CANADIAN

OUT-DOOR LIFE.

A MAGAZINE DEVOTED TO THE GOSPEL OF OUT-DOOR LIFE IN THE TREATMENT OF TUBERCULOSIS, AND THE VALUE OF FRESH AIR AND HYGIENIC LIVING FOR EVERYONE

VOL. I TORONTO, CAN., JANUARY, 1907. NO. 3

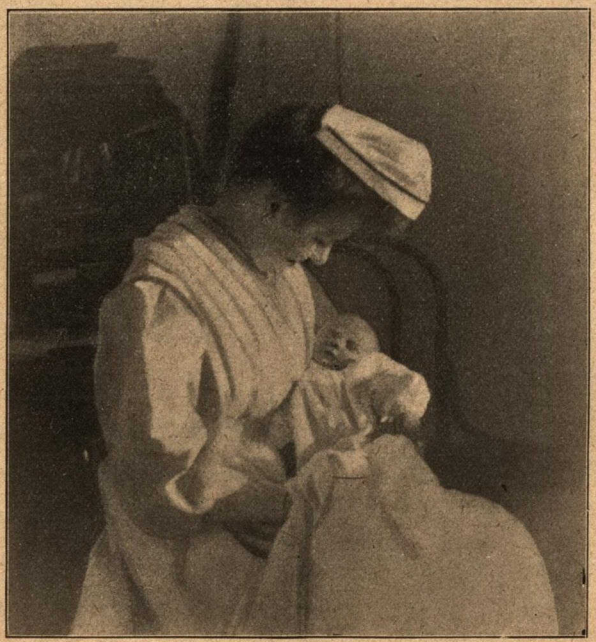
Heredity in Tuberculosis.

Transmission of the Disease from Parent to Child.

THE accompanying illustration is from a photograph of the elder of two infants born at the Toronto Free Hospital for Consumptives during the month of December. In both cases the mothers were suffering from tuberculosis in an advanced stage, and in both cases are the children as well developed and as healthy as are children born of healthy parents.

Such incidents as these naturally raise the question as to the part played by heredity in the transmission of tuberculosis, and as the belief that the disease is hereditary is more or less prevalent it may be of interest to give briefly some account of the part played by inheritance in this disease.

The belief in the hereditary transmission of tuberculosis rests upon two main factors —(1) The great frequency of the disease in early life and (2) the localization of tuberculous lesions in children. It is true that the mortality from tuberculosis in the first years of life is relatively high. Of 2,576 autopsies made on children 27.8 per cent of those who died in the first year were tuberculous, and of 298 tuberculous children dying at an age ranging from a few days to 12 years 147 had bone or joint tuberculosis and only 8 had any evidence of visceral disease. Against these facts, however, it is to be noticed that the percentage of cases of congenital tuberculosis is extremely small.



"MIKE"—INFANT BOY BORN AT TORONTO FREE HOSPITAL FOR CONSUMPTIVES, DECEMBER, 1906.

Of 726 consecutive autopsies in the New York Infant Asylum, tuberculosis was found in only 58 or 8 per cent. of the cases; 6 per cent. of the deaths were due to tuberculosis and in 2 per cent. the children died from other diseases.

Another circumstance which has contributed to the belief in the hereditary transmission of the disease is the frequency with with which it is met in the families of those affected. In 100 cases Williams found 48.4 per cent. with family predisposition, 12 per cent. with parental, 1 per cent. with grand parental and 34.4 per cent. with collateral heredity. Of 250 cases in which Solly made very careful inquiries on this point there were 28.8 per cent. with parental, 7.6 per cent. with grandparental, and 19.2 per cent. with a history of collateral heredity. Of 427 cases at the John Hopkins Hospital their were 53 in which the mother had had tuberculosis, 52 in which the father had been affected, and 105 in which a brother or sister had had the dis-

ease. But of course it is impossible to draw the line between hereditary and accidental tuberculosis, as naturally the children of an affected mother are more liable to accidental contamination, because the baby and the mother during a long period of nursing are in almost continual contact.

Inherited predisposition is of course exceedingly common. This really signifies a diminished resistance of the cells of the body to tuberculous infection. It should be distinguished from the very exceptional condition of congenital tuberculosis where infection takes place before birth.

The possible methods by which the disease could be transmitted directly by inheritance are three in number: (1) transmission by the sperm, (2) transmission by the ovum, and (3) transmission through the blood of the mother by means of the placenta.

In order that the disease could be transmitted by means of the sperm it would be necessary that the tubercle bacilli should lodge in the individual spermatozoon by means of which the ovum is fecundated. Even remembering that tubercle bacilli occasionally exist in the semen, the chance that a bacillus would become lodged in the particular spermatozoon bringing about fecundation is extremely small, looking at the matter merely from a numerical point of view. The chance, however, is much smaller when we consider that the spermatozoon is made up of nuclear material, which the tubercle bacillus is never known to attack. Further there is no chemical evidence to support the view that direct transmission can occur through the sperm, and results of experiment are all against it, in that the young of healthy female rabbits impregnated by tuberculous males, as shown by Gartner and others, are never tuberculous, even though the females themselves often contract the disease.

As to transmission by the ovum it must be admitted that there is such a possibility, since Baumgarten has been able to detect the tubercle bacillus in the ovum of a female rabbit which he had artificially fecundated with tuberculous semen. The question, however, as to what effect such inoculation would have upon the human ovum cannot of course be answered.

It is probable therefore that the most constant method of transmission in congenital tuberculosis is through the blood current. By some it is supposed since tubercles have in several cases been demonstrated in the placenta, that this organ is invariably the seat of the disease. There are, however, undoubted instances in which, when the placenta has been apparently sound, both the placental blood and the faetal organs contained tubercle bacilli.

It has been noted however that no matter how far advanced the disease may have been in the parents, if the child was removed early and kept away from the parental home, there has been no development of tuberculosis.

The following examples are given:—The family of B—— was composed of five children, a father who died of tuberculosis and the mother who was quite well. The second child was removed from its home immediately after its birth, reared by a healthy nurse until he was thirteen years of age, and then placed in a school. He is now a healthy man of 36. He has never lived with his parents. The other four children lived with their parents. Two of them have died of pulmonary tuberculosis and the other two have the disease in an advanced stage.

In another family of seven children the father and mother were both tuberculous. The second and fifth child were removed from their parents and never lived with them. The five children reared by their parents have all died of tuberculosis. The two who were removed remained well and are now both married and have fine healthy children of their own.

In three different families twins were born while the mothers were affected with pulmonary tuberculosis. In each instance one of the children was reared in its own home, being nourished by a healthy wet nurse, while the other child was sent from its home and reared in the country. The three children who remained at home died—one of pulmonary tuberculosis, and two of tubercular meningitis or inflammation of the brain. On the other hand the three children removed from their homes and reared in the country under healthful hygienic conditions, are still living and well.

