Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☑ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☑ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

THE CANADA
HEALTH JOURNAL.
(PUBLIC HYGIENE AND STATISTICS.)

Vol. V. TORONTO, NOVEMBER, 1880. No. 2.

HOW DISEASES ARE SPREAD.

Many people do not know how very simply and easily contagious diseases may be and frequently are spread from one person to another. I purpose in this brief paper to give some examples to show how diseases of a most serious character are transmitted; in the hope that it may put some on their guard, and also that it may lead to measures being taken to prevent like transmissions.

Dr. Arthur Downes writing in the *Sanitary Record* on a practical point in diphtheria diffusion says, notwithstanding a certain *a priori* probability of the occasional dissemination of diphtheria by water, and with due regard to what has hitherto appeared in print on the subject, there is not yet, so far as I am aware, a single indisputable piece of confirmatory evidence upon record. There is, however, a general but misleading and unscientific tendency, by no means confined to the popular mind, to accept the mere existence of drainage defects or polluted water-supply in connection with a diphtheria-invaded house as a final explanation of the outbreak. He believes that the *diffusion* of diphtheria is mainly dependent upon personal infection distributed by mild unrecognised cases, and independent, at any rate, as a general rule, both of water-supply and ordinary sanitary defects.

Diphtheria of marked type had occurred on a wet clay upland situated at one end of a long, well-cultivated vale, up which an irregular prevalence of 'colds' and 'sore throats' forthwith slowly crept from hamlet to hamlet. These ailments, generally speaking, presented no specific features by which they could be diagnosed *per se*, but their true nature was revealed by their history and by occasional cases of more pronounced character.

At length illness appeared among the school-children at a village some eight miles up the valley. It was of rather anomalous type—it is my experience that, especially in the milder epidemics, diphtheria by no means confines itself to the lines laid down in the text-books—some of the cases were called 'gastric fever', one or two 'scarlatina', one, on account of a curious rash, was thought to be 'measles' by an experienced old nurse, but others were sufficiently characteristic to indicate their real nature. The only condition common to those attacked was their attendance at the village school. Their homes were widely scattered. Now, at one side of the playground was a small dip-well, liable to occasional road-washings, but not to serious contamination, much used by the children and by several houses in the village. To this well popular opinion attributed the spread of the disease, and with popular opinion, though in a different way, I came to agree.

A frequent, perhaps the most frequent, mode of transference of the diphtheritic *contagium* from person to person is the use in common

of drinking vessels, spoons, etc. Attached by a chain to the well in question was a metal cup for the use of the children, and to this cup I incline to attribute the spread of the infection. That the water had nothing to do with it may be inferred from its character and from the immunity of households in the village using it. The infection may of course have been spread by mere proximity of child to child in school, or by kissing. I am not prepared to deny this, but, considering the peculiar facility for transmission of diphtheria virus by drinking-vessels, and the fact, *quantum valeat*, that the schoolmaster's family, who mixed with the children, but did not, I was informed, use the cup, escaped. I think the explanation I have given a very probable one.

I believe, indeed, that the actual medium of infection among school children is very commonly some spout or drinking-vessel to which they apply their mouths one after another.

In the Herald of Health, Dr. W. J. Chenoweth refers to the spread of disease by kissing. He mentions a case in which a woman suckled a child affected with diphtheria. In consequence, her own child, which was nursing at the same time, contracted labial diphtheria, and communicated it to the mother, "who frequently kissed her infant." This disease he continues is not more readily conveyed than scarlet fever, measles, small pox, typhoid fever, or any other specific fever. But it is not to any of them I wish particularly to call attention, but to *syphilis*, the silent and fearful monster which has already invaded the majority of households, in civilized communities; and which, though not floating in the air, nor carried by the breath, is being constantly propagated by inoculation from the saliva of persons having mucous patches in their mouths, or ulcers on their lips. The January number of the *Am. Jour. of Medical Sciences* for 1878 contains a report of twenty-two cases of persons who had been tattooed by one James Kelly, who had mucous patches in his mouth; of these, fifteen contracted syphilis, evidently from the needles used having been moistened with saliva during the operation. Men employed as glass blowers pass the blow-pipe from one to another, and so frequently do they become poisoned from mucous patches in the mouths of one of the workmen that it is necessary to have separate mouth-pieces for every one employed. It is not unusual to find in medical journals and text-books, notes, such as follows: "A young man brought his sweetheart to be treated for a hard, excoriated, globular lump upon her lip, which failed to get well under assiduous care during many weeks. It got well promptly under treatment for syphilis." "The gentleman had mucous patches in his mouth." "Within the last eighteen months I have met with four cases where there was undoubted proof of the acquirement of syphilis through mediate contagion. One, a young lady, with the initial lesion on the lower lip, acquired from her lover's kiss."

Prof. Segmund, of Vienna, saw seventy-three cases of syphilis of the lips, between 1861 and 1867, and they were not confined to the substratum of society, but were in all ranks. The causes assigned were pipes, drinking vessels, kissing, and similar means.

If then syphilis, and diseases of a specific nature, can be communicated by kissing, is it just to suffer our children to be kissed by any nurse, or other person, how well disposed they may be? Is it proper for a woman to be subjected to the

osculatory salutations of every other woman she meets merely because it is fashionable?

It seems highly probable that diseases of this sort may be spread by means of the cup at public drinking fountains. I have often thought when witnessing the many drinking at the street fountains in Toronto, that some who drank might get much more than simply a drink of water.

Dr. Mac Cabe relates an instance of the transmissibility of scarlatina by means of wearing apparel. He was sent for to see a lady suffering from an attack of scarlatina, and when he told her husband the state of the case, he, to use Dr. Mac Cabe's expression, laughed him to scorn, and asked how she could have got it. On investigation, it was found that a youth of the family had returned from Rugby, because the school he attended was shut up in consequence of an outbreak of scarlatina. He had not had the scarlatina himself but had brought it over. The doctor called at the same house a few days after and found a ball-dress lying on the lady's bed, which had just been sent in from a Dublin firm. The patient said she was looking at it to see if it was made in accordance with her directions, and that it was for a lady in Belfast. The dress was accordingly sent to Belfast, but with an unexpected addition of zymotic poison, and the young lady who received and wore it died of scarlatina.

Everyone knows that diseases are often spread by means of milk from some infected dairy; and in conclusion I will only say in reference to this that, Dr. James Christie, of Glasgow, Scotland, investigated the causes of an epidemic of enteric fever that occurred last April in one of the districts of Glasgow. Ninety-two cases occurred in a population of 1,242, and 86 of the cases were traced to the milk from one dairy.

ON THE DRY METHODS OF REMOVING EXCRETA.

Dr. Parkes says, "It is highly probable that to the barbarous and inefficient modes of removing the excreta of men and animals we must partly trace the great prevalence of diseases in the middle ages; and there is no doubt that many of the diseases now prevailing in our large towns are due to the same cause."

There is no doubt, indeed, that a very large proportion of the diseases which afflict humanity are caused by the imperfect manner in which the waste matters from our own bodies are disposed of; from these waste matters—from the lungs, the skin, the bowels—finding their way back into our bodies again, and chiefly along with the air and water consumed. It is usually along with the excreta of the body that the specific germs of contagious diseases are conveyed from person to person.

In cities and large towns where there are efficient provisions for abundance of water, the water carriage system of removal of excrement is very generally preferred. And no doubt, with good plumbing work, perfect ventilation of soil and waste pipes, and a water course which will carry the sewage far out to sea and not simply to some other town or city, it is a very excellent plan for the removal of waste. But in the estimation of many eminent sanitarians it is falling into disrepute, for general use. For the most part, it takes the excreta from one door and deposits it at some other door. We are not now, however, going to discuss the value of the water carriage system: in small towns and villages it cannot well be adopted for want of water.

In Canada the water carriage plan is the only one in use. Where it cannot conveniently be employ-

ed, the old disgusting, disease-producing plan of keeping the excrement in privy vaults is universal. There are but few who are not familiar with the serious objections to this plan, and protests are not now necessary here.

The question is, in what way is it best to dispose of the excreta. The late president of the Michigan State Board of Health, Dr. Hitchcock, believes the dry-earth system will eventually supersede water carriage closets and vaults; as it is, he says, the most "sanitary, rational and economical method." "All dead matter," he adds, "when buried in the earth for a time seems capable of a resurrection and a new life, and that the really important and comprehensive question in the disposal of excreta is, how shall it the soonest and in the safest manner be commingled with the earth?"

In Great Britain, where sewage farming is becoming in a measure common, it is aimed to get the sewage on to the farm and mingled with the earth as soon as possible, or before decomposition sets in. Not only is the fresh sewage considered to be most valuable as a manure, but by having it thus disposed of early there are few sewer gases to contend with in connection with the dwellings.

The greatest objection probably to the dry earth system is the difficulty in many places in obtaining sufficient and suitable dry earth, and in its after removal; though with good and dry earth, a very small quantity suffices to disinfect the excreta and destroy all effluvia.

In suburban places and villages and farm or country homes, the resulting compost may be conveniently applied to a garden. This plan is common in Parkdale, where the dry earth system is made compulsory; or rather perhaps so far compulsory that vaults for accumulations are not permitted; and the dry earth is the most convenient alternative.

Those who are not able to incur the expense of an elaborate closet, such as the Wakefield, or other patent closet, may fulfil every sanitary requirement by providing under the closet seat, a movable box or tub, and by having a little dry earth scattered daily or oftener over the excreta.

What is called the Goux System has been largely adopted in England, and gives very good satisfaction in towns and villages. In this system tubs are employed which are before use lined with some absorbent material, such as chaff, straw, hay, &c., which absorbs the liquid excreta, and in which is a small percentage of sulphate of iron or lime. The material is pressed close to the bottom and sides of the tub by means of a mould, which is then withdrawn. The tub is removed and another left in its place once or twice a week, or oftener, as provided for.

In the Rochdale System, pails or tubs are used in a similar manner, but which, instead of being lined throughout, as above, contain a quantity of disinfecting fluid, as solution of sulphate of iron.

