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MAN[®] A CANADIAN HOME MAGAZINE

LITERATURE AND POPULAR SCIENCE,
PUBLIC AND INDIVIDUAL HYGIENE,
SOCIAL AND DOMESTIC ECONOMY.

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**ERRATA:** On page 18, Adulteration of Food and Drugs Act, line 12, for "any special commodity *direct*," read, any special commodity desired. Line 14, for "*liver*," read *direct*. In line 17, omit the first word, "the." On page 45, last item, the 3 lines read together; the first one should not have been in.

No advertisements but those believed to be perfectly reliable in every respect inserted in this magazine. Advertisements form an important and useful part of a magazine, and readers should read or look over them as much as any other part, frequently it proves to be instructive and profitable to do so, and sometimes actual loss is sustained by not doing so.

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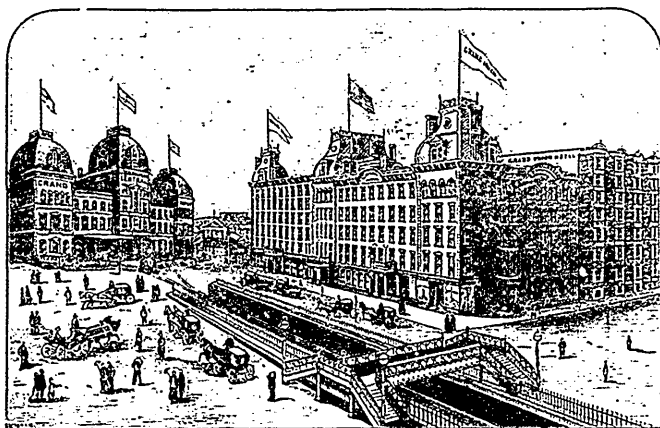
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Forms of Tender and specifications can be had at this office, where all necessary information can be obtained.

Separate Tenders will be required for each work, and must be endorsed "Tender for Removal of Snow, Public Buildings," and "Removal of Snow, Rideau Hall," respectively.

Each tender must be accompanied by an accepted bank cheque, made payable to the order of the Honorable the Minister of Public Works, equal to five per cent. of the amount of the tender, which will be forfeited if the party declines to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

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A. GOBELL,  
Secretary.

Department of Public Works,  
Ottawa, 2nd November, 1855.



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THE Statutes of Canada are for sale at the Queen's Printer's Office, here; also separate Acts since 1874. Price Lists will be sent to any person applying for them.

B. CHAMBERLIN,  
G. P.

Ottawa, March, 1855.



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ALEXANDER CAMPBELL,  
Postmaster-General.



SIR WILLIAM DAWSON.

# MAN,

## A CANADIAN HOME MAGAZINE.

VOL. 8

NOVEMBER, 1885.

No. 1

### THE PET OF AN INDIAN QUEEN.\*

WHEN the admiral's ship was the government house—when the colony of Newfoundland was “governed from the vessel's deck”—there befell to a colonist, who was an ancestor of mine, an adventure which I shall now relate.

The French having been expelled from the island, it was found necessary to repair old forts and construct new ones, for during those stormy times the worsted party always came back. And so the King commissioned his officers to send a body of men from the capital, the old town of Placentia, which is now a ruin, to the Bay of Exploits, to cut timber. They wended their way through sodden marshes, across dreary stretches of “barrens,” and the tall, brawny Indians, who hated the white man, saw them coming. And the king's party pitched their tents in a dense grove and cut down trees, and built for themselves out of squared logs a large shanty which they called a “tilt.” This was in the autumn of the year, and the clump wherein they built had just burst into a blaze of glory. Saffron-smitten hung the leaves on the alder, and every birch-limb held out to the breeze a hundred little fans of burnished gold. The firs—which the king's men called “vars”—and the pines, and the cedars, and the larch—which they called “juniper”—of all the trees in the forest alone retained their green. From the rowan tree, which they called “dog-wood,” they plucked bunches of waxy vermillion and scarlet berries, and they brought into their tilt the inner bark of the yellow birch, which they called “witch-hazel;” for a decoction made from its bark removed the effect of a witch's charms, and proved a safe-guard against other evil things. But the king's men were not

concerned with the beautiful autumn colors; and they hewed down the logs to build the forts.

It happened that early in December a young officer of the army quartered in Placentia, Edmund C—, was commissioned to go out over the desolate country to examine the progress of the king's work in the forest. Edmund took with him an orderly and two guides to carry his linen and what else was needful in the wilderness. Edmund was tall and comely, his hair was wavy and flaxen with a shimmer of sun and green in it, and it fell over his shoulders as was the custom in those olden days. He had his berth in the shanty, and spent his days shooting willow grouse when he was not where the men were squaring their timber.

On the evening after the first snow-fall, when the supper was over, and all lolled around the huge log-fire smoking their pipes, the foreman of the fort exclaimed in a somewhat loud voice—“Hang those Indians! I saw their footings in the snow about here to-day.” These words that camp was to hear again. So it was resolved that a strict watch should be kept during the night; and in the daytime the men kept close together while they chopped the logs; and against the nearest tree at hand rested a long-barrelled sealing gun, charged with seven “fingers” of seal shot.

And so they worked for many weeks after the night of the first snow-fall and saw naught of the Indians save that now and again a chopper would declare he observed the figure of a man emerge from behind some tree in the distance. But there was no fear in daytime, for the king's men were forty-five strong, their guns were at their elbow, and at night

\*This story is true, the facts having been gathered from manuscripts belonging to the Captive Officer, E. C.

they slept within sturdy timber walls, two of their number guarding the door.

On Christmas eve the axes were laid by not to be taken up again till after St. Stephen's day, and the men abandoned themselves to the festivities of the season. When the stores were brought into the forest in the autumn, among other things were two barrels of rum; and from one of these on this fateful night the cook drew many kettles of liquor. The men drank deep, became hilarious, and by midnight many had tumbled into their berths intoxicated. The foreman, like the crew, drank horn after horn to friends and loved ones at home, recking not that that there were deadly foes in the forest and that ceaseless vigilance was the price of safety. And as the master showed no fear the men felt no concern, and one by one they all dropped into their berths till no sound was heard save the occasional spark explosions in the smouldering fire, and the deep breathings of the sleeping men. Edmund was still with the party, but he retired early without the suspicion that in the revel precaution would be neglected.

Ten minutes after the last of the king's men had tumbled into his bed if any one were awake in that camp he would have heard near by the strange, rasping cry of the saw-whet\* and heard the call repeated in the distance; he would have shuddered at the yelping of a wolf almost at the camp door and at the far-off though distinct response. But neither the saw-whet nor the wolf uttered the cries, as the sleepers were soon to know.

Edmund relates in the manuscript which he has left that at about the hour of two o'clock he was awakened by a terrible cry, when, opening his eyes, he saw that the camp was full of Indians, and that every man was bound fast in his bed with deer-skin thongs. He marvelled much why he was not bound, and expected each moment that they would come and bind him; but they came not, and he lay in his bed looking in speechless horror upon the scene. Hate of the white man and the most cruel ferocity he saw written in the face of the Indians. They were the native Boothics, and between this tribe and the colonists there had been constant

and bloody strife, which warfare, I may add here, ceased not till the incomers with their long guns and seal-shot killed the enemy to the last man. For it was the custom to go out and lie in wait for Indians passing through the small channels in fyles of canoes and shoot them down like wild beasts. But it was not till long after this terrible night in the camp of the king's men that gleamed the last Indian knife.

Having seen the terrible work at which the Indians were engaged Edmund closed his eyes and in silent prayer asked that his turn might fall next; but while he so prayed a hand patted him upon the forehead, and a soft voice spoke at his ear, "The poor pappoose." Looking up he saw a woman clad in the savage costume of the forest. He divined that she must be a queen in her tribe for her air betokened superiority, and every gesture was one of command. She again patted him upon the head with the same words as before; and then with the tenderness of a mother to her child toyed with the locks of his yellow hair. It now dawned upon him that for some reason he must have found favor with the queen and that he was not intended for torture; but when he looked out into the fatal ring he again wished that he had not been spared to see the cruel spectacle. The ring was formed of painted savages who danced round and round, singing war songs and uttering terrifying yells. If it will not startle my readers I will tell them how those hapless men were done to death by the cruel fiends. The chief of the tribe, who was the husband of the queen, went to the bed where lay the intended victim, and glaring upon him for a moment with the ferocity of a wild beast, hissed out, "We hear ye d—n poor Ingun." The reader, I suppose, has not forgotten the night of the first snow-fall: the words spoken by the luckless master then were heard by Indians listening at the chinks of the camp. Having said these words he loosed the thongs, and seizing the victim by the hair dragged him out into the ring. Then another brave took a knife from his girdle and drew the blade around the victim's head, cutting to the bone; another falling upon his knee blew through a small horn upon the skin at the forehead. A third seizing the scalp at the place where it had been

\* The saw-whet (*Strix Acadica*) cries in the wood at night before a storm, and its note resembles the sound produced by the filing of a saw.



raised by this operation tore it off with an exultant and diabolical yell. Then the savages joined hands, danced around the mangled victim and sang several songs ; after which he was dragged off and tortured in the most revolting way until he died. In this manner was every man of the forty-five dispatched ; and when the bitter winter's morning dawned the butchery was completed. The queen made Edmund dress, and tried to win his confidence by little caressings and kindly looks, but he besought her by such words as she could understand, and by mute appeals, to take him away from the human shamble ; for the Indians tarried long into the day, drinking the rum which had yet remained in the casks. About noon such of the tribe as were not intoxicated prepared for departure, and rolling out the rum casks put them upon a sled. Then the camp with its mutilated dead was set on fire, and the murderous savages, inflamed with liquor and conquest, set out on their return, yelling, bellowing and brandishing their weapons like a horde of demons let out of Pandemonium. The band numbered about a hundred and twenty, and this comprised all the Indians in the Island. Toward the west lay their town, and thither the chief turned his head. Edmund marched second in order with the queen at his side. By signs, and sometimes by a word of broken English, she conveyed to him that she was a warrior queen ; that she always accompanied the braves to battle and at the chase, and that she counted as many cariboo for her bow as did her fierce lord who stood before her. She gave him some account, too, of the measures taken to surprise the king's men. For weeks several of the braves had been camped in the wood near the tilt ; every night they listened at the chinks and glared through every opening to learn if watch was still kept through the night ; and one hunter with keen ears, and who understood English through his traffic with fur traders on the coast, overheard a chopper say to his comrade on the day before Christmas eve, "Plenty of rum to-morrow night." And so the braves surmised that the white men would drink hard and forget the watch ; word was sent beyond the forest and across the dreary plain to the Indian town, telling the braves to come. They rose at an hour's warning, leaving

their wives and children to the care of a few old men and dogs, and made fast speed to the forest where wrought the king's men. One brave lay crouched in the shadow of the tilt while the revel went on, and his night-dark eye saw through a chink the king's men one by one roll into bed till none remained. Then he gave a cry like the saw-whet does in the night before the storm breaks, which cry was a signal to the braves to come forward ; and some others yeiped like a wolf for a like purpose. Two braves, by the aid of a slanting pine, got upon the roof and descended by the chimney. These, stealthily as the velvet-pawed tiger, unbolted the door and let in their comrades, who noiselessly and swiftly bound every man but one as he slept. And this one, too, a brawny-armed brave was about to put thongs upon, when the queen, who had seen him sleeping and admired his amber-tinted flaxen hair, waved him back and signified that the captive had her patronage. And she tried to tell him as they passed over the dreary plain in the face of the keen, complaining wind, that in the town whitherto they were bound, was her daughter, the comeliest maiden among all the Indian girls, and that she would give her to him for wife. And when he looked disconsolate at hearing this she shook her head with a half pettish, half imperious air, and then began to show to him the wilderness where in the autumn and winter they hunted the huge herds of deer that with the proper season pass from the north to the south, and from the south to the north again. And of the otter, too, whose bore could be seen along the march, she told him ; and of the beaver that during the late autumn rains built dams and new winter houses, and submerged acres of low land by its crafty operations. He was supple and quick of motion, this sturdy queen made him to understand, and he would be able to hunt the deer and spear the fishes ; and over all the land, and she pointed to the east, to the west, to the north and to the south, he would roam by and by with the tribe ; he would have his own wigwam, and while he was on the plains or among the hills the fair Indian maiden would put fringe upon his hunting jacket and beads upon his moccasins.

And while they were crossing a valley wherein grew some dismal larch and scrag-

gy firs, the chief saw making down towards the sea a herd of deer. The flock was led by a tall stag with a proud and widely-antlered head. The Indians withdrew to covert and strung their bows, and the queen gave a sign that Edmund was to kill the tall stag. While he looked to the priming of his gun, she patted his cheek and stroked his hair, softly calling him pappoose; and then informed him that he must not fail to obtain the antlered head as a trophy for the Indian maiden who was to be his bride. With a heavy heart Edmund took his way as directed, down through the wierd larches. The bullet clove straight to the mark, and a tall brave, with a grunt of approval severed the head of the fallen monarch. Thereafter Edmund stood in high regard amongst the hunters.

The Indian village stood in a cup-shaped valley in the midst of a cluster of hills. Edmund's wigwam, which was in the centre of the valley, was conical in shape and built of tree boles as cut in the forest. In the centre was a hole through which the smoke escaped. For a couch and covering he had skins of deer, and for food a bountiful supply of raw meat served in a birch-bark dish. This repast was brought to him by an Indian girl of about seventeen years. Her hair was long, and black as the plumage of a raven; and it was soft and fine as silk. Compared with other Indian girls she was beautiful indeed;—and she was the maiden whom the queen was to give to Edmund for a bride. She knew less English than her mother; and when she saw that the stranger made no sign to eat, she took the knife from his girdle with a bashful air and began to cut into mouthfuls the stag's heart and the tenderloin. But he turned away in loathing, whereat she wondered much, deeming him to be sick; and going out of the tent with compassion in her eyes she soon returned with an ill-favored hag, who compounded snake-root, bog-cane, sarsaparilla and other roots and herbs. This old woman was a doctor in the tribe. When a brave was sick or wounded she was wont to mutter divers dismal-sounding incantations, and cry like all the birds and beasts of the wilderness, after which she applied her medicine. When she came before Edmund she raised a dismal monotone, which she continued for several minutes, after which she uttered several

explosive barks or yelps like the cry of a pack of wolves in full chase. Edmund cut her short and waved her away; and the queen coming in at the moment, he made known that he could not eat raw meat. Thereafter, while staying in the village, meat was served cooked to him.

To her surprise the Indian girl saw that the captive did not wish to wed her, and thenceforth she was bashful when she appeared in his presence; and Edmund learnt that she asked her mother to permit the white-faced stranger to make choice for himself. The wayward and imperious queen bit her ochre-colored lip; but she was a woman of foresight and policy: therefore she yielded, biding her time when this favored captive would ask for the girl, as she knew was the custom where the white men dwelt. Thereafter Edmund's life was happier. When he was not hunting or spearing fish he was engaged teaching the Indian girl to read and write, for she had besought him to let her learn the ways of living among the people from which he came. She no longer plied her needle putting barbaric gauds upon her dress, but engaged herself at her books and making imitations of Edmund's sketches.

The winter sped away and summer came with its green leaves and flowers, and birds and butterflies; but these could not gladden the captive's heart. Although he was a favorite with all the tribe, unceasing watch was kept upon him, and he saw no hope of escape. In this way summer passed into another winter.

