of 20 and 34, who undergo an examination similar to

that for nurses. They have but ten months' training, which is given at the same places above noted for nurses. They also have an allowance, slightly higher than that for nurses, and the uniforms, etc. Their last five months are spent in practical exercises in army hospitals. This is considered very important, as it gives them an idea of military discipline and of the organization of the army medical service. They, like the nurses, on passing the final examination successfully, are appointed under vow. The more competent are fitted for chief attendants by two months' more instruction in the central hospital. It is believed that, as attendants find little employment after graduation, they must be given frequent exercise in maneuvers, relief service in case of public calamity, etc.

Candidates for stretcher bearers must have been trained as bearers when infantry soldiers or if such men can not be procured in sufficient numbers, must at least have been infantry soldiers. Each must be below 37 years of age and must have the guaranty of two persons for his good conduct. Their selection depends upon their physical fitness. They receive three months' training in transporting sick and wounded and in making ropes, stretchers, etc., which it may be necessary to use in connection with their service. All stretcher-bearer students are now trained at the headquarters of the society, where they receive a small amount of money, uniform, etc. On completion of their three months' training course, they may go directly into the reserve or may take a supplementary course, in the case of those best qualified, to fit them for chief stretcher bearers, then going into the reserve. The society complains that, as stretcher bearers find little employment as such outside the society, it is difficult to recruit them.

"In time of war the president is empowered to change or shorten the time of training fixed for the nurses, attendants, and stretcher bearers."

In order to complete the education of the Red Cross personnel, the army permits it to take part in maneuvers. During these exercises the society or its local sections call out and send their relief staffs as in time of war, establishing hospitals on the lines of communication to receive patients and to care for those who have really been injured or suffered

from illness during the maneuvers. The chief medical officer on duty at the maneuvers criticises their conduct at the end of the exercises.

The entire working personnel of the society is divided into certain detachments, each of which pertains to the headquarters in Tokyo or to a local section. These relief corps consist of the five following organizations: (1) Relief detachments; (2) transport columns; (3) hospital ships; (4) rest stations; (5) depots of supply.

The relief detachments have for their purpose the giving of assistance to the army medical staff of hospitals, either at home or on the lines of communication. The standard adopted for the personnel is that considered sufficient for 100 patients, and is as follows: Two physicians, 1 pharmacist, 1 clerk, 2 chief nurses (or chief attendants), 20 nurses (or attendants). In 1904 there were 112 such detachments for the army and 4 for the navy. Of the former, 94 were formed with nurses and 18 with attendants. It was planned to use nurses at home and attendants on the lines of communication.

The transport columns, of which there were but 3 in 1904, are organized for transporting 30 patients in a specially serious condition who will require medical treatment during the period of transportation. Each column is formed as follows: One manager, 1 physician, 1 clerk, 2 chief attendants, 2 chief stretcher bearers, 3 attendants, 150 stretcher bearers.

The next organization is that of hospital ships. While the Red Cross Society has only two such ships capable of carrying 200 patients each, they intend to construct two more, each for 100 patients, and so have organizations for these as well as for the two ships now owned by them.

The organization for a hospital ship for 200 patients is as follows: One manager, 4 physicians, including 1 chief physician, 1 pharmacist, 2 clerks, 2 assistant pharmacists, 2 chief nurses, 2 chief attendants, 20 nurses, 20 attendants.

The hospital ship for 100 patients has the following personnel: One manager, 3 physicians, including 1 chief physician, 1 pharmacist, 1 clerk, 1 assistant pharmacist, 1 chief nurse, 1 chief attendant, 10 nurses, 10 attendants.

In case of war a mechanic, an interpreter, a barber, and a washerman may be added to the personnel of each class of ship.

The fourth organization is that of the rest station. It is intended that these be located at ports of disembarkation and at railway stations between the ports and the hospitals at home. They alleviate the suffering and fatigue of patients by affording them rest and refreshment, and also medical treatment in case of need. The president of the society, with the approval of the Minister of War, fixes the foods, drinks, etc., to be offered to patients, but the local section of the place where the rest station is situated determines its organization and supplies such physicians, clerks, nurses, etc., as may be necessary.

The fifth and last relief corps is termed the depot of supply. It is intended to establish this on the lines of communication where the supplies and contributed articles for the relief corps of the society on service on the lines of communication may be best received and distributed. Only one such depot is ready in time of peace, as it is thought that others may be formed at once on the outbreak of war. Its personnel consists of 1 manager, 1, pharmacist, 2 clerks.