What appears to be an admirable method is coming into use in England, that of using ordinary house ashes, which are light and always on hand, instead of dry earth. A valuable manure is thereby produced. In the March (1880) number of this JOURNAL was a notice of "Morrell's Patent Self-acting, Cinder-Sifting Ash-Closet." The cinders are separated from the dust, a sufficient quantity of which is distributed over the excrement each time the closet is used, and thus all smell is prevented. As ashes, either of coal or wood, are a waste product in every household, it would seem

no better plan can be devised than that of utilizing them in this way.

In conclusion, I may say that there are probably very few villages or small towns, near which there are not farmers who would be glad to cart away, for use as manure, all waste matters of the kind referred to above, without further remuneration than the waste itself, which would greatly enrich their farms.

We hope the time is not far distant when many of the beautiful villages of Canada will be rendered more beautiful by having all excrement removed by one of the methods above noticed.

"TAKING COLD;" THE SKIN AND THE CLOTHING.

Thousands die in Canada every year from inflammation,—inflammation of the lungs, of the bowels, of the brain, and of other organs. A most common cause of inflammation in the different organs is what is called "taking cold." Colds and inflammations are more common during the colder, changeable weather than during milder or summer weather.

A great deal is often said and written about the influence of the weather on health; and the weather is blamed for consequences resulting from our own ignorance, or perhaps neglect of the practical application of the knowledge we possess. Taking cold depends a great deal more upon the condition of the vital processes than upon the action of cold upon the body. With an average constitution, and all the functions of the body performed in a perfect and harmonious manner, and with an intelligent observance of the laws of health, men and women could hardly take cold if they wanted to.

Very rarely indeed do domestic and other animals, living in a natural state, take cold. Why? Chiefly because they are not housed in close, over heated rooms; nor clothed unequally, and otherwise very unhygienically; nor over fed with highly appetizing but often innutritious, irritating and indigestible food. The fact is, that in order to avoid taking cold from ordinary, or even extraordinary exposure, the vital processes of the body must be made strong enough to rise above and resist the outward influences of external conditions. If the body is not thus superior, if it is so enfeebled that it can only act harmoniously under the most favorable conditions, no degree of human care and foresight can prevent taking cold.

Very few people comparatively, either from ignorance, or from want of will power to enable them to act in accordance with acquired knowledge, live so far in conformation with the laws of health as to enable them to resist the influences of cold or any sudden change or exposure; hence colds, chills, inflammations, and consequently premature deaths are rife. The preventive means are therefore obvious enough.

Next to avoiding that intemperance in eating and drinking which obstructs, overtaxes and debilitates the nutrient organs and hence the entire organism, and close overheated rooms, which help greatly to relax and debilitate, especially the skin, and which causes of illness were treated of in the September number of this JOURNAL, attention to

THE SKIN

and the keeping of it in a clean, active and vigorous condition, is probably of the first importance, amongst the means employed to invigorate the system and prevent "colds."

The thousands of sweat glands in the skin are constantly giving off, through their little ducts (the pores of the skin), more or less perspiration, which is water containing some

salts and organic or animal matters —refuse substances which the body has done with, for which we have no further use. The water passes off as vapor through the clothes, but most of the salts and animal matters remain on the skin, or in the clothes. Then the outer dried cells of the cuticle are being constantly rubbed loose, and remain on the skin or underclothing, unless washed off. So if we do not wash frequently, these dead matters accumulate, and the little openings of the glands or ducts get clogged, and the perspiration, with more worn-out matters, cannot get out of the body freely enough, but accumulate in the blood. And so the blood, instead of being purified by the glands of the skin, soon becomes impure. The kidneys now endeavor to do the work which the skin, by reason of these obstructions, is unable to do; but they cannot do it perfectly, along with their own special work, and are over-taxed in the effort.

Furthermore, the heat of the body is regulated and kept within healthy limits by the evaporation of moisture, chiefly the perspiration from the skin. If free perspiration is obstructed, by reason of the pores of the skin being partially closed, the temperature of the body cannot be regulated as it should be, and disordered functions—a diseased condition of some sort, will certainly follow. Hence, want of vitality, debility, and want of resistance to cold and changes in the temperature, humidity, &c. of the weather. And so one cannot be healthy and vigorous unless the skin is kept clean and free from excremental matter; and how is it to be kept clean and constantly free from excrement without frequent—daily bathing?

The editor of this JOURNAL was recently, on reading a paper on a hygienic subject before the Toronto Teachers' Association, asked if it were not, as many people had not the conveniences for bathing, sufficient to rub the skin briskly every day with a towel. Rubbing with a towel, even a dry one, helps to clean the skin,—cleans off some of the waste matters, but it is not enough. Water is indispensable. But an elaborate bath-room is not necessary. A quart or two of cold or cool water in the bed-room, and a washing all over of the surface of the body, just as most people wash the face, with the hands frequently wet with the water, is sufficient; followed of course with brisk rubbing with a towel. The warm hands give an agreeable sensation; whereas a sponge does not—to most individuals. The writer has made use of this kind of bath daily for twenty-five years, with an occasional warm bath, and finds it all that is necessary for health, and to keep the skin clean, soft and vigorous.

If every one was to adopt such a plan and carry it out for a month, there are few who would not continue it; so refreshing, comforting and invigorating is it.

Having attended to the state of the skin, in order to avoid taking cold,

THE CLOTHING

demands attention. Both theoretically and practically woollen is found to be the best material for clothing, not only for underclothing, but for all clothing. This appears to be very universally conceded.

Woollen fabrics are porous and contain a good deal of air, which is a bad conductor of heat; hence they feel warm to the touch, and conserve the heat of the body, instead of conducting it off as do linen and cotton. But besides this valuable property woollen possesses another equally valuable one, namely, its great capacity for moisture. It will

hold twice as much moisture as linen or cotton before giving off any: further more, woollen takes in moisture and gives it off more slowly than cotton or linen. Every one knows how readily these latter fabrics become wet with the perspiration in warm weather; and when thus wet they feel cold, because they take in moisture readily and having little capacity for it, give it off readily on the outside, taking the animal heat with it.

For wearing next the skin during the day, especially for those who lead an active life and perspire a good deal, woollen flannel is particularly valuable.

After working and perspiring, and when the exertion is finished, evaporation still goes on from the surface of the body, often to such an extent as to cause chilliness. If one puts on dry woollen clothing, as a thick coat or shawl, immediately after exertion, the vapor from the body will be condensed in the wool, and will give out again the large amount of heat which was required to convert the perspiration into vapor, or which was given off the body; thus helping greatly to prevent chilliness. A woollen covering, therefore, for this cause alone, feels warm when used during sweating. If cotton or linen is used, the perspiration passes through and evaporates into the air from the outer surface, taking heat from the body with it.

It is now asserted that this property of woollen makes it particularly valuable in yet another way; which is explained as follows: It has long been observed in connection with large numbers of men, as those of the army and navy, that those who wear flannel next to the skin instead of cotton are less likely to suffer from—seem indeed to posess greater resistance against, certain diseases; as those of a malarial character, such as malarial fevers and dysentery. Among the discoveries which have been made during the last few years, some facts brought to light by Dr. Gustave Jaeger, of Stuttgart, regarding the amount of water contained in the human body, may it appears, prove to be of some practical value. In a paper concerning "the resistibility of the human body against epidemic diseases, and the power of constitution," Dr. Jaeger has shown that the specific gravity of several individuals is very different, and that the state of the health of those individuals is closely connected with their specific gravity. The greater the weight of the human body in comparison to the space which it occupies (the greater its specific gravity) the more it is able to resist epidemic diseases. "Persons of a low specific gravity are taken ill from very insignificant causes, such as a cold, and are very susceptible to contagious diseases. Such persons have usually a certain fulness of body, and are even corpulent, but just that which gives them a great size is useless ballast, namely, fat and water. These substances endow the heaviest bodies with a comparatively low specific gravity, giving at the same time to the constitution little power of resistance. Very different is the case with bodies of high specific gravity. Here neither fat nor water is superabundant, the flesh feels solid, and the bodily constitution possesses a high power of resistance."

Dr. Jaeger asserts that he has discovered a simple and natural means of preventing the accumulation of fat and water in the system. The principal of his preventive means appears to be the exclusive use of sheep's wool for the purposes of clothing.

During the night, or when in bed, I believe it is better not to wear

woollen next the skin; as the beneficial effects of wearing it during the day will then be greater. Woollen underclothing should be frequently changed and exposed to the sun and air, though it need not be so frequently washed.

Before concluding, I will draw attention to the fact that much of the so called woollen cloths and flannels of the present day consist largely of cotton; and hence, though much lower in price, they are not nearly so valuable for the purposes of clothing as pure woollen.

I will defer for next number some remarks on mistaken attempts to harden the system by wearing too little clothing, and on over-clothing, tight, and unequal clothing, and sudden changes, &c.

CANADA MEDICAL ASSOCIATION; THE SANITARY WORK.

The thirteenth annual meeting of the Canada Medical Association was held at Ottawa on September 1st and 2nd, in the Railway Committee Room, House of Commons, which, with a suit of small rooms, the Speaker of the House had kindly placed at the command of the Association. The meeting was well attended by members from Ontario, Quebec, and the Maritime Provinces —delegates from the American Medical Association being also present. A large number of new members were elected.

More than usual attention was devoted to subjects relating to Sanitary Science. The meeting was said to be the largest and most successful ever held by the Association.

Dr. Botsford of St. John, N.B., reported on Sanitary Science, in which the importance of the acquisition of hygienic knowledge, and of the adoption of sanitary legislation were dwelt upon. To show the good effect of sanitary measures some valuable statistics from the report of the Registrar-General of England were quoted. Through ignorance on this subject it was estimated that 10,000 lives were annually lost in the Dominion. The lack of sanitary legislation by the Dominion Parliament was regretted, and, by way of contrast, the action of several of the neighbouring States was mentioned.

Drs. Brodie (of Detroit), Playter and Workman (of Toronto), and Sweetland and Grant (of Ottawa) discussed the report and endorsed the views of Dr. Botsford.

At the afternoon session the talented President delivered his very able address. He referred to the high standard of medical education required in the different Provinces, comparing it favourably with that of Great Britain, and alluded to its vast superiority over any in the neighbouring republic.