The tribe sometimes changed their place of habitation, moving in summer from the interior to the coast. One night Edmund leaned against a rock that looked from the edge of a sheer precipice out upon the sea. "Edmund," said a voice almost at his ear, and he started. It was the Indian girl, her night-black hair softly blown in the wind, and deep sorrow in her beautiful eyes. "Edmund,"—for she could now talk English well—"I have seen you here in the moonlight; your heart is not with us; you want to be with the pale-faced men and girls again. In a dream last night the Great Spirit told me that you will go away from our tribe to your white brethren; and you will never think of the Indian maid who loves you. Yes, you have my secret now. I love you; and I wish to go with you where the white

people dwell, although I know they will mock the poor Indian girl, and laugh at her yellow face. You have taught me so many beautiful things that I can no longer stay with my brethren, dearly though I love them." And the girl sobbed and wrung her hands, and looked into Edmund's eyes for answer. But he said that her request was impossible, inasmuch as the girl's desire to go away, he felt, was founded chiefly upon her unhappy attachment for himself; so he told her that she had a noble mission before her in teaching to her people all these things which he had taught to her; that after she had accomplished this it might some day fall that she would be able to visit the places where his brethren dwelt. She made no answer to his words, but there was a look of unutterable woe in her face, and she locked her hands in an attitude of mute and terrible despair. The poor girl had revealed the secret of her love, which, through the winters and summers that he had been by her side, she had silently nurtured, and believed would be at the last required. Then she walked back to her tent uttering no word.

On the morning following the girl hastily entered Edmund's tent; there was the same stony sorrow on her face, but she had her finger upon her lips. "The Great Spirit's words will soon come to pass," she whispered; "there is a ship down the coast, and the tribe go to her to sell their peltry. You are to go with them, and you will take means of escape. Fear not me; I will not betray you; indeed"—and here a low cry, very low, but full of overwhelming anguish, escaped her—"I will aid you to go away." She then became calm and hastened away.

The chief braves of the tribe marched down the shore, and in an inlet of one of the bays Edmund saw riding at slack cable a whaler laden deep with whale-fat from Greenland. He no sooner put his foot on deck than the captain's eye was upon him; but the captain was cautious and showed no curiosity that the Indians could see; while Edmund affected to be driving hard bargains. At length an opportunity arrived,—“You are not an Indian?” (in a whisper). “No; I am a captive.” “Then be here to-morrow morning, or next day, at sunrise.” No more was said.

“Make no attempt to go to-night,” were

the whispered words that Edmund heard at his wigwam door that evening as he lay down among his deer skins. The next day was also occupied in barter, and as Edmund showed no desire to talk alone with the captain, suspicion was lulled. On the second evening as he lay in his lodge there was at his door again the same sad voice—“Make ready for to-night; when the hour comes you will know.” He fell asleep and dreamt of friends in dear old Placentia; and through his dreaming he heard the word, “arise.” He sprang to his feet and was ready to go. The girl was standing in his tent door, beautiful in the light of the moon. But the unutterable and hopeless pain and sorrow in her face smote Edmund to the heart. He paused for a moment and put out his hands to say good-bye; then the girl's tears came. She threw her arms about his neck, laid her head upon his shoulder, and for a minute sobbed there. Then she kissed him on the forehead, saying to him as she raised her hand, “Go.” She folded her arms upon her breast and stood mute again and motionless. When he had gone some paces from the camp he turned to look at the noble girl, and saw her standing there in the moonlight like a statue that Angelo might carve to represent Woe.

There was a boat in waiting, and when Edmund got on board the captain headed him up in an oil puncheon which was stowed in the ship's bottom. An hour later the Indians were at the landing yelling and brandishing their spears. They crowded on board and ransacked the ship from top to bottom. When the moon rose that night Edmund was taken to an island lying three miles from the coast to wait there till the ship's sailing.

With the next sunrise the Indians were again on board, and the queen was with them; and this time they thrust their spears into the empty casks, not even missing the very puncheon in which Edmund had been concealed the day before.

In due time the whaler, which was bound for Newcastle-on-Tyne, reached Placentia and restored to his friends one who had been long thought dead.

EDMUND COLLINS.

LET your life be such that if any one speaks evil of you no one will believe him,

## HANS FINGERHUT'S FROG-LESSON.

A FAIRY TALE.

LONG ago, almost out of recollection, there lived in a small town in a woody German valley a poet named Hans Fingerhut. He had come from the far north somewhere, and had travelled many years with his harp from court to court and hall to hall, buying his bread with songs that the gentlefolk at first were never tired of hearing. But Hans Fingerhut's desires were of the largest. He longed for unlimited good living, sympathy, and above all, for praise. But it seemed to him that the further he travelled the less the world had to give him. Other poets received as much praise as he; and those who were of better figure and bearing were more successful in many things than he. Many a rebuff and many an ill-deed befell him. Then his songs began to grow peevish and querulous, and men would no longer listen to them as they had done to the fresh and joyous ones of his youth. His querulousness grew to anger. His harp-strings no longer trembled to the recital of wonderful and beautiful things; but shrieked and thundered with songs full of wrath and bitterness. The great people turned him from their gates; and in despair he broke his harp, rented a stall in the town, and became a tailor—for he had been apprenticed to that trade in his youth. All day he sewed and stitched, and scowled at the passers by, and half the night he wandered about the streets, scrawling satires on the gates of all whom the people honoured. Nothing prospered with him. Often as he sat and sewed, great songs seemed to come to him, beautiful visions and thoughts that dawned on him and strove to combine with the restless melody in his soul; but the remembrance of his disappointments and forlorn condition always turned them into chants so dreadful and ferocious that little children were afraid to pass his door. At such times his cutting and sewing all went wrong, and people refused to pay him for his shapeless work.

At last one day, driven to distraction, he left his stall and passed away out of the town, determined never to return. Everything seemed to mock him as he walked; the blue sky and the fresh green earth, the song of the birds, the piping of the crickets and grasshoppers, the wind

in the trees and the clink of the cowbells, all so full of fair delight and contentment. The farther he went the fiercer he grew. He cursed the heavens and the earth and all happy and beautiful things in them.

At last he came to a forest and then to a little stream running among stones and fallen moss-grown trees. More than ever the cheery ripple and murmur of the water angered him. It seemed to say to him—"How very miserable you are, to be sure, Hans Fingerhut, you dishevelled outcast; see how happy I am and how delightfully I sing." And Hans Fingerhut began to fling stones into the stream; but it never heeded. Every stone that he flung made the water ripple and dance and sing the merrier, and the bigger the stones the louder the song. Then he seized a great stick and stirred the stream, and raised thick clouds of mud, so that the water ran away yellow and foul; but the song never ceased. At last in his rage he leaped into it himself, and kicked and danced, and lashed the water with his stick till he was tired. But when he was done the stream still rippled round his legs in perfect contentment. Weary, wet and distracted, he laid himself down on the bank among the ferns, and after a long while fell into a sound sleep.

He had not been long asleep, he thought, when something pricked him sharply on the end of the nose, and he awoke with a great start, for behold, there stood beside him a more curious and beautiful little elf than he had ever described in any of his old-time songs. He was not more than a foot high. He wore for a hat a big thistle bloom, hollowed out on the under side so as to fit his head. His jerkin was made of the white petals of the water-lily, wonderfully pieced together, and buttoned with crimson seeds. His hose and stockings were made of the down of the most delicate alder catkins, woven in an elfin loom; his shoes of the thickest golden petals of the marsh-marigold, laced with silver threads of flax; around his shoulders was cast for a mantle a great leaf of the water-lily, and in his hand he held a sprig of thistle, with the spiked blade of which he had pricked Hans Fingerhut on the nose. He had

little keen calm blue eyes, a soft yellow beard that reached to his waist, and long yellow hair that hung and curled in delicate fringes over the great green water-lily mantle.

The elf looked very sternly at Hans Fingerhut. "Wretched mortal," he said, "you have disturbed my beautiful stream, because it retains forever the peace and gladness which you by your own fault have lost; because it sings to you, as you once sang imperfectly in your youth; because it teaches you a wonderful lesson, which you are now too blind and degraded to understand. In your songs long ago you interpreted the song of the stream more than once, but not rightly. Do you know it now?" "No," answered Hans Fingerhut "I have no heart nowadays to interpret anything but what is dark and dismal." "Then," said the elf, "I will turn you into a frog and you must remain a frog until you find out the meaning of the stream-song." So saying he pricked the poet again with the end of the thistle-staff and Hans Fingerhut sank down into a great frog, with webbed feet, wide ugly mouth, and staring eyes.

The elf was gone and for many hours Hans sat on the bank of the stream utterly stunned and wretched, he felt himself so clumsy and ugly, and more than ever useless. The grass, which a few hours ago he had brushed aside with his strong feet, now towered high above his head, and the thick weeds hung so close and rank around and above him that he could scarcely think of penetrating them. At last, however, he grew very hungry and fell to snapping at the flies and mosquitoes. Presently as the evening drew on he heard the innumerable voices of the frogs, at first sharp and fitful and at last swelling into a steady thunder far away down the stream. Finally he jumped into the stream, and all that night journeyed down with the curling water to a great marsh, where thousands of the other frogs were congregated. The stream flowed by itself through the flat watery waste, and Hans, knowing that he must discover the meaning of its song, kept generally near to its bank.

For many days he sat among the long coarse grasses, listening intently to the ripple in the reeds, snapping now and then at the gnats and flies, and keeping a vigilant lookout for the long-legged cranes that waded sometimes in the

shallows or passed low over the marshes with wide heavy wings, or sometimes perched themselves on the limbs of dead trees and peered remorselessly down into the deep grasses. At times he grew fierce and restless, and jumping away into the pools outdid all the other frogs in the marsh in the depth and harshness of his discordant bellowings. Here it was just as it had been before with him. The thick grass teased and impeded him, flies were hard to catch, and the long-billed cranes haunted him perpetually. There was no satisfaction in life anywhere, so he lifted up his discordant voice and reviled the marsh and the cranes and the frogs, and, when he was tired, went back and listened wearily to the mysterious song of the stream.

One day he said to himself, "I know the song of the stream," and instantly the little elf appeared beside him, and pricked him with his thistle-wand. "What then is the song of the stream?" he said. Hans Fingerhut answered very humbly "I am very weary and confused and can hardly grasp the meaning of anything, but it seems to me that the water says this: "I see the green earth round me, and the blue sky above me, and the sweet stars at night. The wind murmurs in the trees and many little birds sing—more than I can count. The voice of the frogs and the sigh of the gnats, the call of the water hen and the chatter of the wild goose are pleasant. All these things and many others are joyous; why should I be sad? Because everything is glad so am I glad." "That is good," said the elf, "but it is not the song of the stream: you must find out the stream song." But before he vanished the little elf, seeing how pinched and hungry Hans looked, waved his wand and brought out of the grasses a swarm of rich plump gnats, so thick that Hans had no difficulty in catching two or three of them at a time, and so enjoyed the first square meal he had had since he became a frog.

Many days Hans sat beside the stream, either listening and thinking or rending the drowsy air with his lonely and cheerless bellowings. The other frogs would have nothing to do with him; nay, even sat round sometimes and abused him. For there was something uncanny about Hans Fingerhut. He talked often to himself in a tongue unknown to them. Some-

times he wept in silence—a thing which astonished them very much, for no other frogs could weep—and then he was very clumsy at catching flies, and was grown quite starved and thin.

Again, Hans Fingerhut said to himself, "I know the song of the stream," and immediately the elf was beside him. "What, then, is the stream song?" he said. "More than ever I doubt myself, for I am very tired," said Hans humbly, "but it seems now to me that the stream-song is this, 'My way is slow and crooked and hard to go. The grey stones and the reeds impede me. The sun dries me up. The cattle come down and trample in me and fill me with mud. The millers dam me and turn me and disturb me with their eternal wheels. I have need to do something to keep my heart up against all these things. I sing gladly, therefore, as the weary weaver may sing to cheer himself at his loom.'" "You have wandered farther away from the stream song," said the elf; "you must wait yet till you find it out. Why how thin you are, poor Hans Fingerhut," he added quite kindly, and, waving his wand, brought up from the earth a host of worms, which Hans devoured with hungry rapidity.

Once more, after many days, Hans Fingerhut said to himself, "I know the song of the stream," and the little elf said, "What then is the stream song?" And he answered more humbly than ever, "The world is wretched and men are wretched and I wretcheder than all. Alas! it seems to me now that the stream song is not joyous at all, but very patient and sad. It seems to me to say, 'The stream course is long and weary, and I have to go on and on and on, no rest, or quiet forever; but yet there is no use in fretting, so I sing, not angrily, but sadly and sweetly, as the elves of the hill do on summer evenings under their mounds, making beautiful, hopeless music. Those who imagine my songs to be joyous only think so because they themselves for the time are joyous.'" "

"Nay, Hans Fingerhut, you are farther from the stream song than ever," said the elf, and vanished; not, however, before he had refreshed poor Hans with a larger feast of flies and worms than ever.

Hans Fingerhut sat beside the stream again for many days, utterly weary and wretched, and wished that he might die.

He took no more heed of the cranes and scarcely ever looked for a fly or a worm, for he could make nothing of the stream song, and it went round and round in his head till he thought he must go mad. He had no heart left even to bellow.

At last he determined to go back up the stream to the place where he first became a frog, and see if he could not make something of it in the coolness and stillness of the forest. It took him many days to make the journey, he was grown so weak and tired. At last one moonlit night he came to the bank where he had flung stones into the stream, and in his envious rage pelted the clear curling water. As he sat on the bank with his big ugly head fallen down between his shoulders he thought it was marvelously beautiful in the moonlight; and the murmur of the water, mingled with the sigh of the midges, seemed to him the loveliest song he had ever heard; neither merry nor sad, but happy and peaceful. Then he wept, and the tears ran down over a stone into a dark eddy, and gathered against a small jutting ledge. And Hans did not see for a long time that from each tear drop sprang a delicate little fairy no larger than a gnat, and that they formed a ring on the stream, shining in the moonlight, and that the ring grew ever wider and wider as the drops ran down. At last he heaved a great sob and two specially large tears, trickling down and joining together, passed out into the middle of the ring and became a fairy much larger and even more beautiful than the rest. Hans started and looked down wonderingly into the glimmering ring and heard a sweet small voice come up from the shining water. What it said was this: "Poor Hans Fingerhut, you have endured enough and are very weary. Shall we sing you the song of the stream in your own mortal tongue." Hans Fingerhut's eyes looked down now bright and wet with joy and gratitude, and he tried to smile, forgetting that he had a frog's mouth, which is not made to smile, so he contented himself with saying, "Ah, I must die soon if I do not hear the stream song."

And the fairy ring widened till it touched either bank, and began to go round with a motion so soft and delicate, and each link was so small and beautiful that Hans would have been entranced and stupefied with wonder and delight had his

mind not been set with all its faculties to catch the fairy song. Then the fairy who stood in the middle waved her wand and the little song rose up scarcely louder than the voice of the midges, yet so distinct that Hans Fingerhut's frog-ears caught every word of it. This was the song they sang—the song of the water drops; for Hans used often to repeat it afterwards, and all the good children in the town knew it well :—

By silent forest and field and mossy stone  
We come from the wooded hill and we go to the sea;  
We labor and sing sweet songs, but we never moan,  
For our mother the sea is calling us cheerily:  
We have heard her calling us many and many a day,  
From the cool grey stones and the white sand far  
away.

The way is long, and winding and slow is the track:  
The sharp rocks fret us: the eddies work us delay;  
But we sing sweet songs to our mother and answer  
her back,

Sweetly we answer our mother, gladly repay.  
Oh, we hear her, we hear her, singing, wherever we  
roam,  
Far far away in the silence calling us home.

Poor mortal, your ears are dull and you cannot hear:  
But we, we hear it, the breast of our mother about,  
Low, far away, sweet and solemn and clear,  
Under the hush of the night, under the noontide  
heat.

Gladly we sing for our mother, for so we shall please  
her best,  
Songs of beauty and peace, freedom and infinite rest.

We sing and sing through the grass and the stones  
and the reeds.

And we never grow tired though we journey ever  
and aye,  
Dreaming and dreaming, wherever the long way  
leads,

Of the far cool rocks and the rush of the wind and  
the spray.

Under the sun and the stars we glitter and dance and  
are free  
For we dream and dream of our mother, the width of  
the sheltering sea.