Numerous other instances have been recorded in medical literature. It is admitted that there is a possibility of the direct transmission of tuberculosis, because this possibility has been demonstrated. But infection by this method must be considered rare as compared with the frequency with which infection takes place after birth, instead of being as was formerly supposed very common. Cases of congenital tuberculosis have been and may be found. They are so few, however, that they are regarded merely as curiosities. The only hereditary factor from a practical point of view is contagion.

Tuberculosis Sufferers Allowed to Flood Canada

Board of Trade Protests to Sir Wilfrid Laurier against Lax Medical Inspection of Immigrants. Startling Statistics Furnished by The National Sanitarium Association as Proof.

THE Toronto Board of Trade have, over the signature of President Howland and Secretary Morley, addressed the following letter to the premier on the immigration question:

Toronto, Dec. 31, 1906.

The Right Hon. Sir Wilfrid Laurier, G.C.M.G. P.C., Premier of Canada, Ottawa, Ont.:

Sir,—On behalf of the Toronto Board of Trade we beg to submit for your consideration the following data bearing on the class of immigrants that, within the past few years, have made their homes in Canada.

The information herewith submitted has been furnished us by the executive of the National Sanitarium Association, under whose direction the two Muskoka Homes for Consumptives have been established, and on behalf of the trustees of the Toronto Free Hospital for Consumptives, who established a home near Toronto. We have reason to believe that the experience of these institutions finds a parallel in many other hospitals and public institutions throughout the Dominion.

The evidence seems very clear that a considerable percentage of the immigrants reaching our shores are in a weakly physical condition and in many cases afflicted with contagious diseases, such as tuberculosis.

Of the 243 patients treated in the Muskoka Free Hospital during the past year, 83, or one-third of the number, were of foreign birth. It may be noted that at this institution patients in the earlier stages of the disease only are admitted. An analysis of individual cases shows a goodly percentage of these 83 left their homes knowing that they were afflicted with this disease, and yet were allowed to pass inspection at the immigrant headquarters at Quebec.

CONSUMPTIVE IMMIGRANTS.

1. Michael Byron, an Englishman, was given a four months' term in the Muskoka Free Hospital. A situation was obtained for him but the disease had taken such hold that he broke down again and had to receive help from the charitably disposed in order to return to England. He was a free patient at the Muskoka Hospital.

2. Miss Rose King, a domestic, was a patient in the Muskoka Free Hospital. She reported to the officers that her mistress in England coaxed her to come out to Canada, as she had consumption, and money was given her to help pay her passage. She was in the hospital for five months as a free patient. She remained so acutely ill that she was transferred to the Toronto Free Hospital for Consumptives, which admits advanced cases. There she remained for sufficient time to regain the needed strength to return to England, the necessary money for this purpose being furnished by charity.

3. Leslie Hayward, an Englishman, was a far advanced case and stranded in Orangeville. He came from England very ill. He was admitted to the hospital on April 24, 1906, and died on May 15.

4. Fred. Hawkins, an Englishman, was admitted to the Muskoka Hospital very ill, because he had no place to go. He came in from the lumber camps and presented himself at the doors of the hospital. He was cared for four months as a free patient.

5. Frederick Fordham, an Englishman, said he was ill when he came to Canada, a laborer, admitted from Oxford County in July and died at the hospital in September.

6. William Thorne, an Englishman, and a divinity student of Wycliffe College, and Rev. R. Pickles, a young Methodist minister, both patients at the Muskoka Free Hospital, report that they were both ill of tuberculosis before leaving England.

7. David Gottdank, a Jew from Austria, admitted from Ottawa, said he came to this country on account of his health. He is still a sick man and is seeking re-admission to the hospital.

8. Moses Lohrer, a Jew from Russia, said he was sent to this country because he had consumption. He was admitted as a free patient and given a four months' term.

9. Samuel Lavine, a Jew from Russia, said he was sick when he came to this country. He was given a four months' term.

10. Israel Pransky, a Jew from Russia, was admitted from Montreal, and is still in the hospital as a charity patient.

11. Max Tinklemnn, a young Russian Jew, is at present receiving treatment as a charity patient.

ONLY HALF CANADIANS.

At the Toronto Free Hospital, near Weston, 134 patients were cared for during the year, made up as follows:

Canadian	67
Scotland	15
United States	5
Wales	2
England	25

Ireland	7
Russia	3
Austria	1
Newfoundland	2
Roumania	4
Germany	1
India	1
West Indies	1

Only 50 per cent. of the number cared for were born in Canada, 35 per cent. came from Great Britain and Ireland, 2.9 per cent. from other British possessions, 11.2 per cent. from foreign countries.

The physician-in-chief, commenting on these statistics, says:

"This but emphasizes the necessity for a very rigid scrutiny of all emigrants before they are allowed to land. They bring with them, not only abject poverty, but also well-developed diseases. In many cases the history showed that they had been advised to come to this country on account of the bracing climate being so beneficial to persons suffering from pulmonary tuberculosis."

One could give a very long list of the individual cases and the conditions of patients that are presenting themselves for application for admission at the hospital. Here are a few;

1. A few months ago an Englishman, accompanied by his brother, made application at the head office of the association for admission. They had only been out in the country three weeks. One of the two was afflicted with tuberculosis. He was sent to the examining physician, who reported that the case was well advanced. He was questioned why he came out and gave the usual answer, that he was told the Canadian climate was good for those afflicted with this trouble. He was admitted for one month on the promise of his brother that he would see that sufficient money was secured to have the sick one returned to the old country.

2. Some months ago Mrs. Spencely, of English birth and a recent arrival, was admitted to this hospital with the disease well advanced. She is the mother of several children. She was kept at the hospital until she gained a fair measure of strength, and in the meantime an Anglican clergyman interested himself in her behalf and sufficient money was raised to have herself and children return to England within the past past month.

MUSKOKA PATIENTS WINTER SPORT

3. A Mrs. Wright presented herself at the office of the Toronto Free Hospital about three months ago. She was the mother of two boys under 14 years of age. One of these had tuberculosis and was accepted as a charity patient at this hospital. The mother was questioned as to her children's trouble, and of course had to admit that there was some indication of it, and again Canada was pointed out as a place to remove such trouble. Within these three months her other boy has been taken down with some other loathsome disease and is in one of the hospitals, and since then the mother has broken down and is also in the hospital. In other words, this family of three are to-day being cared for by the City of Toronto, or its charity institutions.

LAXITY OF INSPECTION.

Perhaps it is not necessary to give in detail further cases. Many more could be given, all going to show the laxity of immigrant inspection at this side of the Atlantic, and something much worse than this is at the other side. The evidence would seem to show that this country is simply being made a dumping ground for those afflicted with tuberculosis and other diseases. There is reason to believe that many hospitals throughout the country can tell of newly arrived immigrants who are residents within their walls, because afflicted, if not with consumption (because no other hospitals outside of these above named will receive consumptive cases), with some other contagious disease.

We respectfully request that steps be taken immediataly to prevent the embarkation for Canada of any immigrants afflicted with pulmonary or contagious diseases of any kind, and the enforcement of such rigid system of inspection of all immigrants entering Canada as will assure the immediate return, upon the transportation lines by which they arrive, of all persons who are found diseased, or from any other cause physically or mentally unfit to become useful and thrifty citzens.

