value to be attached to tuberculin. He says: "It cannot be doubted that the discovery of Koch is of high diagnostic value; also, all my colleagues agree with me, that, by Koch's observations, therapeutics are led into a new, and, as it appears, a fruitful route." He goes on to say that the therapeutic results have not borne out the high hopes he had had, but — "and this I must lay stress upon, it is probable that four months is too short a time in which to make a final judgment in the matter." The JOURNAL editorial closes in this way: "We sympathize as little now with those who are anxious to have the whole treatment thrown aside as utterly worthless, as we did previously with the ultra-enthusiasts who predicted that tuberculosis was soon to be a thing of the past."

Certainly no accurate knowledge of its action upon tuberculosis, as a whole, can be gained, except by the careful collation of statistics; and these statistics must have for their basis work thoroughly carried out in *all* the necessary branches of the investigation, with plenty of force to do it.

THE OTTAWA HOSPITAL OF THE SANTA FÉ RAILWAY EMPLOYEES' ASSOCIATION.

By GEORGE W. NASH, M.D. (HARV.), OTTAWA, KAN.

THIS railroad hospital is situated in Ottawa, Kan., on a branch of the Atchison, Topeka and Santa Fé Railroad, fifty-eight miles south-west of Kansas City, and is one of the newer hospitals belonging to the Association. Being situated at a junction point, and readily accessible to all the larger points on the line, the location is an admirable one. Patients come from the Santa Fé Territory immediately contiguous, in Missouri, Kansas and the Indian Territory; in addition also, under the system of transferring patients from one hospital to another, the hospital has had men from almost every portion of the Santa Fé system, — Iowa, Illinois, Texas, Colorado and California all having furnished patients. This transferring of patients is an excellent feature in the Association, as out of the number of hospitals, climatic conditions may be found for about every case. Patients are admitted for care and treatment for disease as well as accident, the Association guaranteeing this in accordance with the plan of assessment. Since the opening of the hospital, June 1, 1889, up to date (April 20, 1891), there have been admitted 520 patients, the average being here about two medical cases to one surgical case. The medical cases under treatment are mostly acute troubles, although chronic diseases, as consumption, rheumatism and the like, are not excluded; of medical cases, typhoid fever claims by far the larger number. The surgical cases are of various kinds, and mostly due to the nature of the occupation of the patients, whether in the shops as day laborer or in train service.

There have been eleven deaths: one from septicaemia due to extensive laceration of the knee-joint (no operation allowed); one from shock and exhaustion, due to very extensive laceration of entire arm (no operation allowed); one from syphilis; one from pyo-pneumothorax; one gastric cancer; one from rheumatism; four from typhoid fever; and one from peritonitis.

When the nature and condition of the patients is taken into consideration, consisting of all classes and

nationalities and representing all classes of employees, some being constantly exposed even in inclement weather, we think the mortality record is a very favorable one. For burial purposes the Association allows a certain ample sum for the proper and decent burial of the employee; and the friends, if they wish more elaborate furnishings, make up the balance.

The patients are received on the recommendation of the local surgeon first treating the case, and on their arrival are given a bath, the exception to this being seldom found. Hospital clothing is furnished by the Association, and, in addition, for those who need them, undershirts, drawers, socks, overalls, flannel coats and slippers are provided. As soon as a patient is admitted and the diagnosis made, his name is put on the diet list under its proper heading; "fever, sick, house diet, and house diet in bed" being those understood. A duplicate list is kept in the kitchen, so that an exact carrying out of orders is secured. The different dietaries are self-explanatory, although a few words may be said about them. Fever diet consists invariably of milk, egg-nog, beef tea and broths, and some of the different food preparations, as milk powder, Nestlé's food, and the like; sick diet includes, in addition, at meal times, soft boiled egg, dropped egg on toast, dry toast, chicken and bread and butter, although the matron exercises discretionary power in each individual case, on consultation with the surgeon. These two dietaries have special times, 7 and 10 A. M., 12 M., 2, 4, 6 and 8 P. M. Naturally, in special cases, special times for giving nourishment are ordered. No rations are issued, each patient having all he may desire of the dietary ordered for him.

A bath-room is furnished specially for patients, and can be used at any and all times, no restriction as to its use existing. Patients' clothing is laundered for them in the hospital laundry; and at their departure care is taken that the patients are not obliged to carry any soiled clothing away with them. A Chinaman is employed, and it is found that he can manage all the washing needed in the hospital: ward and patients' clothing are washed on Monday, and returned Tuesday ready for use; house clothing and that belonging to the hospital employees are washed Wednesday, being delivered Friday. The laundry being fitted with a good dryer, drying the clothes can always be done in stormy weather, although sun and air drying is insisted upon as far as possible.

The care and cleanliness of the building is scrupulously maintained. The wash-room, water-closets, patients' sitting-room, and all halls are carefully cleaned daily; the ward floors are carefully cleaned with soap and water every alternate day, and carefully swept the intermediate days. To avoid unnecessary dust in the daily sweeping, parlor brooms are used, a soft damp cloth being pinned over the brush; in this way the sweeping is done with absolutely no dust. Dusting is also done with damp cloths, wiping being a more accurate term, feather dusters being tabooed as abominations. Beds, woodwork, chairs, tables and the more inaccessible parts of the rooms, are cleaned with soap and water, weekly. In addition, once a year all the walls are carefully scrubbed with plenty of soap and water, with a liberal addition of carbolic acid or corrosive sublimate. Good ventilation is continually maintained, fresh air always entering the wards, — through open windows in summer, and in winter through ventilators over hot pipes. If a man feels chilly, put on

* Von Jaksch: Deutsch. Med. Woch., April 16, 1891, p. 583.

more blankets, and not rush to close every ingress of fresh air, being the rule and observance. All litter, sweepings, lint and dressings are burned up in the boiler fires, as fast as gathered. The ward tables are kept as neat and tidy as possible, being simply used for what necessary articles a patient must have, and are not catch-alls for food, fruit, medicine bottles (which have a special closet), articles of clothing, and what not.