After referring to the necessity of impressing upon public legislators the importance of paying due attention to all sanitary matters and the collection of Vital Statistics, and a proper consideration of the lessons to be deduced from them, he referred to other objects which he thought the Association should endeavour to obtain. He favoured compulsory registration of cases of infectious diseases, and the adoption of an Habitual Drunkards' Act, the same as in England. Inebriate homes should be established, and a portion of the revenue derived from the sale of intoxicating liquors devoted to their maintenance.

CENTRAL AND PROVINCIAL BOARDS.

Dr. HOWARD said . . . If it be true that under confederation the care of the public health is a function of the Provincial Legislatures, and beyond the power of the Dominion Government, then it appears to me that the first step to be taken should be to establish a central or national Board of

Health, to which should be assigned, amongst other duties, the preparing a comprehensive plan for a national public health organization, to be submitted to the Federal and the Provincial Legislatures for their approval: the obtaining information upon all matters affecting the public health; the advising the several departments of the Government, and the executives of the several Provinces, on all questions submitted by them,or whenever, in the opinion of the Board, such advice may tend to the preservation and improvement of the public health; the securing the establishment of a Board of Health in each Province, whose functions shall be performed in accordance with the plan prepared by the Central or National Board; the guiding, advising and assisting the Provincial Boards, and securing their co-operation in the obtaining of regular periodical reports upon all matters of State medicine; the combining and summarizing in annual reports all the information and facts contributed by the several Provincial Boards of Health, and by any other municipal health organizations or other source. The Central Board should probably consist, as suggested by Dr. Richardson, of a physician, a surgeon, a physician with practical experience as a health officer, a chemist, a veterinarian, a statistician, a sanitary engineer and architect. These should all be men of first-rate qualifications, and should receive compensation during the time when actually engaged in the performance of their duties, and if the President of the Board were given a seat in the Cabinet, as Mr. Stansfeld was in Mr. Gladstone's last Administration, and as Mr. Dodson has been in the existing Administration of the same distinguished statesman, then the influence and usefulness of the National or Central Board of Health would be greatly increased and its success secured.

The eloquent address was closed by a reference to the good work done by the Association in the past and to the great opportunities and bright prospects in the future.

The second day the President presented a report from Dr. Oldright, chairman of the special committee appointed last year to report on the subject of Health Registration, and negotiations with the Dominion Government in relation thereto. The report suggested that a committee, consisting of the President, Drs. Oldright, Grant, Larocque and Botsford, be appointed to continue negotiations with the Government. The names of Drs. Brouse and Strange were added to the committee and the recommendation adopted.

At the afternoon session it was moved by Dr. Fulton, seconded by Dr. Bray,

"That the following committee be appointed to consider the propriety of adopting some Uniform System of Classification of Disease for the guidance of the profession in Canada, and report at the next meeting of this Association, viz.:—Drs. Workman of Toronto, Ross of Montreal, Macdonald of Hamilton, Atherton of Fredericton, N.B., and Parker of Halifax."—Carried.

A very valuable paper was read by Dr. Grant, of Ottawa, on "Gymnastics of the Brain." It dealt with the evils of too early education in ill-ventilated and crowded schoolrooms, and the folly of the system of cramming. Drs. Brodie, Hingston, Sweetland, D. Clarke, Botsford, Campbell, Burgess, Workman, Bray and Macdonald took part in an animated and lengthy discussion on this paper, and coincided with the views of the reader.

It was suggested by Dr. Playter that on account of the practical character of Dr. Grant's paper, the publication of it be not confined to Medical Journals,but that it be published in the secular newspapers; which was readily agreed to.

After further discussion it was moved by Dr. Bray, seconded by Dr. Burgess,

"That the principles embodied in Dr. Grant's paper are approved of by this Association, and are well worthy of the consideration of the educational authorities of the Dominion." Carried.

It was moved by Dr. Hingston, seconded by Dr. Sweetland,

"That in view of the discussion on over brain work and cramming in schools, elicited by Dr. Grant's very important paper on Gymnastics of the Brain, the following committee be appointed to report at the next meeting of the Association in reference to this subject: Drs. Grant, Workman, D. Clarke, Hingston, Playter, Larocque and Botsford." Carried.

After some other business, it was moved by Dr. Canniff, seconded by Dr. Sullivan,

"That it is the unanimous opinion of this Association that at the present time there is no subject demanding the attention of the Legislature of this country of greater importance than that of the public health; and in order that Canada may not be behind other countries in this matter, it is very desirable that both the Dominion and Provincial Governments should, with as little delay as possible, legislate and provide means for the better promotion of the public health throughout this Dominion." Carried.

Dr. Marsden presented the report of the Nominating Committee, which was adopted. Dr. Canniff, of Toronto, being selected President for the ensuing year; the Vice-Presidents are, for Ontario — Dr. Mullin (Hamilton), Quebec, Dr. Fenwick (Montreal), Nova Scotia, Dr. Parker, New Brunswick, Dr. Christie.

Committee on Climatology and Epidemic Diseases, (the only one directly relating to the public health).—Dr. Player, Toronto; Dr. Oldright, Toronto; Dr. Larocque, Montreal; Dr. Allison, St. John, N.B.; Dr. Jennings, Halifax.

PREVENTABLE DISEASE; PARALYSIS.

There is a greater variety of preventable diseases than many suppose; and there are in fact but few diseases which are not in a greater or less measure preventable.

The following on paralysis we extract from a paper in the *Sanitarian*, by E. R. Maxson, A.M., M. D., LL.D. of Syracuse, N.Y. Besides the forms of Paralysis referred to below—Apoplectic, Lead, and Tobacco—the writer treats of Traumatic, Hysteric, Diphtheritic, Rheumatic and Syphilitic Paralysis; which we omit as being of a less practical character.

As an illustration of the extent to which *preventable causes* are operating to produce disease, the writer says, I have selected the very common one, *Paralysis*.

And, while it may readily be seen that many of the causes operating are clearly *preventable*, it is equally true that most of them are, at least, remotely so. And what is true of paralysis, in this respect, may hold good in relation to disease in general, to a great extent.

Apopletic Paralysis is the result of apoplexy, and may depend, remotely, upon all the accidents and imprudencies which lead to the apopletic fit; such as irregular eating, improper food and drinks, licentiousness, violent fits of anger, etc., being attended with softening, or other organic change, of the brain, in many cases, with or without hemorrage, forming a brain clot; the subsequent attending paralysis being general or local, involving, very generally, one side, or the lower extremities, according to the brain lesion attending the apoplexy. And, in some cases, in which there is no perceptible lesion of the brain or nerve centres, the paralysis may be recovered from, by removing the causes, and pursuing a judicious course of treatment; and the same may be true, to some extent, of cases attended with lesion of the brain, with a brain clot, a fair proportion of them improving under judicious treatment, as I have found. But in no case is it reasonable to expect very marked permanent improvement, under any treatment, without a removal of the causes that may have been operating, directly and indirectly. . . . .

Lead Paralysis is becoming very common, not only from exposure to lead, by artisans, painters, plumbers, drinking water running through lead pipe, sleeping in newly painted rooms, or occupying them, etc., but also from the use of lead as a medicine, imprudently, locally or internally. But, perhaps, the most frequent cause of paralysis from lead is from its use as a cosmetic, hair-dyes, etc.; for, its action being slow and insidious, it is often beyond the reach of remedies, having produced irreparable changes in the brain, or other vital organ, before the paralysis is noticed. And, in such cases, the paralysis, though perhaps local to a certain extent, always involves the brain; and hence is attended with more or less mental imbecility, ranging from a slight mental weakness to complete idiocy, as I have witnessed, and of the most deplorable character. Its prevention, of course, consists in abandoning the unnecessary use of lead and observing the greatest possible prudence in its use, where something safer cannot be substituted. No circumstances can justify its use as a cosmetic or hair-dye. And, though many of the cases are curable, they are not all within the reach of remedies, however judiciously administered. . . . . .

Tobacco Paralysis may be *general* or *local;* generally, however, involving the lower limbs, and, in fatal cases, according to my observation, invariably extending to the bladder and rectum, and terminating by a suspension of the renal function; the heart, and other vital organs generally, also becoming more or less involved; all of which symptoms had been developed in a case I recently saw in a distant city, terminating fatally, after lingering for six months, with paralysis of the legs, bladder, and, finally, kidneys, as appeared. I have had cases, however, in which there was a general collapse of the nervous system, with partial paralysis of the heart muscles; one of which I visited in Massachusetts, which recovered, and another from Michigan, attended with convulsions, which terminated fatally, with insanity; both young men or under middle age.

In those cases in which there is, at first, a general collapse of the nervous system, the heart and brain become poisoned by the accumulation of *nicotin* before the legs become affected so as to be noticed. Such cases, however, generally occur from a protracted accumulation of the poison of tobacco in the system, or else from the use of a large quantity, or of unusual strength, in a given time. The paralysis, in such sudden cases, is of a passive apoplectic character, though, of course, rendered transient by death.

The prevention of paralysis from tobacco consists, of course, in abstaining from its use, in any form, for which there is not one shadow of an excuse.

In conclusion, I respectfully suggest to *medical men* that, while we are trying to cure paralysis and all other forms of disease, and prudently avoiding the causes ourselves, we should use our influence as far as we can consistently, to induce others to observe a like prudence, in avoiding the causes of disease. And I also respectfully recommend to *all* a careful avoidance of both the direct and remote causes of disease, and especially the more flagrant, unnecessary and ruinous *habits*, which are now thus not only crippling and killing so many, but also tending to the physical degeneracy, intellectual weakness and moral depravity of mankind.

To correctly understand our responsibility in this matter, it is only necessary to remember that all

these forms of paralysis, as well as most of the ills that afflict humanity, so often regarded and deplored as "visitations of Divine Providence," arise, either directly or indirectly, from *causes* that might be avoided under proper sanitary regulations and the exercise of a discreet and enlightened common sense. And, hence, if visitations of God, in any sense, are such, only as a natural legitimate result of a violation of the *laws* of life and health, which involve not only our physical, but also our intellectual and moral well-being.

DR. CARPENTER ON EPIDEMIC DISEASE.