(Signed) Peleg Howland,
President.

F. G. Morley, Secretary.

The Gray Days

It stirs the blood to see once more
The snowbirds gaily rustling by;
Or hear the North Wind at the door—
And, oh, the white road and the sky.

To-day when life seems at low tide,
And all the green world gray and sad,
Hark to good angels at your side—
The chickadees—call out "Be glad!"

The stinging wind upon your cheek
Drives out the doubting sense of wrong;
Go play with Fate at hide-and-seek,
And conquer with a snatch of song.

—*Roscoe Brumbaugh*

Winter Sport in Switzerland.

By John Davies, in *Recreation*.

THE Swiss winter sports are endless in variety. Both sexes and all ages may find interests there. For the young and active, there are bandy and ice-tobogganing; for those whose agility is waning, there are ski-ing, lugeing, skating and bob-sleighing; while to handle a broom, to give even the faintest semblance of a Scotch accent to the phrase "Swoop her up, mon!"—to have passed nine and be on the right side of ninety—would seem the only qualifications necessary for the ever-fascinating game of curling. Descriptions of these sports are so familiar to the readers of magazines and illustrated periodicals that a repetition of them would be out of place. Yet a recapitulation of their latest developments may not prove profitless.

The bob-sleigh introduced in Switzerland consists of the familiar "bob," with runners of round steel. It is steered in the usual manner—from a cross-bar on the foremost sled—and from the one behind is operated a powerful brake. It is shorter than the American type of "bob," carrying a crew of usually five, three besides the steersman and brakesman. The motor car, latest and most potent influence of our modern outdoor life, has suggested a new means of guidance—a few bob-sleighs are now controlled by a steering-wheel; and, in obedience to a further suggestion of the same influence, there appeared last year one or two which were fitted with a sheet-iron wind-shield not unlike the hood which covers the machinery of a racing motor. The excitement of a descent of one of the Swiss courses on one of these racing sleds is an experience not to be forgotten—compared with riding the "bobs" on the coasting hills in America, it is like a ride in a racing motor car after riding in a low-powered touring car. It is the ski, however, that has provided the most striking development of interest in Swiss winter sports. The ski (pronounced "shee," *not* "skee") is a long, narrow wooden snow-shoe, or, to be more exact, a wooden runner very little wider than the foot itself, and, by rule of thumb at least, of a length exactly coinciding with the height of its user. It is fastened not to the foot direct, but to a pliable gutta-percha attachment like a great inner-sole secured only at the toe; and thus, while the ski remains always on the snow, the body sways and bends with any undulations that may be encountered. During the last few winters, the number of skiers has increased by leaps and bounds. Morning after morning gay parties may be seen starting forth on expeditions, to zig-zag their way up some gently sloping hillside in order to take a long slide down again.

A FAST BEND ON THE CRESTA RUN AT ST. MORITZ WHERE THE NOVICE IN TOBOGGANING GENERALLY COMES TO GRIEF.

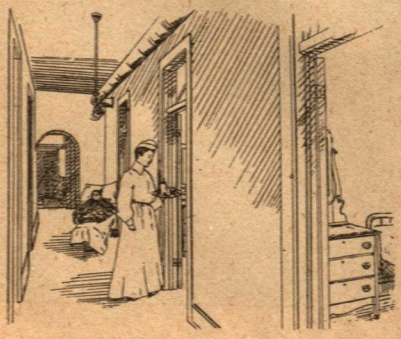
More interesting than all these, though, is the way in which the Swiss native youth have taken to the pastime. Skates they regard, apparently, only as a useful means of progression in the icy village streets—the *lugette* or small sled as a convenient receptacle for parcels or burdens, and a means of accelerated progression when a downward slope serves. But for some inexplicable reason, ski-ing stands in their estimation as a thing apart from these. Whole battalions of them, men and boys together, may be seen on Sundays and fête-days thus on pleasure bent. And many of them have acquired already a skill which will make them in days to come the instructors and ski-club managers of enterprising amateurs in the art, and will no doubt put them on terms of equality with the Norwegians themselves. For at present the Norwegians stand easily first. They come to Switzerland in twos and threes, to give exhibitions of ski-running, to perform those feats of jump and double-jump which sound so incredible when measured in yards, which look so tremendous when reproduced in photographs and on picture postcards. But leaping on ski is and must remain but a trick of the exhibition grounds, a spectacle and an acrobatic feat. In cross-country work it is seldom used. Easily to ascend a slope, to glide with facility and true poise down again, to swing round and stop with celerity—these are the essential accomplishments of the skier, and a proper mastery of them gives ample scope for patience and perseverance.

Bandy too, like ski-ing, gains yearly in popularity. Bandy is, with a few minor differences, ice-hockey; and only polo may be compared to it for speed and splendor. Indeed, the cynosure of all eyes in the figure-skaters' rink is seldom the leader at bandy. And, bar falling weather, it may be played on every day of the winter, for the ice in the bandy-rinks is fresh from morning to morning, being flooded over night and carefully swept.

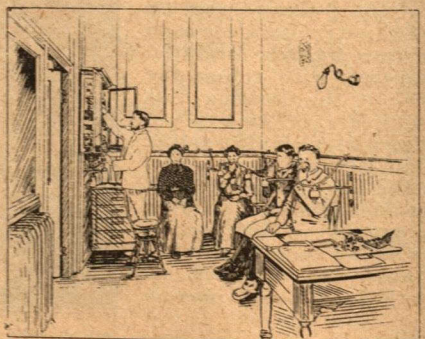
Crowded as are the rinks, however, and much as they have done for the development of winter pastime, it is the mountain lake which affords the true devotee of the polished blade his sport in ideal surroundings; and perhaps the rarity of the necessary conditions makes this kind of skating the more valued. Certainly a day of it lingers long in the memory. One such I recall at Sils lake near St. Moritz last winter—three square miles of black and flawless ice, a blue dome overhead, the air as still as that of a cathedral, and snow-capped bergs "propping the speckless sky."

But the sport universal of the Swiss winter is that afforded by the *luge*, as it is called in the French cantons, the *Schlitten* of the Germans. This is a frame sled, iron-shod, the seat constructed of parallel slats and not in one piece. It amuses visitors to see how old and young, native and foreign, go always with one of these sleds at heel. No one thinks of walking even the least slope. Down they sit on their ever-present *luge*, and save thereby the time and effort of the descent. Nor do they lose in the ascent, for the long cord swung on the arm creates only the very faintest suggestion of an effort. It is the *luge*, too, that gives rise to that debatable question as to which is better fun—a day on the iced runs, or one in the less frequented roads and the fields. It is the *lugers*—by far the greater number—who elect for the latter; and it is there that one sees the brightly-colored caps and streamers flash in the frosty air, the gay procession up the hill; it is there that one hears the laughter that greets a turn-over in the snow, the joyous and incessant "*Gare! Gare!*" and the hum of merriment of a horde of happy children—children (for that day at least) of fifty and under.

