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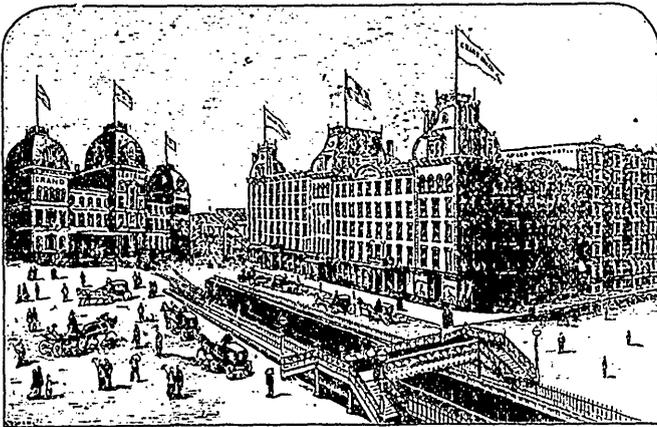
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SURGEON GENERAL BERGIN.

MAN,

A CANADIAN HOME MAGAZINE.

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No. 3.

THERAPEUTICS AND DIVINITY.

I.

DIDACTIC USE OF TRUTHS IN HYGIENE—THEIR ANALOGY TO HIGHER TRUTHS—
PHRASEOLOGY—RESULTS THEREFROM—INSTANCES—INTERPRETATIONS.

It is surely not without significance that in the materials supplied to the Christian teacher for his use in the exercise of his office among his fellow-men, so many illustrations and confirmations should be drawn from considerations connected with human health and the art of healing. The expectation evidently was, that the subject matter of his teaching should be better understood by means of some study given to therapeutics; that truths of a high transcendental but yet, as we say, vitally important character were to be more clearly realized, and more readily welcomed, by virtue of an analogy perceived to exist between them and familiar commonplace facts coming within the personal experience of every one.

Were it fitting to do so here, the places might be enumerated in detail, wherein phraseology derived from considerations connected with human health is used by the authorities of the last resort among Christian teachers. It hardly needs to be said that the expression *hygiene*, expressive of something relating to wholeness or soundness, now become a household word amongst us, is almost pure Greek, the language in which the earliest and most revered of the Christian documents have been handed down to us. In those documents it might be shewn that at least twenty-five passages occur which involve the employment of the

root part of the word *hygiene*. Thirty-two at least might be pointed out, wherein we have the root or stem-part of the ordinary Greek word for physician—the word used in the memorable proverb “Physician! (*Iatre!*) heal thyself”—although it has happened that the stem of that particular term has scarcely found a lodgement in our English speech. (We have it however in one or two seldom-used expressions—as for example, in iatrical—relating to medicine or physicians, iatro chemist—a chemist physician; and iatroleptic, “that cures by anointing,” in Worcester; and elsewhere (Bailey vol. 2), in iatromathematician, “who considers diseases and their cause, mathematically, and prescribes according to mathematical proportions”)—Over fifty places might be cited wherein the root part of the first word at the head of this paper is employed in the same documents; often indeed only in the sense of useful *service* rendered in a general way, but often also in the restricted sense of *medical* help or service which alone attaches to “therapeutics” with us now.—Again, there is a large group of Greek terms applied to didactic use in Christian teaching, (one might count nearly two hundred of them), which also convey along with a general idea of soundness or wholeness, a special one nevertheless of soundness of health or restoration to soundness of health; from which group

likewise no root element has found its way into our language. (Readers of history however, it may be presumed, are sufficiently familiar with the name of Ptolemy *Soter*, and perhaps also with that of the old Christian historian *Sozomen*, both of which contain the stem referred to, as also do such proper names as So-crates, Sos-thenes, etc. The short Greek sentence which supplies the place of a refrain to the third stanza of Longfellow's *Blind Bartimeus* will also supply many English readers with another instance while no observer of modern advertisements can have failed to take note of Soz-odont, the wonderful specific for preserving soundness in the teeth.)

The adoption of hygienic or medical terms by the earliest Christian writers without doubt arose from their familiarity with the Hebrew books or rather with Greek versions of the Hebrew books, in the hands of most of the learned at the opening of the Christian era. From these we learn,—as we abundantly learn also from the English versions of the same books made straight from the original language—that hygienic expressions were therein often used to convey moral ideas. Who does not remember that the Divine rule, destined as the Hebrew people believed, one day to be universal was spoken of, in Hebrew phrase, as “God’s saving health among all nations”; and that the appearance of the generally expected Deliverer was to be as the appearance of a Sun rising with *healing* in his wings or beams? So completely indeed did the idea, viz: that of saving, preserving or restoring to wholeness, contained in the second constituent of the compound proper name Jah-Hoshea predominate, that it seems to have thrown the preceding constituent into the shade. (Out of this proper name thus written at large, it was, that the Greek writers formed, as we know, the familiar proper name

Jesus, for which the sufficient interpretation was held by St. Augustine also to be *Salvator*: thus he says: “Christus Jesus, hoc est Christus Salvator.”)

After the Greeks, the Latins likewise in their own tongue fashioned hygienic terms for use in Christian instruction; and it is from the Latin forms chiefly that we have obtained the terms of this kind that we use in English. Thus *sanus, salus, salvus, Salvator* have given us *sane, i. e, sound, sanative, sanatory, sanitary, salutary, salvable, salvation, salvage, save, safe, Saviour*; all containing a notion more or less of wholeness or recovery of wholeness, even, it may be, from the very verge of dissolution. The Latin *impotentes*, again, gave us the quaint expression “impotent folk,” now modernized into the more intelligible and more correct rendering of “those that were sick.” As to *salus* in its secondary but high moral Christian sense,—*Anno Salutis*, the year of health or human salvation, is almost as common as *Anno Domini*, in the dating of early books and documents.

In our ordinary English speech at the present day we adopt the phraseology which has received tincture from the Latin; but our Saxon forefathers had plenty of words of their own of a hygienic cast, for use in Christian instruction. Most of them are familiar enough to us still; such as *whole, wholeness, wholesome; heal, hale, health*, with which is instructively connected the general term “holiness” itself. Throughout an ancient Saxon poem of the early part of the ninth century, the word used for *Jesus* is *Heliand*, “One who heals”; which word furnishes a title to the poem, the old writer translating the proper name just as St. Augustine had done, by an epithet supposed to be its equivalent.

HENRY SCADDING.

THE NEW YORK Young Men's Christian Association in a recent debate decided that “physicians should be Christians.” The Springfield Unions agrees to the decision, but thinks it a mistake to draw the line at physicians: their patients should be included,

THE mean duration of Life in France, which was twenty-nine years at the close of the eighteenth century, and thirty-nine from 1817-1831, increased to forty from 1840-1859, thanks to the progress of Sanitary sciences.

THE RHYTHM OF NATURE *VERSUS* THE RHYTHM OF ART.

THE Greek maiden, glorious in physical strength and beauty, plucking the rose, that perfect flower, is the type of that energy of thought in literature which is least dependant on language, the symbol of that poetry in which Energy and Art are in equipoise. Poetry is the expression of the human mind in language inspired by imagination and emotion. Exceptional feeling is characteristic of the poet. He is drilled with a thousand facts unseen by the ordinary eye; he pours the flaming thought on the page, making it precious with rhythmic life. His expression may follow the Rhythm of Nature wherein the idea controls the style, or, the Rhythm of Art wherein the ideas are dependant on the language by which they are expressed.

The Greeks, both in art and life, aimed at grasping the perfection of nature which if neglected by her in one individual was carried out in the next. They pursued the rhythm of Life.

The Greek sculptor represented by human figures not men, but broad-shouldered gods; not realities but infinities. They put a gigantic idea into marble, a living soul, hence the form is deathless and supreme. The fascination of beauty in the Greek mind banished all other considerations. Their sculptors not only produced ideal forms that manifested the triumph of nature, but their legislators made laws and established the emulative games whereby the individual might in his own body aspire to perfection of life.

Vitality, vigor of form, splendor of limb, were the chief ideas; the outer garments and mode of life must adopt themselves thereto. Hence the Greek maiden in our illustration as compared with the artificial maiden of to-day, fitly represent that titanic energy of thought that makes diction, sentiment, rhythm, color and melody its vassals. She is the symbol of the thought least supported by language; the thoughts of Homer and Sophocles: Shakespeare and Dante. "Rhythm, melody, precision and force in the words of the

poet" says Ruskin, "are necessary to his greatness, but not the test of his greatness." The vital thought takes precedence of style. Only as good deeds are the outcome of benevolence of soul, so elevation of language and melody of style do often bear witness to richness of emotion and dignity of thought.

Dante is our favorite poet. He combines the might of Shakespeare with the melody of Tennyson in perfect harmony. His *Paradiso* is one of the world's treasures unparalleled in force and melody of thought.

Witness his description of heaven in one line:

And all the laughter of those bloomy shores.

Can splendor of words more perfectly picture a shipwreck:

Then rose the poop, and sank the prow
And over us the booming billow closed.

or the song of angels, when

Voice answers voice, so musical and soft,
It can be known but where day endless shines.

He thus describes the Purgatorial Pilot:

Upon the prow the heavenly steersman stood
Visibly written 'Blessed' in his looks,
Waiting his wings between such distant shores
Lo, how straight up to heaven he holds them reared,
Winnowing the air with those eternal plumes,
That not like mortal hairs fall off or change.

In the "Dream of Clarence" the poet says;

The first that there did meet my stranger soul
Was my great father-in-law, renowned Warwick,
Who cried aloud "What scourge for perjury
Can this dark monarchy afford false Clarence.
And so he vanished. Then came wandering by
A shadow like an angel, with bright hair,
Dabbled in blood; and he shrieked out aloud
Clarence is come! false, fleeting, perjured Clarence,
That stabbed me on the field of Tewkesbury,
Seize on him furies, take him to your torments!

The modern poet would have described this scene by giving all the emphasis to the words, or appurtenances of the idea, and not to the idea itself, thus:

The first to meet me at the sable doors
Was mighty Warwick blazoned in his shame,
He cried aloud in maddening mimicry,
He howled and gabbled till the yellow foam
Stood on his lips, and all the courts of hell
Did knell like beaten bells. "What fiery scourge
Can torture Clarence, who has now come home."
And so he vanished. Then came wandering by
A shimmering shadow, with its bright bronze hair
Stained in barbaric blood, and so he shrieked
"Clarence the murderer that stabbed me on the field,
False, perjured Clarence." then the shoal of ghosts
Wheeled in a living circle round and round
Their heads were skulls, their eyes like rubies flamed,
And hand in hand forever wheeling on
They sang the ritournel of damned souls!

The Rhythm of Art is like the modern fine lady who lives for dress and social posturing. To her it is a greater concern how she appears, than what she is. Over-refinement is the first symptom of decay. She that was once Imperatrix is now a slave.

Macaulay has declared that "as civilization advances, poetry almost necessarily declines. This is a half-truth which may or may not become history. It is certain that nothing will sooner contribute to the decline of poetry than a civilization which forgets to educate those very faculties of man's nature, by the exercise of which alone, poetry can be produced or appreciated. To-day, taste, imagination, and intellectual emotion are left out in the cold by a universal preference for scientific and mechanical pursuits. Hence, when reason, logic, metaphysics, science, and the mechanical arts are exclusively cultivated, emotion is sacrificed.

The poet of to-day is unlucky enough to exist in a mechanical civilization unfavorable to his development. The artificial education, while stimulating mediocrity, only interferes with, and impedes the more original gift. The modern poet is the victim of earthly incompatibility; he sings like the captured bird in a golden cage. His verses instead of being resonant with nature are but variations of art. Like the rhetorical speaker whose pulmonary eloquence may be perfect in style and grammar, but what he says is worthless, so the cultured and literary poet with an over-critical fondness for the manner of saying what he is going to say, proves that his faculty is ingrafted and not original. He is but a manipulator of words. Take away the elaborate and excessive culture, and the poet has vanished.

There are men-dressmakers in Paris, architects in costume, whose elaborations, the result of agonized cogitation, and fitting and trying and turning this way and that. These very much resemble the literary *costumer* who clothes his muse with "samite," and puts a "cithern" in her hand, and instructs her in all the mannered mimicry of an obsolete English.

There is no doubt a dainty sort of

delight in all this. There is a quaint prettiness, an artificial simplicity, a metrical attitudinizing born of the school which mistakes a cultured eccentricity for genius. It is possible that many of these writers are inheritors of real inspiration, but misled by the millinery of poetic thought, they think their Pegasus a kind of circus horse that must be taught tricks. But no amount of masterly manipulation of the implements of the art will ever succeed in giving us the tiger-like spring of the original conception, the leap in air of the Damascus blade, the Miltonic flash of a million swords in hell.

The fine lady whose aim in life is to dress well, and look charming like a picture, may easily forget that she has a soul. All her emotions, her affections, her very life have run into drapery, like the euphonious alliteration of the juggler of words.

Yet this very music is an essential accompaniment to the highest poetry. The most perfect passages are the most musical, but to say on this account they are to dispense with meaning, or to undervalue it, would be ridiculous. We wish at times that Shakespeare was more musical, not less gigantic. We also wish that Tennyson was at times more significant in sense, but not less melodious. The best poetry, the very highest art of song, is where nature and art, sound and sense, meaning and melody, are in perfect equipoise. The best poets at times attain this excellence, but the phrase.

"The fat weed
That rots itself on Lethe's wharf."
will be recognized as Shakespearean,
and the swan that
"Ruffles her pure cold plume, and takes the flood
With swarthy webs."
is Tennysonian.