While it is not the purpose of the Japanese Red Cross Society to furnish materiel to the extent that this is done in some other countries, yet a few supplies are furnished each relief corps, a fixed amount being established by a table. During peace these supplies are stored in godowns, both at the headquarters and at the local sections of the society.

In order that the relief corps may be promptly mobilized, the president of the society draws up two reports of all the preparations made for the coming year for the service of the society and presents them to the Ministers of War and of the Navy before the end of September of the previous year. On receiving the reports the ministers assign to such relief corps as are needed fixed services with the army and navy in case of war, and the relief corps to which definite positions in the system of mobilization have thus been allotted can not be used for any other purpose during the year.

Special regulations stipulating the way in which relief corps are to be mobilized in time of war or for the purpose of review, maneuvers, etc., are executed at the headquarters

and local sections, and orders are printed and stored, so that only the date, name, and time and place of formation of the relief corps have to be filled in before dispatch. A separate list is also made of the distances to the residences of the different members of the corps, so it may be known how many hours are required for orders to reach them. On receipt of such orders they must acknowledge receipt of the summons and whether they can respond to the call. In case they are prevented from doing so by illness, this answer will be accompanied by a physician's certificate. Members responding to a call are subjected to a physical examination and, if found incapable of service, are immediately sent home.

In time of peace the Red Cross Society maintains its central office in Tokyo and its local branches. It has also a large permanent central hospital at the capital, three small permanent hospitals at Nagano, Miya, and Shiga, respectively, and a large administration building and land for a hospital at Hiroshima. It is intended to establish other hospitals. As the primary object of the society is not charity, but the aid of sick and wounded in war, while some charity patients are taken in its hospitals during peace, payment is required from the majority.

As stated above, the society owns two hospital ships. These boats were built on the Clyde, their construction being completed in December, 1898. The plan of construction was determined upon by a technical committee, of which the directors of the medical service of the army and navy were members. Their building was confided to the Nippon Yusen Kaisha, which bought them from the society, the terms of the sale requiring that, whenever the society needed them, they should be placed at its disposal without delay. Thirty days are allowed to transform them into hospital ships in ordinary times, but only seven days in war. While in use by the society, the company receives the same price per ton as is paid by the Government for ships taken by it.

In time of war the Red Cross is only employed by the order of the War Minister, the necessary number being selected by the Inspector-General of Field Sanitation, who directs them as far as the performance of their duties is concerned. They are, however, under military discipline and command, being under the orders of the commander in chief of the

lines of communication, division, etc., as the case may be. It is not intended that Red Cross personnel be employed at the front, and, as far as known, they have never been so employed during the recent war. Their duties are confined to the lines of communication and to home service. In time of war, the regulations provide that the general administrator of the society shall be stationed at Imperial Headquarters, and will direct the relief service of all the relief corps sent out on the several lines of communication. This direction is exercised through administrators on these lines of communication. The general administrator oversees the work, fills vacancies, and attend to the pay and allowances of the personnel on the lines of communication. The administrators supervise the work, each on his own lines of communication. As a matter of fact, in time of war the Red Cross Society is practically merged into the army medical department, and its personnel is used just as that of the latter department. The administrators only attend to the pay and allowances of their personnel and supply their wants. The Central Hospital in Tokyo in time of war becomes a branch of the reserve hospital, and Red Cross personnel is only found alone on the two hospital ships belonging to the society.

The report of the Red Cross Society, presented at the Universal Exposition, St. Louis, in 1904, gave its then strength as follows:

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|---|---|
| Administrators | 5 |
| Clerks | 87 |
| Physicians, including chief physicians | 314 |
| Pharmacists | 124 |
| Assistant pharmacists | 5 |
| Chief nurses | 156 |
| Nurses | 1,677 |
| Chief attendants | 55 |
| Attendants | 713 |
| Stretcher bearers | 150 |
| The number then under training was: | |
| Nurses | 558 |
| Attendants | 4 |
| Total | 3,848 |

The work done by the Red Cross Society in the Russo-Japanese war has been described in two reports published by