The best doctors in the world are Dr. Diet, Dr. Quiet, and Dr. Merryman.



NURSE ENTERING INFIRMARY WARD TORONTO FREE HOSPITAL FOR CONSUMPTIVES



THROAT ROOM, MUSKOKA COTTAGE SANATORIUM

Some Old Health Rules.

Mosaic Laws Included Complete Code of Health Ordinances Which are Equal to Modern Statutes.

By Rabbi Samuel Marks, San Antonio.

"THE Mosaic law was intended to regulate and for centuries actually did regulate the entire life and policy of the Jewish people. It embraced within the sweep of its cognition and control the personal conduct of the citizen, their domestic and social relations, their land tenure, their education, the relief of the poor, their sanitary regulations, their policy and the administration of civil and criminal justice. It was, in brief, the National constitutio n and code. And there is no system of law, ancient or modern, not excepting the marvelous system bequeathed by Rome, which is more worthy of careful study.

"It is a remarkable characteristic of Mosaic law that a very large proportion of its provisions are devoted to purely hygienic and sanitary prescriptions. Of the 613 injunctions into which the Jewish doctors divide the law, more than one half relate to matters of health, while of the 524 paragraphs of the Mishna and the corresponding chapters of the Talmud, 213 are devoted to purely sanitary regulations. State medicine, which, even among the more advanced and enlightened of nations, is little more than a term, was with the Jews a practical and potent reality of every day life.

"The principles which underlie and pervade and mold the whole of the sanitary enactments of the Mosaic law are that health is a matter not merely of individual, but of public concern, that in the body politic, if one member suffers all the members suffer with it; that infectious or contagious disease is a subject not merely of individual or family interest, but of public and state importance; that when an individual, in whatever rank of life, becomes the victim of infectious or contagious disorder, not only is his own life imperiled, but he becomes the center and source of grave public danger: that his person, his clothing, his dwelling and its furniture are all a standing menace to the public weal; that the community of which he is a unit has the duty and the right by isolation of the patient so long as danger exists, and by the disinfection, and if necessary, the destruction of his material urroundings, to secure itself against the spread of the disease, and that no considerations of private interest or family affection or social distinction shall be permitted to stand in the way of the impartial and rigid enforcement of the statutory remedy.

"The Mosaic law regarding the treatment of infectious diseases, of which these are the fundamental principles, is minutely detailed in chapters xiii and iv of Leviticus. It is unnecessary to recite the numerous provisions of that law, as they are easy accessable to all, but the following comprehend generally its enactments:

"1. The compulsory and immediate notification of a responsible health officer of every case of suspected or actual infectious disease or of other insanitary conditions fraught with danger to health.

"2. The immediate inspection by such public health officer of the afflicted individual or of the alleged unsanitary articles and conditions.

"3. In doubtful cases the total isolation of the patient from family and friends and the community for a period to determine whether the disease shall assume an infective or non-infective form.

"4. In actual cases the continued and permanent isolation of the patient so long as the disease continues and consequent danger to the community exists.

"5. On the favorable issue of doubtful cases, or on recovery from actual cases of infectious disease the restoration of the patient to the community only with the permission of the public health officer, after due inspection and upon compliance with certain prescribed purifications.

"6. The disinfection and, if deemed requisite, the destruction by fire of all infected clothing and other effects.

"7. The disinfection and, if necessary, the demolition and destruction of infected dwellings, or of dwellings the sanitary condition of which is dangerous to health.

"These are generally the enactments of the Mosaic law regarding the prevention, the arrest and the extermination of zymotic diseases of whatever character."

"Consumption is no longer the hopeless malady it was earlier believed to be."—*Dr. T. Mitchell Prudden.*

CANADIAN OUT-DOOR LIFE.

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28 ADELAIDE ST. WEST (Saturday Night Building) - - TORONTO, CAN.

PASSING OF THE BROOM

THE persistent warning that dust-filled air in rooms or in streets may be laden with tubercular germs is no mere theory or false alarm. The following clipping from an Old Country paper is instructive and helpful:—"The broom threatens soon to be as obsolete as the old copper warming-pan, judging from the number of vacuum dust removers which are being placed upon the market. The change, says the *Lancet*, is one which must meet with the unqualified approval of all who know what a breeding-ground of disease is the common dust of our houses.

Every housewife who is possessed of cleanly instincts should welcome an apparatus which removes dust instead of scattering it in all directions, lost to the senses, so to speak, for a time by its attenuation in air, only sooner or later to settle again on shelves, pictures, curtains and carpets in a thin film.

Moreover, the removal of dust and its collection in a receptacle by the new method permit of its absolute destruction by fire. Bacteriological science can easily demonstrate the existence of disease germs in common household dust, and there is evidence of an eminently practical character that dust is otherwise a source of disease; there could hardly be a more effectual means of spreading the infective and irritating particles than the old-fashioned broom. The method is not only insanitary but absurd.

A Hungry Nation

REV. A. N. COOPER, known as the "Walking Parson," recently made a tour in Denmark, and, describing his experiences, says that the Danish people, like Dr. Johnson, attend well to their meals, have many meals, and spend time on them. A man in the position of a clerk begins with coffee and rolls before he goes out; he returns to his breakfast at 11, and remains till 1 o'clock; then he dines at 4, and has supper at 8; and at each of these meals he has soup and hot meat and several varieties of cold meat and delicacies.

If you listen in Copenhagen to people talking in a tramcar, the chances are they will be speaking about the last good dinner to which they had been invited, and you hear the process of the feast detailed—"and then we had," "and then we had," and so on till the end.

The Danes are determined not to be overworked. They will not submit to make the acquaintance of nervous breakdown and brain-fag. They have comfortable proverbs like these: "If we don't get there to-day, we shall to-morrow," and "He who plows with oxen will still get through." Cream abounds in Denmark, and a cream-jug is made to hold a quart. Very few tourists go to Denmark, though it is the place for the holiday of a man in narrow circumstances.

CONSUMPTIVE EMIGRANTS

ELSEWHERE in this issue of "CANADIAN OUT-DOOR LIFE," we give space to a memorial sent to the Dominion Government by the Toronto Board of Trade regarding the class of emigrants being brought into Canada within recent years. The data was furnished by the National Sanitarium Association and the Toronto Free Hospital for Consumptives, showing that many emigrants who enter Canada are afflicted with pulmonary tuberculosis.

An examination of the records shows that in most, if not in all cases, these people were possessed with the disease before leaving the Motherland. As a matter of fact, it would appear from the information gleaned from the patients themselves that they have been sent to this country with the expectation that our bracing climate will be a means of removing this trouble. A result is that the institutions at Muskoka and the Toronto Free Hospital have a large percentage of foreign born patients to care for.

Following the receipt of this memorial, the Government have taken steps to obtain all needed particulars, as to the condition of such patients in residence for the purpose of arranging for their deportation.

Canada is in need of emigrants, but there must be a discrimination in the class that are allowed to reach our shores. We have before us the lessons of our neighbors across the line. It is not to be expected that those who are either sick morally or physically can be accepted as suitable citizens of this country.