The art of good writing either in prose or poetry has been defined as "spontaneous thought and labored expression." Elaboration can hardly be overdone as long as the thought that directs and sustains it is the *vrai feu*, and not the *ignis fatuus* of a mistaken ambition.

Let the true poet grasp the fact as vividly as his faculties will allow. Let him charge the fact with all the

fervor, the truth, the imagination, the emotion, the inspiration, the rhythm of soul he possesses, then his learning, his command of words his invention of metaphor, will of themselves accurately

photograph—not the fact itself, for that is prose—but the fact in its living, moving, thrilling exaltation, and that is poetry.—W. R. BRADSHAW in *Literary Life*.

DISINFECTION BY HEAT.

WE have often had occasion in these columns to urge the necessity of some skilled inquiry being made by the Medical Department of the Government into the somewhat empirical methods of 'disinfection' now in vogue. It is satisfactory to find from Dr. Buchanan's recent annual reports that he is impressed with the necessity of investigations in this direction; and accordingly, a substantial share of the auxiliary scientific grant for the last two years has been devoted towards study of the questions of infection and disinfection in their various relations.

Scientific Results attained.—With the more scientific branches of this investigation we do not propose on this occasion to dwell. Exhibiting some valuable results for immediate practical application, particularly as concerns the power of certain gases to destroy an infection that is communicated through the atmosphere, and as concerns the value of acid reaction *per se* to all processes of disinfection by chemical agencies, these researches yield, on the other hand, an abundance of cautions against any too hasty expectation of our finding chemical agents endowed with the ability to kill those dangerous particles in which we are learning that infection resides. There is, however, one noteworthy point vouched for by Dr. Klein that places these researches in a promising light:—When it is possible to recognise, as in the case of anthrax, tubercle, and swine fever, the minute organisms that play an essential part in the disease, and to compare them with other and similar organisms which are not so mere infective as putrefactive it is found that chemical agencies which are wanting in destructive effect upon the putrefactive organisms

have a power, often when present in extremely minute quantity, of arresting or destroying the life of the infective organism.

The line of investigation which is of most immediately practical importance—viz., the best means of disinfection by heat, was placed in the hands of Dr. Franklin Parsons, one of the ordinary staff of the Medical Department. He was careful to take destruction of the most stable known infective matter as the test of true 'disinfection.' Examining, in conjunction with Dr. Klein, the suitability for the purpose of this study, of the virus of swine plague and of tuberculosis and of anthrax—all of which admit of being, before and after experimental heating, put to the test upon animals—the observers soon came to the conclusion that, of these infections, anthrax material was the most resistant to every form of heat, and they were able to proceed on the assumption that such arrangements as would afford a heat adequate to destroy anthrax, not only in its bacillar but in its spore form, might be trusted to destroy the potency of infections matter generally. Having determined by a prolonged series of experiments the degree of heat to be attained, and combinations with moisture in which the heat was best operative, Dr. Parsons examined the physical conditions for its production in the required combinations, and then continued his researches into practical questions concerning the mechanism by which the needful conditions for heat-disinfection could be so obtained.

The general results of the inquiry are as follows:—It was shown to be necessary so to arrange an apparatus that heat should penetrate bulky and non-conducting articles, and so that

the heat could be used to dainty fabrics without injury to their appearance or to their texture. Dr. Parsons came to the conclusion that all infected articles which could be treated by boiling water, so as to penetrate the substance efficiently by this means without injury to the articles themselves, could not be so well disinfected in any other way as by simple boiling for a few minutes; that infected articles which from their nature did not lend themselves to such boiling had best be treated with high-pressure steam, with such arrangement as would insure complete penetration of the steam at high temperature, and that such treatment might be relied on to destroy any infective quality in them with the thoroughness and rapidity that were desired; and that in the comparatively few cases where the articles to be disinfected would be injured by steam, a dry heat of 240 F. would if sufficiently prolonged, bring about the desired destruction of infection, but that this could not, in the case of most articles, be had by means of dry heat without an inconvenient length of exposure. Dr. Buchanan, in commenting on the results obtained, expresses himself as of the opinion that, 'so far as we are at present informed, there is no sort of disinfectant or disinfectant that can rank by the side of heat; and of all methods of applying heat, the use of high-pressure steam is by far the most generally available.'

With the exception of spore-bearing cultivations of the bacillus of anthrax, all the infective materials reported on were destroyed by an hour's exposure to dry heat of 220 F., or five minutes' exposure to steam at 212 F. Spores of bacillus anthrax required for destruction four hours' exposure to dry heat of 220 F., or one hour's exposure to dry heat of 245 F., but were destroyed by five minutes' exposure to a heat of 212 F. in steam or boiling water.

It may therefore be assumed that the contagia of the ordinary infectious diseases of mankind are not likely to withstand an exposure of an hour to dry heat of 220 F., or one of five minutes to boiling water or steam of 212 F.

Dry heat penetrates very slowly into bulky and badly conducting articles, as of bedding and clothing; the time commonly allowed for the disinfection of such articles, being insufficient to allow an adequate degree of heat to penetrate into the interior. Steam penetrates far more rapidly than dry heat, and its penetration may be aided by employing it under pressure, the pressure being relaxed from time to time, so as to displace the cold air in the interstices of the material. In hot air the penetration of heat is aided by the admixture of steam, so as to moisten the air, but hot moist air does not appear to have a greater destructive effect upon spores of anthrax bacilli than dry heat.

The question whether articles can be submitted to the required degree of heat without injury requires to be solved not merely by laboratory experiment, but by practical experience on a large scale; which involves technical knowledge of trade processes, and is complicated by questions of pecuniary interest. The principal modes in which injury may occur are these:—1. Scorching or partial decomposition of organic substances by heat. In its incipient stages this manifests itself by changes of colour, changes of texture, and weakening of strength. 2. Overdrying, rendering materials brittle. 3. Fixing of stains, so that they will not wash out. 4. Melting of fusible substances, as wax and varnish. 5. Alterations in colour, gloss, &c., of dyed and finished goods. 6. Shrinkage and felting together of woollen materials. 7. Wetting.

Scorching begins to occur at different temperatures with different materials, white wool being soonest affected. It occurs sooner in woollen materials, such as flannel and blankets, than with cotton or linen; while horsehair will bear a higher temperature still; in fact the process of curling it for stuffing chairs is effected by exposing it to a temperature of over 300 F. Most materials will bear a temperature of 250 F. without much injury, but when this temperature is much exceeded signs of damage soon begin to show. Flannel and blankets exposed to steam at 260 for half an

hour acquire a distinct yellow, tinge, and their textile strength is somewhat diminished. Exposed to a dry heat of 220 F. for four hours, or a steam heat of 228 for half an hour, white flannel acquired a slight yellow tinge, but its textile strength was not appreciably impaired.

Scorching is especially apt to occur where the heat is in the radiant form. To avoid risk of scorching the heat should not be allowed much to exceed 250 F., and even this temperature is too high for white woollen articles.

Linen articles, sheeting, body linen, &c., which have been in contact with infection, should be disinfected before coming into the laundry, since otherwise they may infect the washerwomen, and possibly the linen of other households. Such objects, however, if soiled with bodily excreta cannot be disinfected by heat, not even by boiling water, without indelibly fixing the stains. The only alternatives, therefore, are to put up with damage to this extent, to allow the articles to pass through the earlier processes of the laundry in an undisinfected state, or to attempt their disinfection by chemical means, which are uncertain and unsatisfactory. When the grosser dirt has been removed by soaking and rubbing in cold or tepid water, the articles may be boiled without injury, and are then doubtless effectually disinfected.

The limits of the field of practical usefulness of disinfection by heat may be gathered from what has gone before. For washable articles which will stand *boiling in water*, no other procedure is necessary. The difficulty is that, granting that linen may be disinfected by washing, if conveyed in undisinfected state to the wash, it may communicate infection to the washerwomen and to the linen of other households.

The best plan is to place the linen on being left off, and before it is removed from the infected precincts, to soak in a pan of cold water, which may contain some chemical disinfectant, though it is doubtful if much additional security be gained thereby, unless the solution be a very strong one, in which case it may cause injury to the clothing. After the grosser impurities have been

removed by this preliminary rinsing, the clothes may be boiled without damage, and (with care to avoid re-infection) may be considered free from infection and sent away if necessary, to undergo any further processes of the laundry which may be required.

The articles for which a more technical '*disinfection by heat*' is especially required are such as will not bear washing in boiling water. The most common articles of this sort are blankets, rugs, carpets, and cloth clothes generally, pillows, beds and mattresses, furs, and dresses. Articles of furniture with stuffed seats and backs, as chairs and sofas, may require disinfection by heat if they have been in an infected room, and such articles are often so exposed to heat in order to check the ravages of moths. Again, exposure to heat is often employed in workhouses and similar establishments to destroy lice in clothing, or the animal and vegetable parasites which cause certain skin diseases. It may be necessary to insist on the disinfection of rags coming from places where epidemic diseases prevail, and in such cases heat, especially in the form of steam, affords the most satisfactory means. Letters sent by patients suffering from infectious diseases, or coming from countries in which epidemics prevailed, might readily be disinfected by heat, provided that they were not fastened with sealing-wax. Books which have been used by the sick or convalescents may be disinfected by heat, but the effect of steam on leather bindings must be remembered. In some hospitals the periodical heating of pillows and mattresses is practised as a part of the ordinary routine of antiseptic practice,

For some of these purposes dry heat and steam are both applicable, provided that in the case of steam precautions are taken to avoid undue wetting. Steam possesses the advantage over dry heat of requiring far less time and a lower temperature for penetration into bulky objects, and for destroying contagia: it is on these grounds especially adapted for the purification of bedding, bales of rags, large bundles of clothing, and other objects difficult of penetration. On the other hand, it

instantly destroys leather articles, so that these must be disinfected, if necessary, by careful exposure to dry heat.

The characters of a good disinfection chamber are given as follows:—The uniform distribution of heat in all parts

of the chamber. The constancy with which the heat is maintained at any required degree. A trustworthy index to the actual temperature of the interior at the time being.

THE PHYSICAL APPEARANCE OF SOUND AND UNSOUND FOOD.

In attempting to describe the physical signs by which unwholesome food intended for human consumption may be detected, it will be convenient to consider the examination of the articles the Public Health Act [nearly uniform all over the American continent] empowers sanitary officers to examine and seize under five headings, as follows: 1. Animals, carcases, and butcher's meat. 2. Poultry, game, and fish. 3. Fruit and vegetables. 4. Corn, bread and flour. 5. Milk.

This arrangement includes all the foods named in the statute except 'flesh,' which appears to be a superfluous word.

It is proposed to deal with these five groups of foods by first describing the appearances each food should present when sound and wholesome, and then the physical signs indicative in the case of each of disease or decomposition.

The simplest language will be used medical and scientific terms being avoided as far as possible.

Good MEAT is firm and elastic to the touch, moist but not wet, and except in the case of pork, veal, and lamb, bright red in colour. It has also, if well-fed, a somewhat marbled appearance from small lawers of fat in the muscles. It has a fresh, not disagreeable smell. (To test this, an iron or wooden skewer should be thrust into the centre and rapidly withdrawn and smelt.) The meat-juice should slightly redden litmus paper, showing that it is faintly acid. The fat should contain no watery juice or jelly, and should be free from blood stains; the suet fat should be hard and white. In salt meat the brine should not be sour.

A sound, healthy carcase should be well-set as soon as it is thoroughly cool; it should also be well bled, no

part of it being purple, brown or speckled. One side or quarter should not be darker than the rest. It should not be bruised, nor bile-stained, and not markedly attenuated. The muscle on being pressed with the fingers should not 'pit,' as this would indicate the presence of water, and should not 'crackle,' as this would indicate the presence of air.

In places where carcases are inspected the offal also (that is the head, feet, hide, and all the internal parts except the kidneys) should be submitted for inspection. The mouth and tongue should be free from blisters and blotches, the hoofs should be firmly attached to the feet, the hide should be free from sores and pimples. The lungs should be of a bright pink colour and spongy, free from cavities, pus (matter) or worms. A portion cut off should float in water. The heart should be free from bile-staining and blotches. The liver should be of a rich brown colour, should not break down easily under pressure, should be free from abscesses (collections of matter) and from flukes. The spleen or melt should be of a dark colour inside, grey on the outside, thin and long, and sharp at the edges. The stomachs should not be inflamed, the lining should not readily rub off, and should not smell of drugs. The bowels should have a smooth, uninfamed lining, and should be free from blotches or ulcers (surface sores).....

MEAT UNFIT FOR FOOD.—In examining meat it should be borne in mind that there are three conditions owing to which it may be unfit for food, viz.:— 1. It may be partially decomposed through having been kept too long. 2. It may be derived from an animal which has died a natural death, or only been slaughtered when in a dying state. 3. It may be derived from an

animal affected with a disease, either communicable or in some other way injurious to man, or from a poisoned animal.

1. Partial decomposition is shown mainly by the characteristic smell. The meat, too, loses its elasticity, is soft, and tears readily. On cutting, the resistance offered to the knife varies, some parts being softer than others. The cut surface often swells from a kind of fermentation or 'heating.' The outside is pale and livid, at a later stage greenish. Litmus paper is not reddened, but remains neutral, or indicates the juices are alkaline.

2. Meat from animals which have not been killed or only killed when moribund, is dark in colour, often purple. The meat sets badly, is full of blood, neutral or alkaline, and readily decomposes. The flaying and dressing of such animals is usually done under unfavourable circumstances, and often by no expert hands, so that the carcase look hacked and blood-stained and untidy.