As the last echoes of the song died away the fairy ring faded off into the quiet moonshine. Only the larger fairy remained in the middle, and it was no longer the fairy, but the little elf of the thistle, looking more beautiful and wise than ever. "Do you know now the stream-song," said he, and no frog's voice ever sounded so sweetly as Hans Fingerhut's as he repeated word for word the fairy song of the stream. "Was I not right," said the elf, "when I said that the water drops sing forever as you too once sang imperfectly in your youth? Night and day, as they journey, they feel the far off strength and grandeur of the sea, calling and beckoning them on, and the song that they sing is neither weary nor sad, but perfectly happy and peaceful. So everything in the world has something great and noble to strive towards. You, too, Hans Fingerhut, gifted above most men, have your sea to seek without ceasing—a wondrous and absorbing sea of strength and beauty and

peace. You can never come to it, but you can approach ever nearer and nearer. If you understand this rightly the troubles and vexations of life, all its toils and difficulties, will no longer fret you, but only arm you with the wider knowledge and power." So saying, the elf once more pricked Hans Fingerhut on the nose with his thistle-staff, and he became a man.

All night long Hans sat by the stream in the moonlight, very quiet and thoughtful, listening to the eternal ripple of the water. It seemed to him that he could render now the sweet, joyous voice distinctly into words, and the murmur ever seemed to say :—

"Oh, we hear her, we hear her, singing, wherever we  
roam,  
Far, far away, in the silence, calling us home."

At last the dawn came and Hans Fingerhut went down to the stream and bathed his face and hands, taking the utmost care never to disturb its clearness, and he blessed the stream and turned away homeward through the forest. The voices of the birds came soft and muffled out of the cool trees, and the bells of the waking cattle sounded fitfully across the far off fields. As he passed out of the woods the sun rose, and the birds broke into full chorus; the laborers began to go afield and anon the grasshoppers piped in the warm grass. All these things no longer made Hans Fingerhut angry, but only seemed to him so many different versions of the stream song. They seemed to say to him, "Ah, Hans Fingerhut, you are changed and become like us again. We are all happy and peaceful, for we have all something noble and beautiful to work for. We long to hear you sing." So Hans came to the town, and the noise and stir of the streets were become quite pleasant to him. He no longer walked with his usual defiant stride, downcast face and scowling brow. The portly figures and round faces of the busy burghers, and the well-filled purses at their girdles no longer made him fierce and envious, but he greeted them all with a quiet and pleasant "good morning."

All that day, and many days, he sat in his stall and sewed and stitched dilligently and sang so many glad, beautiful songs at his work that the little children, instead of making a long circuit to escape his door, as they had been wont to do, came and gathered round him now and listened to his singing with delight and wonder in

their eyes. Hans Fingerhut thanked the little children, knowing that what they loved must be good, and he became very fond of them, for there was something of the freshness and beauty of the stream song about them. He bought cakes and sweetmeats for them out of his savings and sang and played on his harp for them in the intervals of his work. The fame of his singing spread and the halls of the great were opened to him again. But from that day the great songs that he

made were nothing like his former ones. There was never anything bitter and complaining in them. They were all sweet and beautiful and wise. He would receive no reward for them, nor did he ask the favor of anyone. When others received higher praise than he he never envied them in the least, for he knew that what he sang was just such as the Great Father had given him. So ends the story of Hans Fingerhut and his frog lesson.

A. LAMPMAN.

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### THE SCIENCE OF MORALITY.

**B**Y morals, or the science of morality, is meant that body of principles and laws, relating to conduct, which are conducive to the well-being of humanity. Morality, or, more accurately, the art of morality, is the carrying out in practice the laws which the science has established.

To understand clearly the definition of the science it is necessary to ascertain what the well-being of humanity is. This can be done only by tracing all motives and feelings to their ultimate cause. This ultimate cause is the most powerful instinct implanted in human nature—the preservation of life, which includes our own life and that of our offspring. We live and we want to live. Unconsciously we will flee from danger. We will fight frantically against death. In the presence of great danger we lose our reason, and yet, though volition is powerless, reflex action makes us struggle for safety. Why we want to live, why we were ever endowed with life, is more than man can know; but of this he is certain, that he does not want to die. The fact that a mother will sacrifice herself for her child; that the man who suffers the tortures of the rack, or of incurable disease, or of great mental affliction, will prefer oblivion to existence, does not alter the truth that the love of life is the most powerful instinct implanted in animals and in man. These exceptions, like many apparent exceptions to the law of gravitation, can be satisfactorily explained away.

By the phrase "conducive to the well-being of humanity" is meant not merely the bare preservation of life, but includes all that which makes life itself more

pleasant and happy, which will insure a more complete and rounded existence.

All those actions which are conducive to the well-being of humanity we call good or right; all those actions which are not so conducive we call bad or wrong. Thus there is an absolute standard of right and wrong.

Already, long ages ago, it was discovered by experience that a tribe or nation, and every member thereof, would better serve his own prosperity and success by generally telling the truth than by telling falsehoods; so nine times out of ten he will tell the truth. The confusion that would arise were everyone to tell nine falsehoods to one truth is inconceivable. The man who had been placed on sentinel duty, when asked whether he had seen the enemy, would answer no, although he knew the enemy to be within the hearing of his voice. The mother would tell her child that certain herbs, which she knew to be poisonous, were good to eat; the child would eat, and die. The father would deny his ability to provide food for his family, although but an hour before he had slain a buffalo or deer. Telling the truth sometimes, and most of the time, is an absolute necessity, depending not on theological injunctions, but on the very existence of life. Our rude forefathers of the prehistoric age were aware of this fact, and they enunciated the general principle that it was wrong to lie. This is a scientific generalization. It is a law deduced by experience and observation from a great number of facts, and it is as justly entitled to be considered a generalization as Newton's law of gravitation or Pascal's principle of hydrostatics,



The experience of nations and of ages has firmly established this principle; it is incorporated into all codes of morals.

In the physical sciences we explain any particular phenomenon by laws already established. We explain the reason why any particular candle burns and gives off light, by laws already discovered of oxidation and incandescence. So in the science of morality we determine whether any particular action is right or wrong by referring the action under consideration to laws that have been already established.

Certain laws conduce more to the well-being of humanity than others. Thus, the law, It is wrong to murder, is of vastly more importance than the law, It is wrong to lie. Because, if we all committed murder, the world would be depopulated; while, if all told lies, there would be a sad confusion, yet some of us would manage to exist. Hence, to commit murder is a greater wrong than to tell a lie, and a man would be perfectly justified in telling a lie in order to escape either becoming a murderer or being himself murdered. In this manner we can test the relative importance of moral laws.

As the attraction of gravitation differs under different circumstances, although the law of gravitation always remains the same, so can a falsehood, according to circumstances, be a greater or lesser wrong—be a so-called white lie of society, be the business lie of the dishonest tradesman, or the criminal lie of the perjurer—and still the law, It is wrong to lie, would remain unassailed. We determine by deduction whether any particular action is right or wrong: If the act is in conflict

with the law of morality, it is wrong; if not in conflict, it is right.

The laws of morality are not all of the same relative importance. Those laws which are more vital to the well-being of humanity are more important than those laws which are less vital. Hence, occasions can arise when we are justified in breaking one law, in order that we may escape breaking another of greater importance.

The thinking mind of to-day asks, Is there a scientific basis for morality? I think there is. The modified doctrine of utility, or, as I have expressed it, conducive to the well-being of humanity, is the basis which science seeks. We deduce, from the experience of races and nations for centuries and for ages, the laws in regard to conduct which are for man's best welfare. These laws, systematically arranged, would constitute the science of morality or morals. As yet such a science does not exist. The material is all at hand; it but awaits the master-workman to fashion it into shape.

An incidental question here arises. Had we a most complete science of morality, would it affect, either for better or for worse, the morality of the masses? At present the dictates of morality are enforced in three ways: By the so-called criminal or penal laws of the land; by public opinion, or the opinion of society; by the teachings of punishment after death. These three sanctions must always exist. The science of morality might not have any effect in compelling its laws to be observed, but it undoubtedly would explain to many minds which are now groping in darkness and disbelief the why and wherefore of moral codes.—SELIM M. FRANKLIN, in *Popular Science Monthly*.

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#### AN OCTOBER SUNSET.

One moment the slim cloud-flakes seem to lean  
 With their sad sunward faces aureoled,  
 And longing lips set downward brightening  
 To take the last sweet hand kiss of the king,  
 Gone down beyond the closing west acold,  
 Paying no reverence to the slender queen,  
 That, like a curved olive leaf of gold,  
 Hangs low in heaven rounded toward the sun,  
 Or the small stars that one by one unfold  
 Down the grey border of the night begun.

A. LAMPMAN.

## SIR HENRY THOMPSON ON INDIGESTION.

**T**HERE is a very common term, familiar by daily use, conveying unmistakably to every one painful impressions regarding those who manifest the discomforts indicated by it—I mean the term indigestion. The first sign of what is so called may appear even in childhood; not being the consequence of any stomach disorder, but solely of some error in diet, mostly the result of eating too freely of rich compounds in which sugar and fatty matters are largely present. These elements would not be objectionable if they formed part of a regular meal, instead of being consumed, as they mostly are, between meals already abounding in every necessary constituent.

Sugar and fat are elements of value in children's food, and naturally form a considerable portion of it, entering largely into the composition of milk, which nature supplies for the young and growing animal. The indigestion of the child mostly terminates rapidly by ejection of the offending matter. But the indigestion of the adult is less acutely felt and is less readily disposed of. Uneasiness and incapacity for action, persisting for some time after an ordinary meal, indicate that the stomach is acting imperfectly on the materials which have been put into it. These signs manifest themselves frequently, and if nature's hints that the food is inappropriate are not taken they become more serious. Temporary relief is easily obtained by medicine; but if the unfortunate individual continues to blame his stomach and not the dietary he selects the chances are that his troubles will continue or appear in some other form. At length, if unenlightened on the subject, he becomes "a martyr to indigestion," and resigns himself to the unhappy fate, as he terms it, of "the confirmed dyspeptic."

Such a victim may perhaps be surprised to learn that nine out of ten persons so affected are probably not the subjects of any complaint whatever, and that the stomach at any rate is by no means necessarily faulty in its action—in short, that what is popularly termed "indigestion" is rarely a disease in any sense of the word, but merely the natural result of errors in diet. For most men it is the penalty of conformity to the eating habits

of the majority, and a want of disposition or of enterprise to undertake a trial of simpler foods than those around them consume probably determines the continuance of their unhappy troubles. In many instances it must be confessed that the complaint, if so it must be called, results from error, not in the quality of food taken, but in the quantity. Eating is an agreeable process for most people, and under the influence of very small temptation, or through undue variety furnishing a source of provocation to the palate, a considerable proportion of nutritious material above what is required by the system is apt to be swallowed. Then it is also to be remembered that stomachs which vary greatly in their capacity and power to digest may all nevertheless be equally healthy and competent to exercise every necessary function. In like manner, we know that human brains which are equally sound and healthy often differ vastly in power and activity. Thus a stomach which would be slandered by a charge of incompetence to perform easily all that it is in duty bound to accomplish may be completely incapable of digesting a small excess beyond that natural limit. Hence, with such an organ an indigestion is inevitable when this limit is only slightly exceeded. And so, when temptations are considerable and frequently complied with, the disturbance may be, as it is with some, very serious in degree. How very powerful a human stomach may sometimes be, and how large a task in the way of digestion it may sometimes perform without complaint is known to those who have had the opportunity of observing what certain persons with exceptional powers are accustomed to take as food, and do take for a long time apparently with impunity. But these are stomachs endowed with extraordinary energy, and woe be to the individual with a digestive apparatus of moderate power who attempts to emulate the performance of a neighbor at table who perchance may be furnished with such an effective digestive apparatus.

But, after all, let not the weaker man grieve overmuch at the uneven lot which the gods seem to have provided for mortals here below in regard to this function of digestion. There is a

compensation for him which he has not considered, or perhaps even heard of, although he is so moderately endowed with peptic force. A delicate stomach, which can just do needful work for the system and no more, by necessity performs the function of a careful door-porter at the entrance of the system, and, like a jealous guardian, inspects with discernment all who aspire to enter the interior, rejecting the unfit and the unbidden and all the common herd.

On the other hand, a stomach with superfluous power, of whom its master boastfully declaims that it can "digest tenpenny nails," and that he is unaccustomed to consult its likes and its dislikes if it have any, is like a careless hall-porter who admits all comers, every pretender, and among them motley visitors any whose presence is damaging to the interior. These powerful feeders after a time suffer from the unexpended surplus, and pay for their hardy temerity in becoming amenable to penalty, often suddenly declared by the onset of some serious attack, demanding complete change in regimen, a condition more or less grave. On the other hand, the owner of the delicate stomach, a man perhaps with a habit of frequently complaining of slight troubles, and always careful, will probably in the race of life, as regards the preceding pilgrim, take the place of the tortoise as against the hare. It is an old proverb that "the creaking wheel lasts longest," and one that is certainly true as regards a not powerful but nevertheless healthy stomach which is carefully treated by its owner; to whom this fact may be acceptable as a small consolation for the possession of a delicate organ.

For it is a kind of stomach which not seldom accompanies a fine organization. The difference is central, not local; a difference in the nervous system chiefly; the impressionable mental structure, the instrument of strong emotions, must necessarily be allied with a stomach to which the supply of nerve-power for digestion is sometimes temporarily deficient and always perhaps capricious. There are more sources than one of compensation to the owner of an active, impressionable brain, with a susceptible stomach possessing only moderate digestive capabilities — sources altogether beyond the imagination of many a coarse feeder and capable digester.

But it is not correct, and it is on all grounds undesirable, to regard the less powerful man as a sufferer from indigestion; that is, as liable to any complaint to be so termed. True indigestion, as a manifestation of diseased stomach, is comparatively quite rare, and I have not one word to say of it here—which would not be the fitting place if I had. Not one person in a hundred who complains of indigestion has any morbid affection of the organs engaged in assimilating his food. As commonly employed, the word "indigestion" denotes, not a disease, but an admonition. It means that the individual so complaining has not yet found his appropriate diet: that he takes food unsuited for him, or too much of it. The food may be "wholesome enough in itself," a popular phrase permitted to appear here, first, because it conveys a meaning perceived by everyone although the idea is loosely expressed; but secondly, and chiefly, for the purpose of pointing out the fallacy which underlies it. There is no food "wholesome in itself"; and there is no fact which people in general are more slow to comprehend. That food only is wholesome which is so to the individual; and no food can be wholesome to any given number of persons. Milk, for example, may agree admirably with me, and may as certainly invariably provoke an indigestion for my neighbor; and the same may be said of almost every article of our ordinary dietary. The wholesomeness of a food consists solely in its adaptability to the individual, and this relation is governed mainly by the influences of his age, activity, surroundings, and temperament or personal peculiarities.

Indigestion therefore does not necessarily, or indeed often, require medicine for its removal. Drugs, and especially small portions of alcoholic spirit, are often used for the purpose of stimulating the stomach temporarily to perform a larger share of work than by nature it is qualified to undertake; a course which is disadvantageous for the individual if persisted in. The effect on the stomach is that of the spur on the horse: it accelerates the pace, but "it takes it out" of the animal; and if the practice is long continued, shortens his natural term of efficiency.—*Nineteenth Century*.

Your character cannot be essentially injured except by your own acts.

## THE WISH IS FATHER TO THE THOUGHT.

**T**HERE is probably no human faculty that is more in need of faithful and patient cultivation than the judgment, for there is none that has more complications to deal with or more difficulties to overcome. Nevertheless, there is perhaps none which receives less systematic discipline or upon which people generally are less willing to expend labor and thought. They train their children's memory; exercise their powers of expression; school them in habits of industry, endurance, patience and self-control; but seldom discipline their judgment to teach them how to draw correct conclusions. That, they suppose, is something which time and experience will do for them; yet when they see what hasty opinions and ill-advised judgments are continually formed by older people, they might infer that some definite education in this respect was necessary for both young and old.