There has been a laxity of careful inspection in the Motherland, before these people took ship for Canada and we fear there has been much laxity at this side in accepting these new arrivals.

In the best interests of this new country, as well as the people themselves, who are coming from abroad, the Dominion Government has acted wisely in planning for a more rigid inspection in the future, and if need be, the deportation of certain ones, who are now in the country and who cannot be other than a charge on the public and our charitable institutions.

Open-Air Treatment of Pneumonia

W. P. NORTHRUP, New York City *(Journal of the American Medical Association)*, for over eleven years has been using free ventilation and fresh air treatment in pneumonia, and during the last year he has followed the practice of putting his patients in the New York Presbyterian Hospital for six hours a day out on the roof in all weather in which harsh high winds, rain and snow did not prevent. He gives histories of two cases both serious, and in one of which he thinks the patient could not have recovered under other treatment. The hospital authorities are so well satisfied of the value of this method that they are making a colossal roof garden on the medical side of the hospital to be an open-air ward for these cases. The patients most favorably affected by open-air treatment are those with severe poisoning, with delirium, partial cyanosis or deep stupor. In Northrup's experience all patients do better in cool fresh air, which can be secured in private practice by screening off a portion of a room by an open window. None have been harmed, in his observation, and some have been greatly benefited and possibly saved by the cold fresh-air treatment. If pneumonia, due to an infecting agent, is thus benefited, the value of the treatment for other infectious diseases is suggested, and, in fact, he has tried it in many others, including typhoid fever with severe bronchitis, whooping cough with bronchitis and convulsions, with excellent results. He considers it, in fact, the ideal treatment for septic fevers. The only regulation is to keep the patient comfortable and especially to keep the feet warm.

The Preventability of Tuberculosis*

By W. J. Dobbie, M.A., M.D.C.M., Physician-in-Charge of the Toronto Free Hospital for Consumptives.

TUBERCULOSIS is not hereditary, but is on the other hand a mildly communicable disease. A consumptive is not such merely because his forefathers were; nor does it necessarily follow that children will be exempt from the disease simply because their parents were healthy. The disease is transferred from one person to another, and for this transference, two conditions, and only two, are necessary. The germs of the disease, the tubercle bacilli, must gain an entrance into the body, and in the body there must be either a tissue of low vitality or a reduced power of resistance.

And it is because tuberculosis is a disease of such a nature that it is preventable. And on this account the more it is a matter for wonder that a disease so insidious in its onset, so widespread in its distribution, so destructive in its effect, has not long since claimed a more adequate attention from the most thoughtful men of the community. Were it a disease more alarming in its onset, more spectacular in its symptomatic manifestations, and more rapid in its progress to a fatal termination it might perchance have claimed a more careful consideration. And yet it is a disease most prevalent and destructive. Consider the following roll of death in the City of Toronto:

	1904	1905	1906
Smallpox	2	0	0
Scarlatina	12	5	12
Diphtheria	127	131	42
Measles	6	2	11
Whooping cough	8	18	11
Typhoid fever	41	39	67
Tuberculosis	303	271	279

or consider that, in the Province of Ontario for one month

November, 1906

	Deaths
Smallpox	0
Scarlet fever	4
Diphtheria	45
Measles	3
Whooping cough	11
Typhoid fever	113
Consumption	134

and some idea will be had of the prevalence and destructiveness of the disease.

In the prevention of tuberculosis there are three main points presented for consideration:

(1) The prevention of the transmission of the phthisical tendency from parents to children.

(2) The prevention of the development of the disease when the predisposition exists or has been acquired.

(3) The prevention of those unsanitary conditions, uncleanly habits, unhealthful circumstances of life which are known to favor the acquirement, development and propagation of the disease.

By the hereditary tendency to tuberculosis it is not meant that tuberculous parents transmit to their offspring constitutions in which at a certain period tuberculosis must

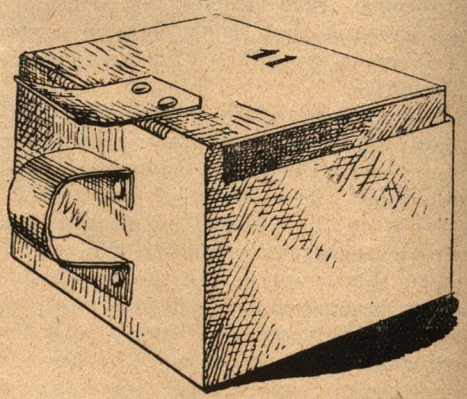


FIG. 1

necessarily develop, but rather that there is transmitted a constitution favorable for an attack by the tubercle bacilli. That such a tendency may be transmitted is not at all to be doubted, but in no sense can this circumstance be taken to imply that the disease itself is transmitted by inheritance. The children of tuberculous parents may have a peculiar tissue of low vitality, and they may have constitutions of poor resisting power, but they do not except in a few very rare cases inherit the disease itself. They are, however, if exposed to contagion more liable to contract the disease than are children not so handicapped, and the only method by which the transmission of this so called tubercular tendency can be prevented is by discouraging the begetting of children by persons actually infected or belonging to families in which the inheritance of such a tendency is known to be the rule. This can be brought about only by the dissemination of knowledge concerning the nature of the disease but even at that from the nature of the case the results to be expected in this regard are not, to say the least, very promising.

In the matter of preventing the development of the disease in persons in whom a tendency is already known to exist very much may be done. Prophyllactic measures should be instituted at the outset and carried out faithfully and persistently. Every effort should be made to secure and maintain as high a standard of general health as is

* Third in a series of popular and informing articles on Tuberculosis by Dr. W. J. Dobbie. The first appeared in November CANADIAN OUT-DOOR LIFE, entitled, "Tuberculosis: What it is and Its Cause." The second in December on "The Communicability of Tuberculosis." The series will embrace twelve articles all told.

possible. Nor should the matter be left wholly to chance, nor to the direction of any but those specially qualified. The advice of a physician should be sought and his suggestions carefully observed. In this way there is every reason to believe that any tendency to acquire the disease may be surely and successfully combated. In any other way the result is at best but very uncertain.

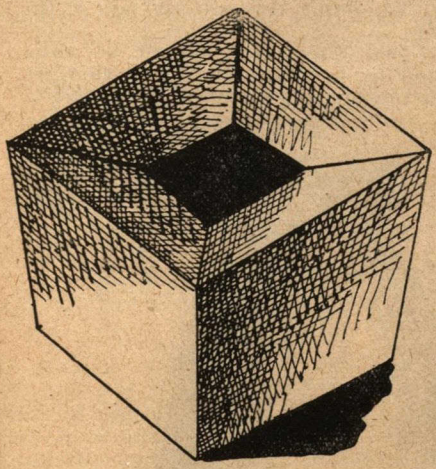


FIG 2

An infant born of tuberculous parents or having implanted in it at birth a phthisical tendency requires the most careful management. On no account should its mother be allowed to nurse her offspring, because therein lies a danger not only to the mother, but also to the child. Such a child should be brought up if possible in the free open air of the country rather than in the foul and vitiated atmosphere of a city. Every means should be adopted to aid in the development of the limbs, and nothing should be tolerated which in any way would tend to hinder the free expansion of the chest. During the common ailments of childhood especially measles, whooping cough and scarlet fever, such a child needs to be specially guarded on account of the tendency which these diseases have to affect the respiratory passages, and thus by reducing their vitality to invite infection by the consumption germ. In the early years free exercises in the open air, gymnastic exercises under supervision, cold sponging, and in general a life of wholesome activity should be encouraged. The diet should be nutritious, but unstimulating and close application to study in crowded school rooms should be avoided.