3. Meat from animals affected with disease and thus injurious to man.—The detection and seizing of such meat is one of the most trying duties of sanitary officers. Determining whether meat is sound or decomposing, or whether it is well-bled or has the blood in it, are comparatively simple matters, and not beyond the intelligence of most housewives; but judging whether meat is from a diseased animal, the nature of the disease, and whether it affords warrant for the seizing of the meat will tax the officer's capacity to the full. There are three things he should do to prepare himself for this work:—first, he must acquire the necessary knowledge; next, he must train himself to observe closely; and thirdly he must cultivate the judicial faculty so as to be able to interpret rightly what he sees.

Good poultry should be firm to the touch, pink or yellowish in colour, should be fairly plump, and a strong skin. It has a fresh, not disagreeable smell. Stale poultry loses its firmness, becomes bluish in colour, green over the crop and abdomen, the skin readily breaks, and the bird has a disagreeable

odour, not at all difficult to recognize.

The freshness of fish is indicated by its being firm and stiff. In really prime condition, if held out in a horizontal position by the hand, it will remain rigid. Any drooping of the tail shows that it is not quite fresh, and, indeed, the extent of this drooping may not unfairly be taken as a measure of want of freshness in the fish. The fish usually hawked about the streets is what the shops have failed to sell, and much of it is very limp. However, before and officer is justified in seizing fish, it must be a stage beyond being merely unfresh. If the fish besides being limp is actually softened in parts, and if it has a distinctly disagreeable odour, there is sufficient evidence of commencing decomposition to warrant seizure. Healthy pilchards and herrings, and many other fishes, and mussels and oysters, even when in season, may occasionally, on being eaten, produce symptoms of poisoning. Attempts to isolate the poison in such cases have failed and it is thought the fish may themselves have been feeding on unwholesome food. There is certainly nothing to distinguish such fish from others. At times when the salmon disease is prevalent, it is not unlikely that fish affected with the disease might be sent to the market. The disease is due to a parasite, the visible signs of its being a fungus growth, especially about the head, which, so to speak, eats its way into the sound flesh. A sanitary officer would be warranted in seizing a fish thus affected.

Fruit may be the subject of disease, or in a state of decay, or it may be so unripe (especially in the case of early windfall apples) as to justify seizure. Diseased or decaying fruit is known by softening, change of colour, and external mould. Fruit may be bird-bitten or insect-bitten and none the worse, except that it is disfigured.

Potatoes and all fresh vegetables may also be the subject of disease or decay; and either softening or discoloration, or both, will mark the parts affected. Good potatoes are firm, the colour is pale and uniform, and the juice is acid. Inferior potatoes are best known by their lightness: thus a

potato, with a specific gravity of less than 1068, may be regarded as bad.

Dry peas on keeping become pale, shrivelled, and hard; but they keep better thus than as meal, which is very liable to become mouldy. Whole or in meal peas are susceptible to the attacks of insects. The accarus, a sort of itch insect, may be well defined with a pocket lens.

There is good ground for believing that all tinned fruits and Vegetables, and also meat, poultry, and fish, are more or less contaminated with tin, the amount present being from one-tenth of a grain to about $1\frac{1}{3}$ grains per pound, and, according to some esti-

mates, much more. Fortunately, the metal is not known to be poisonous, except in large doses. Green peas and French beans, and some other preserved green vegetables, and pickles, are frequently deliberately adulterated with copper, and this metal is undoubtedly injurious to the health of the consumer. The presence of copper can be detected by leaving the blade of a penknife in the liquor round the vegetables for a short time. The copper will deposit itself on the blade.

—FRANCIS VACHER, M.D. HEALTH OFFICE OF BIRKENHEAD, in the *Sanitary Record*, London, E.

THE INCREASE OF NERVOUS DISEASES.

The peril of the race from the increase of the neuropathic diathesis should set us all to thinking, and those who have the authority of acting in the direction of self-preservation and indirectly of the ultimate life of the nation. The multiplication of hospitals for the insane and inebriate asylums and of schools for the feeble-minded, and improved methods of treating nervous diseases and of homes for impoverished neuropaths of every grade, from the hospital for nervous diseases proper to the almshouse where many of these wrecks are lodged, does not cure the evil, though they serve to hide it somewhat from public sight. We best provide against the spread of smallpox by general vaccination, not by numerous pest houses, so by general preventive sanitation can we avert the threatening spread of the now prevalent and growing disease of the nervous system.

The neuropathic diathesis, the insane constitution that breeds its like and burdens the state with hereditary imbecility, idiocy, insanity, deaf-mutism, and the lesser degrees of mental defect, must be made the subject of statutory enactment and enforced law; sentimentality must yield to fact; the teachings of nature must be as decided and as sternly enforced as her own unerring edicts are. Why should the drunkard and

epileptic be permitted to beget a race of imbeciles, epileptics, idiots or criminals? Why should the life-long criminal and the pauper be allowed to go on reproducing his defective kind, the lunatic likewise, and all the mentally maimed of whatever degree, especially when by forfeiture of liberty they fall under proper custody of the law; and why should generation after generation of these miserables be allowed to be brought into being to become either burdens upon the state or victims of its misdirected vengeance, when prevention is possible, and better for the state, and only justice to the helpless and prematurely doomed to an unchosen existence worse than death? If municipalities may lawfully quarantine yellow fever and cholera, why may not, and why ought not, this greater destructive agency that plague or pestilence, which never ceases its ravages—the hereditary descent of the organically vicious and defective—be stopped by law? No pestilence, that ever walked in darkness or destruction that has wasted at noonday has done greater harm to mankind than the silent, ever active destructive power of hereditary degeneracy of brain and mind. Instead of visiting punishment on the heads of these weakened victims of entailed disease, let law go to the *fons et origo*, and stop this vicious progeny from being thrown upon a

world in which they are unfitted to live.

More than a century ago Cabannis said: "As the liver secretes bile and the stomach gastric juice, so the brain secretes thought," a proposition exact enough for comparison, and as a working basis for sanitary legislation for, though thought and mind are probably something more than secretion of the brain, mind is dependent for its every normal movement upon the integrity of the brain, and wrong and misleading thought will be evolved if the physical substratum of the mind—the human brain gets out of order. The duty of our day is to see that, so far as practicable, we transmit to our descendants healthy brains and vigorous nervous systems, and to this end personal endeavor and municipal legis-

lation should be invoked. A true civilization should show development and not degeneracy of brain power, and the proudest monument to our wisdom we might erect would be one of neurotic regeneracy, a richer legacy to the coming generations than railroads or telegraphs, phonographs or telephones, electric lights, or aerial navigation successfully accomplished, for without neurotic regeneracy these blessings will prove curses and promoters of still further neuropathic decay, and final extinction of mind. To enjoy these, power of the nervous system and mind should be increased, not diminished; yet in them, and the press, injudiciously used, are the seeds and elements of destruction.—C. H. HUGHES, M. D. in *Alienist Neurologist*.

HEALTH IN MICHIGAN—INTERESTING FACTS.

Reports to the Michigan state board of health indicate that, in the month of September, 1885, compared with the preceding month, influenza, typho malarial fever, bronchitis and neuralgia increased, and that cholera morbus, cholera infantum, and diarrhœa decreased in prevalence. Compared with the average for the month of September in the seven years, 1879-1885, intermittent fever, remittent fever, dysentery, typho-malarial fever, cholera infantum, cholera morbus, diarrhœa, consumption of lungs, and typhoid fever were less prevalent in September, 1885. For the month of September, 1885, compared with the average of corresponding months for the seven years, 1879-1885, the temperature was lower, the absolute humidity and the day ozone were about the same, and the relative humidity and the night ozone were more. Including reports by regular observers and others, diphtheria was reported in Michigan in the month of September, 1885, at 56 places, scarlet fever at 42 places and typhoid fever at 49 places.

For the month of October, 1885, compared with the preceding month, the reports indicate that diphtheria increased, and that diarrhœa, cholera

morbus, dysentery, and cholera infantum decreased in prevalence. Compared with the average for the month of October in the seven years, 1879-85, remittent fever, typho-malarial fever, diarrhœa, consumption of lungs, typhoid fever, bronchitis, dysentery, and cholera morbus were less prevalent in October, 1885. For the month of October, 1885, compared with the average of corresponding months for the seven years, 1879-85, the temperature was lower, the absolute humidity was less, the relative humidity was much more, and the day and the night ozone were less. Including reports by regular observers and others, diphtheria was reported in Michigan, in the month of October, 1885, 59 places. Scarlet fever at 41 places, and typhoid fever at 36 places.

For the month of November, 1885, compared with the preceding months, the reports indicate that bronchitis, tonsillitis, neuralgia, rheumatism and pneumonia increased, and intermittent fever decreased in prevalence. Compared with the average for the month of November in the seven years, 1879-1885, intermittent fever, diphtheria, remittent fever, typho-malarial fever, pneumonia, consumption of lungs, and

bronchitis were less prevalent in November, 1885. For the month of November, 1885, compared with the average of corresponding months for the seven years, 1879-1885, the temperature and the absolute humidity were about the same, the relative humidity

was less, and the day and the night ozone were more. Including reports by regular observers and others diphtheria was reported in Michigan in the month of November, 1885, at 63 places, scarlet fever at 39 places and typhoid fever at 34 places.—H. B. BAKER, M. D.

SANITATION IN ST. LOUIS—LESSONS TO BE LEARNED.

From a notice in the *Sanitary Record* of a work consisting of a number of short articles, prepared for the St. Louis meeting of the American Public Health Association, by city officials and local sanitarians, the following is gathered. The mean temperature of that city for the year is 55o. 4, and on the average there are in the summer twenty-three days when the maximum (in the shade apparently) rises to or above 90o, between six and seven days when it rises to or above 95o, and one day when it rises to or above 100o. Generally there is but a slight mortality from solar heat, for the reason that the average daily humidity of the air is very low.

The Board of Health of St. Louis consists of the Mayor (who is its presiding officer), president of the council, one commissioner of police (designated by the Mayor), two regular practising physicians (appointed by the Mayor), and the health commissioner. The board is invested with judicial powers in determining what constitutes a nuisance detrimental to the public health, and on this question their action is final. A complete system of drains for the removal of waste and surface waters was commenced in 1849, so that St. Louis may claim to have been one of the first towns to have attacked this subject in any serious systematic way. The public sewers are designed to carry off a rainfall equal to one inch per hour from the whole area drained, and the final outlet of the system is the Mississippi River. It has been estimated that the provision of proper drainage and an ample water supply, together with other minor sanitary improvements, have reduced the mortality from 34 to 19 $\frac{1}{10}$ per 1,000. The public

water supply is received from the river in an inlet tower placed in deep water, about two hundred feet from the above line, and is pumped to reservoirs, in which it is allowed to settle, and, after settlement, is again pumped into the distribution pipes and storage reservoir. Various forms of street paving have been tried in St. Louis. Wood pavements generally have proved expensive and unsatisfactory, and the city authorities propose to pave all streets of heavy traffic with granite blocks laid on concrete; and to pave with asphalt such streets of lighter traffic in the residence part of the city as will bear the expense of it, leaving the outlying streets to be paved with limestone Macadam laid upon a Telford base.

Investigation into the relative mortality in different parts of the town shows that the mortality in those parts of the town at present unprovided with drainage and water supply is very largely in excess of that to be found in districts in which the provision is complete, and demonstrates beyond question the utility of a perfect drainage and water supply in lowering the mortality of large cities.

In a history of the numerous outbreaks of cholera from which the town has suffered, a careful investigation of the subject leads to the conclusion that those parts of the city where the people and their habitations were clean, and where no wells were used for drinking water escaped almost entirely, and the whole force of the epidemic was spent upon those parts where the houses and the people were unclean and well water was in most frequent use.

THE EDITOR.

THE MONTREAL SMALL POX EPIDEMIC—REPORT OF THE INVESTIGATING SUB-COMMITTEE—HOW THE DISEASE SPREAD.

The sub committee of the Board of Health, Messrs. A. Lévêque and Hugh Graham, appointed to investigate the cause of the epidemic of smallpox last year, and suggest precautions against a future visitation, presented its report at the session of the Board on the 9th January, inst. Extracts are given from the registers of the Fabrique of Notre Dame, and the Mount Royal Cemetery, which show that there were no deaths from smallpox between the 1st of January and 1st of April of last year. The deaths from smallpox in the course of this year, until the 5th of December, when the epidemic seems to have been stayed 3059.

Dr. Rogers, who it was said had a considerable practice in the city, stated that he believed no cases of smallpox had occurred in Montreal for several years previous.

H. Longley, Pullman car conductor on the G. T. R. was admitted to the Hotel Dieu about midnight on the 28th of February, at the request of a physician of the hospital. He was immediately placed in a private room, in which were two beds. There was already a patient in the room. The hospital was full, and had been so all the Winter. Longley had only a few pustules on his face and hands. He said he had taken the fever on the cars. or in Chicago about the 15th of February.

A few days after the departure of Mr. Longley, on March 21, a servant of the Hotel Dieu, Pelagie Robichaud, fell ill with smallpox. She was isolated in a small room off the corridor leading to the mortuary chapel, and two nurses were given her. This servant had no intercourse with Mr. Longley, but she was extremely afraid of the smallpox. She may have contracted it through holding communication with the servant that waited upon the smallpox patient, a thing that we could not prevent.

She died on the first of April. Her body was immediately carried to a building outside of the hospital and put into a double coffin. Her room was carefully disinfected. The nurses, after

bathing and completely changing their clothes, were allowed to return to their appartments.