that body. As the latter of these covers the period till September, 1905, they practically give an account of the entire war. "The two hospital ships were made ready for service as soon as instructions were received from the army, the names of the vessels being intimated to Russia by the authorities, in accordance with the rules of the Hague Convention. The *Hakuai Maru* sailed from Ujina on the 21st of February, 1904, and the *Kosai Maru* on the 25th of the same month. Since then both have been engaged in the transportation of patients between the different ports in Korea and Manchuria and Japan. The Central Hospital in Tokyo, on the outbreak of war, was immediately appropriated to the use of the army as a branch hospital of the Tokyo Military Reserve Hospital. Many additional structures, principally wards, have been erected for the former since the outbreak of war. At Hiroshina the land owned by the society has been put at the disposal of the army, which has erected a temporary hospital on its site. Seventy-eight relief detachments have been dispatched to the naval and military hospitals at home, and 32 have been sent to Korea and Manchuria. Nearly all of these have served with the army. In addition, 38 relief detachments have been assigned for service to the hospital ships owned by the army. One depot of supply has been established on the lines of communication, and one transport column has been located on these same lines. In addition to these institutions, 13 agencies at home and 1 at the front have been organized in order to facilitate the management of the relief detachments, numbering 152 in all, and of the relief stations established at ports and railroad stations." These stations have had as their working personnel members of branches of the society and surgeons, nurses, and members of the Ladies' Volunteer Nursing Association, to be spoken of later.

The society reports that it has sent out more than 4,700 nurses, both male and female, from which personnel, with the necessary additions to complete them, five relief detachments have served wholly in Russian prisoners' hospitals and stations. The approximate amount of the expenses for Red Cross work up to the end of the year 1905 is estimated at 5,150,000 yen.

In the recent war sister societies contributed both money and personnel to the Red Cross. The Red Cross Society of Germany, with the permission of the Japanese Government, sent out two eminent surgeons and a nurse, who, from March, 1905, till October of the same year, conducted a military hospital in Sendagaya, Tokyo. A party of American nurses, under Mrs. McGee, was utilized from May to October, 1904, principally at Hiroshima, but also on hospital ships and at Matsuyama and in Korea. A Mrs. Richardson, an English lady, also did some work, mainly in the Tokyo and Hiroshima hospitals.

In 1887 the Ladies' Volunteer Nursing Association of the Red Cross Society of Japan was established, which, under its constitution, is attached to the Japanese Red Cross and is under its supervision and protection. At the end of the war this association had 41 branches, which, together with the headquarters, numbered nearly 10,000 members, including princesses, the wives of the nobility and of diplomatic staffs, and other distinguished ladies. Many of these ladies, including some of the princesses, have studied nursing. In time of war they make bandages and caps for patients, furnish part of the personnel at relief stations, visit hospitals, help patients to write to their families, and distribute books, magazines, etc., which they have collected. They may actually nurse the sick, if necessary, and may afford them aid in various other ways. The greatest work of the ladies' association has been to raise the position of the Red Cross nurses by making the dignity of their work appreciated. "The traditional position of women in Japan left a considerable prejudice to be overcome in this respect. The patronage of the Empress and the cooperation of the committee of ladies have been the means of bringing about the good results achieved in this direction." The army authorities believe that the voluntary services of the lady members of this association have much improved the morale and discipline of the hospitals generally.

Undoubtedly it has already been noted that the Japanese Red Cross Society, contrary to the custom in some other countries, devotes itself mainly to providing personnel and not materiel. Whether such exclusive attention to personnel

would be desirable in all other nations may, of course, be questioned. The point is, however, that the Japanese Red Cross learned from the army what it would need and went systematically to work to furnish this, and not something else which might or might not be useful.

There is no doubt but that the carefully thought-out organization of the Japanese Red Cross Society proved of incalculable value to the army medical department in the Japanese-Russian war. Consider for a moment the primary requirements of a voluntary aid society to render it most efficient in affording aid to sick and wounded in time of war, and it will be seen that the Japanese Society of the Red Cross had such requisites inherent in its organization and administration.

1. A society for voluntary aid for sick and wounded must be so administered as to gain and retain the confidence of its members and the public generally, or funds will not be forthcoming, and the vast sums required for it will not be on hand.

2. A society must be imbued with the highest spirit of humanity—so high that in the accomplishment of its primary object it must be willing to sink petty jealousies.

3. A society must recognize that a special department is made responsible by law and regulations for the aid of sick and wounded, and its patriotism must be such that its efforts will be directed to the assistance of that department and not to a separate administration, which, while perhaps more satisfactory to the fancied dignity of individuals in a society, has never failed in practice to result in overlapping of effort, surplus at one point and deficiency at another, and extravagance.

4. A society must have on its board of governors or in another responsible position representation from the army which is empowered authoritatively to indicate the direction which training of personnel should take and what materiel should be collected.

5. A society must make arrangements for the training of personnel on lines which will make it effective for army use.

6. An army medical department must know, in the event of war, what aid in the way of personnel and materiel a society is ready to supply.

7. A society must know what will be done with its personnel, in order that it may be instantly dispatched on mobilization.

8. The services of personnel with an army must fuse with the existing organization of the medical department of that army or confusion will result.