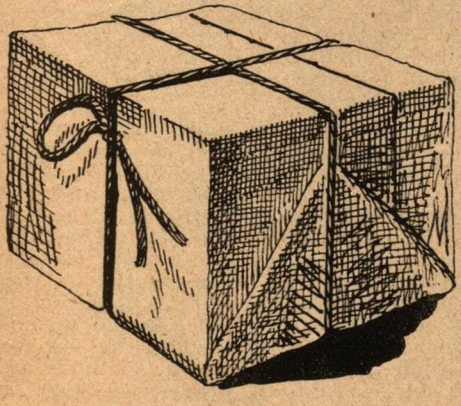


FIG. 3

During and after puberty similar precautionary measures should be faithfully carried out, and all such persons should avoid those conditions, such as indiscreet exposure to changeable or inclement weather, occupations necessitating confinement in poorly lighted and badly ventilated living rooms or workshops, employment involving exposure to irritating vapors and dusts, which tend to excite or maintain catarrhal conditions of the air passages, or to cause what are so well known by the name of common colds.

The most important point, however, in the prevention of the disease which has to be considered is, perhaps, the transmission of the germ from those who are sick to those who are well. Unless this can be successfully accomplished the hope of staying the spread of the disease is small indeed. The disease is propagated chiefly through the agency of the sputum. This when dried is converted into dust and carried by currents of air almost everywhere. Tubercle bacilli are not thrown out from a consumptive patient in ordinary quiet breathing. One observer conducted experiments in this connection as follows: With 219 patients who wore masks for 24 hours, he was able to collect 2600 tubercle bacilli in 32 days or about three germs per hour from 219 cases. But in the act of coughing tiny particles of sputum may be thrown into the air with considerable force and in this moist condition such particles are a source of danger to persons in close proximity to the cougher, unless precautions are taken, because it has been reckoned that in 24 hours one patient expectorating once each hour would discharge 7,200,000,000 bacilli. And it is worth remembering that a patient on the road to recovery may be reinfected by his own sputum, if during coughing small particles are drawn in to the sound lung or into the sound parts of an affected lung.

The care of sputum and its proper disposal involves the consideration of measures adapted to the needs of two classes of patients. These are those who are confined to bed or at least to the home and those who are able to go about from place to place. And it may be well to emphasize the point that it is not the bedridden patient, nor the one who is at the point of death who is the

most dangerous. Those who are most to be feared are the patients who have still strength enough to work in factories or offices, or who can still travel from place to place. These are the real distributors of the disease germ.

In sanatoria and hospitals of course are seen the most complete methods for the handling and disposal of the germ bearing sputum. Paste board sputum cups (Fig. 1) held in metal containers, (Fig. 2) covered with a spring lid designed to prevent flies and other insects gaining access to the contents are in use. Once or twice a day these paper refills as they are called are removed from the container, carefully wrapped in four thicknesses of paper, tied with a string (Fig 3) and placed right side up in a receptacle provided for the purpose, so that they may be subsequently cremated, These containers are frequently cleaned and disinfected, and are carried constantly by every patient when in residence. When away from the hospital of course patients meet changed conditions for it is scarcely practicable to walk around the street carrying a sanatorium sputum cup. For this reason pocket flasks (Fig. 4) are used. At home if nothing better is at hand an ordinary cup with a wide base, such as a shaving mug, may be used if a five per cent. solution of carbolic acid is kept in it. Cuspidors on the floor should not on any account be used no matter what disinfectant is placed in them.

Linen handkerchiefs should not and need not ever be used. In hospitals small squares of butter cloth which can be burned as soon as soiled are found to be very satisfactory. At table, paper napkins should be used entirely and at the close of each meal they should be burned.

So that for the protection of families in which there is a member suffering from tuberculosis a few simple directions carefully followed are all that is necessary. In addition to what has been already said the following might be sufficient :

(1) The first care which the tuberculous patient must exercise is *never to spit about a room in halls or passages or in fact anywhere except into the receptacle provided for that purpose.*

(2) Care must be exercised to avoid soiling pillow covers and bed clothing with expectoration, and men should shave the face to prevent the germs of the disease from clinging to the hair. During cough a piece of moist rag or cheese cloth should be held before the mouth to prevent the germs of the disease, which are then expelled as a fine spray, from infecting the room.

(3) A separate bedroom should, if possible, be occupied by the tuberculous patient, and under no circumstances should the bed be shared by another sleeper. The room should be bright and well aired, and the habit of sleeping with an open window should be cultivated. Provided there is no draught and plenty of warm bed clothing, there is no danger of catching cold, even in winter.

(4) Unnecessary carpets or heavy curtains should be removed, and the floor left bare or covered with a piece of oilcloth. In cleaning the room a damp floor cloth must be used to avoid scattering the germs through the air of the room.

(5) Bed linen, etc., should be disinfected by boiling. Such articles when soiled by sputum readily infect a room.

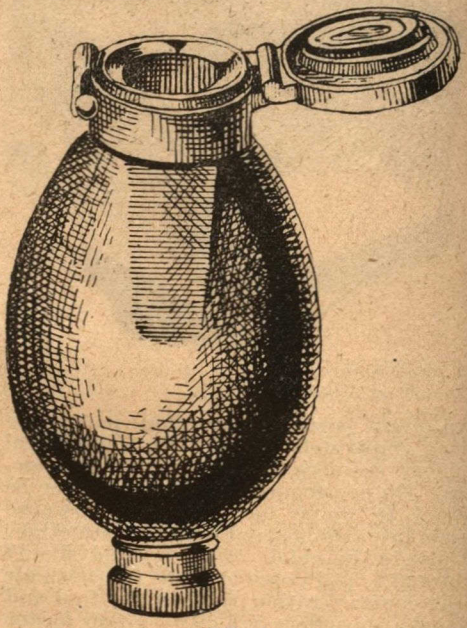


FIG. 4

(6) Be careful not to use the same dishes as a consumptive, unless they have been first thoroughly boiled. In handling articles that have been used by consumptives or that have been in general circulation by the public, you should take particular care to wash your hands afterwards.

In the case of the consumptive patient who is able to walk about the problem of prevention is, however, more difficult, unless he is under careful supervision and has received adequate instruction as to the best means to be adopted to prevent his being a source of danger to the community. Usually it is the case that a consumptive of this class is either unaware of his condition or has no desire that the fact should become known to those with whom he has to associate. In either event no methods are put into execution to properly disinfect or destroy the dangerous expectoration.