The first of a series of drawing-room lectures under the auspices of the National Health Society was delivered last week at 23 Hertford street, Mayfair, by Dr. William B. Carpenter, C. B., F.R.S., the subject being "Predisposing Causes of Epidemic Diseases." The lecturer explained that all the epidemic diseases with which we were acquainted were of that class to which the term zymotic was applied, that term having been first suggested by Dr. Farr in the reports of the Registrar-General. The diseases were occasioned by the introduction into the system of poison which had the power of multiplying itself within the body, and of passing from one individual to another throughout a community. There were several modes in which the poison might obtain access to the blood: it might be introduced from without by means of bad food, bad water, and impure air; or it might be introduced from within. It did not at first seem very apparent in what way the conditions of persons suffering from famine was allied to that of individuals who were subjected to zymotic poison, yet history showed that pestilence always followed great famines, and it would be remembered that in our own day the Irish potato famine was succeeded by a severe epidemic. The excessive use of intoxicating liquor was also known to promote the spread of epidemic disease. The experience of the whole medical service of India was, that fever, cholera, and dysentery were peculiarly prone to attack the imtemperate, the evil being greatly aggravated when the activity of respiration was diminished by overcrowding or insufficient ventilation. Although in an immense city like London they could not hope to reduce the mortality below 16 per 1000, they might destroy most of the predisposing causes of zymotic diseases. A study of those causes was, therefore, of the utmost importance, and should be the constant aim of those who took an interest in sanitary reform.

SHAKER SANITATION.

The following communication to the *Plumber and Sanitary Engineer* well illustrates the regard which those peculiar people, the Shakers, have for practical hygiene:

The Shakers of New Lebanon have always given a great deal of attention to hygiene, and their secular reading includes journals like tl e *Scientific American*, *Journal of Chemistry*, New York *Tribune*, Boston *Herald*, *American Agriculturalist* and *The Sanitary Engineer*, all of which are in their reading room. During a late brief stay in the community I had an opportunity of seeing how carefully they attend to sanitary matters. It seems singular that a community whose main thoughts are turned toward spiritual things and to preparing for another life should be so zealous to secure bodily health. The results

of this care and attention are shown in the remarkable vigor and longevity of all their members; and their example might well be followed by more worldly-minded people.

The tombstones in their cemetery record numerous deaths among the nineties, and we were struck with the fresh and lively interest which an elder past eighty showed in conversation on general topics.

The Shaker doctrine as regards hygiene is simple, and includes plain and wholesome food, manual labor for all, early and regular hours, and good ventilation. The latter is a constant study. Slats are placed in every window to make an opening between the two sashes, so that there shall always be an influx of atmospheric air. Small holes along the base-board in all of the halls aid this end. In the gathering rooms there are round openings from outdoors, just below the steam radiators, to supply fresh air, and the central (student) lamps have vent pipes to carry off the products of combustion; in addition, all beds are stripped and windows kept open to insure an ample circulation of air. They have a copious and pure supply of water brought from a distance with a heavy pressure, 60 lbs. The wooden conduit has just been replaced by a cement pipe and the storage reservoir enlarged. All rain water from roofs is utilized for laundry purposes. The laundry itself is a model of convenience and neatness, and is a curiosity from the fact that all the fittings were put in by the Shakers themselves. The washing, wringing, and drying apparatus is simple, yet perfect, and nothing seems wanting.

The sanitary arrangements are well worth imitating. In each dwelling there are baths, sinks, and w.c.'s, all well ventilated, while the outdoor privies, which are more generally used, are treated much the same as earth closets, the material being taken away every few days and composted. The house drainage, which is mostly kitchen waste, is conveyed to an open drain which encircles an orchard and is not offensive, while it is very serviceable to the growth of the apple trees.

The Shaker regard for cleanliness is strikingly shown in the milking room in the huge stone barn, which is wonderfully clean and neat, while the arrangements for carrying off and preserving the manure are very ingenious.

The Shakers are a progressive people, and are always experimenting with new devices. The Elders informed me that their careful attention to hygiene has a theological basis, they believing that science and religion, "truly so called," are one and the same.

WATER FILTERS.

The following valuable and practical conclusions on the use of filters are from a paper, on Filters and Potable Waters, read at the Sanitary Convention, held in Detroit in January last, by Dr. Prescott, of Ann Arbor:

1. A good portable filter, when in good order, removes from eighty to ninety per cent. of the putrescible organic matter from rain water.

2. Such a filter, in good order, supplied with unpolluted rain water, collected and stored with due cleanliness and with strictest exclusion of ground drainage, furnishes a very pure water (containing an average of only three-tenths, and, at most, seven-tenths of the maximum safe quantity of nitrogenous organic matter).

3. A good filter, in good order, cannot at all be depended upon to make polluted water safe for drinking. A polluted water, probably containing animal excreta, is liable

to carry specific poison, as that of typhoid, and no filtration can be at all trusted to make it safe.

4. In case of any potable water of doubtful quality, as regards organic matter, the danger from its use is greatly lessened by its filtration through a good filter in good order.

5. A good charcoal filter, used for clean rain water, and not kept submerged over half or two-thirds of the time, but left with the filter-bed drained off a part of every day, will remain in good order for considerable time, and may be relied on for at least a year. Air is far better than the purest water to cleanse a good charcoal filter. The better the filter the more readily it is cleansed of organic matter by atmospheric oxidation. Due care of a filter requires that all suspended matters should be removed before the water reaches the filter-bed. This is well accomplished by the sponge, interposed between the reservoir of unfiltered water and the bed. Of course, water that is loaded with impurities (especially with dissolved impurities) will far sooner clog a filter-bed and make it worthless. It is only when supplied with approximately pure water that the slight organic residues can be removed by atmospheric oxidation, and the filter be considered an almost permanent means of purification.

6. Water should not be stored after it is filtered. Filtered water is like the manna of the Hebrews; it must be obtained fresh every day. Organic growths multiply in even pure water. These bodies are highly nitrogenous, perhaps taking nitrogen from the air, and they should be removed. Filtration does it.

The best filter-bed is bone charcoal. But, whatever the material, it should be so disposed that the water must all be subjected to capillary attraction as long as possible, in going through the bed. A good filter-bed must be fine and close enough, so that, at any given point, the liquid does not pass through faster than by drops.

WOMEN AS SANITARIANS.

President Gilman, in his address at the Smith College Commencement, remarked (*Plumber and Sanitary Engineer*): "That education must be secured through good living, obedience to the laws of health and recreation. The housewife should be educated so as to be able to prevent the ailments of those who dwell under the same roof with her. As every young man must expect to qualify himself to support a household, so must every young woman strive to render herself fit to manage the affairs of the house. The relations to each other of all the things which effect good living must be understood, food, air, water, exercise, etc., in order that all emergencies may be provided for. *All those things which we call modern improvements, gas, water service, furnaces, books, newspapers, magazines and other manifold accessories of the household must result in bad odors, noxious gases, headaches and a host of other ills unless their right use is understood and insisted on by the ever watchful housewife. All sanitary reforms must rest on the shoulders of the women of the country.*"

MORE BOARDS OF HEALTH.

Within the last few months the following States have each had a State Board of Health organized by the various State Governments, with a money appropriation for the use of each varying from $5,000 to $15,000: viz., New York, Iowa, Indianna, and, we believe, Ohio. Twenty-one or more other States had each established a Board pre-

vious to the above. The chief object of most of these Boards is the education of the public in health matters, and in various ways to protect the lives of the people. When is Ontario and other Canadian Provinces to take like action in the interests of health and life?

REGISTRATION OF HOUSES.

On this subject the *Plumber and Sanitary Engineer* has the following: The proposition made some time since by an English architect to adopt a system of house registration similar to Lloyd's ship registration, and to issue certificates for all dwellings according to their sanitary status, has lately been thoroughly discussed at a meeting held under the auspices of the London Society of Arts. Much diversity of opinion was expressed by the many eminent sanitarians present, but the general conclusion seemed to be that the plan was feasible, and would prove a great security and comfort to householders. There are practical difficulties to be overcome to make sure that a house is soundly constructed; but these are no greater than in the case of a ship or steamer, where a vast variety of materials are employed and many kinds of workmen are engaged, while, as with house plumbing, much of the work is hidden from view. It would appear also that the same element of self-interest which leads ship builders and owners to construct perfect vessels would induce house builders and owners to erect perfect dwellings. If "jerry" building was as common on the Clyde as it is in our great cities, there would soon be a decline in ocean travel; and there seems no real reason why our dwellings should not be as safe and as lasting as a Cunarder.

IMPORTANCE OF REGISTRATION.

Harriet Martineau, on the importance of registration, wrote as follows:

"A faithful register of births, marriages, and deaths is wished for by enlightened philanthropists of all advanced countries, far more as a test of national morals and the national welfare than as a matter of the highest social convenience. For this the physiologist waits as the means of determining the physical condition of the nation; as a guide to him in suggesting and prescribing the methods by which the national health may be improved and the average of life prolonged. . . . .When the philanthropist gains access to a register of the national births, marriages, and deaths he will have under his hand all the materials he requires as completely as if he were hovering over the kingdom, comprehending all its districts in one view, and glancing at will into all its habitations. The comparative ages of the dead will indicate to him not only the amount of health, but the comparative force of various species of disease; and from the character of its diseases and the amount of its health much of the moral state of a people may be safely pronounced upon."

REGISTRATION OF INFECTIOUS DISEASE.

This is a subject demanding the serious attention of all who value the public health. The plan has been adopted by several districts in England and the number of deaths from infectious disease has greatly fallen off. The *Sanitary Record* (London, Eng.) says, We learn incidentally from a useful memorandum detailing the precautions to be taken against diphtheria which has been sent to us by the courteous secretary of the Michigan Board of

Health, that notification to the sanitary authorities of the existence of infectious disease has been compulsory in that State since the year 1871. Section 1,734 of the Compiled Laws of Michigan imposes a fine not exceeding a hundred dollars on any householder who refuses or neglects to give immediate notice of the existence of small-pox or any other disease dangerous to the public health to the Board of Health or the health officer of the township in which he resides. As regards the medical attendant, the law is even more strict, for it enacts that refusal or neglect on his part in giving notice to the authorities shall be punished by a forfeit, for each offence, of a sum not less than fifty nor more than a hundred dollars. Another section of the same laws provides that the Board of Health shall use all possible care to prevent the spreading of the infection, and *give public notice of infected places* to travellers, by such means as in their judgment shall be most effectual for the common safety. This is a clause which we might very well copy in England.