There is a universal tendency to believe as really true that which is desired to be true; and to resist that tendency is perhaps the first and most essential step in this kind of mental discipline. Some new theory is propounded which excites human sympathies. It is hoped it can be established, and, with that feeling, those who like it proceed to investigate it. Although they doubtless mean to be impartial, they yet welcome the evidences in favor of it with alacrity, and listen to the objections against it with reluctance. Unless they are very much upon their guard against this influence, they will accept the theory upon insufficient evidence, and, whether it be true or not, their belief in it will only prove their weakness. Or some proposed reform is presented to them, against which their accustomed habits of thought and their prejudices rebel. Perhaps it may involve duties which they dislike or sacrifices they are not ready to make, and they sincerely hope it may prove to be wild and visionary. Now with such a bias they are in danger of deciding against it, simply because they do not like it, although they may imagine they have given it the most impartial consideration. A charge is made or a report is circulated against their friend or their favourite candidate. How indignantly they resent it, and, when proofs are offered, how they struggle to refute them! But let similar charges be brought against

their foe or the candidate of the opposite party, and how willingly they listen to them, how easily they can be brought to believe them! One man is by constitution and habit of mind conservative; he clings to old ideas, old habits, and old fashions, and his impulse is to reject new notions and new customs because they are new. Another by birth and training is radical; and he lets old things slip from him without a pang, and receives all novelties with open arms.

Now all these impulses are natural and not to be condemned, but they are impulses for which due allowance should be made in forming any conclusion. All preferences impose an obligation to give more weight to the opposite side. As men know they will be influenced by their wishes, they should insist upon dwelling longer and more carefully on the arguments that thwart them. They should practice a wholesale self-abnegation as far as possible, resisting the force that agrees with their wishes, and welcoming that which opposes them, thus doing all in their power to restore the balance which an intense desire has destroyed. Professor Faraday, to illustrate the rarity of impartial judgments, alludes to the very common amusement of fastening a ring to a long thread and holding it suspended over a glass to notice its movements, and see whether it will tap the glass at the mention of some name or letter, or other signal. Though every one who tries the experiment disclaims the possibility of an involuntary motion of the hand in the desired direction, Prof. F. said he had rarely seen any one who was willing to put it to the proof by screening the object from sight and having its position then changed. Yet it would seem that any one really desiring to discover the *truth* about even so trifling a matter would eagerly welcome every means that could throw light upon it.

One effect of resisting inclination in the exercise of judgment will be to prevent hasty decisions. There are emergencies when rapid judgments must be made and speedy action must follow. But it is likely the larger number of conclusions would be improved by delay. It is an easy thing to accept as true or best what we wish to be so without weighing or sifting the evidence. But to judge wisely and well takes both

labor and time. Suspension of judgment at certain times and for certain periods is the best mental state men can be in. When we remember how many complex conditions are involved, and how difficult it is to understand and appreciate those conditions, and to accord to each its proportionate value, we may well pause and reflect before committing ourselves to judgments which may prove to be wrong. When men attain a true conception of the knowledge,

thought and wisdom that are required to form wise opinions, or draw correct conclusions upon even ordinary subjects, they will be in less haste to proclaim their ignorance by forming rash judgments; and when they realize the importance of bringing energy, patience and self-abnegation to the task, they will become better fitted to bear the responsibility and arrive at the decisions that life requires at their hands.—*Philadelphia Ledger.*

### SIBERIA AND THE EXILES.

WHOEVER associates with the name of Siberia the idea of a vast prison is involved in as great an error as the person who conceives the country as an icy desert or an interminable *tundra*.

By far the greater part of this immense territory has been spared the presence of convicts; and the districts in which the residence of persons of that class will justify the application of such a designation occupy a relatively small space in the country. It can not be denied that the transported persons, so far as they do not work in the mines, are subjected to a very strong restraint, but it is in no respect more severe than that which is imposed in the houses of correction of our highly civilized lands. Siberia is regarded by the mass of readers as a country full of discomfort and misery, and it is very hard to controvert that view. It is too much the fashion to consider the Russians as barbarians, and to accuse them of inhumanity. I feel compelled to enter a decided protest against so unjust a condemnation, and to assert as a fact that there are greater barbarians in Europe than the Russians. . . . I can readily and with perfect conviction declare that, among the educated Russians of Russia, there are a manifest spirit of progress and a striving after better and higher things such as exists nowhere else, and that many of them afford rare examples of magnanimity and generosity. If we consider it from a purely geographical point of view, we shall find that Siberia is in no way, as a whole, a land of misery and terror. It is true that away up in the north are the immense ice fields and the high moors, and the short, insignificant vegetation of the *tundra* does not offer an attractive picture; but there is

also a larger Southern Siberia, where there is room for all kinds of enterprise, reward for every kind of work, and good living for every industrious man. Material suffering cannot be spoken of in this part of the land; but in an intellectual sense there is much lacking without which we can hardly think of life. Thus, it seems to us something to be lamented that the people are four or five weeks behind the current events of the world. But if the question is one of making a living by means of hard work and a rugged constitution, and particularly of making a new start in life, then Siberia is to be preferred to nearly every other country. Yes, a new era has dawned over Siberia, and along the highways famous for "sighs, where night and day, with the frightful clang of chains, with lamentations, groans, and agony, the prisoners were driven on by the cruel knout," are now wending free men, joyous with hope, with their families and goods, going to build up a more comfortable home than the old one in the rich fields of the south-east. And all those who give themselves earnestly to it see their enterprise crowned with success. The false representations which are so widely spread respecting Siberia originate in the numerous maliciously colored descriptions of the country, and judgment of its condition that flow from the pens of famous convicts. I can not exactly pronounce these reports unjust, but they should not be taken as wholly correct. The situation of the ordinary exiles in the mines and of the settled convicts is relatively much better than that of the miners who are laboring under the despotism of capital in Germany. If one has no especial backsets in Siberia, if he can and will work, he will be able under

all ordinary circumstances to earn a most comfortable living there. When I crossed the Ural the first time I had only the ethnographic side of my journey in view, and thought little or nothing of the ethical side, which bore no relation to the object I was then seeking. I was not concerned with the exiles, nor in general could any man who stood in open conflict with the laws, not even a political dynamiter or murderer, have aroused any interest in me. But, from the moment I found myself in the heart of Siberia and came in contact with its exiles, I felt it my duty to examine the ethical question more closely. I have gone down into the dens of vice and made the acquaintance of the most common criminals—of thieves, robbers and murderers; I have associated with pontifical exiles; I have sought information everywhere; have made enquiries of officers and private persons, have visited prisons, collected statistics, taken down numerous biographies as given by the exiles from their own mouths, or as recorded by impartial persons; in short, I have become a regular philanthropist. I am aware of one thing, that I have taken all pains to discover the truth. . . .

The climate is generally mild. During four months a hot summer prevails, which is followed by two months of autumn, four of winter and two of spring. The mean temperature is not high enough to perfectly ripen grapes, but oranges grow well in the southern parts. The fact that the people live to be very old is the best testimony to the good qualities of the climate. When I travelled over the country in 1876 I was assured that only four doctors were settled within the whole of that vast territory, and they did not live in very great luxury. Men die here of old age without the help of medicine, and live long and happily without doctors.

Since the house of Romanoff has taken possession of the country anyone can settle there, cultivate such land as suits him and erect factories on the single condition of paying an annual rent of thirty copeks—about seventeen cents—per acre; but the fee of the land remains the Czar's; the tenant can cut the wood, but the soil belongs to the imperial domain. He can not mine for gold or silver or other metals, for these go with the title to the land. . . .

From this time (1861) agriculture im-

proved rapidly, and in the year 1876 half of Siberia was already settled. A free peasantry was formed, such as we might wish to see in the whole of the country. There are no servile persons like the Russian peasants, and when I occasionally by inadvertence called them "Russians" they would immediately inform me that I was mistaken, they were "Siberians." . . .

I had already been told in Russia that prosperity was generally prevailing in Siberia, and shone in strong contrast with Russian poverty, and I am again obliged to say here that even Russian poverty is not so repulsively conspicuous as the misery in the German factory and mining districts. I do not go too far in asserting that the Siberians lead a happy life; and the best evidence in confirmation of this opinion is found in the fact that the idea of an independent Siberia, not attached to Russia, has already begun to dawn in a few speculative minds. I must guard myself against the suspicion that I am falling into a merely subjective judgment. My opinion is founded on careful observations and conscientious inquiries. It is generally known that in all countries and governments the farmers are always complaining of hard times and high taxes, and I therefore took special pains to compare these peculiar complaints with the representations of the officers. I had arranged a kind of informal catechism in my head, and used it on every suitable opportunity. The answers were, in all cases, if not literally, substantially alike, and I can not forbear repeating one set of them here. My conductor and myself were staying a short time in a little mountain town, and in one of my excursions I overtook an old peasant who I afterwards learned was the head man of a small village. I invited him to take a seat in my carriage and at once opened my catechism upon him:

"How is it with you here?" said I.

"God bears with our sins?" he replied.

"Yes, he is very merciful, but how are affairs otherwise?"

"We are contented."

"How are the wife and daughters?"

"They are contented."

"And the other children?"

"They are all contented."

No German farmer ever told me he was contented.

I next turned from the family to the live-stock, and asked, "How many horses have you?"

"Thirty or thirty-five."

"Don't you know exactly?"

"No, there may be some new colts, and some may have been eaten by wolves. . .

"How many head of cattle have you?"

"That is my wife's affair."

"And how many hogs?"

"Nobody knows."

"How do your fields yield?"

"I am satisfied if I get ten times as much as I sow."

"Are your taxes heavy?"

"We are satisfied with them."

"Have you nothing to complain of?"

"Oh, yes, we are getting crowded here; there are beginning to be too many people in the country. If I were not so old I should move farther east."

"But," I replied in surprise, "where are the villages? I don't see any."

My village chief was silent, and shook his head doubtfully. The fact was the nearest village was ten miles away. The man was satisfied with himself and his family, satisfied with his live-stock and his crops, and satisfied with his taxes, and over-population was apparently the only thing which he and his peers conceived needed to be set right. On this point we should remember that not nearly all the land is yet taken up and that many of the farms are as large as, and sometimes larger than, the most extensive German manors. Even a spoiled American farmer would be satisfied with such an area. In the midst of these extensive estates stands the spacious log house, surrounded with barns and sheds, which, possibly, are not large enough. Hardly anything is large enough for the Siberian. I have made personal confirmation of this greed for extension and space in the towns, where it is often carried to excess; thus I have seen parlors where the mirrors and sofas could be counted by the dozen. In bright contrast with the stereotyped complaints of the farmers concerning the too thick population is the fact that they are all proud of having a numerous progeny. The farmer loves his land, his cattle, his summer and fall, but he loves above everything a large family, while, notwithstanding his prejudice against strangers, he lives in the perfect conviction that the country needs men and he governs his con-

duct accordingly. In every other country in the world there are foundling hospitals; in Russia they are numerous, but in Siberia there are none. If a mother is not able to take care of her child she will offer it to the nearest farmer, and he will be as glad to have such an increase in his family as if it were a fine colt foaled to him. Till 1856 marriage of free persons was permitted at any age; now the marriageable age is fixed by law at eighteen years. To show how little in earnest the people are in their depreciation of over-population, they as a rule marry immediately after they have passed the legal age, and their families increase with mathematical regularity by at least one member every year. It may sound strange if I mention the fact that, notwithstanding the low marriageable age fixed by law, elopements are common. It is true they are of a quite peculiar sort, and they might be divided into elopements with and elopements without the consent of the parents on either side. This custom so illustrates the character of the peasantry of all regions that I must not dismiss it with too brief a mention. Elopement with consent is an important matter. The young pair are agreed, and have the full acquiescence of the parents on both sides. But every marriage calls for a wedding, and a farmer's wedding is, under ordinary circumstances, no child's play. The relatives and friends must be invited from distances extending to fifty or a hundred miles. The substantial part of the feast is rather a secondary affair to the farmer richly provided with farm products and cattle, but then drink must be furnished, and the national drink is dear and will be consumed on such occasions in immense quantities. In order to escape the expense of this provision, which would be borne equally by both families, the parents of the bridegroom advise him to elope with his beloved, and her parents advise her to consent to the elopement. After receiving the blessing of the crafty parents the young people steal away into the bush. On the next day the friends set up a cry as of murder, beat around for a while, and laugh in their sleeves. The young couple must of course come back after a little while and receive forgiveness, but there can be no wedding feast after such a "scandal." The latter is confined to a narrow circle

and the brandy is saved. The second kind of elopement is of a more serious nature, but in it also thrift and brandy play the chief parts, the latter that of a propitiator. The custom prevails for the bridegroom to pay to his future mother-in-law before she will give her acquiescence a definite sum of "bride-money," the amount of which is regulated according to the standing of the parties. The Siberian youth, having thus made things all right for his future, escapes with his beloved by night and under favor of darkness, and with the scandal of the abduction of the daughter a second matrimonial candidate is out of the question. The mother screams and curses the couple for a little while, but the storm soon ceases. The bridegroom knows the people he is dealing with, and after the first spurt of vexation is over returns with a stout brandy flask, from which he pours out to the angry mother-in-law till she is propitiated. Then the ruined daughter

appears, and a general forgiveness follows, with a family wedding feast, in which immense quantities of brandy are consumed.

The young pair go right to housekeeping, and in the course of ten years the former abductor will be able to stretch himself before the door of his own unencumbered residence. In the reception room will hang waving tapestries, and in the bedrooms will rustle silken curtains and canopies. I have seen hundreds of such cheerful family pictures and rejoiced over them. The people form a splendid race, and are happy. "I am a Siberian!" sounds from the mouth of one of them like a shout of exultation; "I have nothing more to desire."

A similar happy future awaits the convict-exile, if long life and success are given him, and he is endowed with courage and energy. — DR. ALFRED E. BREHM, in *Popular Science Monthly*.

#### THE ADULTERATION OF FOOD AND DRUGS ACT.

IT is satisfactory to be assured that the operation of the Adulteration of Food and Drugs Act is being vigorously prosecuted. Eight public analysts are now appointed, besides a chief, who are kept busily employed in analysing samples of food and drugs, purchased by officers of Inland Revenue by order of the Department; and it may be here mentioned as specially interesting to the public that on receiving communications from any of the public indicating any special commodity direct to be analysed, and from any especial source, the department will at once divert such samples to be purchased under the terms of the act and analysed by the public the analysts, the offence of selling adulterated food or drugs being constituted by act a felony, the purchase and subsequent dealing with the samples is surrounded by conditions whereby it is hard to imagine the possibility of the act being in any way misused.

*First*, the officer is to make his purchase in the ordinary way as one of the public, and only when the purchase is completed by the payment of its cost and taking possession of the goods is he, *secondly*, to declare the purpose for which he has made the purchase (viz.: to be

analysed by the public analyst). He then, *thirdly*, to divide the sample so purchased into three parts in the presence of the vendor or his agent, wrapping and sealing each part with his official seal in such a manner that it cannot be opened without breaking the seal. Two of the parts he labels with the name only under which it has been sold to him and an official number, which also appears on the third part, and by which the samples are officially known. The third part, in addition to the name and official number has attached, the name and address of the vendor, and the manufacturers, and any remarks the officer deems necessary in regard to the purchase. The last portion is forwarded to the Minister of Inland Revenue to be dealt with by the chief analyst, in case of appeal by the vendor from the decision of the public analyst. One of the other two portions of the sample is sent to the public analyst for analysis, and the remaining portion is left with the vendor for reference to any independent authority in case of his dissatisfaction with the ruling of the chief analyst.

Thus the public are protected by the officer making the purchase in his un-



official capacity, and the public analyst being uninformed as to the source of the sample to be analysed by him, is protected from a vast amount of annoyance by being thus able to declare to the vendor, should he apply to him (as has often been the case) to know the result of the analyses with a view to making capital out of it, that he is in ignorance whether or not he has had any sample from him to analyse; and the vendor is protected, to some extent, by this ignorance on the part of the analyst, by his right of appeal, within the reasonable time of forty-eight hours after receiving notice of intention to prosecute, from the public analysts certificate to the decision of the chief analyst, and further by the power the sealed portion of the purchase left with him affords him to obtain a perfectly independent analysis should he feel so disposed. And the analyst is protected on the one hand from the adverse ruling of the independent analyst who may or may not have a worthy reputation, and through him against any unworthy prejudice which might operate with the chief.