On April 3rd, a Sister of Pelagie seemed to be somewhat out of sorts. On the 6th a violent fever broke out and on the 7th hæmorrhagic smallpox was diagnosed. The board of Health being informed of the fact and pressed to open its hospital the patient was carried thither on the same day. Dr. Larocque took a great deal of trouble in getting this hospital ready, and succeeded in getting nearly all the staff he required, amongst the convalescents at the Hotel Dieu. The next day, two cases of smallpox were discovered in the wards of the Hotel Dieu and in the same way transported to the Civic Hospital. On April 10th there were two other cases.

The doubtful cases were then isolated. The isolation did not take place earlier, because of the crowding of the sick in the hospital wards. This delay lasted from April 8th to April 11th. From the 8th April to the 18th, there were 16 cases of smallpox transported from the Hotel Dieu to the Civic Hospital. On April 14th, the Medical Faculty of the Hotel Dieu proposed to the Superior to dismiss all the patients who seemed to have no symptoms of the contagion and who could go home. The Superior consented; there seemed to be no other means of assuring a thorough disinfection and a complete cleansing of the wards. In the Hotel Dieu, quarantine was impossible. On April 18th, the epidemic had ceased in the Hotel Dieu. The wards and other departments were carefully subjected to disinfection for a fortnight. Nothing was neglected in the way of cleaning and washing of the departments and linen, the disinfectants employed were the fumigations of sulphur, carbolic acid, chloride of lime, camphor and sulphate of iron. A portion of the effects of the smallpox patients were burnt, the rest was carefully disinfected. The wards were reopened on May 10th.

As the sub-committee states, if there had been a house at the disposal of the Health Board to quarantine these patients before allowing them to circulate in the city and elsewhere, it would have been a wise precaution, and they further add, "whatever precautions may be taken to prevent the recurrence of a calamity such as recently visited us, we must not lose sight of the fact that it will always be difficult to prevent cases of contagious sickness from getting into the city; an accident can always happen in spite of the surveillance of the authorities and the vigilance of the doctors themselves. To avoid as much as possible the repetition of an epidemic, there is but one sure and practical means to be adopted; it is the establishment and maintenance by the city itself, with the least possible delay, of a permanent hospital for contagious diseases. This hospital should always be open, and should be provided with a staff whose members should vary according to circumstances. If the doors of St. Roch's, insufficient as it was, had been open to receive the patient Longley, his doctor would not have been under the necessity of demanding admittance at the Montreal General Hospital, then at the Hotel Dieu, and a great public misfortune would probably have been avoided.

We would further recommend the imposition of an exemplary penalty on any transportation company introducing within the city limits or landing on the wharves, in front of the city and territory, any case of contagious disease, without having, in the first place, obtained permission to that effect from the Medical Health Officer of the city. And to avoid any surprise in the future, the Medical Health Officer should keep himself posted as to the sanitary state of the several cities of North America, situated on the railroad lines communicating with Montreal, as also on the steamboat lines.

The chairman of the board of health, Mr. H. R. Gray, reports an outbreak, which occurred about the same time as follows: H. Shattuck, Pullman car conductor, left Montreal quite well on February 7th and arrived at Chicago

on the 10th. On the 9th, he had a lady on board going to Chicago, who, it was discovered, had a mild form of smallpox, and took supper in the dining car with others before knowing the nature of the disease. He left Chicago on February 19th, felt very ill on the 20th, and came to Montreal to his own home on February 25th. The rash appeared out well on the 27th. His residence was on Mayor street, where he was attended by Dr. Molson who promptly reported the case to the Medical Health Officer, and it was immediately isolated, a sanitary policeman being detailed for this purpose. Dr. Molson was most assiduous, and, on his demand, the Health Department supplied a nurse and washerwoman and disfectants. The family being very respectable and intelligent assisted Dr. Larocque, the Medical Health Officer, to the best of their ability. Unfortunately, two young ladies left the house as soon as the nature of the disease was noticed and before it was quarantined. One of these went to St. Andrews and smallpox developed shortly after her arrival. Luckily, she fell into intelligent hands, and was securely isolated and convalesced without spreading the disease. The other young lady also fell sick in a house on St. Catherine street west, but, by the watchfulness of Dr. Molson, was immediately removed back to the infected house on Mayor street, and the Department, under the direction of Dr. Larocque, at once disinfected the premises from which she was removed.

The cases in the Mayor street house all shortly got well without a death occurring, and the house was cleaned and disinfected, and not a single case in the city outside resulted from it.

There is no doubt if a permanent civic smallpox hospital had been in readiness to receive the patients, the case of Shattuck as well as that of Longley would have been placed there on arrival, and thus the outbreak in the Hotel Dieu would have been avoided.

J. A. U. B.

NOTES ON THE OUTBREAKS OF SMALL POX IN OTTAWA.

On the 6th of April last I was made aware of the existence in this city of two cases of smallpox: one being a little girl of about seven years, in whom the disease in its confluent form was fully developed; the other a young man of about 26 years, the eruption in this case just making its appearance. The house where these occurred, a private boarding house, was at this time occupied by 11 adults and 3 children—14 inmates in all, out of which one half bore good marks of previous vaccination whilst the seven others, among whom were the three children, had never been vaccinated. Out of the seven protected by vaccination not one was effected by the disease, whilst five out of the seven unprotected were infected during the week preceeding the 6th of April and developed the disease after periods of incubation varying from a week to thirteen days; and two acquired immunity by vaccination immediately after the removal of the two first cases. Of these five who contracted the disease, two were children and three adults. The children were the little girl mentioned above and her little brother of about five years who though vaccinated on the 6th of April developed the disease in a modified form. The three adults were cases of the most fatal type of hæmorrhagic variola and two died. The third case barely escaped with life; the deeply scarred marks of the disease he will carry all the days of his life. Isolating each case properly and otherwise taking necessary precautions to prevent the spread of infection, the disease was always under control, and within

five weeks it was completely eradicated.

Between September and the latter end of the year, 1885, I have had under any care in hospitals for contagious diseases 27 cases of smallpox and one case, an adult female, isolated at domicile, who had never been vaccinated; case fatal within 12 days.

Of those treated in hospital, 15 were French speaking, 9 English and 3 Italians; 6 were under 5 years of age, 3 between 5 and 10, 3 between 10 and 15, and 15 above that age. Out of the 27 cases, 12 had been vaccinated and 15 unvaccinated. Of the vaccinated, 2 died and 10 recovered; of the unvaccinated 9 died and 6 recovered. Of the fatal cases, 6 were under 10 years of age, and 5 were adults. All these cases were isolated immediately after the first appearance of the eruption or shortly afterwards, except in 2 cases, one of which was wilfully hidden and the other not known until pustules more fully matured; fumigations with sulphur fumes were resorted to and the linen to be washed was soaked in disinfectants before being washed by ordinary process. Only in 3 instances did there develop a second case in the same house after isolation of the first in hospital; whilst from the cases isolated at domicile and who died, 3 cases originated: her infant child, unvaccinated, who died; her sister who staid with her as nurse, previously vaccinated, who developed the disease in a mild form; and this woman's child, unvaccinated, who also died. These last three are included in the list of the 27 treated.

A. ROBILLARD, M. D., M. H. O.

FOOD ADULTERATION—ITS PREVALENCE—HOW TO CHECK IT.

In the December number we gave some notes from the last report on the adulteration of food by the Commissioner of Inland Revenue, which we propose to continue from time to time. The work now being done through the department of the Commissioner cannot fail, especially if aided by the press and the public, to check the growing evil of food adulter-

ation. It is indeed strange, in view of the report plainly showing what the public are buying and consuming and how they are being deceived and swindled, that editors generally do not more freely discuss this subject and assist in exposing the sale of fraudulent, health destroying articles of our common daily food. In some cases probably the small trader is not aware

of the extent of the fraud he is committing upon customers, but it must be plain to him, from the price at which many foods are sold, that they are not pure. In many instances, it is true, on the one hand, that the articles are not sold by the trader as pure foods; and on the other, purchasers of ten know that they are purchasing and consuming an adulteration. Many do not know the evils which may follow the use of certain adulterations in foods, and others who one would suppose must know much on this point seem indifferent, and will purchase and have consumed in their family an impure article, because they can purchase it for a few cents less per pound. They ought to know that to do this is false economy as regards getting value, to say nothing of injury which may result to the health from consumption of an impure food. Indeed there are doubtless those who would purchase an adulterated food at a low price for themselves and their families, while if purchasing food for their horses they would be much more particular. So that in endeavoring to check and suppress the evil of food adulteration, there are two distinct obstacles to overcome, on one hand the greed and craft of the fraudulent adulterating trader and on the other the ignorance and apathy of consumers. While the former must be exposed and punished, the latter must be educated up to a knowledge of the importance of consuming only pure foods, and aroused up to the desirability of acting upon such knowledge.

FRADULENT SPICES—DEALERS IN THEM.

In Toronto, of the six specimens of "cinnamon" purchased from A. H. Carter, W. Potter, S. Greenfield, R. S. King, Mills Bros., and Eastern tea House, and analyzed by the public analyst, those from the five first named consisted of "pure Cassia," no cinnamon at all, it appears, and that from the last named, of "cassia and peas." Cassia, all our readers may not know is the bark of a tropical, ever-green shrub (*Laurus cassia*), the aroma of which somewhat resembles that of cinnamon, yielding a pungent, stimulating oil. It is used as a flavoring in

medicines, and being much more plentiful than cinnamon it is much less expensive. It is probably not injurious to health and those who receive it instead of cinnamon are only defrauded in pocket.

Of seven specimens of ginger examined by the same analyst in Toronto, purchased from R. S. King, H. Kelly, G. Long, S. Greenfield, E. Thompson, W. G. Boulton and G. B. Toole & Co., that from the first named was "unadulterated" and from the last named it was "mixed with a small quantity of ground rice," while the other five were adulterated with flour and turmeric, three to the extent of 25 p. c. and two to the extent of 30 p. c. Of fourteen specimens of cream of tartar examined there, six only were pure, and one was found to be baking power. The seven others, from R. Dunmore, M. A. Carrick, M. B. Dunn, D. Killen, J. Paterson, J. George, J. Foley, H. Mathews, E. Manning and J. McCleary, were all adulterated with from 25 to 75 p. c., of gypsum or gypsum and corn starch. Gypsum is a sulphate of lime—"plaster of Paris," and is a highly injurious substance to take into the stomach.

In London, of four specimens of "cinnamon," obtained from D. Dodd & Co., J. C. Trebilcock, H. A. Duggan and C. A. Conover, and examined by the public analyst there, all were either simple cassia, or cassia with farinaceous adulterants. No cinnamon whatever. The four specimens of ginger examined in that City were good. Of ten specimens of cream of tartar examined there, only one was pure. The nine other specimens were quite as largely adulterated as those in Toronto, and in a similar way. They were purchased from John Moule, Thos. O'Callighan, Jas. Southcotte, Sommerville and O'Connor, John Shaw, Elliott Bros., W. H. Brandon, Deacon Bros. and Wm. Moore & Co.

In Montreal and the eastern cities there would appear to be no cinnamon, only adulterated cassia, very little pure ginger, mustard or cream of tartar, and some foul adulterants were used. We propose giving more details in a future number.

THE EDITOR.

THIRTEENTH ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The medical wisdom of many of the most important cities in the United States was represented at the meeting last month at Willard's Hall, in Washington, where the American Public Health Association convened in its thirteenth annual session. The delegates came from nearly every State in the Union and the Dominion of Canada, and is reported to have been a perfect success. It was presided over by the President, Dr. J. C. Reeves, of Wheeling, West Virginia.

The Lomb prizes had brought forth a vast amount of material. There were thirty-six papers upon "Healthy Homes and Food for the Working Classes." There were twenty upon the "Sanitary Conditions and Necessities of School-houses and School-life." Still in spite of the vast number of applicants for the prizes but one first prize and two second prizes were drawn. Dr. Lincoln, of Boston, received the second prize for his contribution to school hygiene. Dr. Sternberg received the first prize for his paper upon "Disinfection and Individual Prophylaxis against Infectious Diseases." A second prize for an essay on "Healthy Homes for the Working Classes," was given to Dr. V. C. Vaughan. A second prize was also given to a mechanic from Springfield, Mass., for an essay on "Preventable Causes of Disease, Injury and Death in American Workshops." About half of the Lomb prize money remains for prizes to be offered for the best essays on definite subjects next year.

Dr. Reed, of New York, offered a resolution recommending legislation—national, State and municipal—to protect the people from the sale of diseased meat, which was appropriately referred. Dr. H. B. Baker, of Lansing, Mich., discussed the relation of rainfall and water supply to cholera. Statistical nomenclature was ably discussed by Dr. Hunt, of Trenton, N. J. Dr. J. S. Billings, of Washington, discussed the forms of tables for exhibiting vital statistics. Many other valuable and interesting papers were read and discussed more or less. The treasurer reported more than a thou-

sand dollars in the treasury. A conference of the representatives of all the State Boards of Health was held at the same time as the Public Health Association meeting. This is a very important body, as it represents the health organizations of all the States.