9. The personnel, while in the service of the army, must be under military discipline and command.

Several societies were also established during the war for the relief of soldiers' families and for like purposes. The principal one was the Ladies' Patriotic Association, of which Prince Kania was the head. It was an excellent organization, but its discussion is hardly believed to be within the purposes of this report.

While voluntary aid for sick and wounded soldiers, so far as societies were concerned, was practically confined to the Red Cross and to its Ladies' Association, naturally, in a contest so near the hearts of a whole people in its objects as the recent one, much voluntary aid was offered individually. A number of university professors, court physicians, and ordinary practitioners of medicine volunteered their services to the Minister of War and these were sometimes accepted. Civilian practitioners were utilized almost entirely in reserve hospitals, but some of the professors were sent to Manchuria for investigations in their special lines. They were treated as high civil officers. Under the law reasonable allowances are made to such volunteers while they are in the service, but some of them who were well to do refused to accept anything from the Government. The volunteers have all worked under the Chief of the Medical Bureau of the War Department. While their desire to assist their country in the hard trial through which it was passing is, of course, deserving of nothing but praise, their services can not be said to have been of any great value. To this statement an exception should be made in the case of some of the specialists, whose volunteering enabled the Government to secure the best material available in Japan for certain lines of work. The people generally also made many gifts to sick and wounded soldiers besides those sent through the Red Cross. Such presents, designed for Manchurian troops, were sent to the War

Department, which used its own discretion in reference to forwarding them. At home people in a division district not infrequent made gifts to their hospital. These were received and accounted for by the hospital director of the place in question, who usually placed them in a recreation room, where all patients might have access to them.

Some remarks have already been made on the ability manifested by the medical department of the Japanese army. This subject may now, therefore, be completed by discussing the professional ability displayed by this department as a whole, including its active and reserve lists, the Red Cross, and other voluntary aid. While, perhaps, no country has ever utilized so large a proportion of its medical talent in war as has Japan in her recent conflict, it can not be successfully maintained that such talent was of a very high order professionally. Japan is a young country, which still requires time to develop practitioners of medicine and surgery comparable in ability with those of other nations, in which study of these subjects has been the labor of many years. Full discussion of the practice of medicine and surgery will be found under the proper headings; the different conditions which obtained in regard to the practice of sanitation in the army have already been described.

In all places where Red Cross personnel was employed—that is, at reserve hospitals, at convalescent camps, on hospital ships, and at hospitals on the lines of communication—it fused so perfectly with the army medical department personnel that it was almost impossible to tell where one began and the other ended. However, the surgeons of the Red Cross, though many of them were said to be eminent practitioners in civil life, were only on a par professionally with the army medical officers. The Red Cross attendants were, perhaps, as a class, slightly better qualified for nursing duties than were the army attendants. The Japanese army has no woman nurse corps, all such nurses being supplied by the Red Cross. While their training does not compare favorably with that of women nurses in America, they are much better qualified than are other nurses in Japan. Their cheerful performance of duty, under the frequent discomfort from which they suffered, is to be commended, as is also their

general willingness to make themselves useful in necessary tasks, which were not, in all instances, strictly connected with nursing. At home, in war, practically all scientific nursing devolves on these women. Formerly they were not permitted to care for cases of contagious disease, as, until the passage of a recent law, there was no provision for pension to their families in the event of their death. They are now found employed in the contagious disease wards and in those containing the most serious cases of illness and injury, as well as in the operating rooms, where, under direction of the surgeons, they do everything except operations, dressings, and the rougher police work. No women nurses were permitted in Manchuria, as the Japanese deemed this impracticable on moral grounds.

Since the close of the Russo-Japanese war the Japanese authorities have made the following official statement in reference to medical personnel employed by them during that conflict:

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| Army: | |
| Medical officers | 4,517 |
| Apothecary officers | 639 |
| Sanitary soldiers | 33,753 |
| Red Cross | 5,470 |
| Professors, etc., volunteers | 239 |
| Foreign surgeons | 2 |
| Sister of charity | 1 |
| Total | 44,621 |

The total number of surgeons was 5,131. Members of the Ladies' Aid Association are not included.

Unfortunately this statement does not answer some important questions, as it is not known what the Japanese include under the term "sanitary soldiers." It is thought, however, that only conscripts and civilians employed as nurses and chief nurses are represented here, and that all soldiers of the intendance and train and all civilians not employed in duties connected with nursing are excluded. Obviously, if these were included, the number would be a much higher one. Moreover, none of the line, train, or intendance officers on duty with the medical department are shown in the table.