Such is a brief sketch of the technical machinery in operation under the act. Provision of course is made for prosecution and heavy penalties for infringing the act, and during the past year several prosecutions have been made, attended with conviction and the imposition of fines and penalties, and as the staff becomes more perfected in its work and methods, these will become more frequent and be prosecuted with greater vigor. The keen competition which pervades every branch of industry to-day is only too ready to avail itself, for the fraudulent purpose of sophistication, of the discoveries of scientific chemistry; hence the staff of public analysts is daily beset with new difficulties in the demonstration of fraud practised upon the public in this way, and the discovery of fraudulent practices becomes more and more intricate and the labor of the analyst more elaborate. It is necessary, therefore, in order to combat the adulterations of the day with success, that the best technical talent available should be enlisted in the service that the combat may be made on equal terms and with arms of equal if not superior temper to those of the adulterator. Each public analyst in his own

territory has to exercise this originaive vigilance; but in order to reduce results to equal terms of expression the chief analyst examines the methods suggested and indicates therefrom such methods and processes of chemical analysis to be followed as may from their rigor and effectiveness most certainly serve to discover the tricks of trade. In the chief's laboratory the manipulations of the adulterator are studied and the properties and chemical characteristics of the substances used by him in his sophistications investigated and demonstrated. Thus, although the analyst is daily beset by new difficulties arising from the eagerness of fraudulent dealers to avail themselves of the discoveries of the scientific chemist, the staff provided under the Act, by co-operating with the central chief analyst, is calculated to successfully combat this dishonorable use of science for fraudulent ends.

One of, if not the most important subjects for rigorous inspection is the milk supply of our cities. No article of food is more easily victimized by the fraudulent dealer, and yet, seeing the immense importance of milk as an article of everyday diet, forming as it does the staple food of infancy and early childhood, it is a positive iniquity that its purity should be tampered with; yet it is undeniable that the milk as supplied to the consumer is too often a very different article from that which the cow delivered to the milkman. The principal, if not the only adulterations practised on this article are the abstraction of cream and the addition of water—both frauds upon the nourishment of the rising generation. Milk inspection to be of any real value must be daily and constantly maintained, for it is found where the inspection has been intermittent—for instance daily except Sunday—that on those days known by the milkman to be exempt from inspection the quality of milk delivered on those days has been very much lowered. In some of the cities of the United States the milk inspection is carried to great perfection, and the result is a vastly improved quality of the supply. In the city of Boston fifty to sixty samples of milk are inspected daily. These undergo a preliminary general inspection, whereby the doubtful samples are, as it were, sifted out and these subjected to complete

analysis; and where adulteration is thus established proceedings are at once instituted. Such a system is alone competent to contend with the evil, but it is manifest that such a rigorous inspection is incompatible with the duties of an excise officer, and that the Department of Inland Revenue is not competent to undertake it. It is a duty rightly pertaining to municipal authorities, and in this view the Act provides that the council of any city, town, county or village may appoint inspectors, who shall have all the powers vested by the Act in officers of Inland Revenue for the purposes of the Act, and that all penalties recovered under the Act

in proceedings instituted by such inspectors shall be paid into the revenues of such city, town or county; and further to encourage such civic appointments, by Order in Council it is provided that one-half the fees payable to public analysts for the analysis of such samples shall be remitted.

It is a matter of the widest public interest and advantage that these provisions should be known and enforced upon the municipalities, and until such is done, and civic inspectors are appointed in all the chief cities of the Dominion, the Act is shorn of a very large portion of its effective usefulness. D. C. A.

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OUT OF POMPEII.

Save what the night-wind woke of sweet  
And solemn sound, I heard alone  
The sleepless ocean's ceaseless beat,  
The surge's monotone.

Low down the south a dreary gleam  
Of white light smote the sullen swells,  
Evasive as a blissful dream  
Or wind-borne notes of bells.

The water's lapping whispers stole  
Into my brain, and there effaced  
All living memories from my soul—  
An atom in a shifting waste.

Weird figures, groping, strove to rise  
Some numbing horror from my mind,  
And ever, as it struck my gaze,  
The sharp truth struck me blind.

The keen-edged breath of the salt sea  
Stung, till a faint, swift, sulphurous smell  
Blew past, and I reeled dizzily  
As from the brink of hell,

One moment; but the swan-necked prow  
Sustained me, and once more I scanned  
The unfenced flood, against my brow  
Arching my lifted hand.

O'er all the unstable, vague expanse  
I towered the lord supreme, and smiled,  
And watched the hard white sparkles glance,  
The dark vault wide and wild.

Again that faint wind swept my face—  
With hideous menace swept my eyes:  
I covered tack in my straitened place  
And groped with dim surmise,

Not knowing yet. Not knowing why,  
I turned, as one asleep might turn,

And noted with half curious eye  
The figure crouched astern.

On heaped-up leopard-skins she crouched  
Asleep, and soft skins covered her;  
And scarlet stuffs where she was couched,  
Sodden with sea-water,

Burned lurid with black stains, and smote  
My thought with waking pangs; I saw  
The white arm drooping from the boat,  
Round-moulded, without flaw;

The yellow sandals even-thonged,  
The fair face wan with haunting pain;—  
Then sudden crowding memories thronged  
Like unpent sudden rain.

Clear-stamped, as by white lightning when  
The swift flame rends the night, wide-eyed  
I saw dense streets, and fleeing men,  
And walls from side to side

Reeling, and great rocks fallen, a pall  
Above us, an encumbering shroud  
About our feet, and over all  
The awful Form that bowed

Our hearts,—the fiery scourge that smote  
The city,—the red mount; clear, clear  
I saw it,—and this lonely boat,  
And us two drifting here.

With one sharp cry I sprang and hid  
My face among the skins beside  
Her feet, and held her safe, and chid  
The tumult till it died.

And crouched thus at her rescued feet,  
Save her low breath, I heard alone  
The sleepless ocean's ceaseless beat,  
The surge's monotone.

## LUNG GYMNASTICS—HOW TO BREATHE.

Not long ago some rules relative to developing and strengthening the lungs were given in MAN. In view of the great prevalence in this country of various sorts of lung disease the importance of giving attention to the function of respiration can hardly be overestimated. As corroborating the views on the hygiene of the lungs then expressed, is the following from the *N. Y. Medical Times* :—

Probably some of our patients would be quite surprised if we were to tell them that very many healthy people do not habitually use all their lungs in the act of respiration. Yet this is undoubtedly the case, especially in regard to persons engaged in sedentary pursuits. Some of these individuals may be "too lazy to breathe"—though not entirely conscious of the fact. Perhaps it would be more correct to say that they are "too careless to breathe," or that they never comprehend the full importance of the function. Dr. J. H. Tyndall has well said : "The importance of knowing how to breathe cannot be overestimated. No line of treatment [of lung diseases] at home or by change of climate should be inaugurated without instruction in lung gymnastics, in the mechanism of breathing. Until you have paid close attention to the subject for a number of years you will never know how many human beings do not know how to breathe, and through which organ to breathe. Respiration, this most important of all functions of life, is by some carried on superficially, by others pervertedly and contrary to physiological requirements."

"Breathing is a function which should be exercised slowly and profoundly ; a requirement which can only be fulfilled by breathing through the nose. Breathing through the mouth leads to superficial and often rapid breathing ; still oftener to snapping off the air."

We are often called on to prescribe or give advice for patients of sedentary habits—as bookkeepers, clerks, students, and women in general—who complain of pain in the upper half of the chest, or at least of a very uncomfortable feeling of oppression referred to that region. They are often afraid that consumption is threatening them, or that their lungs are already rendered partially useless by the disease. In such cases we may frequently notice a

marked expression of languor, or some degree of melancholy, with sallowness of the skin. There is also, perhaps, soreness of breast or lungs, a little cough, dyspnoea on exercise, lassitude, speedy exhaustion, rapid pulse on slight exertion, constipation, mental dullness, etc.

The proper remedy, or at least a most valuable adjunct in all such cases, is *forced respiration*. Let the patient be instructed at once how to breathe so as to inflate his lungs to their utmost capacity, and let him practice these forced inspirations and expirations from four to six times every day, for ten or fifteen minutes at a time, and with proper attention to diet and regimen he will soon feel like a new man.

Tyndall says, "lung gymnastics proper should be carried on in the open air, while at work if possible or while walking or standing still, or in a well-ventilated room. The exact limits to which actual gymnastics should be carried on at home or in a gymnasium often tax the best judgment of the physician. Nearly all performances require more or less severe straining of the pectoral muscles, and sudden calls upon the heart for increased action."

"While walking, the patient should as frequently as possible (say every ten or fifteen minutes) take deep inspirations and expirations without straining, from six to eight times in succession ; which act completely empties and refills the lungs."

The point so strongly emphasized above, that breathing can only be properly performed through the nose, is one upon which we desire to lay special stress in this connection. We remember a little book, written many years ago by George Catlin, a celebrated artist and traveller among our Indian tribes, in which this subject was treated in a quaint and forcible manner which made considerable impression on us at the time, and we have often wished that the *brochure* could be republished and widely circulated. Savages almost everywhere, according to this author, practise nasal respiration exclusively, being forced to do so by their mothers in early infancy ; and civilized parents, he thinks, should train up their offspring in the same way. In this we have no doubt he is perfectly correct. As it is, almost everybody sleeps with his or her mouth wide open, for want of a proper education in the matter. If

such education could be universally imparted, a first step would be taken towards reducing the present dreadful fatality from

consumption—besides diminishing the liability to contagious diseases, and abolishing the nuisance of snoring. M. R.

## A LIFE'S LESSON.

LET me record what life has taught me  
In the lapse of its five and forty years;  
Evil and good those years have brought me,  
Sunshine of gladness, rain of tears.  
Its flowers are faded, its wine is spilled,  
Alike are vanished and unfilled  
Its noblest hopes and its darkest fears.

I have learned that life is a hopeless tangle,  
'That we waste our pains if we seek the clew;  
That words will clash and opinions jangle,  
Till we reach the kingdom where all is true:  
That neither preacher, nor priest, nor friend  
Can help a soul to its journey's end,  
Or clear the maze it must struggle through.

I have learnt that our wisdom and skill and  
knowledge  
Are the efforts of children here below  
On the lowest benches of Truth's great coll ge,  
'To guess at what grown-up angels know:  
As the child to the child of four  
Is the sage to the fool; and our highest lore  
Is the lore of the babe that begins to grow.

I have learnt that the best and wisest nature  
Is the child-like, simple, ungifted one  
That is content to be God's small creature,  
And ask no questions of star or sun:  
'That runs the race that is set before it  
By the common daylight shining o'er it,  
And waits for more till the race is run.

I have learnt that the commonest gifts and  
graces  
Are the best and noblest when all is said;  
That peace and kindness on homely faces  
Are a glow from Heaven directly shed;  
That the devil, disguised as an angel of light,  
Has much to do with the soaring flight  
Of the restless heart and the seething head.

I have learnt that Genius is partly fever,  
Raving delusion and morbid dream;  
That the healthy nature is wise, not clever,  
Knows the things that are from the things  
that seem;  
Loves and works and has little to say:  
Will feel next year as it feels to-day:  
Nor is slow of thought, as we idly deem.

I have learnt that our wild and weak emotions  
Are not worth a place in tale or song;  
That we need not trust our sublimest notions,  
For they are sure not to last us long;  
That the best we can do is to hold our peace,  
And love our neighbor and wait release  
With a helpful hand, and silent tongue.

I have learnt that the friend who is worth the  
having  
Is a friend who may hurt you now and then;  
Will turn to ice at your sickly craving  
For sympathy, uttered by word or pen;

Will pull you with brave, rough hands away  
From the altars you build to your gods of clay  
And break them down lest you kneel again.

I have learnt that pleasure is far more pleasant  
When it grows from some common and cost-  
less thing,  
That is offered alike to prince or peasant,  
Than from such as our wealth or our toil may  
bring:  
That we ought to play with the playthings  
given  
For His children's use, by our Lord in Heaven,  
Which never wear out, nor fail, nor sting.

That the toys we make for our own diversion  
Are dangerous things that will cost us dear;  
We are proud of the taste that is all perversion,  
Till it turns to loathing, as life grows sere;  
And then, God help us, if we are left,  
Of all our illusions and joys bereft,  
To a flowerless autumn, cold and drear.

But the happiest lesson my life has taught me;  
'The one that my heart has learned the best,  
And which contentment and peace has brought  
me  
Through disappointment and sore unrest,  
Is to love and rejoice in, more and more,  
The treasures of Nature's boundless store,  
'The innocent things which God hath blest.

Oh, how I thank my God for making  
This joy in His works a part of me,  
So that my heart in its sorest aching  
Can be glad in the gladness of bird and bee:  
Can turn to look at a fern or flower,  
Soothed in its darkest and saddest hour,  
When a human touch would be agony.

Oh, faithful Nature! as life declineth  
She grows more dear to this soul of mine;  
A purer light on her sweet face shineth,  
A glory deathless, a stamp divine;  
The trees of earth seem more fair than ever,  
As I think of the Tree by the Heavenly River,  
And spirit and sense the joy combine.

The passionate glow of the sweet spring season  
Comes warm to my heart as in days of old;  
Its beauty is dear for a purer reason,  
And dearer it grows as the days unfold;  
Mountain and meadow, and herb and tree,  
Are the truest of all true things to me,  
And the best of their story is not yet told!

For if Thou, oh, Framer of Souls, hast made me  
Glad thro' Thy works, as, indeed, Thou hast,  
If this gladness and hope has ne'er betrayed me,  
But is stronger now than in bright days past,  
Hast Thou not taught me to understand  
A part of the joy of the Promised Land?  
And wilt thou not lead me there at last?

## WHAT IS "PUBLIC HEALTH?"

WITHOUT IT THE "HIGH" ARE PULLED DOWN WITH THE "LOW."

**P**UBLIC health cannot be regarded as a subject which concerns doctors only; it concerns every person capable of understanding his or her true position in the world, and the true relations of persons to each other. There can be no public health where persons assume false relations to each other. Public health means the prevention of disease of all kinds and the promotion of true relations among men. It recognises conscience as a law to be obeyed. It prevents disease by removing its causes. There cannot, indeed, be public health unless each person is conscious of the duty of doing his or her part towards it. It should be understood by everyone, high and low, that to help to maintain public health is everyone's duty alike.

In a state where each individual might be independent of each other, he would have the right to please himself in what he should do, and if he should please to live in dirt and contract disease, he might claim his right to do so; for in such a state there would be no public; there would be a segregation of individuals each acting independently. But that, it need hardly be said, is not the state in which we live. The other state might be as much civilised as this, or much more so, but the forms of the civilisation are essentially different. Here we have a public; we have a society, each member of which is intimately dependent upon some other or upon the whole, and if a member suffers, he does not suffer alone.

Nothing will or can be properly done in maintaining public health unless we all first agree upon this principle, viz., that everyone has an absolute right to have those things without which he cannot live healthily, and which he cannot procure for himself. It is the duty of the sanitary authority to procure those things which are necessary for public health, and which individuals cannot in the country procure for themselves. The responsibility of using the means provided, by which a man's family may live healthily, must lie upon his own conscience.

He who would argue that an individual in a community like ours should be left to his own devices in procuring the necessities of healthy life, and that if he can-

not procure them he shall not have them, would seem to be of a persistently evil mind. The only man who would object would be he who might be required to contribute to the welfare of his fellow-man, but any such argument against providing all persons with the means of living healthily, and which they cannot procure for themselves, could not stand, even upon the ground of self-interest, for if any person is made ill by one of those infectious diseases which are so frequent where people cannot live healthily, his neighbours may suffer by means of infection.