This class of patients are to be found everywhere. Every town and village has its quota.

In every factory and workshop they are to be found. Every hotel accommodates them and every steamboat and railway carriage affords them transportation. And it is in these places and the like that precautions must be taken if the spread of the disease is to be prevented. Hygienic cuspidors, such for example as Knopf's elevated cuspidor (Fig. 5) should be placed in railway carriages, on steamers, in the

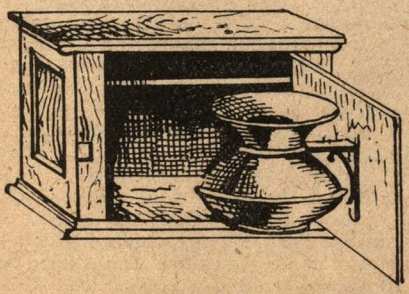


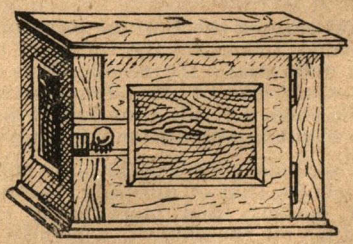
FIG. 5

rooms of hotels, in factories, and in other places in which people congregate. Spitting in any other place should be prohibited, and wall cards setting forth the dangers arising from promiscuous spitting should be prominently exhibited.

As of course in spite of the most careful precautions there will always be some who are careless or obstinate, further precautions must be taken and dry sweeping and dusting abandoned and adequate methods for frequent disinfection introduced.

And it is thus that the question of municipal control of tuberculosis arises. And undoubtedly it is a disease worthy of the attention not only of municipal authorities but also of practical statesmen and students of political economy everywhere. Twenty-five people died of this disease in Canada to-day, and 350 in the United States. Counting the loss to the individual in wages while ill, the extra expense of food, nursing and medical attendance, the cost of burial, together with the loss to the state entailed in the education of children who do not live to make any return, some conception may be gained of the enormous economic loss entailed by the prevalence of the disease. In the United States it has been estimated at $330,000,000 annually and for Canada the figure would be $1,750.000. Different views will be held of course as to the extent to which it is the duty of municipal authorities to interest themselves. They might reasonably be expected, however, to encourage and aid the dissemination of knowledge, to look to the sanitary conditions of schools and the health of school children, to do as much for adult workers in factories, warehouses, shops, stores and the like, to prevent the unsanitary housing of people in over crowded tenements or congested districts, to aid in the maintenance of patients in hospitals and sanatoria. Further, laws should be enacted and regulations enforced to the end that promiscuous spitting may be prevented.

The allied question of compulsory notification in tuberculosis is one of course, that calls forth diverse opinions. It is well, however, that the case should be presented fairly and that the terms used should be thoroughly understood. To the average layman the term compulsory notification is associated with the idea of isolating the patient, and placarding his house. Such however is not the intention. By compulsory notification in tuberculosis, is understood the giving the name and address of the person afflicted to the Board of Health, so that for his own good and the good of others he may receive adequate instructions as to the best means of preventing the transmission of the disease to to others. It is not a system which would cause him to be shunned, and it can readily be understood that the placading of houses would be a measure which would defeat its own object, because tuberculosis is a disease which can readily be concealed for years. On the other hand compulsory notification with protection for the patient against annoying interference and publicity, systematic instruction, competent supervision of the methods adopted for the destruction of sputum, and the disinfection of rooms seems



to be the only practicable method of reaching those who cannot be relied on to voluntarily protect themselves and others.

In any event the disease is disastrously prevalent. And yet it is preventable. On whom the responsibility for its prevalence and for its spread properly rests is a question which each may reasonably ask himself.

Not a single applicant has ever been refused admission to the Muskoka Free Hospital for Consumptives because of his or her poverty.

CANADIAN SANATORIA

News From the Field.

Muskoka Cottage Sanatorinm.

AT the Muskoka Cottage Sanatorium, the older of the two institutions of the National Sanitarium Association, 68 patients are at this writing in residence. The new McCormick Cottage has been opened and provides accommodation for seven patients.

No better evidence of the excellent work that has been done by this institution for the past ten years can be given than a quotation from one of the many letters that are constantly being received from those who have been patients.

The following is a letter written by Mr. W. F. Parker, Barrister, Wolfville, N.S., to Mr. W. J. Gage, Chairman of the Executive Committee of the N. S. A.:—

"DEAR SIR:—As a small expression of sympathy with the work of the Muskoka Free Hospital for Consumptives, and some slight return for the great benefit I personally derived as a patient in the Cottage Sanatorium, I enclose a contribution of $100 to the Free institution.

Nothing calling for beneficence appeals to me so strongly as the case of a consumptive without means, and therefore without arms with which to combat the most destructive enemy of human life to be found in the Western World.

I first entered the Cottage Sanatorium in 1899, and returned for the winter of the two years following. My recollections of the institution are of the happiest nature. Among them I recall your kindly personal interest in the patients including myself.

The secondary work of the noble enterprise at Muskoka, that of diffusing, through outgoing patients and more lately through literature on the subject, a popular knowledge of the nature of pulmonary tuberculosis, its prevention and treatment,—teaching those afflicted with it how to live in their homes, I regard as an inestimable public service of an educational character. Speaking personally, I have been able, in various ways, to counsel and to help many persons, even though the ruin of professional prospects and ambition in my case has made it impossible to do much for others in a financial way. When the climate of Halifax compelled me to remove to a country place in the interior of Nova Scotia, my own educational experience at Muskoka taught me how to build a little Sanatorium of my own, and in this I practise the Sanitarium life successfully.

Wishing you and co-workers a prosperous New Year in the furtherance of your work."

Muskoka Free Hospital for Consumptives.

The increasing interest shown in the work of the Muskoka Free Hospital for Consumptives is indicated by the generous contributions that have been received at the head office during the past month. This institution can say that at no time since its doors were first opened in 1902 has a single patient been refused admission because of his or her poverty. It is doubtful if a greater work of faith has been at any time undertaken in Canada. About 60 patients are in residence from day to day and the Trustees depend almost entirely for the maintenance of these on the gifts of the Canadian people.

The following is a letter from an ex-patient, Mr. D. L. Robertson, of Borwnsburg, Que., one of the many letters indicating the gratitude of patients towards the institution:—

"I am glad to say that I have been benefitted greatly by my stay at the Muskoka Free Hospital for Consumptives. I have been doing three and four hours work each day since I left the institution, until November 15th, when I started to work full time, and as far as it has gone, I am feeling no ill effects from it. I trust the Muskoka Free Hospital will have a brilliant future and that money will come in to enlarge its accommodation, as it richly deserves, and I will do my utmost to make its usefulness widely known."

Toronto Free Hospital for Consumptives.

Large and growing interest is shown in this institution for advanced cases—the only hospital in Canada that makes provision for the advanced and far advanced cases of pulmonary tuberculosis.

From modest beginnings with accommodation for only 25 patients, new buildings have been provided, until to-day there is accommodation for 65.