President Cleveland sent a happily worded letter regretting that it was quite impossible, owing to other pressing duties, for him to be present. Among other things, he said, "if this beneficent organization shall succeed, as it ought, in impressing upon municipalities the duty of sensible and thorough sewerage, a plentiful and pure supply of water and general cleanliness, together with a proper construction of school buildings for the children of their citizens, it may well point with pride to its achievements." He was elected an honorary member of the association, the first upon whom this honor has been conferred. The retiring president, Dr. J. E. Reeves, in his address, urged the importance of national aid and interest in public health proceedings, and the subjects of a national health department and of aid in establishing a biological laboratory, was strongly shown. He said, "from the Agricultural Department, the Commissioner may send our distinguished Fellow, Dr. Salmon, into any part of the United States to investigate an outbreak of disease among cattle, horses, sheep and swine, chickens, geese and ducks—if there should be no demurrer of *States Rights* (?) and he may order an inquiry to be made concerning the blight of the crops—the *potato-rot*, for example—and the best method of housing, making healthy and productive swarms of honey-bees; but what special, well-organized national department have we which is charged with the humane duty of investigating the causes of diseases among men, women and children? The passage from infancy to childhood, and from childhood to adolescence, is a thousand times more dangerous than the approach to our harbors; but no central effort is made to save the children from death before they reach their fifth anniversary.

ILLINOIS STATE BOARD OF HEALTH ANNUAL MEETING.

The Ninth Annual meeting of the ILLINOIS STATE BOARD OF HEALTH has just (this month) been held in Springfield. A large portion of the time of the board was occupied on the subject of Medical education. It was shown that Progress in the enforcement of the Board's Schedule of Minimum Requirements by the Colleges has been satisfactory. There has been a decrease in the number of medical students and of graduates, a marked reduction in the percentage of graduates to matriculates in some colleges were the proportion was formerly very high, and an increasing uniformity and higher standard of the requirements of the colleges.

A number of cases of outbreak of small-pox had been reported, but there had been no spread of the disease up to the date from any of the cases. In Chicago there had been 12 cases during the quarter; one group of seven—contracted, it is believed, from a Canadian tramp—was concealed by an unqualified practitioner. Four of the seven were already dead, and the medical attendant was in the county jail awaiting trial for practising without a license.

Dr. Grove, of Galva, who had vaccinated large numbers with both humanized and bovine virus, had reported to the board that, previous to this campaign he was extremely partial to the bovine, but he had completely changed his mind. "At least 50 per cent of the vaccinations

with bovine virus had been failures," and "this experience adds to the mass of proof which he had long recognized of the superiority of humanized virus not too far removed, in cases demanding promptness and certainly of action." In reference to the epidemic in the Province of Quebec the secretary, Dr. Ranch, reported that, from personal observation of all the conditions—having spent several days in the infected region and compromised territory at the invitation of the Dominion of Canada authorities—he was prepared to say that every thing possible under the circumstances was being done, both for the suppression of the disease in the infected area, and for the prevention of its spread westward.

Relating to cholera, the secretary reported as follows: It is hardly necessary to say that this country is not yet free from danger of an invasion of cholera simply because there is now a cessation of alarming reports from Europe. Periods of remission, more or less complete, have characterized every pandemic spread of cholera since it first invaded the latter country. Until it entirely disappears from the European continent it will not do for us to relax our vigilance or to remit a single precaution. On the contrary, this delay in its march should be utilized to strengthen our defenses, and to perfect our precautionary system.

HEALTHFULNESS OF THE NORTH-WEST CAMPAIGN—VALUE OF PURE AIR.

SINCE returning from the recent N. W. campaign, where I served with the forces on the medical staff, much has been thought of the wonderful healthfulness of that expedition, and on what it depended. Not only was it marvelously free from disease of a zymotic type (those diseases formerly thought to depend upon some ferment, now known to be of germ origin) but others not depending upon germs; arising from within the body; and I feel fully persuaded that it was due to

constantly breathing, both by day and by night during the whole twenty-four hours, an unlimited supply of free air, pure, untainted and undefiled by the multitude of causes which seem to be inseparable from the abodes of civilized man.

Night after night did we lay rolled in our blankets, with nothing above us but the starry vault of heaven, where twinkling stars were the last peaceful objects to lull us to sleep and the first to welcome our early waking.

It seemed the perfection of rest, and one arose fully refreshed, feeling capable for any duties of the day. I shall never forget those nights, nor the quotation which they called up,

“And over us, with constant, kindly smile,
The sleepless stars keep everlasting watch.”

There were no drafts or pent up exhilarations, all was free and pure. Most of us know something of what drafts are capable of producing in our systems. By a draft is meant air constricted and condensed in a channel which causes its motion to be accelerated and so altered in quality as to make it disturbing and harmful to our bodies. And this brings me to consider how drafts differ from other air in motion, what change there is, for there must be some alteration to affect us so harmfully. It cannot be due to increased velocity, for we may expose ourselves to a gale which almost blows us off our feet and yet take no harm, nay, are benefited and exhilarated by it—but pass some of the same air through a passage or windows opposite each other and then try its effect. A chill, a sneeze or two, and increase of mucus in the throat will follow, and we experience these sensations which are the signals from within that tell us that something is going wrong, or, as it is commonly expressed, we are catching cold. I have, rightly or wrongly, associated it with a derangement of its constituents. We know too, that gasses and fluids have definite laws of diffusion when undisturbed and may it not be the interference with such laws that so alters the air as to make it affect us so very differently and more deleteriously than when it is free and untrammelled.

We are far too indifferent and careless

about the quality and quantity of the air we breathe. Much more is thought, talked and written about the quality, quantity and preparation of our food, which is of great importance, but which I hold is a secondary necessary for our healthy maintenance to that of good air.

One constantly in the open air with moderate exercise can eat, relish, fully digest and thrive upon the most indifferent food, such as he turns from in disgust when housed in polluted atmospheres of civilized habitations.

This was exemplified in a marked manner in the recent military expedition—when the men were fed upon the most monotonous, unvaried diet, of hard tack, canned beef and tea—canned beef, tea and hard tack—tea, hard tack and canned beef, at meals one, two and three for upwards of four months, yet the result was that the weak and sickly grew strong and the strong stronger. I do not mean to imply that these were the only articles of diet used, but with little exception they were, or that they make a model bill of fare for those who wish to grow healthy and strong, but to illustrate what free air is capable of doing in sustaining our bodies, in spite of such a diet.

I am more fully convinced than ever before, of the prime importance of free, fresh air in maintaining our bodies in health and restoring them when diseased. In respiration we have a process of feeding and assimilation constantly going on night and day, whether we sleep or wake, like the heart, our lungs never cease from labor, but keep their constant, faithful, rhythmic motion from the moment we enter this atmosphere till we leave it.

A. J. HORSEY, M. D.

THE PUBLIC HEALTH—THE LIVING AND THE DEAD.

Most of our readers know that many towns & cities throughout Canada in accordance with certain regulations and provisions made by the Government about three years ago, send to the Department of Agriculture on the first of each month a monthly statement of the number of deaths, with the sexes, ages, causes of death, &c., which had taken place during the previous month, in the respective cities. These statements are tabulated by clerks in the

Department, a work which involves a great deal of labor and care, and are published, in abstract, in a yearly report. But besides the yearly report, the Department publishes a monthly statement of the number of deaths, mentioning sexes, in each of twenty cities and towns which make returns. In England a similar statement, including about thirty cities, is published weekly.

From the tables we find that the

total number of deaths in the 20 cities and towns during the month of December, was 1,336. The 20 cities contain an estimated population of 576,000. This gives a death-rate of 27.6 per 1,000 of population, per annum. Montreal with an estimated population 157,000, recorded 460 deaths, or at the rate of 30 per 1,000, of population per annum. Leaving Montreal out of the calculation, the other cities registered a mortality of 24 per 1,000, per annum. Toronto's mortality for the month was at the rate of 23 per 1,000, of estimated population, per annum. The mortality of Quebec was at the rate of 38 per 1,000. That of Hamilton was barely 20; Halifax, 22; Winnipeg, 23; Ottawa, 24; St. John, 22; Kingston, 20; Charlottetown, 38; Sherbrooke, 19; Sorel, 48; Frederickton, 18; St. Hyacinthe, 47; Galt, 24. St. Thomas, Guelph, Belleville, Chatham, and Peterborough recorded only a mortality of from 12 to 14 per 1,000. One-third of the deaths in Montreal were caused by smallpox. The mortality from all other causes was therefore only 24 per 1,000. In Quebec, omitting 80 deaths caused by measles alone (two fifths of the totals) the mortality from all other causes was likewise 24 per 1,000—just the same as the average of the 20 cities, and but little higher than that of Toronto. Without the smallpox cases in Charlottetown, the mortality would have been but 15 per 1,000, and in St. Hyacinthe, 20. From diseases other than smallpox, Sorel returns the highest mortality, or about 37 per 1,000 of estimated population, per annum. It looks as if the returns from those towns showing such a low mortality as from 12 to 14 per 1,000 were not correct.

During the last quarter of the year—October, November and December, there were 5,359 deaths recorded in the 20 cities and towns, showing a mortality of 37 per 1,000 of estimated population per annum. Omitting the large number of deaths from the epidemics of smallpox, in the four cities—Montreal, Charlottetown, St. Hyacinthe and Sorel, and measles in Quebec, amounting in all to 2,129, there were, besides these, a total mortality

in the 20 towns of 3,230 or 22.5 per 1,000. Excepting these two epidemics, therefore, the mortality for the quarter was about that usually recorded in the cities of Great Britain. Going back to the third quarter of the year—July, August and September—we find that there were 5,462 deaths recorded in the 20 cities and towns, a few more than in the last quarter. Omitting the number of deaths from smallpox and measles, 1161, there were 4301 deaths from all other causes, showing a mortality of about 30 per 1,000 of population per annum; nearly 25 per cent greater than in the last quarter. The difference most likely was made up by the deaths of infants during the hot period, and principally in the larger cities, as will probably be learned when the tables giving the ages of decedents are made up and published in the annual report.

During the six months—July to December, 1885—a total of 10821 deaths were recorded in the 20 cities and towns, about 19 per 1,000 of population; or 38 per 1,000 of population per annum. Omitting the smallpox cases, the mortality was at the rate of about 26 per 1,000. From smallpox there were, during the six months, 3,286 deaths, 3153 in Montreal and 133 in other places. While measles caused 150 deaths.

From zymotic diseases, the mortality for the six months in the 20 cities and towns was 5,193, or at the rate of 18 per 1,000 of population per annum. Omitting the deaths from smallpox, the mortality was at the rate of 6.6 per 1,000, per annum, from this class of diseases; a very high rate.

Of the 10,821 deaths from all causes recorded during the six months, 3,286, not much less than one third, were from smallpox alone. Political economists estimate that each individual addition to the population is worth one thousand dollars, or that each death represents a loss of one thousand dollars, to the country. Upon this estimate the smallpox epidemic of last year was a loss of \$3,286,000. A well organized Dominion Health Bureau, not costing per year as much as a one-hundredth part of this sum, might have prevented

nearly the whole of this sacrifice of human life; to say nothing of the loss of time and money during the days and weeks of sickness and suffering.

THE Toronto Sanitary Association held its regular meeting in the Canadian Institute last week, the president, Mr. D. B. Dick, in the chair. Mr. EDWARD BURKE, architect, read a paper on "The Disposal of Garbage in Toronto." He said the whole city was girt about with foul smelling dumps, which were extremely deleterious to health—on the city front, at the mouth of the Don, Riverdale park, Tannery hollow, and the Garrison creek—and it was no preventive of disease to cover it with two or three feet of earth. In time these places would be built upon by parties who did not know the nature of the ground. The proper method for disposing of garbage was by a crematory. Every household should burn its own garbage, but as this was well nigh impossible, because servants would not take the trouble, and where gas stove were used in summer time it was impossible, there was nothing for it but to allow the municipal corporations to deal with the subject. Hamilton was the first city in Canada which had instituted a crematory, but it was only for the burning of dead animals and very offensive garbage. He would like the whole question to be placed in the hands of a competent engineer to report on.

THE HIMALAYAN TEA imported by General Keer, of 58 Church Street, Toronto, is carefully selected to General Keer's order, and is certainly a very superior and reliable tea. It is a very economical tea, because it is so pure and strong. Every one who tries it, almost without exception it appears, is very much pleased with it and continue its use. Samples may be obtained direct from the importer at the above address.

ORILLIA in proportion to its population, takes more copies of this JOURNAL than any other town or city. Orillia is reported to be a very healthy place. It has a most efficient and active medical health officers.

SANITARY MATTERS IN FRANCE.—A correspondent in the *Sanitary Record* gives the following: DR. ARNOZAN, in an article published in the *Revue Sanitaire de Bordeaux*, mentions a number of cases of pellada, in which the contagious element was clinically directly traced to domestic animals. An interne (house surgeon) of one of the Paris hospitals for skin diseases, on the suggestion of Dr. Arnozan, questioned several of the patients on it. He learned that they had frequently a pet dog or cat which lost its fur. One female patient related that she had a pet dog which lost its fur, and limited naked areas of skin remained; the dog was always with her, and she combed it with her own comb. Three months afterwards she was attacked by pellada; one spot when she was admitted in the hospital was getting better, the other was perfectly smooth. The microsporon Audouini was not sought for either in the dog or the human patient. Dr. Layet, in a series of articles published in the *Revue Sanitaire de Bordeaux*, describes the deformities in children which result from the use of badly constructed school furniture. The chairs and tables in use ought to be adapted to the conformation of the scholars, and not the pupils be obliged to adapt themselves to the furniture. Dr. Layet lays down the following rules. The children should be able to sit on both buttocks; when seated they should be able to rest their feet either on the floor or on the bar of the chair. The seat of the chair should not be too small, and the chair should have a back. The writing table ought nearly to reach the chair; the pupils would thus maintain an upright position, and be supported by the back of the chair. M. Lacaze Duthiers, at a recent meeting of the Academy of Sciences, called attention to the researches of M. Herman Fol (of Geneva) on hydrophobia. M. Fol has isolated a microbe which he believes to be the specific element of the malady. Inoculation with this microbe through the orbit produced rabies, and the incubation period was shorter than with Pasteur's method.