To maintain public health the natural propensities must be held under intelligent control. With all our civilization we retain a remnant—if no more—of our original barbarism, the ruling principle of which is that each man should act for himself without regulation or intelligent conscientious regard for others, or for one's own interest through the action and with the help of other. To compare small things with great, we may say that of two boats' crews, one civilised and the other savage, and both cut adrift and left to the operations of nature, the difference between them would be that one would be wholly saved and the other wholly lost, for the individuals of the one crew would help each other, each for his own sake, the result being the salvation of all; while those of the other crew would each help himself at the expense of another, until the strongest one would be left, and he would perish for want of the help he had destroyed. Thus, admitting that self-preservation is the first law of nature, it would seem that it is more truly accomplished by helping each other than by each acting independently of others.

A very important thing to be remembered is that we all have a common origin, and become different only by accidental circumstances. Thus it comes about that wealth is accumulated in families. Refinement of person then sets in by reason of the choice of beauty which persons are able to make, and the refined "blood" is confined to a few. Without complicating the question with considerations whether these are rich or not, we shall call them the High, in contradistinction to person

of more common blood whom we shall call the Low. The question is, can the few high maintain their high position in presence of the many low? Our answer is, No; the vulgar many pull them down. This occurs in various way, as, for instance, by mere example, creating a hopelessness in the educated man when he sees the misery of the un-educated multitude. (By education we mean well brought up, not limiting the term to school education, but including the proper care and attention of parents and others having authority over children.)

Is the form or composition of the infant of the low different from that of the high? Yes—by a long course of degradation, through many generations, it is made so; and, if a hundred be degraded, and one improved, how is the law fulfilled—the inexorable law? When the one comes to look upon the state of the hundred, he is made hopeless; and so, by mere example, he is pulled down. The finer sort of man is pulled down also by anger and contempt. He suffers the passion of

anger when in contact with ignorance, and crime, and dirt. He does not, however, by that effect any improvement, but is met by a spirit of resistance.

That we should live a life of warfare with savage animals, and keep them down, is our allotted task, and we are equal to it; but as long as we prey upon each other, can the status of any be maintained? No—the high are pulled down, while the low are in no way elevated.

How, then, to improve this wretched state of things? By authority. Begin at the mother's knee, and induce the father to provide all that is necessary to the healthy life of a child.

The intelligence of the high must be brought to the help of the low. Can the Legislature not accomplish this? Then the Church must do it. But in these secular days, the Legislature takes precedence of the Church. Let the State, then, see to those things. Shall the nation prosper in which legislation at the same time weakens the Church and neglects the poor—the multitude?—*Pub. Health, Lon. E.*

### THE CARPET IN HISTORY.

**A**MONG the ancient Egyptians, Greeks, and Romans, carpets were not for common use, but things of rarity and price, appearing only in the houses of the great and wealthy, or in the temples of the gods. They were spread upon thrones, or upon the couches of the most luxurious houses. In Egypt they were only for the priest and Pharaohs, or were laid down for the sacred animals to recline upon. The Europe of the early Middle Age was quite as unfamiliar with them, but as the West gradually extended its intercourse and commerce it gradually extended its use of carpets also. They came to Venice with the Levantine trade, and by the fifteenth century they were so plentiful as to be used in gondolas. Fine carpets were made in semi-Oriental Spain and Sicily even before this. The crusaders brought them back with them to France and other western lands. They were introduced into the Netherlands by merchants and became as common there as in Venice. By the seventeenth century Oriental carpets were in vogue generally in Europe, and the manufacture of imitations of them and of carpets of West-

ern design, was commenced in France and other countries. It was not until the eighteenth century, however, that they became necessities in all houses with any pretension to be well furnished.

In England, although carpets may have been found in churches, and possibly in a few great houses at an earlier period, Eleanor of Castile, the wife of Edward I., has the credit of introducing them as domestic floor coverings. It was not until the 17th century, however, that they became anything more than the rarest of superfluities in ordinary households. In 1660 Turkey carpets were not infrequently advertised for sale, but most of them were probably used as table covers. In the second edition of Bailey's "Dictionary Britannicum," published in 1736, a carpet is defined as a "table cover," while in the twenty-first edition, published in 1766, the definition is enlarged into "a covering for a table, passage or floor." It was between these two dates that carpets came into common use in England as floor coverings. With the rise of English carpet manufactories came the curious plan of covering the entire floor of a room

with a carpet having a monotonous design repeated over it, and as often as not unrelieved by a border. A healthier taste, both from an æsthetic and a sanitary point of view, has recently restored to us the beautiful carpets and rugs of India, Persia and Smyrna, and has to a great extent brought about a suppression of the old Brussels, whose removal for cleaning

caused a commotion not faintly resembling that accompanying an earthquake. We shall have cause to thank the present fashion in carpets, too, if by leaving a portion of the floor bare it will induce builders to put better work into a portion of a house that is far too often "scamped."  
—*Textile Manufacturer.*

### SIR WILLIAM DAWSON.

CANADA has as yet contributed very little to the world's culture. What she has contributed has been almost entirely scientific. Her scientific men have taken a more prominent position than her workers in any other branch of knowledge. And this has been mainly owing to the personal merit and powerful example of the subject of this sketch. There are many people who would probably never have known that Canada existed, if they had not heard of Sir William Dawson.

John William Dawson is a native of Nova Scotia, a province which has produced most of our best literary and scientific names. He was born at Pictou in 1820. At the age of 12 years the instinct for science, inherited from his father, had begun to assert itself. He was already making a collection of the fossil plants of the Nova Scotia coal formation. His education was begun at the College of Pictou, and completed at the University of Edinburgh. After a winter spent at the latter institution, he accompanied Sir Chas. Lyel in his tour through Nova Scotia, finished his collegiate course in 1846, and returned home, having already contributed something of importance to the geological knowledge of his province.

In 1850, at the age of 30, he was appointed superintendent of education for Nova Scotia—an office which he held for three years. He had rendered himself prominent by the publication of many papers, reports and lectures, on a variety of subjects, characterized by original and valuable research. From this time he became chiefly distinguished in his own country as an indefatigable promoter of educational progress, and a founder of educational institutions. He took an active part in the establishment of a Normal School in Nova Scotia, and in the regulation of the affairs of the University of New Brunswick.

In 1852 he made a re-examination, in company with Sir Chas. Lyel, of the Joggins section, and visited the deposits of albertite at Hillsborough, New Brunswick. Several important discoveries were made, among others that of the first reptile found in the coal formations of America. This expedition produced papers on the "Structures in Coal," and on the "Mode of Accumulation of Coal."

In 1855 he was appointed principal of McGill University and professor of natural history. At the time of this appointment the affairs of this university were in a very unsatisfactory condition. The arts and law courses amounted to nothing. In Dr. Dawson's hands there was an immediate and lasting change. McGill has become one of our most important homes of learning, and is chiefly indebted to its Principal for that eminence in all branches of science which distinguishes it among its rival institutions.

In the same year he published his "Acadian Geology"—a complete account up to date of the geology of the maritime provinces of Canada. This work was supplemented in 1860, and enlarged and illustrated in a second edition in 1868, and is still the standard work in geology for all that part of Canada.

Three years later appeared "Archæia," or studies of creation in Genesis, in which the author shows himself to be not only an accurate scientist, but a profound and reverent student of the Bible. This work was afterward re-written and modernized, and published in 1877 under the title of "The Origin of the World."

In 1863 Dr. Dawson published "Air Breathers of the Coal Period"—the collected result of many years study devoted to the fossil reptiles and other land animals of the coal of Nova Scotia. A year later he discovered the now celebrated *Eozoon Canadense*—the only animal re-

mains in the Laurentian rocks, which had hitherto been considered "Azoic."

In 1865 Dr. Dawson lectured before the British Association at Birmingham; and in 1870 before the Royal Institution and Geological Society. In the latter year appeared "Hand Book of Canadian Zoology"; and in 1873 "Notes on the Post-Pliocene of Canada," which raised the number of species of known post-pliocene fossils from thirty to over two hundred.

In the meantime Dr. Dawson had been continually occupied in the management of his University and of the Protestant Normal School—both institutions to a great extent the work of his hands and requiring his constant attention and the best of his labour, not only as a principal, but as a lecturer. In 1870 he withdrew from his active duties in the Normal School; still, however, remaining chairman of its managing committee.

Dr. Dawson's later works have been of a general and comprehensive character and very valuable. "The Story of Earth and Man" is a popular view of the whole of the geological ages; "Science of the Bible" and "The Dawn of Life," an illustrated work on *cozoon* and other ancient fossils; "The Chain of Life," "The Origin of the World," are all of them profound and interesting works, open to the general reader as much as to the scientist.

Dr. Dawson was appointed President of the Royal Society of Canada, in the Marquis of Lorne's time; he was indeed the first President. In 1882, he was appointed President of the American Association for

the advancement of science; and in 1883 one of the Presidents of the British Association. In 1884 he was knighted. In the latter year he travelled in Egypt and Syria, and published accounts of his geological researches. He is the President Elect of the British Association for 1886.

Such is the record of one of the few men who have carried the name of Canada into foreign lands. Sir William Dawson is one of the greatest scientists of the time; more than this, he is one who has done good service to religion. He is an active opponent of the advanced theories of evolution, and believes that no antagonism exists between the principle of physical science and the mozaic account of the creation. Sir William Dawson is not only respected for his intellect and knowledge, but prized by his country and his friends as a man personally excellent and worthy to be imitated. A gentleman, who has known him well for many years, says of him: "He fully realizes the saying of Boileau, *letruaicil c'est les trois-quarts du génie*. As a lecturer his words come like water from a fountain, almost uninterruptedly, and he lectures with never more than a casual glance at his notes. His students are entirely devoted to him, and respect him as well for his ability as for the personal interest that he takes in every one of them. Having known him well for many years I can say that I have never met a man of such extraordinary merit with so much quiet dignity and modesty." —GAMMA.

**APPLIED SCIENCE.**—Instead of hot water for heating their carriages in winter, the London and North-western Company now use acetate of soda—a neutral salt in crystals, which melts somewhere about the boiling-point of water. As the foot-warmer cools the liquid crystallises; and during this crystallization it throws out the latent heat absorbed to convert the salt from a solid to a liquid form. It is said that these foot-warmers remain hot eighteen hours, and that even then the crystallization is incomplete; and that on tapping or shaking the foot-warmers the crystallization of those parts of the substance which had remained uncrystallized commences, and the foot-warmer becomes hot a second time.

**VISITING THE SICK.**—When friends visit the sick, they have no right to tell them how badly they look. Instead of doing good such a course does harm and is very wicked. When visiting a sick friend carry some bright cheer with you or stay away. Make your visit short, and do not talk loudly or about unpleasant things. One of the secrets of the faith cure is the new hope it brings to the invalid already overloaded and borne down with discouragement: a faith cure doctor never says how bad you look. Evil communications corrupt good manners; so does sadness the sick. It is right for those who are ill to shun such bad company.—*Herald of Health*.



# POPULAR PREVENTIVE MEDICINE—THE SANITARY SCIENCE.

## PRESENT METHODS OF DISINFECTION.

**D**ISINFECTION, as at present understood and practised, is often little more than a farce, and the masking, as someone has said, of one nasty smell by another. The last published report by the medical officer of the Local Government Board shows that Dr. Buchanan appreciates the present unsatisfactory position of the question, for he has set Dr. Sanderson and Dr. Klein to work at the chemistry of infection and disinfection, and the ability of substances arrogating to themselves the title of "disinfectants" to destroy the power which any specific microphyte possesses of directly or indirectly producing disease. So far, these investigations have not led to much practical result; but it must be remembered that the field of exploration is extraordinarily difficult, and that every inch of ground has to be laboriously won by pathological experiments. Pending the completion of this research, it may be interesting to put on record the latest views on the subject of practical disinfection, as enunciation by an international committee of experts at the Sanitary Conference held at Rome in June.

This committee, which consisted of Drs. Sternberg (U.S.), Koch (Germany), Proust (France), Thorne Thorne (England), Eck (Russia), Semmola (Italy), and Hoffmann (Austria), recommended as a means of disinfection against cholera, with especial reference to vessels and their reception and treatment at ports of arrival, the following:

1. Steam at 100° C. (212° Fahr.)
2. Carbolic acid and chloride of lime.
3. Aëration.

Carbolic acid and chloride of lime are to be used in aqueous solutions. Weak solutions: Carbolic acid, 2 per cent.; chloride of lime, 1 per cent. Strong solutions: Carbolic acid, 5 per cent.; chloride of lime, 4 per cent.

These means of disinfection to be applied as follows:

I. For the disinfection of the person the weak solutions should be employed.

II. For the disinfection of clothing, bedding, and other articles of the kind: (a) destruction; (b) steam passed through the articles for one hour; (c) boiling for

thirty minutes; (d) immersion for twenty-four hours in one of the weak disinfecting solutions; (e) aëration for three or four weeks, but only in case the other means recommended are inapplicable. Articles of leather, such as trunks, boots, &c., should be either destroyed or washed several times with one of the weak disinfecting solutions.

III. Vomited matters and the dejections of the sick should be mixed with one of the strong disinfecting solutions, in quantity equal to the amount of material to be disinfected. Linen, clothing, bedding, &c., recently soiled by the dejections of the sick, and which cannot be immediately subjected to the action of steam, should be at once immersed in one of the strong disinfecting solutions, and left for four hours.

IV. The dead should be enveloped in a sheet saturated with one of the strong disinfecting solutions, without previous washing, and at once placed in a coffin.

V. Disinfection of merchandise and of mails is unnecessary. Steam under pressure is the only reliable agent for the disinfection of rags.

VI. When cases of cholera occur upon a vessel at sea, the locality where the case occurs should be disinfected. The floors and walls of the cabin, or other locality, should be washed at least twice with one of the weak disinfecting solutions, and then exposed freely to fresh air. In the case of objects of considerable value, which have not been in immediate contact with the sick, and which would be seriously injured by the vigorous disinfection, the physician on board may determine what measures are necessary to protect the sanitary interests of the vessel. The bilgewater should be pumped out and replaced by sea-water, at least twice at each disinfection of a vessel. The closets should be well washed with one of the strong disinfecting solutions at least twice a day.

VII. If the drinking water is open to suspicion, it should be boiled before it is used, and the boiling should be repeated, if it is not used, within twenty-four hours. All suspected food should be destroyed.

VIII. Hospitals should be disinfected by washing the floors and walls with one of

the weak disinfecting solutions, by a subsequent free ventilation and cleansing, and finally by repainting. The wards to be disinfected should, as far as possible, be isolated from those in use. The latrines should be disinfected at least twice a day by pouring into them the strong disinfecting solutions in quantity at least equal to

the amount of the dejections received since the last disinfection.

IX. The clothing worn by physicians and attendants should remain in the hospital, and should be regularly disinfected. Physicians and attendants should use the weak disinfecting solution for washing their hands, &c.—*Sanitary Record*.

## THE INTERNATIONAL SANITARY CONFERENCE AND THE DANGER FROM INFECTED RAGS.

THE conference recently held at Rome was composed of diplomatic and technical delegates from Italy, Germany, Belgium, Spain, France, Russia, Servia, Sweden and Norway, England, Switzerland, Denmark, Turkey, Greece, Austria, India, Japan, Mexico, Brazil, several South American States, and the United States; and among the delegates there was a fair proportion of the foremost men in sanitary science—Koch, Moleschott, Brouardel, Proust, Thorne, Fayrer, Semmola, and Sternberg. Cholera was the chief subject of discussion. Among the most important declarations of the conference, in regard to it, is that "*land quarantines and sanitary cordons are useless*." Besides this, and the adoption of the following excellent report of the Committee on Disinfection—of which Dr. Sternberg was a member, and believed to be a chief contributor—no other practical conclusions have been published:

1. Steam at 100° C. (212° Fahr.)
2. Carbolic acid and chloride of lime.
3. Aëration.

Carbolic acid and chloride of lime are to be used in aqueous solutions. Weak solutions: Carbolic acid, 2 per cent.; chloride of lime, 1 per cent. Strong solutions: Carbolic acid, 5 per cent.; chloride of lime, 4 per cent.