M. PAUL BERT ON SCHOOL HYGIENE.

This celebrated French savant, says the *Sanitary Record*, lately presented a prize for history which he himself had founded at the communal school of La Madeleine, Auxerre, and took the opportunity to express his views on school hygiene. School-houses, he said, should be bright and cleanly, and so attractive that only lazy dunces would attempt to play truant. They ought to have large airy school-rooms, with plenty of sunshine pouring into them, and no bars to the windows. Then there should be a fine spacious playground, a gymnasium, and, wherever it was possible, a beautiful flower-garden. The school-house should be ornamented and decorated; it should be the lay church; and Republicans ought to do for it what their forefathers did for the common house of worship. It should be counted a holy place, because there truths susceptible of demonstration, civic virtues and the religion of patriotism, are taught. M. Bert also very sensibly recommended keeping good fires in winter, a change of clothing for every pupil in the school-house, and the provision of basins of hot soup for indigent children—a fair amount of food being necessary to open a child's ears to the voice of the schoolmaster. The value of these recommendations is incontestible; the possibility of carrying them out, less so.

EDUCATION OF YOUTH.

This is a subject in which we are pleased to see a good deal of interest is being taken at the present time. In commenting upon a very able and lengthy address, on Psychology, by Dr. Crichton Brown, LL.D., F. R.S.E., &c., at the late meeting of the British Medical Association the *Medical Times* and *Gazette* gives the following:—This question of the education of our youth has hitherto been too much regarded as one concerning which only statesmen and schoolmen were entitled to entertain very definite opinions. It is now, however, becoming more and more evident that the physiologist and the physiological psychologist have a much greater right to be heard on the matter than either the schoolmaster or the minister of education. Over and above the important, but often neglected, rules already supplied by physiology and hygienic science to prevent the injury to bodily health and development during the process

of education, the more recent researches into the embryology and evolution of the brain, as connected with the natural order of development of its various functions, have for the first time revealed the real principles on which a true science of education can be built. Though we are still unable to say very definitely at what periods of life the elaboration of structure in the different cerebral centres is complete, we already know sufficient to prove that this elaboration of the various parts of the brain of the child and the youth does not proceed at random, but in a definite natural order, and that there is therefore a certain time in the life-history of each individual when certain mental functions ought to be stimulated and cultivated by education—the period, namely, when the centres corresponding to these functions are in a certain stage of natural structural evolution. It is also equally obvious that the best time for cultivating certain of our mental powers may be allowed to pass by unimproved, and that an undue strain upon any of the centres at a time when their structural evolution does not admit of such strain may do very serious injury. It is found to be just at that period in the history of each nerve-centre when growth-activity, though becoming less energetic, is still present, and functional activity, although still feeble, is gradually gathering strength, that most may be done, and that most easily too, to stimulate and foster the special function. By skilful management this nascent period of functional activity may be indefinitely prolonged, and a superior anatomical substratum provided for subsequent developments; but by undue or untimely forcing it may be seriously curtailed, or by negligence it may be allowed to slip past unimproved.

His remarks on the important bearing of physiology upon education furnish another very striking instance of the signal and wide-reaching importance and influence of recondite and painstaking researches such as those on embryology and on the minute structure and structural evolution of the brain—researches of a kind which many of the so-called "practical" men amongst us are too prone to sneer at as useless or unimportant. In this very practical subject of education, upon the successful regulation and ordering of which the success and progress of individuals and nations must so much depend, the schoolmaster and the legislator will, if they are wise, be guided in future by the teachings of physiology and physiological psychology.

PHYSICAL EDUCATION.

On this subject the *Brooklyn Eagle* writes as follows: Absolute health is only attained when the body is equally developed in all its organs and members. The man with muscles of steel and a diseased heart cannot be said to be in good health, and diseases of stomach, heart and nervous system are often—it may even be said usually—produced by that system of development known as training. At a recent rowing match in Philadelphia, two plucky lads in contesting boats fainted as soon as the race was over. Their condition, which was apparently good, was actually abnormal, and their systems gave way because the strain which their muscles met was too great for their vital functions. Yesterday a similar but more serious calamity occurred at Sag Harbor. A Brooklyn lad who had taken part in a pedestrian contest, when removed from the track, fell down dead. He had prepared himself for walking and running, and depleted his vital organs to build up his limbs. When the

strain came, the impoverished and most important part gave way. The severe muscular exercise of college athletes has carried off many fine young men by consumption, heart disease and other disorders, directly traceable to the absurd overwork required of their bodies. There is a limit of human endurance. That limit is reached when the body is impaired in one quarter to benefit special organs. The severity of the test by which athlete prizes are won seems designed rather to award the laurels to him who is least healthy, because more unevenly developed, than to the really best man.

ARCHITECTS' OMISSIONS.

We speak of the luxury of the modern house, says the *London Builder*. Perhaps luxury is hardly the right word for what we mean, but it is hard to find another. We mean the care that is taken to prevent the inmates, in going from room to room, or on any occasion but that of purposely "going out," from ever meeting the external air. Closed corridors, double doors—above all, gas stoves—are, in our view, mischievous luxuries, tending to enervate the body and to shorten life. Here the architect may say that he only provides that for which there is a demand. Has he fairly looked the problem in the face? And having so done, has he laid his own conclusions before his client? A drafty house is one thing, a stove is another. The location of the ticket offices in the Charing-cross Station, swept as they are by every north wind, without the shelter of a screen that might be so readily provided, is a thing as to which we have often marvelled at the long suffering of the public. On the other hand, it is to the over heating and under-ventilating of some of our royal and noble residences that we owe, in our opinion, the loss of some invaluable lives. These, and such as these, are some of the problems which have to be solved by the great architect who would build not for to-day only, but for the future.

BACTERIA IN THE AIR.

By a certain process M. Miquel has succeeded (*Scientific American*) in seizing and numbering the spores or eggs of bacteria, and while confirming M. Pasteur's observation, that they are always present in the air, shows that their number presents incessant variations. Very small in winter, it increases in spring, is very high in summer and autumn, then sinks rapidly when frost sets in. This law also applies to spores of champignons; but while the spores of moulds are abundant in wet periods, the number of aerial bacterial then becomes very small, and it only rises again when drought pervades the soil, a time when the spores of moulds become rare. Thus, to the *maxima* of moulds correspond the *minima* of bacteria, and reciprocally. In summer and autumn, at Montsouris, one finds frequently 1,000 germs of bacteria in a cubic meter of air. In winter the number not uncommonly descends to 4 and 5, and on some days the dust from 200 liters of air proves incapable of causing infection of liquors the most alterable. In the interior of houses, and in absence of mechanical movements raising dust from the surface of objects, the air becomes fertilizing only in a volume of 30 to 50 liters. In M. Miquel's laboratory the dust of 5 liters usually serves to effect the alteration of neutral bouillon. In the Paris sewers infection of the same liquor is produced by particles in 1 liter of the air.

These results differ considerably, it is pointed out, from those published by Tyndall, who says a few cubic centimeters of air will in most cases, bring infection into the most diverse infusions. M. Miquel compared the number of deaths from contagious and epidemic diseases in Paris with the number of bacteria in the air during the period from December, 1879, to June, 1880, and, certainly, each recrudescence of the aerial bacteria was followed at about eight days' interval by an increase of the deaths in question. Unwilling to say positively that this is more than a mere coincidence, he projects further observations regarding it. M. Miquel further finds (contray to some authors) that the water vapor which rises from the ground, from rivers, from masses in full putrefaction, is always micrographically pure, that gases from buried matter in course of decomposition are always exempt from bacteria, and that even impure air sent through putrefied meat, far from being charged with microbes, is entirely purified provided only the putrid filter be in a state of moisture comparable to that of earth at 0.30 meter from the surface of the ground.

CONCERNING THE PULSE.

Every intelligent person owes it to himself to learn from his family physician how to ascertain the pulse in health; then by comparing it with what it is when ailing, he may have some idea of the urgency of his own case, and it will be an important guide to the physician. Parents ought to know the healthy pulse of each child; as now and then a person is born with a peculiarly slow or fast pulse, and the very case in hand may be that peculiarity. An infant's pulse is 130, a child of seven about 80, and from twenty to sixty years it is 70 beats in a minute, declining to 60 at four-score.

There are pulses all over the body, but where there is only skin and bone, as at the temples, it is more easily felt; the wrist is the most convenient point. The feebleness or strength of the beat is not material, being modified by the finger's pressure. Comparative rapidity is the great point; near death it is 140 and over. A healthy pulse imparts to the finger a feeling of a woolen string; in a fever it feels harder, like a silk thread; if there is inflammation, which is always dangerous, it beats fast, spiteful and hard, as if a fine wire was throbbing against the finger. When the pulse beats irregularly, as if it lost a beat, then it hurries to make it up, there is something the matter with the heart. But do not worry about it; take nothing, do nothing, except by the advice of an intelligent physician.

ROPE JUMPING.

As cooler weather approaches, says the *Scientific American*, the jumping rope will be more and more in the hands of girls. Properly used it is not an objectionable plaything. But children cannot be too frequently cautioned against jumping against time or competing to see who can jump the greatest number of times without stopping. In an essay on popular customs on public health in the recently published annual report of the Department of Statistics of Indiana, Dr. J. W. Hervey, of Indianapolis, lays great stress on the danger of this practice. None, he says, is more injurious; and in illustration of its evil effects he mentions a case of real occurrence in that city. The patient, a girl of twelve years, was dead when he reached the house. He says: "On inquiry I learned that she had jump-

ed the rope at school, a few days before, five hundred times. Think of five hundred rushes of blood upon the little heart in quick succession! No wonder I had to make the certific of death, 'Emboli, or clot in the heart, caused by overheat and jumping straight up five hundred times.'"