SURGEON GENERAL BERGIN—FACTORY LABOR REFORM.

Prominent among that host of able and useful men who have been the honor of Canada is Dr. Darby Bergin, distinguished not only as a clever and industrious physician, but as an efficient militia officer, an active politician, and a vigorous and enterprising townsman.

Dr. Darby Bergin was born at Toronto in 1826. He is of Irish extraction. His father Mr. William Bergin, Civil Engineer, was a native of Roscrea, in Ireland, who settled in Canada in 1820. He had five children, of whom two survive, Dr. Darby and Mr. John Bergin, the latter a lawyer in Cornwall. The father died in 1850.

Dr. Bergin began the serious part of his education at Upper Canada College, Toronto. As an instance of his success as a student it is said that, while he was in a junior form and under twelve years of age, he carried off the prize in a Latin Grammar competition open to the whole college. So far as its productiveness of distinguished men is concerned Upper Canada College may almost be termed the Eton of Canada. During his course there the future Doctor, if he had been gifted with a spirit of prophesy, might have looked with interest upon many a youth, unnoted then, but whom a growing nation has since had abundant reason to regard. Let us say that one such is the Doctor himself.

The work of Education thus begun was continued in medicine at McGill College, Montreal. Mr. Bergin's course there was distinguished for zeal and ability. In April 1846, at the unusual age of 19 years and seven months, he passed an examination which entitled him to a license to practise medicine. In the following April while yet under age he passed the examinations for the degree of M. D. C. M., to which he was admitted in September of the same year by a special convocation.

The Doctor then settled in Cornwall and began the practise of his profession. Energy and talent with a fair field do not tarry long on the lower rounds, and Dr. Bergin soon had a practice which was one of the largest in Eastern

Ontario. In the rapid success which has attended him, it will be only necessary to name the several distinguished positions which he has since held. In 1848 he had part charge of the Emigrant's Typhus Fever hospital at Cornwall. When the small-pox epidemic broke out with such destructive violence among the Indians of St. Régis, he was sent by the Department of Indian Affairs to attend them, and when his labours were over, received the thanks of the Government for his zeal and devotion in a not very tempting task. He was president of the Eastern District Medical Society and vice-president of the Association for the St. Lawrence and Eastern division. Of this latter he has been for four years President *ex-officio*. He has been vice-president and twice president of the College of Physicians and Surgeons of Ontario, and at different times examiner in surgery, medicine and other subjects. He is at the present time the representative for his division in the council of that institution.

Dr. Bergin's usefulness not only as a physician and surgeon but as an active public man, has been steadily recognized by his native town. The honours and places of trust which have been conferred upon him have been wisely bestowed and faithfully held. The Doctor has been the steady friend of Cornwall, in helping on its industries and providing it with public buildings. The new Post Office there, the Custom House and Inland Revenue Offices, the Stormont Cotton Mills, the Toronto Paper Mills and the main trunk sewer, a costly construction along the front of the town, are mainly the work of his influence.

In Cornwall Dr. Bergin has been member of the town Council and trustee of the High School. He was first elected to Parliament in 1872, by acclamation. At the general election of 1874 he was defeated by Mr. A. F. Macdonald, being 23 votes behind. Mr. Macdonald was unseated, but on a new election in September he was again returned with a majority of 40 votes. In 1878 Dr. Bergin defeated Mr. D. B. McLennan, but was unseated.

In a new election in 1880 he was a second time victorious with an increased majority. In 1882 the town of Cornwall having been united to the County of Stormont, Dr. Bergin was nominated for the constituency and was elected by a majority of nearly 500, the opposing candidate being the late James Bethune.

The most noticeable work of Dr. Bergin in the House has been respecting the regulation of factory labor. To this subject he has given a great deal of attention. A few years ago he introduced a bill for the regulation of the hours of labor in workshops, mills and factories. In it was a clause relating to education, and as it was thought this would interfere with provincial rights, the bill was withdrawn. During the last session of parliament (1885) the doctor brought in another bill of a similar character but without the educational clause. On the second reading of this bill, in April last, he made an eloquent and exhaustive speech on the subject. He went back more than a century into the records of time and pictured the terrible evils of the days when, after Watts' discovery of steam, and the introduction of the mule and the Spinning Jenny, came the monster establishments which supplied the world, and into which were crowded the old and the young, from 6 years of age up, the strong and the weak. "Long hours, over-work, misery, and starvation were the rule. Steeped in ignorance, there seemed to be no escape from pauperism and degradation." He doubted not "many of the manufacturers were humane; that they were not naturally cruel; but as business grew and demands were made for the products of the loom and the anvil and the mine, faster than they could supply within the ordinary hours of labor, little by little, slowly but surely, came about the great evils which it took half a century to alleviate, if not to cure, by legislation." He feared that unless the bill were passed like results might be brought about in this country. He said that from the time he had introduced his former bill, the working hours had been confined to sixty hours per week in all the large mills in this

country, and that provisions had been made for the separation of the sexes in certain portions of the mills, provisions which were necessary to decency. In the American mills, such provisions are not made, and requests are constantly sent to the Legislatures of the different States by the factory commissioners, asking for the same provisions as are now made here, under the influence of public opinion created by the introduction of this labor Bill, in our factories. In the United States, the closets in the mills are so placed that none but the vile girls use them."

He desired that no child under 13 years of age should be employed in a factory. This would give them a chance to be educated. "If we grow up in Canada a generation of ignorant children," the doctor said, without any education, without any knowledge of the Christian doctrines, we are bringing up in our midst a class which will be most dangerous to the community, a class which will marry and bring into the world the same class to be worked from the same early age until manhood and womanhood, as this class is being now worked, and so it will go on generation after generation increasing in ignorance, increasing in degradation, increasing in everything which would be a shame to the country, and for these reasons it is necessary that we should have all the children of this country educated.

Dr. Bergin concluded his able speech in the following words: "I feel warmly and I have spoken warmly upon this question; I know, Sir, that many of the evils which attended upon the English system, will creep into ours if not provided against by legislation. The future of the children is in our hands; they appeal to us for protection and I feel that that appeal will not be in vain. Their health, their life, their faith, and their morals, are at stake, and they ask us to give them all the aid and all the assistance which it is in the power of this Parliament to give. That the factory boy may grow up strong and vigorous, full of life and health, a good Christian and a good citizen and a valuable member of society; that the factory girl may grow up an intelligent and a virtuous

woman, a true wife and a loving mother of healthy children, devoted to the duties of her station; that they may, both boy and girl, not be killed through over work; that they may not grow up puny and delicate and dwarfed in mind and body; that they may not, through cupidity on the part of their masters, be maimed or crippled for life by machinery; that their lives may not, through the lack of proper precautions, be endangered by fire; that they may not in any other way be victims of the want of care and forethought on the part of their superiors; that they may not become victims of the moloch gold, as was the case in England; that they may not become holocausts on the altar of mammon—these are among the objects of this Bill. That it may not be said of Canada, as it was said of England, and too truly said, that the wheels of her industries are driven by the heart throbs of her little children—that no such wail may go up from Canada's children to-day as went up from England's children before the passage of the Factory Law, depends upon this Parliament. Sir, the snows of winter are fast melting away; the earth will soon be clothed in green, there will be bud and blossom and leaf on every tree, the air will be filled with the music of the birds, and the flowers will be forth in all their 'beauty, and smiling in their mother earth's old face will say all her children should have happy hearts.' What more appropriate season than this springtime to give to these little toilers the boon they crave, and thus build for ourselves a monument with passionate hearts of love for corner stones."

Dr. Bergin however has not been contented with distinction in medicine and politics; he is also a valuable militia officer. His connection with military matters began in 1861. At that time a volunteer company was formed for active service in the town of Cornwall, in view of the Trent difficulty, and the Doctor was induced take command. After this he served as captain in the 3rd Provincial Battalion at Laprairie, from December 1863 to May 1864, and as major during the Fenian raid of 1866. In 1869 he organized the 59th

Stormont and Glengarry Battalion and became its colonel.

At the outbreak of the recent rebellion in the North West the attention of the Government was early called to the necessity of forming a special medical service in connection with the Militia Department, and when a head was to be chosen no one was found more thoroughly fitted for the position than Dr. Bergin. His appointment was well received by the medical profession throughout the country, and also by the medical press, and seemed to give universal satisfaction. He was both a surgeon and a soldier. Considering the short time at his disposal, the novelty of the event and the magnitude of the needs involved, Dr. Bergin's conduct of this service in his capacity of surgeon-general was worthy of all the praise which has been bestowed upon it. With the experience which the surgeon general had had, his untiring energy and natural habit of doing well everything which he had to do, it was nothing more than would have been expected by those who knew him well. Night as well as day, incessantly, almost without rest, his vigorous constitution and determination to do his duty sustaining him, the Doctor devoted himself to the work of organization. Dr. Boyd, of London, England, who was sent to Canada by the Princess Louise, in charge of stores, declared that Dr. Bergin's arrangements were complete and satisfactory, and that he had never seen a better medical service sent into the field.

Dr. Bergin, during his school and college life, while standing high in his classes, always found time to make himself a sociable genial companion; which he is still, at the present time. He usually has at hand in conversation some pleasing and amusing anecdote or story to enliven the occasion. He is therefore an agreeable companion; as he is also a warm friend. As a speaker he is fluent, pointed, and sometimes eloquent. He is much interested in, and is a principal promoter of, the proposed Ontario Pacific Railway, to extend from Cornwall to Sault Ste. Marie. In politics he is a conservative, and a genuine liberal one. He is still unmarried, and

EDITOR'S SPECIAL CORNER.

MONEY has often been referred to as a carrier of disease germs. It is a most widely and constantly circulating medium, and it can hardly be doubted that it does occasionally convey from one person to another the contagium of disease. The much-used soft bills in common circulation would carry the minute forms of microscopic germ quite readily, as would also the older coins, on which are known to grow in the dirt gradually collected in the indentations, species of bacteria and algae. In the store of the trader piles of paper money, containing hundreds of bills, are daily received from hundreds of different people from various localities, and these are deposited in the bank, where they are assorted and laid away or soon paid out. It can hardly be otherwise than that some of these bills occasionally come from houses where there are cases of infectious disease, and it would be quite in accordance with known facts if the infection were sometimes carried in old folds of the bills to the store and hence to the bank and elsewhere. A good many of our readers are bank managers. It would be well for them to bear in mind the possibility of an infectious disease being communicated to one of their clerks in the way above indicated; and in this way might be explained the cause of any such an outbreak, which otherwise might be inexplicable. To suggest or provide a practical remedy for preventing the spread of disease in this way would seem to be a very difficult thing. The danger could be greatly lessened by the periodical destruction of the old bills, and the thorough cleaning and disinfecting of metal money. This could not be done by individuals and would have to be done by public bodies, as the Government or board of health.

BOTTLING has become a very common process in connection with all sorts of, and nearly all, beverages. Why could it not be more generally practised in the case of pure drinking water for purely drinking purposes especially when not to be boiled? Water of most excellent quality as regards mineral ingredients, absolutely free from contamination, can be obtained from springs in almost every section of country. It could be sold and delivered anywhere in bottles at about the cost of bottling and carriage, which with the low price of bottles (which could always be "returned") and railway facilities, would bring pure bottled spring water within the reach of almost every one. Not far from Toronto, for example, at Thornhill, is the "Hawthorn Natural Mineral Spring," the property of Mr. John Langstaff, which will furnish an almost unlimited supply of a most delightfully sparkling water. A peculiarity about this water is that, those who cannot drink ordinary water, or think they cannot, and there are many such, can drink large quantities of this without dis-

turbance of the stomach or inconvenience of any kind. Doubtless it pure bottled spring water could be readily obtained, many would buy and drink it instead of the vile compounds sold everywhere as this, that or the other kind of "ale" or "beer," or even instead of real malt ale or beer, and as a rule the former would be a much more satisfying, healthful and less dangerous beverage, on which to spend money.

CANDIES have become so universally sold and consumed by all class of people, and at almost all ages, more especially of course by the young, that the quality of them is a matter of very great importance. Contrary to the belief of many, the candies sold in the large cities of Canada, it appears, are adulterated very little. Recent returns made to the Department of Inland Revenue by the public analysts from the different divisions, during November and December last (in accordance with the recent food and drink Act) with which we have been favored, show a satisfactory condition of the candies sold in the principal cities. As most of the candies consumed in the Dominion are manufactured in the cities, parents generally will be quite as pleased as their little ones to be informed that the candies analyzed by the public analysts are nearly all reported as being "genuine," "good," "unadulterated," &c., and containing nothing more deleterious than glucose, starch, flour and minute quantities of comparatively harmless vegetable coloring matters. Out of eighteen samples examined in each of the five divisions, such is the resulting fact. In Halifax a few samples of yellow varieties contained lead salts as coloring matter. A large proportion in all the divisions consisted largely of glucose instead of genuine cane sugar, but they are very little the worse for this. It is probable that the recent Act above referred to has been influential in producing this rather satisfactory quality of candies. In New York, not long ago, a number of samples of candies were found to be adulterated to a very serious extent.