There are ten employees all told, as follows: Surgeon. Matron, who has charge of the housekeeping, and also has an oversight in the care of the patients. Houseman or orderly, who does the daily heavy cleaning in winter, he takes care of the boilers during the day, and in summer cleans the numberless windows. Male nurse, whose duty varies; he sleeps in a small room adjoining the wards, ready for call by electric bell from the patients, or from an arriving patient, and in winters keeps up the fires during the night. If any case needs special attention, or when there is a run of sickness, he remains up all night, getting needed rest during the day in another part of the house. In the morning, if not thus busy, he empties spit-cups and urinals, throws back the bedding in use, and helps the patients dress. The care of the patient's wounds and injuries is done as early in the morning as possible, and he assists the surgeon in this as well as in his operations. During the day, he is ready to help in care of patients, as may be needed, and has always found time to maintain a nice vegetable garden. Two women nurses are employed, who go on duty at 5.30 A. M., and whose work ends when the patient's supper dishes are cleaned. They have two hours for change and recreation every alternate day. They sweep and prepare the wards and rooms for the houseman, dust rooms, and make the patient's beds. They have the care of the inmates all the time they are on duty. In addition a cook, kitchen-girl, chamber-maid and laundry-man are employed.

The hospital itself is on the cottage plan, consisting of the ward building and administration building, both connected by a corridor. The ward building is long, and has but one story, containing two large wards with a hall between, each having twenty beds. Between these wards, on one side of the hall, are a small ward of three beds, a baggage-room, a dining-room for patient, which is also a sitting-room; on the other side of the hall are a bath-room, wash-room and water-closets, entrance from administration building, and nurse's room, with pantry. There is an outside door from the dining-room, by which patients may go in and out. The baggage-room is for storing patient's clothing, having as many stalls as there are beds, and numbered to correspond, so each man may easily know where his own clothing is. This room is constantly kept cleaned and ventilated, and thoroughly fumigated with sulphur yearly. Besides the overhead ventilation, and that secured by windows and transoms, there is a ventilator under each bed, connecting with the main chimney.

The administration building is two stories and a half high, containing operating room, apothecary office and dining-room and the necessary store and sleeping rooms for the hospital employees.

There are seven acres of ground belonging to the hospital, with apple orchard and vegetable garden; benches are put around in convenient places for lounging and shade.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

G. G. SEARS, M.D., SECRETARY.

REGULAR Meeting, Monday, May 11, 1891, the President, DR. FREDERICK I. KNIGHT, in the chair.

DR. H. C. ERNST read a paper entitled

PRELIMINARY REPORT ON THE CLINICAL USE OF TUBERCULIN.¹

DR. E. H. BRADFORD: Of course, I can only give general impressions in regard to these cases, because I have left the matter of record and inoculation entirely to Dr. Ernst; and, as we know, Virchow has said that there is nothing so fallacious as the general impressions of medical men. I shall therefore be very scant with my general impressions. There were but two cases that I referred to Dr. Ernst where I could state that improvement followed, I mean improvement in the clinical sense. The one was a case of excision of the wrist which I did. The case did well after the excision, a slight sinus being left, however. I etherized him to curette the sinus, and also to remove the portion of the radius which had not been removed during the excision. It was removed as it was diseased, and on the recovery there was a deformity left. At the second operation I was enabled to examine the tissues very carefully, and I must frankly confess that it seemed to be thoroughly free from any granulation tissue or oedema such as one often sees from excision of tubercular tissue.

The other case is the one referred to by Dr. Ernst, where the patient has made a noticeable improvement in the general condition. I am inclined to think that the improvement may be due to the tuberculin, though I am not positive as to the matter, because the hip disease was not of a very severe form. In his statement he notes that the patient is now walking about with crutches. I think that should be amended, for the patient received permission to walk about with crutches at the time treatment was undertaken. The patient has improved markedly, however, in general condition since the injection of the tuberculin, and the ulceration of the cornea which had not yielded, has yielded entirely under this treatment, whether for that reason, or otherwise, I don't know.

In regard to the other cases I should state that there had been no marked change.

DR. BOLLES: Of the cases Dr. Ernst reported, four were more or less under my care. They were all of them peculiar cases and interesting on that account. One of them, a case of tuberculous disease of the joint had been operated on some months previously, and I think persistent sinuses had remained, sometimes one and sometimes two. This condition had been going on for three or four months without any perceptible change, when Dr. Ernst undertook the Koch treatment with him. During the continuance of that treatment the patient had very marked, and, I believe, typical reactions. The physical discomfort was greater than that of the others. The patient looked during the several weeks of treatment, if anything, more poorly than before it. The condition of the knee-joint was unchanged, excepting after the first and second injections there was a certain amount of increase of turbid fluid, and

¹ See page 5 of the Journal.