Not only does this practice throw a great and sometimes killing strain upon the heart, but it often causes serious injury to the joints of the knees and hips and to the spine. The muscular and nervous exhaustion, due to long continued jumping, must also be injurious.

EFFECTS OF SMOKING ON THE HEART.

Some years ago (*Gazette Obstetricale*) M. Decaisne drew attention to the fact that tobacco-smoking often causes an intermittent pulse. Out of eighty-one great smokers examined, twenty-three presented an intermittent pulse, independent of any cardiac lesion. This intermittency disappeared when the habit of smoking was abandoned. He also studied the effects of smoking on children from nine to fifteen years of age, and found that it undoubtedly caused palpitation, intermittent pulse, and chloroanæmia. The children, furthermore, became dull, lazy, and predisposed to the use of alcoholic drinks. Recently he reported to the *Societe d'hygiene* the results of his observations on the effects of smoking on women. Since 1865 he has met with and observed forty-three female smokers. Most of them suffered from disturbances of menstruation and digestion, and presented very marked intermittency of the pulse without any lesion of the heart. He gave detailed accounts of these eight cases, in which all treatment directed against the intermittency proved utterly useless, while the suppression of tobacco was invariably followed by improvement, and very often by complete disappearance of the phenomenon.

STRANGE CAUSES OF DEATH.

The proceedings of the Medical Society of the County of Kings, Brooklyn, N. Y., "proliferates" the following:

A special committee, in a report on medical matters to the Supreme Lodge, Knights of Honor, say "that among the certificates of death we found a death recorded as caused by 'organic duodenum of the heart,' a peculiar form of cardiac disease of which your committee have no knowledge; one caused by 'dysphagia, on account of closing the glottis,' and we are left to conjecture whether or no it was done voluntarily, by due process of law, or a dispensation of providence; another was caused by 'congestion of the brain and falling from a building'; the primary cause of death we are unable to determine; another, in a little more than three months after initiation, died of the following onslaught of maladies: 'inflammation of neck of the bladder, acute bronchitis, pleuro-pneumonia, inflammation of the left ear, nephritic trouble and functional cerebral trouble.' 'Trouble' enough to kill an entire Lodge."

DRUNKENNESS AND SUICIDES.

From statistics collected by a director of an asylum for drunkards in Germany (*Med. Times and Gaz.*), the number of suicides has lately increased in every country in Europe except Norway. In Norway there has been an average of nine per cent. fewer cases of suicides during the last ten years than in any preceding ten years—a fact which the German writer attributes to the

stringent regulations against drunkenness in force there. In most German countries the suicides have increased from ninety to one hundred per cent. For each million of inhabitants there are, on an average, every year in Saxony three hundred cases of suicide, in Denmark two hundred and eighty, in Wurtemburg one hundred and eighty, in Mecklenburg one hundred and sixty-seven, in Baden one hundred and fifty-six, in Prussia one hundred and thirty-three, in Austria one hundred and twenty-two, in Bavaria one hundred and three, in Sweden eighty-one, in Belgium seventy-three, and in Norway forty.

THE DINNER TABLE.

OYSTER SOUP.—One quart of *solid* oysters free from grit. Pour into a saucepan two quarts of boiling water; cream a large tablespoonful of flour with a half teacupful of butter, thicken the boiling water with the paste, season with pepper, boil up, add the oysters and cook until the edges curl. Have heated a teacupful of sweet cream or as rich milk as you can get, turn into the tureen, pour in the oysters and serve.

MAKING SOUPS.—To make good soup, the meat should be put on in cold water, and slowly brought to the boil, that the juices may be drawn out. Before it comes to the boiling point, the scum will rise freely; take it off before ebullition has broken and scattered it; then when it does boil, throw in half a cup of water, and skim again—add this water just as it comes to the boil two or three times; it brings all remaining scum rapidly to the surface, and when this rises no longer, set aside to simmer. It must never go below boiling point after this until made. This is the whole secret of clear soup.

Jules Gouffé's receipt for Pot-au-feu. If carefully followed, a clear brown bouillon will be the result, and this bouillon is the foundation of most soups. Boiled down to one-half its bulk it becomes *consommè*.

Pot-au-feu requires four pounds of beef, six quarts of water, eight ounces of turnip, same quantity of onions, and three ounces of celery and cloves. After once or twice making this soup, the cook will be able to judge by the size of the vegetables the required quantity, but weighing is advisable at first, as much depends on perfect proportion. The pot in which bouillon is made should have a very closely fitting lid.

Quick boiling and careless skimming are the causes of cloudy bouillon; supposing as a matter of course, that all the vegetables have been perfectly cleansed.

TAPIOCA PUDDING.—Dissolve one teacupful of tapioca at night in one quart of water; next morning pare and core six tart apples; stew them until tender in an earthen pudding dish; add sugar and lemon to the tapioca; pour it over the apples, and bake until the whole becomes a jelly. To be eaten cold with cream and sugar.

RAW AND COOKED OYSTERS.

Dr. William Roberts, in a series of lectures on digestive ferments, published in the *Lancet*, says:

The oyster is almost the only animal substance which we eat habitually, and by preference, in the raw or uncooked state, and it is interesting to know that there is a sound physiological reason at the bottom of this preference. The fawn-colored mass which constitutes the dainty part of the oyster is its liver, and this is little else than a heap of glycogen. Associated with

the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment —the hepatic diastaste. The mere crushing of the dainty between the teeth brings these two bodies together, and the glycogen is at once digested without other help, by its own diastaste. The oyster in the uncooked state, or merely warmed, is, in fact, self-digestive. But the advantage of this provision is wholly lost by cooking, for the heat employed immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.

DUTIES OF THE CHRISTIAN IN RESPECT TO THE LAWS OF HEALTH.

At the Michigan Sanitary Convention, held at Detroit in January last, the Rev. J. Morgan Smith read a paper on this subject. It was a brief paper, giving an idea of a strictly Christian basis of duty in the matter of the laws of health. In taking the Bible, so far as the New Testament goes, it commands us to provide those things necessary for the body, for the sake of the soul, and not for the sake of the body. The Old Testament declares bodily health and beauty to be the result of obeying God's moral law, and so desirable. The example of Christ himself, who healed all diseases, is to the effect that disease is inseparably connected with sin, so that to remove disease is to remove one of the prominent, exciting causes of sin. As a whole the Bible makes it a Christian's duty to obey the necessary laws of health, and therefore a wrong to break them when they are known. Beyond specific commands in this direction, however, the Bible contains principles which make it a Christian's duty to secure, so far as possible, the application of the laws of health to all men, on the same ground that freedom for one means freedom for all, and honesty toward ourselves honesty toward all; health for ourselves, means health for all.

PROFITING BY HUMAN WEAKNESS.

The Scientific American, says the *Mich. Med. News*, has the following interesting remarks on this subject:

It is not only among the lawyers that a certain class is found who induce quarrelsome or avaricious people to go into law-suits by telling them they are right, and must seek redress by law. They do this only for the purpose of obtaining their professional fees, in place of giving them the honest advice to settle amicably, by mutual agreement, as *in nine cases out of ten would be far better.*

We find the same class of men among doctors, who, when people mention some slight ailment, make them believe that they are sick, or soon will be very sick if they do not take a certain course of medical treatment which they will prescribe. They also do this for the purpose of obtaining a professional fee, in place of giving them the honest advice to fast for one or two days, to take rest, and to stop drinking and smoking, if they are addicted to these vices. *In nine cases out of ten this would be far better.*

CRUELTY TO SHOP GIRLS.

A lady writes to the Montreal *Daily Witness* on the above subject, and after noticing that young shop girls, in two of the leading dry goods stores, look so pale and wearied by standing, that they appeared ready to fall from exhaustion, and says when she has been told, on credible authority, that it is forbidden them by their

employers to sit for a moment, no matter how many hours they may have stood, or how weak and weary they may be, she has felt that there is as much need for a *Society for the Prevention of Cruelty to her own sex*, in this city, as to animals.

She adds, it may be useless to appeal to these employers, as many appeals have been made, but if not susceptible to humanity, they are usually keenly susceptible to any attack on their profits.

She concludes by sending the following to the *Witness:*

"The London *Lancet* urges the necessity for supplying seats to shop girls while on duty, and declares its intention to publish lists of the names of those houses which at once furnish seats. These lists will be given to physicians, who will exhibit them in their families, the ladies of which will be asked not to trade at shops that, for want of seats, are 'cruel to women.'"

Will the ladies of Toronto and other Canadian Cities (and also the dry goods men, who as a rule manifest more interest in their profits than in the health of their employees), take a hint? Some leading stores in New York provide seats for their shop girls.

THE HABIT OF SELF-CONTROL.

The Philadelphia *Public Ledger* gives the following:

If there is one habit which, above all others, is deserving of cultivation, it is that of *self-control*. In fact it includes so much that is of value and importance in life, that it may almost be said that, in proportion to its power, does the man obtain his manhood and the woman her womanhood. The ability to identify self with the highest parts of our nature, and to bring all the lower parts into subjection, or rather to draw them all upwards into harmony with the best that we know, is the one central power which supplies vitality to all the rest. How to develop this in the child may well absorb the energy of every parent; how to cultivate it in himself may well employ the wisdom and enthusiasm of every youth. Yet it is no mysterious or complicated path that leads to this goal. The habit of self-control is but the accumulation of continued acts of self-denial for a worthy object; it is but the repeated authority of the reason over the impulses, of the judgment over the inclinations, of the sense of duty over the desires. He who has acquired this habit, who can govern himself intelligently, without painful effort, and without any fear of revolt from his appetites and passions, has within him the source of all real power and of all true happiness. The force and energy which he has put forth day by day, and hour by hour, is not exhausted, nor even diminished; on the contrary it has increased by use, and has become stronger and keener by exercise; and, although it has already completed its work in the past, it is still his well-tried, true, and powerful weapon for future conflicts in higher regions.