A QUESTION of much importance, especially from a medical-legal point, may at some future time come up which will involve serious consequences relating to the justification of taking one life to save another. Not long ago the New York daily papers reported that every Roman Catholic physician in that city was in receipt of a circular containing a declaration by the Pope that the killing of an unborn infant is never right, even when the life of a mother can be saved in no other way. This bears on the surgical operation of Craniotomy, which, as some of our readers may not know, is to cause the death of an unborn infant, and which is practiced by the profession in cases where a choice is forced between losing two lives and saving one

by hastening the death of the other. A writer in "The American Israelite," Cincinnati, gives the Rabbinical view on this question. In Mishna Oholoth, vii. 6, the undisputed decision is laid down that "in case of a dangerous parturition it is justifiable to kill the unborn infant in order to save the mother, as her life precedes its life." Such operation is, however, not permitted after the infant has already been partially born, as in this case the maxim applies that

one human life must not be set aside on account of another. Though this is a serious subject, we are tempted to give the view of Dr. Oliver Wendell Holmes, in his charming poem read before the Society for Medical Improvement in Boston, some years ago. He wrote of Craniotomy as—

"A trivial damage, since so oft we find,
That babes grow up, who left their brains
behind."

OBSERVATIONS AND ANNOTATIONS.

A STATEMENT has been published in connection with the scheme for providing cheap dinners to poor children in Birmingham, which shows that the central committee had, up to Christmas, four centres in operation. Since October, the number of dinners supplied was 27,835. The expenditure for food alone cost slightly under, and the total cost, including cooking, was slightly over, a halfpenny per head.

IN the children's department at the University Hospital of Berlin ("Therapeutic Gazette") there is a collection of some three hundred nursing-bottles of various sizes and shapes, all provided with a long rubber tube, which enclose a piece of litmus paper colored red. No commentary is needed. It is quite clear that the presence of lactic acid in the tube suffices to explain many obscure disorders of the alimentary tract for which the physicians are often at a loss to find a satisfactory explanation. Mothers return to the Polyclinic and testify to the rapid recovery of their children after withdrawal of the nursing-bottle.

THE Iowa commission of Pharmacy has made the following regulations as a safeguard against dispensing accidents: Registered pharmacists are requested to affix a strip of rough emery paper or emery cloth around each shop bottle, or other container, from which they dispense morphine and other poisons. The width of the aforesaid strip to be of not less than one-fourth of the altitude of the dispensing bottle, and to be pasted under the label of contents.

THE United States Census says there are 503 patent medicine establishments in the country, employing 4,015 operatives, with an aggregate investment of over ten million and a half of capital. It is frightful to think of the injury to the public caused by swallowing the vile compounds sent out by these more than 500 establishments.

PROF. KOCH opened the new course of hygiene, which is for the first time an integral portion of the medical studies, at the University of Berlin,

on Nov. 3, before a crowded auditorium. In his introductory lecture he dwelt on the vital importance of the hygienic science, which was at no time so fully appreciated as at present, and pointed to the necessity of every medical school that desired to keep up with the progress of science establishing regular chairs of hygiene. He said, "Hitherto, gentlemen, you have been taught how to endeavour to cure a disease; henceforth you will be taught how to succeed in preventing disease."

A MR. FISHER, of Dundee, Scotland, has been led by certain observations, which proved the defective condition of the teeth in a majority of school children, to suggest that some regular system of supervision by a dentist be adopted as a part of school management.

IN driving at night a Philadelphia physician attaches a lantern to the breast collar of the harness, which plan he says he has tried with perfect satisfaction. He adds, "My light is a common tubular lantern, with a reflector, and a spring for attachment to the dash. In place of putting it on the dash, I slipped the spring over the middle of the breast collar, directly in front of the horse. Every part of the road in front of me was plainly seen, so I could drive with as much confidence as in broad daylight."

SALT and vinegar, taken in moderation, says the "N. Y. Medical Times," promote the formation of the gastric juice, but, taken in excess, they irritate the coat of the stomach and hinder digestion.

ON Arctic expeditions, a writer in the "Crytic" says: "Success amounts to nothing. Public interest and praise are the reward of suffering. De Long did nothing but suffer. He was the great hero until Greely did—what? Nothing but suffer, and—like De Long—lose nearly all his men. Sir Allan Young went out and in one summer's cruise rescued a party of shipwrecked explorers and brought them back to England without losing a man. His skill and judgment took him right to the spot where he expected to

find them, on Nova Zembla, and there they were. His achievement was lost sight of. But if he had lost his ship, and his own crew had perished as well as that which he went to rescue, he would have become a famous hero."

THE Cremation Society of Copenhagen numbers 1,400 members, and the process of cremation is accomplished in about an hour. This method of disposing of the dead, it appears, is greatly on the increase. The Health Department of New York city refuses permits for cremation, on the ground that the Sanitary Code does not provide for the cremation of human bodies but only for their interment.

DR. CANTANI, an Italian, has been endeavouring to destroy pathogenic bacteria by means of bacteria which are harmless under the given conditions. He claims to have obtained remarkably favourable results by administering "Bacterium termo" (the agent of putrefaction) in cases of tuberculous consumption. He claims that the bacterium termo is innocuous to the patient, but it destroys the bacillus of consumption, and that he has found great improvement in cases of this intractable disease from regularly administering, by inhalation, the harmless bacterium.

THE Soochow (China) Medical School has eleven native students, and the course laid down is very complete, comprising a five years' curriculum, nine months session, and a thorough preliminary examination in Chinese Classics, as shown by the second annual report of Soochow Hospital and School.

DR. LOOMIS in his recent lecture on bacteriology, says: "The great question at present to be settled is, whether we are about discovering the ultimate cause of many hitherto obscure pathological states, or whether these microbes are only bacteria of health taking advantage of diminished vitality to develop with increased rapidity—whether they are the cause or the scavengers of disease.

CONGRESS at its last session, in view of the probable advent of cholera in this continent during the next summer, has wisely appropriated about \$349,000, to be used at the discretion of the President in case of a threatened or actual epidemic of cholera or yellow fever. The President, it is thought, will authorize the National Board of Health to utilize as much of this money as is necessary to carry out the design of Congress.

AT a recent reform meeting in New York, it was stated as a matter of fact ("American Lancet"), that the State of New York had expended more than one million three hundred thousand dollars in the support of four generations of the descendants of one prostitute.

A NEW building material, consisting of a mixture of cork, silica and lime, is coming into extensive use in Germany. It has the advantage of keeping out heat and cold, and is claimed to be an excellent preventive of damp and defender of sound. It is substantial, light and durable, and seems to be especially adapted for ceiling and wall lining.

THE authorities of Atlanta, Ga., have forbidden the hotel proprietors from turning off the gas at the meters during the night, to save the lives of guests who turn down their gas on going to bed, and leave it burning, because then the gas will continue to burn and there will be no leakage. If turned off at the meters the jet will be left open, and when turned on in the morning for those leaving by early trains, the gas will escape into the sleeping room and poisoning occur.

"WE would like to know," an exchange says, "when the human race will become so civilized that the God of humanity will be worshipped instead of the Goddess of Justice? When the whole world will recognize that to be just is not always to be humane, and that justice, in the main, is arbitrary, and that no man, nor collection of men, can lay out its exact metes and bounds? What is the exact relation of labour to capital, and what system of sociology can be adopted to insure that every man shall have of creature comforts a share in keeping with his industry? When men will recognize that there are many subjects concerning which they have no right to an opinion, nor a right to express themselves, because they have not within them the elements to make a conclusion which they know is truth?"

THE impossibility, by reason of their social and religious laws, for the women of India to receive the care of male physicians is well known. A society has just been formed in India for supplying female physicians, of complete education in medicine and surgery, to these afflicted women. Of this society, Lady Dufferin is the lady president, and the Viceroy, Presidency Governors, and other officials, with their wives, are patrons. The society has the support of the native princes, without which nothing of its aims would be practicable. Europe and America are to be called upon to furnish teachers for native women who wish to be instructed and fitted for the profession, and pecuniary aid is pledged both in India and England.

A SANITARY patrol has been established in Jersey City by the police authorities. Four policemen are to act as inspectors and report any violation of the sanitary laws. It is to be hoped many other cities will follow the example.

STE. CUNEGONDE, a suburb of Montreal, has been shut off from all communication with the city. Montreal, as one of the daily papers gives it, has spent so much in getting rid of the smallpox that it would be ridiculous to suffer Ste. Cunegonde to foster the disease within its borders and to maintain at the same time free intercourse with the city. Montreal has only done with Ste. Cunegonde what it did with its own citizens individually. Had Ste. Cunegonde quarantined its own patients, it would not have been necessary for Montreal to quarantine the town.

RABBI GOLDAMMER, of Nashville, Tenn., recently preached a sermon on the subject of cure by prayer, and, according to the "Daily American," he said: "When our patriarch was in trouble he did not trust all his chances to prayer, but he went to work. He did not take prayer as the sole agency to secure safety. He first prepared all possible means and then cast his hope upon the promises of a faithful God. Those seeking cure by prayer and faith may take a lesson from this."

THE RABBI continued: "God never pays a premium to indolence and idleness. Prayer in Judaism is that noble part of our soul by which man is elevated above any other creature; it is the expression of the best disposition of our nature. Whenever we desire to give utterance to our best thoughts, best sentiments, and best emotions, we pray, and the richer the soul is in those noble qualities which constitute a good man, the richer is the offering we bring to God in the shape of a prayer. Prayer is not so much the desire that God may give us what we want, as the desire to show our filial dependance on our Heavenly Father."

RECENTLY Dr. Blackstock, of Thorold, was called to attend two children who had been suddenly taken ill. He found them suffering from the effects of mineral poison, but no explanation could be given as to how they had been poisoned until a couple of days after, when the mother's attention was called to some miniature bronzed garden tools which had been given as a bonus with some candies the children had bought. She then remembered the children playing with and sucking these toys shortly before they were taken sick. Upon investigation it was found that these tools are coated or bronzed with a composition containing an alloy of copper and other poisonous mineral. The children were for some time in a very dangerous condition.

THE number of bacteria per cubic metre in the air thus is about 2,500; in the air of a city hospital it is about 11,000 cubic per metre.

JUDGE CHIPMAN, of Detroit, affirms that pills are in no sense indispensable to the human race.

THE New York *Sun* calls attention to the curious fact that Mark Twain's article, in the *December Century*, entitled, "The Private History of a Campaign that Failed," is, by an odd coincidence, a contemporaneous supplement to chapter 18 in the first volume, just printed, of General Grant's memoirs. It appears that the only time that General Grant was really scared was when he had to meet the little army in which his future publisher was a private. At Palmyra, Grant, then a colonel, was ordered to move against Col. Thomas Harris, who was said to be encamped at the little town of Florida, some twenty-five miles away. In his memoirs General Grant tells how his heart kept getting higher and higher as he approached the enemy, until he felt it in his throat, but when he reached a point where he expected to see them and found they had fled, his heart resumed its place. Mark Twain was one of the "enemy," and that he and his fellow-soldiers were equally frightened appears in his frank confession in the *December Century*. The difference between the two soldiers was that Mark Twain was thrown into such trepidation that he then and there abandoned forever the profession of arms, whereas General Grant made on that occasion the discovery that the enemy were as much afraid of him as he had been of them. This, says General Grant, was a view of the question I had never taken before, but it was one I never forgot afterward.

DISINFECTATION is a subject as yet very imperfectly understood. We have always urged that there is danger in relying very much upon disinfectants. A Spanish physician, Dr. Jose de Letamendi, has recently been making extensive experiments relating to the effects upon different forms of bacteria of the various chemical agents used as disinfectants. From his experiments, either the microbes have no part in the causation of infectious diseases, or, ordinary disinfectants are of but little use as preventives, for they will not destroy the microbes. Dr. Letamendi reduces the means of disinfecting to two simple agents, FIRE and WATER. This means supreme cleanliness and complete cremation. We purpose referring to his experiments at greater length in our next issue.

THE German Imperial Government has ordered the establishment of chairs for hygiene and bacteriology at all universities of the Empire.

THE Annual Report of the Toronto local Board of health has been received, showing that a good deal of Sanitary work has been done and progress made. The Medical officer however reports that. "The large increase of mortality from typhoid fever and diphtheria in the last year, as compared with the previous year, is a matter for serious consideration. After making due allowance for increase of population, the difference is so great as to call for immediate consideration of the cause of these maladies." We purpose alluding to the report on another occasion.

FROM ORILLIA (Ont.) the vigilant and active medical health officer, Dr Elliott, reports, "Although I am not able to present quite such a clean bill of health as last year, I am happy to be able to report that we have not had any epidemics of contagious or infectious disease. There have been no cases of smallpox, measles, diphtheria or whooping cough." We purpose drawing some useful lessons from the intelligent and valuable report of Dr. Elliot for our next issue.

IN MICHIGAN, for the month of December, compared with the preceding month, reports indicate that bronchitis, neuralgia, and pneumonia increased, and typhoid-fever, typho-malarial-fever, and diarrhoea decreased in prevalence. Compared with the average for the month of December in the 7 years, 1879—1885, pneumonia, remittent-fever, typho malarial fever, intermittent-fever, diphtheria and consumption of lungs were less prevalent in December, 1885. Elsewhere we have noted like reports from this state for the three months previous to December last.

The smallpox epidemic has now about disappeared from Montreal. Only about 25 deaths took place from the disease during the first half of this month; or about one-third the number during the first half of December.

IN MICHIGAN, arrangements have been made by a local Committee of the citizens of Howell, acting with a Committee of the State Board of Health, for a Sanitary Convention to be held in that city on March 3rd and 4th, first.

READERS of this journal in Michigan will be glad to learn that "Heaps Patent" earth and ashes closets will be manufactured in that state at an early day. These closets are universally acknowledged to be the best made.

"AMRANTH" would confer a favor by sending his address to the publishers of Man. It has been mislaid or lost in some unaccountable way.