These means of disinfection will be applied as follows:

I. For the disinfection of the person the weak solutions should be employed.

II. For the disinfection of clothing, bedding, and other articles of this kind: (a) destruction; (b) steam passed through the articles for one hour; (c) boiling for thirty minutes; (d) immersion for twenty-four hours in one of the weak disinfecting solutions; (e) aëration for three or four weeks, but only in case the other means recommended are inapplicable. Articles

of leather, such as trunks, boots, etc., should be either destroyed or washed several times with one of the weak disinfecting solutions.

III. Vomited matters and the dejections of the sick should be mixed with one of the strong disinfecting solutions, in quantity equal to the amount of material to be disinfected. Linen, clothing, bedding, etc, recently soiled by the dejections of the sick, and which cannot be immediately subjected to the action of steam, should be at once immersed in one of the strong disinfecting solutions, and left for four hours.

IV. The dead should be enveloped in a sheet saturated with one of the strong disinfecting solutions, without previous washing, and at once placed in a coffin.

V. Disinfection of merchandise and of mails is unnecessary. *Steam under pressure is the only reliable agent for the disinfection of rags.*

VI. When cases of cholera occur upon a vessel at sea, the locality where the case occurs should be disinfected. The floors and walls of the cabin, or other locality, should be washed at least twice with one of the weak disinfecting solutions, and then exposed freely to fresh air. In the case of objects of considerable value, which have not been in immediate contact with the sick, and which would be seriously injured by a rigorous disinfection, the physician on board may determine what measures are necessary to protect the sanitary interests of the vessel. The bilge-water should be pumped out and replaced by sea-water, at least twice at each disinfection of a vessel. The closets should be well washed with one of the very strong disinfecting solutions at least twice a day.

VII. If the drinking water is open to suspicion, it should be boiled before it is

used, and the boiling should be repeated, if it is not used, within twenty-four hours. All suspected food should be destroyed, or at least recently cooked.

VIII. Hospitals should be disinfected by washing the floors and walls with one of the weak disinfecting solutions, by a subsequent free ventilation and cleansing, and finally by repainting. The wards to be disinfected should, as far as possible, be isolated from those in use. The latrines should be disinfected at least twice a day, by pouring into them the strong disinfecting solutions, in quantity at least equal to the amount of the dejections received since the last disinfection.

IX. The clothing worn by physicians and attendants should remain in the hospital, and should be regularly disinfected. Physicians and attendants should use the weak disinfecting solution for washing their hands, etc."

That the International Sanitary Conference should have come to the conclusion that *steam under pressure is the only reliable agent for the disinfection of rags*, is surely no surprise to any diligent reader of the *Sanitarian*, for it is in accordance with its long cherished faith: that the most efficient of all disinfectants, wherever it is practicable, is *steam*.

The practicability of applying steam, at any desired degree of temperature, to rags, as indeed to nearly all articles liable to infection, and to infected vessels of every class, has been so abundantly and *efficiently* demonstrated as, it seems to us, to render any further argument for its universal adoption unnecessary.

AN IRISH ATHLETE AND THE APOLLO BELVEDERE.—A youthful athlete from Dublin, named Patrick, recently visited his uncle, a fellow-countryman who was pursuing the respectable avocation of butcher in Rome. His uncle took him about the city to see the wonders. On Patrick's return home, he told his sweetheart that one of the most wonderful things he saw in Rome was a shtone man. "A shtone man!" exclaimed Bridget. "Yes," replied Pat; "and they called him the Polly Belvedere. As we were looking at the shtone man, says my uncle to me, says he, 'Patrick, you and the Polly Belvedere are very much aloike.' And be that, we measured.

## DANGER FROM RAGS.

But it is *necessary*, and high time that the public mind should be duly impressed with the truth in regard to the danger of rags, not only in relation with small-pox and cholera, but with other diseases.

And who is the observer, pray, that does not know that paper-stock rags gathered by the *chiffonniers* everywhere consist in great measure of the castaway clothing and bedding of those who have been sick with or died of infectious diseases? Of handkerchiefs loaded with expectoration, too filthy to wash, from the consumptive wards of hospitals; of bandages saturated with pus—often of the most loathsome diseases—from the surgical wards of hospitals; of the dirty-rag out-throw from lying-in and infant asylums, and other hospitals, asylums, and public institutions of every kind? And who, also, that has not seen the early *chiffonnier* before his own door, on ash-gathering day, with his hook and bag, pull out the discarded typhoidal dish-cloths and other *kitchen* rags which no tidy cook can longer bear to handle without tongs? Who that reflects upon such common knowledge as this, by all except the purblind, can wonder at the most important fact of all in relation to rags, that they are a prolific means of spreading infectious diseases of every kind.

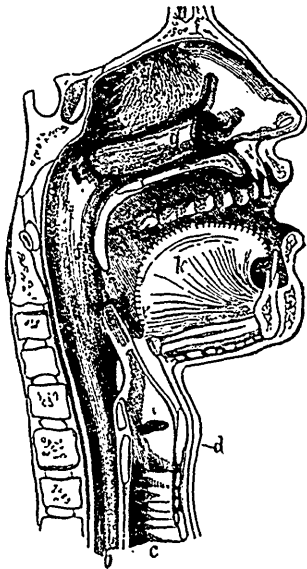
But with reference to rags gathered abroad, the out-throw of the cholera hospitals and of the panic-stricken inhabitants, in infected places during the prevalence of an epidemic, the danger of spreading infection by this means is greatly multiplied.—*Sanitarian*.

I was broader than him in the fut, but he was higher than me in the instep. I was larger than him around the ankle, but he had me in the calf of the leg. My knee was larger than his, but he was better than me in the thigh. My belly was twice as large round as his, but his brist was twice as large round as mine. Then, again, my neck was much larger than his, but his head was larger than mine; but, as my uncle said, on the general average, we're just about the same."

AVOID temptation through fear you may not withstand it.

## THE NOSTRILS, THROAT AND LARYNX.

**I**N previous numbers of *MAN*, under the head of "How to Breathe," the function of respiration has been fully treated of. One important point in connection with breathing remains to be touched upon. This might indeed be almost sufficiently dealt with in three words: "Shut your mouth." When breathing, always keep the lips closed and breathe only through the nostrils. These intricate passages are especially designed as a portion of the respiratory passage, and for the purpose of breathing through. The nerves of the sense of smell terminate in the nostrils, because it is most convenient that they should do so. And the fact that the sense of smell is situated in the nostrils affords strong evidence that they are designed as the sole gateway to the lungs. The nostrils form a most perfect, natural respirator. Their walls tend to moisten the air, and to warm it when cold, while the irregularity of the passages, and the hairs within them, with the somewhat tenacious nature of the moisture, strain and greatly aid in purifying the air breathed: evidenced by the dust and other foreign substances which collect in the nostrils.



In the accompanying figure are represented the outer wall of the left nostril, with the three scroll-like spongy bones (*g*, and above it), which partly divide the cavity into three passages. This arrangement, while it provides

a large surface for the terminal filaments of the nerve of the sense of smell, increases the value of the cavities as the gateway to the lungs, in moistening and purifying, and in regulating the temperature of the air passing to the lungs.

Behind and below the back part of the nostrils is the throat or pharynx; as represented in the figure, *f* is about in the centre of the cavity. It extends from the nostrils down to the commencement of the neck, where it terminates in a smaller tube, the œsophagus, or gullet, shown further down at *b*, which extends and conveys the food to the stomach. Opposite *f*, hanging down between the mouth and the pharynx, is the soft palate. The black, oblongish spot above *f*, near the scroll-like bones, represents the opening into the eustachian tube, a small canal which leads to the inner ear. At the lower part of the pharynx, opposite the angle formed by the lower jaw and neck, is the opening into the larynx, the cavity of the vocal apparatus, opposite *d*, and which is continuous below with trachea or wind-pipe, *c*. Projecting above this opening, at *e*, is a valve, which, chiefly by the backward movement of the tongue, *k*, in the act of swallowing, shuts down over the opening, guides the food into the gullet, and prevents it getting into the larynx or windpipe.

Sometimes when one is laughing or talking with food in the mouth, or especially when attempting to swallow it, a tiny morsel will get between the valve and the margin of the opening and cause such irritation and spasmodic closure of the valve as to almost suffocate one; as when the valve is closed no air can possibly get into the lungs. Sometimes just before the valve entirely closes, a tiny morsel gets through the opening into the larynx and causes great irritation and coughing until it is brought up. Strange foreign bodies, such as a piece of coin, have been known to get into the wrong passage here and drop down the wind-pipe into the lungs and cause much suffering. And such bodies have been known to drop out through the opening into the pharynx and mouth when the sufferer was turned with the head downward—perpendicularly inverted.

Sometimes when one is eating hurriedly, a large piece of food, especially flesh meat, gets lodged between the shut valve and the back wall of the pharynx, so that the valve cannot open again, and complete suffocation follows—the person is "choked to death." Spasmodic action of the muscular fibres, of which the walls of

the pharynx and œsophagus are largely composed, holds the obstruction so firmly that it will not pass on down, or it may be too large to pass or be carried down by the ordinary action of these muscular walls. Any person finding another suffering in this way, and who would have sufficient presence of mind to quickly pass two fingers into the throat and, if possible, grasp the obstructing body and draw it out, and if this could not be done, pass

the handle of a spoon, or better, the large part of a rawhide or a flexible whip stalk, into the throat and firmly but gently press the obstruction down past the closed valve, supporting the body of the sufferer erect and turning the head well back, with mouth upward, might chance to be rewarded by having saved a life.

In the next number of *MAN* it is purposed to give a paper on the heart and the circulation of the blood. —THE EDITOR.

#### HOUSE PLANTS AS SANITARY INDICATORS.—AN EXPERIENCE.

A BOSTON lady writes to us: "We began housekeeping ten years ago, with plants in two of the rooms for window ornaments instead of lace and damask curtains. The house was a modern one, lighted by gas, and heated by a furnace, with no open fireplaces in any of the rooms. Fortunately there was a skylight in a slope of the roof over the central hall, which we kept always raised some ten inches—in warm weather twice as much—and since we kept the doors of the rooms open, the hall became a ventilating shaft. The result of this automatic ventilation was so good that visitors exclaimed: 'Why, you have furnace and gas, yet your plants look as thrifty and fresh as if they had grown in a greenhouse. How do you do it?'"

"A somewhat careful study of the conditions of successful window gardening led us to the conclusion that a house in which plants *would not thrive* was a house in which people *ought not to live*. We then allowed our plants to overflow into all the other rooms and for years pointed with pride to the sanitary indicators, which also served the purpose of keeping the air moist enough, since on a sunny day these growing leaves will put up at least six quarts of water into the atmosphere of the house.

"But the past winter the plants seem to droop unaccountably; one or two

nearly died, others lost their leaves, and the whole lot looked like the sickly things one so often sees in houses. So far as we could see, the conditions were the same as in previous years. Suspicion was lulled by the fact that even gardeners complained of so much cloudy weather as affecting the plants. A visit of inspection by the Sanitary Science Club, in the late spring, called our attention to some defects in the furnace air box and draught slides, also an occasional smell of gas, which had not been noticed in previous years, added an incentive to a thorough overhauling of the furnace as soon as the fire was dispensed with. The explanation of the behaviour of the plants was found in a large hole in the iron lining of the fire-pot, so that a free communication of the air over the fire with that in the hot-air chamber was inevitable. This hole was caused by the rusting through of the iron, a result of carelessness in filling the water-pan, and finally of a leak in it, which escaped notice for some time. The iron partition must have been a long time in a bad condition, and only the good ventilation effected by the always open skylight saved the family from very serious consequences. They should have taken immediate warning from the plants, and should have searched until the cause of the trouble was found." —*Sanit. Engineer.*

#### HEALTHY HOME DECORATIONS.

IN a recent lecture on "Healthy Decoration in the Home," Mr. G. Aitchison, an English architect, said, among other things: Nothing is better for preventing the permanent location of dirt than really good hardwood polished parquet; but if

that be found too expensive, then let the joints of the board be well scraped out, filleted with wood when wide, and let all the joints be puttied. And let the whole floor be painted or varnished; dust is then more easily and completely swept

up, and a wet flannel cleans the floor; but with parquet perhaps a washing once a year is enough with clean sweeping, and the wholesome application of turpentine and beeswax.

Next to polished wood, tiles, marble, glass, and marble mosaics, the best wall finish is oil paint, which can be made agreeable to the eye by simple flat tints of harmonious colour, or it can be ornamented with floral arabesque ornament, or with the highest triumphs of the painter's art, and this last will not only mark the owner's real taste for art, but will prevent the accumulation of dust on the picture frames. Flock papers should never be used, except when they are painted over, as they form a natural receptacle for dust, and seem to absorb the greatest quantity of foulness from the air, and when the flock is not dyed "ingrain," whenever they are touched, some of the coloring matter comes off, and is mixed with the air of the room. Mr. Aitchison was greatly inclined to recommend the varnishing of all papers, so that they could be cleaned with a sponge; but it was absolutely essential to varnish them in nurseries. Children will lick the papers, and neither lead, copper, nor

arsenic can be good for them, and neither size nor whiting are substances you would give to children without medical advice.

Beauty of form and color have a very important effect upon our health. All of us can bear witness to the dullness of a room of one color, in which we have to sit when we are without occupation, and the desire we then have for some beautiful and intricate pattern to relieve its monotony. When a room is adorned with pictures, we have not merely occupation, but delight, and those higher emotions that are only excited by the fine arts. When we choose wall papers, those that are more beautiful in form and color are to be preferred. We should, however, satisfy ourselves that the patterns on the papers with which our rooms are hung, have not a look of motion. Nothing is more distressing than to be in a room where the pattern of the paper seems always crawling like a bag of worms. It would be well if we could have all things about us in beautiful form, elegantly simple, and all the colors harmonious and restrained; these great qualities seem to impart to us the feelings of self-restraint, dignity, and repose.—*People's Health Journal.*

M. MAREY, who was commissioned by the Académie de Médecine to investigate the cholera epidemic which raged last year at Marseilles and Toulon, has laid his report before the Académie des Sciences and the Académie de Médecine. Among other statements he made the following: According to the testimony of medical men, residents in the stricken localities, cholera was recognized to be imported into three-fourths of the localities; in the remaining fourth there was strong presumptive evidence that it was also imported. Cholera epidemics are less intense in thickly populated towns than in small country places; it is therefore an error to induce the inhabitants of towns to migrate into the country. Dirty habits, especially omission to remove excrement, are powerful factors in the production of cholera; water rendered impure by contact with choleraic dejecta is a means of spreading cholera if used as drinking water. Storms increase or provoke cholera epidemics by carrying along dejecta lying on the ground

into water afterwards used for drinking. The most dangerous localities during cholera epidemics are low-lying regions near rivers, and those supplied by water of doubtful purity. Towns have their water supply better preserved from contact with impurities, and therefore are less favorable to the development of a cholera epidemic; but those towns or cities that have not this advantage rank with country places. Disinfecting cholera-stricken houses according to the directions laid down by the Comité Consultatif d'Hygiène, is a measure of the highest importance, and has been known to arrest a threatened epidemic of cholera. It is indispensable that doctors should be capable of recognizing cholera, even when doubtful, for slight attacks contaminate water and thus diffuse the disease. Old people and infants are specially liable to be attacked. Intemperate and dirty habits are also provocative of the disease. One attack does not confer immunity from cholera, as a second may occur.

## MISCELLANEOUS ITEMS.

**CHOLERA SPECIFIC.**—Most people imagine, more especially those who do not think much, that the discovery of some specific which would infallibly cure any one suffering from cholera would be one of inestimable value, and that the discoverer would be entitled to a place amongst the greatest benefactors of the age. It is somewhat doubtful, however, whether such a discovery, were it possible, would be of such great advantage to society at large. Cholera attacks the weak points of our sanitary system, and the weak points only; so that the perfect specific against cholera is a perfect sanitary system. If we could purchase in an apothecary's shop an infallible specific against cholera for a few shillings, people would not trouble themselves much about sanitary matters; but in getting rid of cholera in this way we would continue to harbor other diseases, physical and moral, infinitely more destructive than cholera ever has been.—*Glasgow Sanitary Jour.*

**OZONE IN THERAPEUTICS.**—Prof. Alexander Wilder in speaking of this agent says:—"I believe ozone to be the medicine of the future. Disease, as we usually denominate it, is an effort of the vital forces to rid the body of morbid and effete material, and so requires oxygen in abundance for this purpose; hence ozone, consisting as it does of an additional endowment of this substance, ready to be imparted in a nascent form, constitutes the most effectual medium for supplying it.