WELL MARKED FOR IDENTIFICATION.—The body of an unknown man, (*Scientific American*) elaborately tattoed, was found floating in the Mississippi River, near New Orleans, July 8. On the back was pictured the crucifixion, with the Virgin kneeling at the foot of the cross. This extended from the nape of the neck to the middle of the back. There was a star on each shoulder, with the medallion of a lady in the centre; on one shoulder a shield, with a ship in the centre, and the name "Independent" on it; on the chest an American eagle, two crossed American flags, surrounded by a wreath of laurels; on the right arm two lovers in the act of kissing, and a sailor boy holding a rudder; on the left arm a tomb, with the inscription, "In memory of my mother," and a bouquet of flowers extending from the elbow to the wrist. On the back of the left hand was the letter H.

Book Notices.

TREATISE ON THERAPEUTICS. By A. Trousseau and H. Pidoux. Translated by D. F. Lincoln, M. D. Ninth Edition. Revised and enlarged with the assistance of Constantine Paul; two vols. New York: Wm. Wood & Co.; Toronto: Willing & Williamson.

THE SURGERY, SURGICAL PATHOLOGY AND SURGICAL ANATOMY of the Female Pelvic Organs. In a series of plates taken from nature, with commentaries, notes and cases. By Henry Savage, M.D., London, F.R.C.S.E., one of the Consulting Officers of the Samaritan Hospital for Women. Third edition, revised and greatly extended. Thirty-two plates and twenty-two wood engravings, with special illustrations of the operations on vesico-vaginal fistula, ovariotomy and peritoneal operations. New York: William Wood & Co.; Toronto; Willing & Williamson.

A TREATISE ON COMMON FORMS OF FUNCTIONAL NERVOUS DISEASES. By L. Putzel, M. D., Visiting Physician for Nervous Diseases, Randall's Island Hospital; Physician to the Class for Nervous Diseases, Bellevue Hospital Out-Door Department, and Pathologist to the Lunatic Asylum, B. I. New York. Wm. Wood & Co. Toronto: Willing & Williamson.

The above are four more volumes of Wood's admirable series of Standard Medical Authors for 1880. Too much can hardly be said in praise of the efforts of Messrs, Wood & Co. to supply such excellent standard volumes as they are issuing. at such remarkably low prices. As we have before said they are the cheapest medical literature ever published, we believe: 12 handsome vols., of over 300 pages each, for $15.

The first of the above is one of the most complete works published on Therapeutics, proper, (not Materia, Medica or Pharmacy), and has now reached the ninth edition. It has kept well up with the recent advancement made in this department of medicine. The work contains a vast amount of most useful practical matter.

The second named, that of Dr. Savage, may be said to be really worth the price of the whole yearly series, for it has hitherto ost, with the colored plates, from $15 to $17. The excellent plates in this volume, though not colored, answer every purpose. The text consists chiefly of lucid explanations of the plates, and nothing short of actual dissection could prove more instructive. It is surprising how the publishers could afford to add this costly work to the series.

Putzel's Functional Nervous Diseases is a work composed chiefly on the clinical experience of the author, and is really an *addition* to medical literature. It omits those diseases common to works on practical medicine, and special attention has been paid to clinical history and diagnosis, which are of the first importance. Like the others it appears to be a most excellent work.

VEGETARIANISM THE RADICAL CURE FOR INTEMPERANCE. By H. P. Fowler, New York: M. L. Holbrook & Co.

This is a little book of 79 pages, paper cover, containing much useful reading.

TRANSACTIONS OF THE MEDICAL SOCIETY OF TENNESSEE, at its forty-seventh annual meeting, held at Knoxville, Tenn. 1880.

ANNALS OF THE ANATOMICAL AND SURGICAL SOCIETY, BROOKLYN, N. Y., Monthly—July, 1880.

THE INTERNATIONAL SURGICAL RECORD. A new Weekly Journal. Achilles Rose, M.D., Editor, New York.

MEDICAL AUTHORS.—Whilst disclaiming any undue claim as benefactors to mankind, it is certain that to the medical profession in all ages the public have been indebted for a profusion of good advice voluntarily given. What a catalogue of authors might be furnished of men who have written on the preservation of health, from Herodicus, the preceptor of Hippocrates, downwards. They have exhibited much of disinterestedness in the matter. The truth has not been concealed, but diffused, even against the painful practice of physic, and many a professional author may say, as Sir Thomas Ellyot does in reference to his "Castell of Health"—"I have not written for glory, reward, or promotion, God is my judge."—*Medical Times and Gazette.*

INFIDELITY—A WARNING.—The editor of the *Independent Practitioner*, Baltimore, very properly sounds a note of warning to parents and guardians in reference to the selection of schools for their children, in order that the youth may not receive pernicious seeds, of infidelity and contempt of religion, at the hands of their teachers, as they are about to go forth on the business of after life. He says the "admonition is particularly necessary in regard to medical schools;" referring it appears to a "few educational institutions" in that country (U. S).

Editor's Special Corner.

MONEY.—Our friends must think we do not need any of this "necessary evil." Health should be the first thing paid for. Friends will very greatly oblige by taking the amount due us from their pocket just now, and mailing it, or at any early day; especially those behind for 1 or 2 volumes. The amount, "dear reader," is small to each of you, but, in all, large to us.

The reduced rate of $1,50 per Vol. is intended only for those who pay *in advance*, and *without account being sent.*

TO ALL INTERESTED IN THE GOOD WORK of public health, it must have been gratifying to find so large a measure of attention given to matters pertaining thereto at the meeting of the Canada Medical Association, in Ottawa, last month, as compared with the amount of attention given to this subject four or five years ago. No subject indeed created greater interest, if so great. Why should medical practitioners, who are only paid for attending the sick, give their time and attention to, and take such interest in, the prevention of disease? Because there is naturally inherent in them a something which raises them above the feeling of self interest alone —of personal gain and profit;—a very necessary feeling, doubtless this last, in this age, but which is not unfrequently rather too strongly manifested for the well being of the whole community.

Dr. Workman, humorously, and very naturally said, he did not think medical men should bother themselves much about prevention, as the public only accused them of seeking self interest in some way.

True, it is easy to understand that the physician can the most readily see and comprehend the evil consequences of the present neglect of sanitary matters, and that he can therfore feel a deeper interest in bringing about a change, but it is not so easy to understand why it is so very difficult to get the public to see and comprehend these evils and to aid in making a change for the public good.

DR. J. A. GRANT'S PAPER on Gymnastics of the Brain, elicited a lengthy, animated, and interesting discussion, which we have no doubt will prove of much value. We suggested after the meeting that the paper should be published in the secular papers, and are pleased to find it has been published in the Canada School Journal. Dr. Grant thinks, with Dr. Rochester, that education is "not in all instances the blessing which it seems unmistakably to be, for it becomes necessary to acquire it at too great a risk;" as in badly constructed, badly ventilated school rooms, for example. And he naturally fears "the cramming system of the present day is not likely to produce a generation equal to the one now passing away."

THE LATE PRESIDENT of the Canada Medical Association, Dr. R. P. Howard, of Montreal, we are pleased to observe, favors the compulsory registration of infectious diseases. This registration is certainly one of the most important steps in preventing the spread of those diseases, and we have long advocated it. It is being adopted now in many places in England. Practically, the registration of diseases in general, which is being sought for, falls into insignificance in comparison with the compulsory registration of infectious diseases.

MANY WERE DISAPPOINTED that the Hon. Senator Dr. W. H. Brouse was not able to be present at the meeting of the Association, where he had intended to read a paper on Public Health Legislation.

EPIDEMICS OF DIPHTHERIA are reported in different places in the Dominion. This disease is becoming, it appears, more and more common every year, all over the world. It is very prevalent in Russia; and there have been many deaths from the disease in New York and Brooklyn. No zymotic disease, probably, is more prevent able than this one.

TO SEE LITTLE BOYS SMOKING in the streets, as one may almost any day in Toronto, is a most lamentable sight. The next step they take, and which is almost inevitable, is to learn to drink intoxicating liquors. There is in Prussia a law forbidding any one under twenty years of age smoking tobacco. Such a law here would help to lessen the evil; but probably other

equally effectual means might be resorted to. But it is not easy to prevent boys doing what their fathers are in the habit of doing; boys like to do manly things, and they think, alas! that smoking is manly. They want to be taught better. Parents, Sunday school teachers, and clergymen should do their utmost to lessen this evil. See what is said about the effects of smoking on the heart of boys on page 50.

SMOKING IN THE STREETS by those who were boys from twenty to forty years ago, is a most abominable nuisance. Talk of a "free country!" One cannot walk the length of a block on the streets of Toronto, at certain hours of the day, without being forced, much against the will, to inhale tobacco smoke from some dirty mouth. One can avoid a staggering, intoxicated man, keep out of his reach; but one cannot keep out of the reach of the vile fumes of the tobacco smoker one meets on the sidewalk. Smoking is prohibited in street cars, railroad cars, and many other places; why should it not be on the sidewalks, which are not infrequently so crowded that smoking becomes quite as disagreeable as in a street car? We believe there is a law in Boston prohibiting smoking on the sidewalks.

THE AUTHORITIES OF PRINCETON COLELGE, N.J., it appears, require that all boarding-houses occupied by students of the College must submit to sanitary inspections, and conform to a certain standard of sanitary fitness. This is undoubtedly a capital move; though it naturally provoked some opposition from the boarding-house keepers. Perhaps the time is not very far distant when all dwelling-houses will have to be examined and registered, as is the case with ships, before being occupied.

WE READ OF SANITARY LEGISLATION in Colorado, in Georgia, in Brazil, in Japan, almost everywhere but in Canada. Canada is a new country, it is true, but not so new as many of the Western States, which are far in advance of it in sanitary matters. Emigrants from Great Britain, Germany, and other countries coming to America, might, possibly—the very class most needed here, the better class—take the progress made in sanitary work as an index of the general progress and enlightenment of the people. In that case they would probably prefer Colorado to Canada, or say to Ontario; for it appears public health legislation rests properly with the local legislatures.

EXPLANATION.—The last number of this Journal—No. 1, Vol. 5—printed late in September, should have been dated October, instead of September. This—No. 2—is consequently the November number. The year or volume commencing October, 1880, and ending September, 1881.

DEATH RETURNS

from the cities of Ontario for the half year ending June 30th, 1880.