FROM MAINE, THE SECRETARY of the State Board report d, December 23rd, that information received at his office indicated smallpox still generally prevalent in the Province of Quebec. He names 38 towns which were known to the Board to be, or lately to have been, effected with the disease. December 29th he reported eighty-six places in that Province which had been affected.

THE Medical Inspector of the New York Association for improving the condition of the poor, reports that there are eleven public baths in the city open during the summer months and that during the season of 1884 these baths were patronized by 3,104,785 people, of which 2,182,074 were females, and 982,711 males. These people were chiefly from tenement-houses.

DURING the past year one hundred and ten thousand people it is said occupied the 613 rooms of the Grand Union Hotel, New York city. The charge for rooms is \$1 and upwards per day, including elegant suites of rooms for families. It is kept on the European Plan, and the best of everything is supplied at moderate prices. Those who have tried it believe they can live there better, for the same money, than at any other first-class hotel in New York.

SOME Subscribers complain that certain numbers of Man never reach them. We can only say, the fault must rest with the local post office. A copy is *invariably* mailed to *every* subscriber.

MISHAPS, sickness and other causes of delay with the printer have made this number late, but February and March numbers will soon follow, and we trust subscribers will pardon the delay.

ALL subscribers remitting \$1.50 at once, or at an early day, before account is sent, will receive the JOURNAL for one year; but we must charge \$2.00 when we have to send a bill and perhaps several times. If every one would remit \$1.50 now we would much prefer to be so paid, instead of \$2 later, and take it as a favour.

ONE who "tried" every furniture establishment in Ottawa and purchased considerable furniture states very clearly that he can get better furniture for the same money at the "Art" Furniture Warerooms of Messrs Harris & Campbell, than at any other place in the city.

The deaths from patent medicines are estimated by a writer in the *British Medical Journal*, to be about one hundred and fifty thousand annually.

CURRENT LITERATURE.

GEMS OF THOUGHT—WRITTEN FOR MAN.

THE BROTHERHOOD OF MAN.

"FOR WE BE BRETHREN."

Genesis, XIII. 8.

I.

On some far tented Eastern plain
Two brothers parted long ago ;
One journeyed tow'ards the Western main :
The other wandered to and fro
Within the limits of his race
Until he found a resting place.

II.

Though far apart our lot be cast,
Howe'er unlike in tongue or hue,
At some time in the shadowy past
Our fathers thus have said adieu.
Each twain in all the teeming earth
To one fond mother trace their birth.

JOHN READR.

SONNET—PURPOSE.

Brother! awake from thy long lethargy ;
Walk forth into the world ; search out the task
That is allotted thee ; tear off the mask
Of morbid thought, that ever blindeth thee.
God hath appointed each good man to be
His warrior in the righteous cause ; go, ask
His benison and, donning sword and casque
March forth to meet the common enemy.
Each good deed done shall be a death-blow given
Unto a sin conceived : each true word said
Shall be a javelin that hath not sped
In vain, its force doth come from Heaven.
Waste not the time—man's inmost spirit saith,
" Life without purpose is a lingering death."

AMARANTH.

A BATCH OF BOOKS.

A MORTAL ANTI-PATHY, by Oliver Wendell Holmes, Crown 8 vo. pp. 327. Boston: Houghton, Mifflin & Co. Price \$1 50 The autocrat announces on the title-page that this volume is the first opening of the *New Portfolio*, necessarily implying that it is to be followed by other openings, while on his last page he calmly informs us that he "may take up the *New Portfolio* again, and consider whether it is worth while to open it," which means, presumably, that he won't do it unless he is entirely satisfied with the success of the first opening, and being an autocrat there is of course no possibility of compelling him Well, let this be understood at the outset If the new *Portfolio* contains anything else so good as "*A mortal Antipathy*," Dr Holmes' love for his fellow men and desire to advance their best interest are too well known to put us in any uncertainty as to whether it will be opened again or not, for this last work of his, if not altogether the best, is one of the best his pen has produced While, as in "*Elsie Venner*" the plot hinges upon an abnormal phase of human nature, an extraordinary antipathy to woman kind in the hero being substituted for the ophidian element in the heroine which lent peculiar fascination to the earlier work, there is also in addition thereto a chatty discursiveness which constantly reminds one of the "Breakfast Table Series."

The Story is a very simple one, provided

of course you take the Doctor's word unhesitatingly for what may be termed the medical side of it. Maurice Kirkwood while an infant in arms is unintentionally given a terrible fright by a beautiful young girl, and so intense is the effect upon him that thenceforth the near presence of a lovely young woman, no matter under what circumstances, sends him off forthwith into a deadly swoon. This constitutes the mortal antipathy, from which the heroine, Euthymia Tower, ultimately rescues him in a manner so dramatic that we will not spoil the interest of the story by revealing it here. Besides these two chief actors there is a very admirable and imposing "girl with brains", Miss Leureda Vincent; a dear old Dr Butts; a most interesting and improving Pansophic Society at which remarkably clever papers are read; an irrepressible modern "interviewer," and a score of other entertaining characters who in one form or another furnish outlets for the writer's wise, witty, tender, and trenchant notes and comments upon men and things. It is not a book to be hastily read, nor to be laid aside after a single reading, but like everything else Dr. Holmes has written, to be read first of all for the pure pleasure of the reading, then re-read for the profit, and then taken up again and dipped into here and there for mental refreshment in times of weariness The next opening of this wonderful *Portfolio* will be eagerly looked for by all who read "*a mortal antipathy*."

RUDDER GRANGE, by Frank R. Stockton, illustrated by A. B. Frost, Crown 8 vo. New York: Charles Scribner's Sons. Price \$2.00. Here is an old friend in such sumptuous attire that if it did not fit him so well and become him so admirably there might be some difficulty in recognizing him. We have always felt grateful for the chance which a few years ago introduced us to "*Rudder Grange*." Perhaps it would have been more correct to have written "Newsboy" instead of "Chance" in the last sentence, because it was on board a train that one of these irrepressibles (being a cheap Canadian reprint of the book (by which I fear the author profited little) into our lap. The odd title secured the purchase of the book, and a perusal of the first chapter convinced the reader that a most excellent investment had been made, while a reading of the whole work established the hitherto unknown Frank Stockton upon a pedestal from which he has not yet descended and from which, judging by the excellence of his later writings, he is not likely to descend in a hurry. Whatever our opinion may be worth, here it is—that the author of "*Rudder Grange*" is the most original, refined, natural humorist at present entertaining the public, and having made this confession of faith it is perhaps unnecessary to add more.

But then this edition of "*Rudder Grange*" contains more than the original story. It is embellished with a wealth of illustration from the pencil of A. B. Frost, there being over one hundred in all, which for aptness, accuracy, and sympathetic interpretation of the author's drollery could hardly have been surpassed. Familiar as we were with *Rudder Grange* these illustrations seduced us into another reading just that we might get their full flavour, and having gone through the book in this way, we were at a loss to understand how it could ever have got on without them so long. However, text and illustration so peculiarly fitted for each other having thus been happily wedded under the auspices of Messrs. Scribner's Sons, they can never again be divorced, and "*Rudder Grange*" thus worthily equipped takes a place no other book can fill as a perennial source of entertainment.

BIRD WAYS, by Olive Thorne Miller. 16 mo. pp. 227. Boston: Houghton, Mifflin & Co. Price \$1.25. This dainty little volume in its dark green binding, prettily relieved by an empty cage, and flitting bird stamped in gold on the front cover, will prove a genuine revelation to many a bird lover, and can

hardly fail to awaken interest in and sympathy for birds among those who have hitherto been altogether indifferent to the charms of the winsome creatures Mrs. Miller has described with such delightful spirit. We had the pleasure of reading several of the papers in this book when they appeared in the *Atlantic Monthly* and *Harper's Magazine*, and thus had our appetite whetted for those that now appear for the first time, and combine to make one of the best books about birds with which we are acquainted. Mrs. Miller seems to have possessed every qualification necessary for making a careful study of these tricky ariels which she so graphically describes for us; plenty of time, infinite patience, entire self-control; great ingenuity, and above all a profound sympathy which enabled her to read as it were the very hearts of her little visitors—for visitors they only were—never captives. "The moment one shows a desire for liberty for the world outside my windows, he is gladly allowed to depart"; such was her rule of action. The Robin, Thrush, Cat Bird, Black-bird, Oriole, and Sparrow have each several chapters devoted to them, and one rises from a perusal of the book, not only quite ready with Mrs. Miller to "recognize in the birds something like intelligence and reason," but willing to admit with her "that they too have their opinions, and could express them, if you could only understand their language." While the moral is not very obtusive, there is one all the same, and it is this: "Be kind to the birds. They were not made to be slaughtered ruthlessly, but to brighten the world by their beauty, and charm it with their songs," and if any man or woman can read "*Birds-Ways*" without resolving to deal more considerately with their little feathered friends henceforth the future punishment should be relegation to a limbo where things are reversed, and the birds have it all their own way

J. M. O.

THE DECORATOR AND FURNISHER for December is one of the most elaborate of all the Christmas magazines and one of the best, in an artistic and practical sense, that this publication has given us. There is a beautiful colored plate, showing an apartment decorated in Moorish style, and there is a supplement giving the studio of Frank L. Kirkpatrick, the artist. There is an elegant design for an Entrance Hall, a most interesting account of the Produce Exchange, with sketches of its new building, an illustrated paper on Chantilly, design for a kitchen, decoration of city houses, Christmas decorations, designs for cabinets, mantels, etc. Articles on furnishing country houses, picture frames, art events, curtain hanging, and a vast number of other valuable and interesting pieces. The magazine is published at 32 East 14th Street, New York.

THE CENTURY MAGAZINE for January is a rich number, fully sustaining the high reputation of this best of monthlies. We are treated to "The City of Teheran" (2nd paper) and a very interesting paper, "Feathered forms of other days," both profusely illustrated. Also "Typical dogs—pointers" and "The lesson of Greek Art." In a Poem, by Prof. Charles G. D. Roberts, of Kings College, Windsor, Nova Scotia, we read:

O child of nations, giant limbed,
Who stand'st amid the nations now
Unheeded, unadorned, unhymned,
With unanointed brow!

The saxon force, the Celtic fire,
These are thy manhood's heritage!
Why rest with babes and slaves? Seek higher
The place of race and age!

And in a good article on "Spiritual Preaching of our times" the following: Science has grandly stimulated industry by increasing its rewards. The prices of enterprising labor are great, often glittering. The power of wealth is fascinating. The successful producer or dealer of to-day is a prince. The industrious laborer is rich. And the result of all this is that laziness is ceasing to be fashionable;—the nobility of England are learning to make themselves useful. Science sets the world astir. The goal of its motion is gain. The race is eager. Hence mammon-worship. Hence mercantilism, the inordinate estimate of wealth; the grading of all things at a value in cash; society graded on a cash basis; idealism sacrificed to material good; virtue, patriotism, heroism, manhood counting for less, money counting for more; votes, offices, justice having their price. This is mercantilism, the great danger to society; greater because more subtle than nihilism. It creeps into literature, science, art, politics, the state, the church; and here arises the demand for that spiritual teaching which fell from the lips of Jesus, the antidote for inordinate worldly care and worldly striving; the lofty view of a life which is more than meat. The cure for the mercantile spirit is not ethics, but faith. It is not a moral code but the divine Fatherhood.

THE MIKADO WALTZ, by Coote, is an arrangement of the most taking airs from Gilbert & Sullivan's latest opera. Containing the gems only. Praise is unnecessary.

"MARY DARLING MUST YOU LEAVE ME?" by H. P. Danks, is a very pretty sentimental effusion. The words are very nice, the author and seems to have written a song which will make him more famous than "Silver Threads among Gold" did.

LITTLE AH SID, [The Chinese Kid.] by J. P. Skelly, is a funny little piece concerning a little

"Chinese Kid" who on first seeing an "American Bumble Bee" takes it to be "a Melican" Butterfly, and is "sold" accordingly.

The publishers offer to mail the above three pieces of music postpaid on receipt of 60 cts., one-half the regular price. Address RICHARD A. SAALFELD, 12 Bible House, New York.

THE WEEK of Toronto enters upon its third year of publication somewhat altered and much improved in appearance, while its contents rather more than maintain the high standing which has characterised the Journal from its commencement. It sustains well too its promised independence in politics, and it is quite refreshing to read it after one has read the two extremes in the ordinary daily papers. Political questions in Great Britain are treated by the *Week* in an equally independent manner. Not only is it moderate and independent on political questions, but it is likewise so on the temperance question. Thomas Hughes, author of "Tom Brown's School Days" writes "I take only one English weekly paper, *The Spectator*, and one Canadian, *The Week*, and as a rule I should be puzzled to say which I should miss most." Such Journalism should receive, liberal encouragement.

THE INDIAN is a new fortnightly Journal, published at Hagersville, Ont., in the interests of the Indians. It is edited by an Indian, Dr. Jones (son of the late Rev. Peter Jones), a medical practitioner, and an M. D. of Queen's College. Some years ago, he successfully urged the strong claims of the Ontario Indians to the franchise. We have received the first two numbers of the *Indian*. It is evidently ably edited and contains papers on historical, archaeological and political subjects, of much interest. We trust it may and believe it will be of much service to the descendants of the once owners of this great country, and help to make many of them, what they give promise in their Journal to become, useful citizens.

GRIP too has greatly improved since the commencement of the year. It manifests a greater degree of independence than it sometimes had done, and is a highly creditable comic paper. We wish it a full share of success.

THE PIANO and SEWING MACHINE advertised for sale on another page are first class instruments and a great bargain. Any one wanting a Piano or Sewing Machine would be wise to communicate with the advertiser.