Anyone, a resident of Toronto, who will secure an order from the Medical Health Officer, is admitted to this Hospital without any charge. Under the generous gift provided by a Toronto citizen, provision has also been made for a limited number of advanced cases from the Province. The work is being further extended by the erection of new buildings, which will give accommodation for some 20 patients, and provide the nucleus for advanced cases for those who have the means to pay the cost of maintenance.

Friends, who feel like assisting this work can send contributions for the Muskoka Free Hospital, to Sir Wm. R. Meredith, Kt., Toronto, or W. J. Gage, Esq., 84 Spadina Ave. Contributions to the Toronto Free Hospital can be sent to Mr. H. C. Hammond, Treasurer, 21 Jordan St., Toronto.

All applications and information regarding the work of either the Muskoka institutions or Toronto Free Hospital will be gladly furnished by addressing J. S. Robertson, Secretary of both Trustee Boards, Toronto.

NATIONAL SANITARIUM ASSOCIATION.

Branch Associations and Their Work.

SOME thirty-five branches of the National Sanitarium Association have been organized in leading cities and towns throughout Ontario. The purpose of these branches is to aid the central Association by the circulation of educational literature with reference to the nature and prevention of consumption; agitation for such local measures as would check the spread of consumption within the municipality; the erection of Sanatoria in the Dominion for the care and proper treatment of poor consumptives, and the securing of the co-operation of the press, the municipalities, the Dominion and Provincial Parliaments for effective measures to stamp out consumption and provide proper care for its victims.

Not the least important work undertaken by many of these branches is the securing of a fund to provide for the endowment of bed or beds for needy patients at the Muskoka Free Hospital for Consumptives. $300 a year endows a bed. Allowing four months as the average stay of a patient, this means that a community in raising this amount, really makes provision for three needy patients within the year. As a result of this method, there are to-day a considerable number of endowed beds at the Muskoka Feee Hospital for Consumptives, and patients, who would otherwise be a charge, as well as a source of danger on the individual community, are having the required care and treatment at Muskoka.

Recognizing the importance of this line of work, many municipalities are joining hands with the Branch Associations and contributing of their funds for endowed purposes.

Recent contributions from municipalities have included $300 from the County of Grey, Simcoe, Oxford, and the City of Brantford.

Among the Associations organized within the past few months are the Owen Sound Branch, Collingwood, Midland and Penetang.

A leaflet giving full instructions as to how these branches may be organized will be sent to anyone on writing J. S. Robertson, Secretary National Sanitarium Association, 28 Adelaide St. West, Toronto.

AS OTHERS SEE US.

—WE bid welcome to a new monthly from Toronto, CANADIAN OUT-DOOR LIFE, published by the National Sanitarium Association of Canada, and devoted to the gospel of out-door life in the treatment of tuberculosis and the value of fresh air and hygienic living for everyone. The initial number is attractively garbed and is full of valuable information presented in non-technical language. The intention is that all profits of the magazine will be devoted to the maintenance of patients in the Muskoka Free Hospital for Consumptives. A meritorious magazine published for such a purpose is surely deserving of generous support, and we cordially wish the venture every success. —*The Maritime Medical News.*

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—THE *Journal of the Outdoor Life*, with a pleasure which is not unmixed with pride, welcomes a new contemporary and namesake, CANADIAN OUT-DOOR LIFE, to the ranks of those powers which are battling against tuberculosis. The first number of CANADA OUT-DOOR LIFE, which is published by the National Sanitarium Association of Canada, appeared on the first of November. In the choosing of the name for the new publication those at its helm pay tribute to the work which has already been accomplished by the *Journal of the Outdoor Life* and the esteem in which it is held. The CANADIAN OUT-DOOR LIFE is not undertaken as a money-making proposition. Its profits are to be devoted to the maintenance of patients in the Muskoka Free Hospital for Consumptives. There can never be too many preachers spreading the gospel of fresh air. There can never be too many sign-posts pointing the way to immunity from tuberculosis. The CANADIAN OUT-DOOR LIFE has a boundless sphere for usefulness, and that it will do much towards keeping the healthy healthy, and curing the sick, is not to be doubted. Its initial number is creditable in every way to its publishers. In appearance it is neatness personified, and the reading matter and editorials are carefully chosen.—*The Journal of Outdoor Life, Saranac, N. Y.*

LITERARY NOTES

THE life story of E. H. Harriman, the man who reorganized the Union Pacific Railroad and created the "Harriman System" of Western roads, is at last told at length in the January *Review of Reviews* by Carl Snyder. Very little material of an authentic nature has heretofore been printed concerning this modern "Colossus of Roads," as the editor of the *Wall Street Journal* very aptly styles Mr. Harriman. The article by Mr. Snyder is both illuminating and convincing. It is based on a thorough study of the Western railroad situation, and of Mr. Harriman's relations thereto.

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IN the January number of McClure's will begin the Life of Mary Baker G. Eddy and the History of the Christian Science Movement. For the first time a complete, impartial and true story of Mrs. Eddy and Christian Science is to be had—it will run throughout the year. Georgine Milmine has written the story—for nearly three years she has pursued her study of the subject. Five other writers of McClure's staff have worked with her to make this story accurate, fair, unbiased and complete. In view of the fact that for some months the press has been full of diverse and conflicting news and statements regarding Mrs. Eddy, it is evident that accurate knowledge concerning her is difficult to obtain in a short time. Consequently McClure's long and thorough preparation of its series will give us for the first time a true history and account of her and her cult.

What It Costs to Run an Automobile

THE prospective automobile purchaser must realize even though he buys a runabout,—the smallest type of motor, carrying the driver and one other passenger,—he is not going to be able to keep the car in operation for $5 or $10 a month. It has often been said, and truly, that it is not the first cost of an automobile that counts so much as the maintenance expense. It may be possible for a man with a small car who motors modestly to get along with an expense of $20 or $30 a month if he has good luck and handles his car carefully and considerately, but the average cost of maintenance will be from $50 to $300 and even more a month. Here are some figures from bills I paid while the owner of a car of the runabout type with a single cylinder 8-horsepower engine and convertible body carrying two or four passengers. These are my expenses for seven months, from April to November, when I covered nearly 10,000 miles. My bill for April follows:

April 1.	Four hours time on adjustments	$2.00
	One gallon of cylinder oil	.75
	Two inner tubes	15.00
	Extra fan belt	1.50
6.	Repairing puncture	.75
10.	Repairing puncture	.75
12.	One auto jack	4.50
14.	Four hours' time adjusting	2.00
18.	Half gallon cylinder oil	.38
21.	Patching inner tube	.75
23.	Two hours time adjusting	1.00
26.	Extra spark plug	4.50
30.	One month's storage	12.00
Gasoline for the month		10.00
	Total	$55.88

My bill in May was $67.22 and was made up chiefly for mechanics' time in making adjustments, as I was not then familiar enough with the car to do this kind of work myself. —From "The Automobile and the Average Man," by Harry B. Haines, in the *American Monthly Review of Reviews* for January.