	Population 1880.	No of Deaths 1st half year 188	Miasmatic Diseases.						Consumption.	Brain Disease.	Heart Disease.	Pneumonia.	Lung Disease.	Old Age.	Small Pox.	Total rate per 1,000 living.
			Diphtheria.	Diarrhœa.	Typhoid Fever.	Scarlet Fever.	Other Fevers.									
Toronto	73,813	815	20	8	19	9	3		83	25	28	83	35	14	...	22·00
Hamilton	31,268	312	6	3	8	13	1		22	10	9	45	8	9	...	18·30
Ottawa	24,015	268	5	1	1	4	8		27	8	4	11	5	1	63	23·00
London	19,941	256	3	1	1	9	...		13	1	7	12	3	5	...	25·00
St. Catharines	10,475	104	...	...	5	5	2		10	2	4	15	1	3	...	20·00
Kingston	14,358	158	...	...	1	3	1		24	6	10	4	7	10	...	22·00
Belleville	10,000	101	1	...	...	15	1		17	1	2	5	10	3	...	20·00
Brantford	10,688	97	...	...	...	4	...		18	3	1	15	1	4	...	18·40
Guelph	10,672	48	2	...	...	...	...		4	2	3	6	9	4	...	10·00
Totals	197,630	2159	37	13	36	62	16		218	58	59	196	79	53	63	21·00

The above table, from the returns in the office of the Registrar-general of Ontario, shows that the total mortality in the nine cities in the province for the half year ending June 3th, 1880, was at the rate per annum of about 21 per 1,000 living of the extenuated population. In Toronto the rate was about 22 per 1,000. In Guelph it is so low, 10 per 1,000, that the returns from there can not be complete. In London the public health wants looking after. On the whole, excepting Guelph, the death returns from the cities may be regarded as complete.

THE CHAINS OF HABIT are generally too small to be felt till they are too strong to be broken.

TEMPERANCE.—There are now upwards of 3,000 coffee taverns in different parts of England. We believe temperance people would do well to encourage the establishing of these more in this country.

A HARD HIT.—It is said that an absent minded doctor called on a patient and put a fee in the sick man's hand and took the medicine himself; and that he did not become conscious of his mistake until he found himself getting sick and his patient rapidly recovering.

ARSENICAL POISONING.—A case of recent occurrence is recorded of a young lady who had a very beautiful complexion, suffering from an outbreak of pustules on her neck and arms, especially painful at night, caused by wearing a green colored dress, in which there was a large percentage of arsenic.

SUNDAY-SCHOOL BOYS AND TOBACCO.—The International S. S. Teacher makes the very valuable suggestion that teachers in Sunday schools should do all they can to prevent the boys using tobacco. As the habit of using this poison is usually acquired in boyhood, much good might doubtless be done in this way.

DE LESSEP'S CANAL AS A HYGIENIC MEASURE.—G. H. Boyland, M.A., M.D, writes to the *Practitioner*, Baltimore, on this subject, and believes that by the building of the canal a whole country will be rendered more salubrious, a people more healthy, and the means of transmitting germs of infectious diseases to foreign ports materially diminished.

AWAKENING SUDDENLY.—To awaken children from their sleep with a loud noise, or in an impetuous manner, is extremely injudicious and hurtful; nor is it proper to carry them from a dark room immediately into a glaring light, against a dazzling wall, for the sudden impression of light debilitates the organs of vision, and lays the foundation of weak eyes from early infancy.

WHEREVER unselfish love is the mainspring of men's actions; wherever happiness is placed, not on what we can gain for ourselves, but on what we can impart to others; wherever we place our highest satisfaction in gratifying our fathers and mothers, our brothers and sisters, our wives and children, our neighbors and friends, we are sure to attain all the happiness which the world can bestow.

PLATO, one of the wisest men of ancient Greece, observed that the minds of children were like bottles with very narrow mouths: if you attempted to fill them too rapidly, much knowledge was wasted and little received; whereas with a small stream they were easily filled. Those who would make young children prodigies act as wisely as if they would pour a pail of water into a pint measure.

A DOCTOR tells with pardonable pride how, being called in at the debut of his career to a consultation with an eminent prince of science, he had insisted, despite the opinion of his famous senior, that the patient had an incurable affection of the heart. "And what were my delight and pride," he says, beamingly, "on learning three days later that my patient had gone off precisely as I had declared he would."

DR. BESSEY, of Montreal, in an article in the *Canada Medical Record*, opposes the use of alcohol in the treatment of disease. He states that the use of alcoholic remedies is common in that city, and is in practice in the General Hospital, whose last annual report gives the mortality rate of the cases of typhoid fever as 40 per cent., while the average rate is 20 per cent., and in the Glasgow hospitals, where the stimulating plan has been abandoned it has fallen from 17 to 10 per cent.

THE POST MORTEM OF A LIVER PAD.—The pad is made of drilling, and filled so as to be about one half to three-fourths of an inch in thickness. The contents are: Ground flaxseed and ground fenugreek seed, fifty per cent.; pitch, resin of galbanum or olibanum, aad resin of sandarac, forty-five per cent. The remainder is probably composed of aromatics. The fenugreek gives the peculiar odor, though this is changed to a limited extent by the resins and aromatics. Wonderful invention!

REMARKABLE RESTORATION OF THE APPARENTLY DROWNED.—In a recent communication to the French Academy, Professor Fort asserts that he was enabled to restore to life a child three years old, by practising artificial respiration on it four hours, commencing three hours and a half after apparent death. He mentions also a case in which, in July, 1878, an apparently drowned person was reanimated by four hours of artificial respiration, begun one hour after the patient was taken from the water. The possible benefi that may come from a persevering effort to revive victims of drowning, should encourage friends not to despair of their resuscitation, even after several hours of seemingly fruitless labour.

A CORRESPONDENT calls the attention of the Montreal *Witness* to the death of two excellent gentlemen in his vicinity, from no other apparent cause than the excessive use of tobacco. The one was an inveterate "smoker,"

and the other an inordinate "chewer." The former was said to have died from general debility; the latter died after frequent and terrible convulsions. These are among the many legitimate effects of poisoning by nicotine. Are there not many who are unconsciously, but actually committing suicide in this way? What constitutes the difference in point of culpability between death from such a cause and that by *delirium tremens*.

CHLORAL! spawn of depths abysmal,
Spring of restlessness and raving,
Fancies sick and visions dismal—
Source of still insatiate craving.
When that once-blest light auroral
Breaks thy feverish spell, O Chloral.

Comes Reaction's Nemesis,
And the soul in Tophet sinking.
Wooes again thy fatal kiss—
Wooes, and ends in endless drinking,
Till to the unplumbed absym
Sink thy victims, Chloralism!—(*Punch*.)

SILENT MEN.—Thomas Jefferson never made a speech; he couldn't do it. Napoleon, whose executive ability is without a parallel, said that his greatest difficulty was in finding men of deeds rather than of words. When asked how he maintained his influence over his superiors in age and experience, when commander-in-chief of an army in Italy, he said, "By reserve." Washington never made a speech. In the zenith of his fame he once attempted it, failed, and gave it up, confused and abashed. In framing the Constitution of the United States, the labour was almost wholly performed in committee of the whole, of which George Washington was, day after day, chairman, and he made but two speeches, in each of which he used but very few words. The greatness of man is not measured by the length of his speeches and their number.

HONOLULU, it seems, rejoices in the possession of a Board of Health, from the report of which we learn that the questions of sewerage and privies are fully discussed, and estimates given to show that the pail or Rochdale system would be most effective and economical at Honolulu.

SYDNEY, AUSTRALIA.—U.S. Consul reports as follows: The population of Sydney and its suburbs is about 120,000; there is a voluntary Health Association, and the authorities keep records of births, deaths, and marriages, but there are no statistics of disease. Asiatic cholera and yellow fever are not known there. Sporadic cases of small-pox have occurred from imported contagion, but the disease has never spread, probably not more than six cases have appeared in the last ten years. Scarlet fever prevails every winter, and is quite fatal among children; measles, also, are occasionally epidemic.

ALUM, it appears, because it is much cheaper than cream of tartar, is used not unfrequently in the composition of baking powders—as well as sometimes in bread making. Alum is decidedly injurious to health, when thus taken with food, and housekeepers should be on their guard.

STEWING AND MAKING SOUPS.—A witty Frenchman says: "To make good soup, the pot should scarcely smile." This is as true of stewing meat, as of making soup. To do either well, the whole process must be exceedingly slow, from beginning to end; the saucepan should only "smile."

ON THE PROPERTIES OF GOOD APPLES.—Mr. Elwanger a famous nurseryman of Rochester, says, there is often, if not generally, a misapprehension as to what really constitutes a good family apple. Besides high flavor, we should look to the juiciness, and, above all, to what may be termed the dissolving properties of a fruit. The Spitzenburg is one of the highest flavored apples we have, but it is one of the most tough and indigestible when not cooked. The Jefferis, Fameuse, Jonathan and Northern Spy are none of them quite equal to the Spitzenburg in flavor, but how far superior they are as dessert varieties any one familiar with them well knows. The reason why they are superior is on account of their crisp flesh, which is yet so tender as almost to dissolve in the mouth. The four sorts will ripen in the order given, and furnish a supply of fruit from early autumn till late spring. They are in my opinion the four best apples for table use yet produced.

HOW I TREATED MY BABY.—A mother writes to a health journal as to how she treated her baby, or rather how she *didn't* treat him. In the first place, before he was three hours old, he *didn't* have several teaspoonsful of sugar and water, nor anything else, forced into his tender stomach; and he never has tasted catnip tea or any other kind of tea. He nursed when one day old, and all his nourishment, so far, has been his mother's milk. That mother never drinks tea nor coffee, and does not eat salt, fat pork nor *grease* of any kind. Baby has been accustomed from the first to drink cool fresh water. I think this to be a good preventative against "baby's sore mouth." Much harm is done by forcing some stuff or other into the baby's stomach almost directly it comes into this over-eating world. Upon this medical opinion is unanimous. Did babies require anything for the first twenty-four hours or so, the Creator would most likely have provided it to hand, as He has done for the after period. The chick and other animals eat nothing the first day or two.