**A PREMIUM ON POPULATION.**—Reviving an obsolete law of the Revolution, the Chamber of Deputies have agreed to a vote of 400,000 francs for the education and board of the seventh child in French families. Within the last few years several parents with seven children have called on the State to fulfil its legal obligation, but these applications have been evaded. The anti-Malthusians in the Chamber have now, however, scored a triumph. Some estimate the number of seventh children at 50,000; but State adoption is to be limited to those in necessitous circumstances.

The little town of Plymouth, Pa., has been summing up the cost of its typhoid fever experience through neglect of its water supply. The price in human lives was 107. There is no way to equate that

in terms of money. The cost in dollars was nearly \$60,000 in extra expenditure, and about the same sum in loss of wages from enforced idleness among the sick and those who had to wait upon and nurse the sick—in all about \$120,000. Costly experience for a little town like Plymouth; but the remaining question is, will the people there profit by it?—*Ledger, Phila.*

IN many towns and cities (*Science*, July 10th) the privy-vaults and leaching cess-pools of every house drain really into the sheet of ground-water. The soil arrests the coarse material, the grease and slime; but the swarming bacteria diffuse with ease, as much as the soluble chlorides and nitrates, and follow the flow wholly unobstructed. Into this same soil are sunk or driven the wells; and the water that is drawn for use is polluted in proportion to the number and proximity of the vaults and cesspools, on the one hand, and the thinness and sluggishness of the water-sheet on the other. In the worst wells in daily use the water is distinctly colored with sewage; but the most deadly water may carry only the germs of typhoid fever or of dysentery and be otherwise sparklingly clear, and so pure as to pass unchallenged through the most searching chemical analysis.

**SOMETHING FOR PROHIBITIONISTS** to turn their attention to. Edwin R. Maxson, A. M., M. D., L. L. D., of Syracuse, N. Y., in a recent paper on wine, though opposed to the use of fermented wine except as a medicine, writes: "Now, to keep the intellects of our children, as well as our own, up to a point at which they and we may not be likely to be deceived by this medicine, and hence go to taking it when not indicated, we should all obey the laws of life and health in every particular, avoiding ourselves late suppers, tobacco, and all forms of narcotics; keeping from children candies, and all other unnecessary and unwholesome trash; having them take food with strict regularity; having pantaloons and other garments to suitably cover their arms and legs, thus avoiding an undue quantity of blood to the brain, etc.; keeping from them dime novels and other such trash, and not allowing them to approach even any of the haunts of vice and crime. For though the neglect of these essential precautions may appear to some as of very

little account, it is, I am satisfied from careful observation in this country and abroad, mainly from such imprudences and neglects that much of the mental weakness and most of the physical ills are acquired, which by degrees cloud and degaude the moral sense, leading to a reckless disregard of consistency, temperance, and moral purity, and hence to the improper use of wine and other intoxicants, and ultimately to drunkenness, debauchery and crime: *God forbid!*"

**STIMULANTS FOR THE AGED.**—Dr. J. L. Tyson (*Med. & Surg. Rep.*) regards it as perfectly allowable to give stimulants to the aged, whose vital organs are impaired or flagging. He says: "In a practice of forty-five years, I have repeatedly saved and greatly prolonged many valuable lives, through the instrumentality of stimulants judiciously administered." Dr. J. Milner Fothergill says: "Alcohol may be used with benefit at bed-time by those who undergo much mental activity, and whose brains are exhausted. Here some alcohol exercises a distinctly soothing effect upon the brain, and procures a sound night's rest, where without it would be a restless, perturbed, uneasy, and unrefreshing slumber. There exists no objection to the use of alcohol under these circumstances; neither is there much probability of the habit growing, except in rare cases where there are probably other determining factors." The late Prof. Samuel Jackson, of the University of Pennsylvania, was consulted many years ago by a gentleman of my acquaintance, then in his fiftieth year, for a complication of maladies threatening early dissolution, prominent among which were vertigo, dyspepsia, languor, debility, etc., etc. His advice was, after a thorough investigation of the case, that half an hour before each meal he should take a teaspoonful of whiskey in a little water. This the patient continued through the remaining years of his life, with renewed health and vigor, and lived comfortably to the age of eighty-six.

**THE TEMPERANCE OF THE DANES.**—It has been a matter of frequent remark (*N. Y. Med. Times*) that in countries where wine is freely consumed by all classes, to the lesser use of the stronger alcoholic drinks, there is comparatively little intemperance. This view gains additional confirmation from the remarks of the correspondent of the *Medical Press* at the late International

Medical Congress, who says: "I was very much struck here by the great temperance of the people. Wine is taken. At Kronsberg 'there was water, water everywhere, but not a drop to drink.' The tables were lined with wines, clarets, hocks and champagnes, but there was not a single water carafe. Though this was the case, and though only wine was to be obtained to quench the thirst, yet I did not see a single person out of the 2,000 in the slightest degree with signs of elevation. I watched the people at Tivoli. There was the same moderation; wine was taken, intoxication was absent. On this occasion it might have been expected that the bounds of sobriety would have been passed."

**CURIOUS MORTALITY STATISTICS.**—Dr. Pratt, of London, Eng., in his address to young men, gives these facts: According to statistics, the married life is not only the purer, producing the minimum of evil-doers and criminals, but it is by far the most healthy. Take the male sex, and it is seen that from twenty-five to thirty years of age, 1,000 married men furnish six deaths; 1,000 bachelors furnish ten deaths; 1,000 widowers furnish 22 deaths. The figures, however, become very unfavorable if the marriage be contracted before twenty. Out of 8,000 young men married before twenty, their mortality has been found to be: before marriage, only seven per 1,000; after marriage, 50 per 1,000. With respect to the female sex we find a similar advantage of marriage over celibacy, but on the same condition. If young girls be turned into wives before twenty a like mortality befalls them which befalls the other sex. Everywhere young married people from eighteen to twenty years of age die as fast as old people from sixty to seventy years of age. The common sense and common law of Western Europe have, with perfect justice, marked twenty-one as the age of maturity. After that epoch, however, marriage should be contracted as soon as practicable. It is the healthiest and happiest life—the best for the individual and for the community.

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"Dirt, debauchery, disease and death are successive links in the same chain."

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"Mold and decaying vegetables in a cellar weave shrouds for the upper chambers."



## THE PUBLIC HEALTH.—THE LIVING AND THE DEAD.

WHILE MAN's great object is to promote the well-being of the living, it desires all its readers to take an interest in the dead—especially in the prematurely dead, and in the causes of premature death. Although, on first thought, to most people, all things relating to death form a sombre subject, they may be made an interesting and highly profitable one. To familiarize ourselves with those dangers which "stand thick through all the ground" and which cause so many while yet young in years to fall out by the way in the race of life and "be no more seen," is to give us such advantages over the dangers as will enable us to avoid them, and so prevent not only the too early death, but the trying sickness and acute suffering which usually precede the death. To study a little all the various causes of death, at what periods of life and at what seasons they are most active and most likely to destroy life, is to increase our ability to overcome them and to promote health and prolong life. It is the intention of MAN, therefore, to give some attention to the mortuary statistics of the Dominion, so that all readers may become interested therein.

Following are the mortuary returns from twenty of the principal cities of Canada to the Department of Agriculture, for the month of September, 1885. From them we learn what terrible consequences have followed neglect of proper sanitary regulations in Montreal. Municipal authorities and others may from them learn that the neglect to timely provide simple and comparatively inexpensive means for promptly isolating first cases of contagious epidemic disease, such as smallpox, and at once suppressing outbreaks and preventing the spread of the disease, as is done in many cities, especially in Great Britain, may at any time—and in a short time—cost the municipality many, many valuable lives with inestimable suffering, and, directly and indirectly, vast sums of money. Municipal bodies insure their public buildings against loss by fire, probably never neglect this, yet commonly fail to insure by means of proper precautionary measures, against the development and spread of contagious malignant diseases.

The returns show that, through a little neglect, the mortality of Montreal was increased to four or five times what it should

have been; or to nearly 100 per thousand of population per annum, over two-thirds of which was caused by that one fell disease, small-pox. The mortality of Quebec is also shown to have been very high; while that of Toronto, Ottawa and other cities, was not exceptionally so. The mortality from the various zymotic diseases in Toronto, Ottawa, St. John and Sorel, as well as in Montreal, was, during the month, much greater than in London and other cities in England; while in the other cities in Canada it was lower, and in many of them much lower, than in the English cities. The mortality from zymotic diseases, as most readers of MAN know, furnishes a good indication of the sanitary condition of a locality: if the mortality is high, the sanitary condition may be safely regarded as bad.

Of the *zymotic* diseases, diarrhoeal affections prevailed most universally, and caused 176 deaths in the 20 cities during the month, and, with the exception of small-pox in Montreal, caused more deaths than all the other zymotic diseases combined. The victims of these affections were, doubtless, for the most part young children. The diseases are most commonly, if not always, caused by improper food and foul air. There were 42 deaths from diphtheria; 15 of which were in Montreal, 13 in Toronto and 6 in St. John. There were in all only 32 deaths from fevers. From *constitutional* diseases, which class includes all tubercular affections—consumption being the chief—with cancer, dropsy, anæmia, and the like, there were 205 deaths during the month. From *local* diseases—apoplexy, paralysis, diseases of the heart and lungs (other than consumption) and of the stomach, bowels, liver, kidneys, etc., there were 434 deaths. From *developmental* diseases—premature births, teething, child-birth, old age, debility, etc., there were 274 deaths; and from *violence* or *accidental* causes, 42 deaths.

### IN THE THREE PREVIOUS MONTHS,

June, July and August, diarrhoeal affections, caused 782 deaths; 178, 234, 370 respectively in the three months. Just two more deaths from these diseases took place in June than in September; while more died from their effects in August than in both June and September. July

NUMBER OF DEATHS WITH CAUSES AND SEXES.—MONTHLY STATEMENT.

| MONTH OF SEPTEMBER, YEAR 1885.                                  |           |     |         |          |    |         |         |    |         |           |    |         |
|-----------------------------------------------------------------|-----------|-----|---------|----------|----|---------|---------|----|---------|-----------|----|---------|
| CAUSES OF DEATH.                                                | MONTREAL. |     |         | TORONTO. |    |         | QUEBEC. |    |         | HAMILTON. |    |         |
|                                                                 | M.        | F.  | Totals. | M.       | F. | Totals. | M.      | F. | Totals. | M.        | F. | Totals. |
| <b>1. Zymotic—</b>                                              |           |     |         |          |    |         |         |    |         |           |    |         |
| a Small-pox .....                                               | 443       | 386 | 829     |          |    |         | 1       |    | 1       |           |    |         |
| b Measles .....                                                 | 2         | 2   | 4       |          |    |         |         |    |         |           |    |         |
| c Scarlatina .....                                              |           | 1   | 1       |          | 1  | 1       |         |    |         |           |    |         |
| d Diphtheria .....                                              | 6         | 9   | 15      | 7        | 6  | 13      |         |    |         | 1         |    | 1       |
| e Quinsy (tonsillitis) .....                                    |           |     |         |          |    |         |         |    |         |           |    |         |
| f Typhus, Enteric or Typhoid and simple contagious fevers ..... | 9         | 6   | 15      | 2        |    | 2       | 2       | 1  | 3       | 2         |    | 2       |
| g Erysipelas .....                                              |           | 1   | 1       |          |    |         |         |    |         |           |    |         |
| h Puerperal Fever .....                                         |           |     |         |          | 1  | 1       |         |    |         |           |    | 1       |
| i Diarrhœal Affections .....                                    | 25        | 29  | 54      | 10       | 21 | 31      | 9       | 9  | 18      | 1         |    |         |
| j Rheumatism .....                                              |           |     |         |          |    |         |         | 1  | 1       |           |    |         |
| k Septicæmia (Pyæmia) .....                                     |           | 2   | 2       | 1        | 1  | 2       |         | 1  | 1       |           |    |         |
| l Remittent Fever .....                                         |           |     |         |          |    |         |         |    |         |           |    |         |
| m Malaria Fever .....                                           |           |     |         |          |    |         |         |    |         |           |    |         |
| n Syphilis .....                                                |           |     |         |          |    | 2       |         |    |         |           |    |         |
| o Alcoholism .....                                              |           |     |         | 2        |    | 2       |         |    |         |           |    |         |
| p Worms .....                                                   |           |     |         |          | 2  | 2       |         |    |         |           | 1  | 1       |
| q Other Zymotic Diseases .....                                  | 23        | 36  | 59      | 18       | 10 | 28      | 7       | 19 | 26      | 6         | 13 | 19      |
| <b>2. Constitutional.</b> .....                                 | 75        | 67  | 142     | 32       | 57 | 89      | 47      | 33 | 80      | 8         | 9  | 17      |
| <b>3. Local.</b> .....                                          | 40        | 43  | 83      | 17       | 13 | 30      | 34      | 25 | 59      | 6         | 6  | 12      |
| <b>4. Developmental.</b> .....                                  | 8         | 2   | 10      | 4        | 2  | 6       | 2       | 1  | 3       |           |    |         |
| <b>5. Violent Deaths.</b> .....                                 |           |     |         |          |    |         |         |    |         |           |    |         |
| Totals .....                                                    | 631       | 539 | 1,220   | 93       | 94 | 187     | 103     | 90 | 193     | 26        | 32 | 58      |

| CAUSES OF DEATH.                                             | CHARLOTTE-TOWN. |    |         | GUELPH. |    |         | BELLEVILLE. |    |         | CHATHAM. |    |         |
|--------------------------------------------------------------|-----------------|----|---------|---------|----|---------|-------------|----|---------|----------|----|---------|
|                                                              | M.              | F. | Totals. | M.      | F. | Totals. | M.          | F. | Totals. | M.       | F. | Totals. |
| <b>1. Zymotic—</b>                                           |                 |    |         |         |    |         |             |    |         |          |    |         |
| a Small-pox .....                                            |                 |    |         |         |    |         |             |    |         |          |    |         |
| b Measles .....                                              |                 |    |         |         |    |         |             |    |         |          |    |         |
| c Scarlatina .....                                           |                 |    |         |         |    |         |             |    |         |          |    |         |
| d Diphtheria .....                                           |                 |    |         |         |    |         |             |    |         | 1        |    | 1       |
| e Quinsy (tonsillitis) .....                                 |                 |    |         |         |    |         |             |    |         |          |    |         |
| f Typhus, Enteric Typhoid and simple contagious fevers ..... |                 |    |         |         |    |         |             |    |         |          |    |         |
| g Erysipelas .....                                           |                 |    |         |         |    |         |             |    |         | 1        |    | 1       |
| h Puerperal Fever .....                                      |                 |    |         |         |    |         |             | 1  | 1       |          |    |         |
| i Diarrhœal Affections .....                                 | 1               | 2  | 3       | 1       |    | 1       |             |    |         | 1        |    | 1       |
| j Rheumatism .....                                           |                 |    |         |         |    |         |             |    |         |          |    |         |
| k Septicæmia (Pyæmia) .....                                  |                 |    |         |         |    |         |             |    |         |          |    |         |
| l Remittent Fever .....                                      |                 |    |         |         |    |         |             |    |         |          |    |         |
| m Malaria Fever .....                                        |                 |    |         |         |    |         |             |    |         |          |    |         |
| n Syphilis .....                                             |                 |    |         |         |    |         |             |    |         |          |    |         |
| o Alcoholism .....                                           |                 |    |         |         |    |         |             |    |         |          |    |         |
| p Worms .....                                                |                 |    |         |         |    |         |             |    |         |          |    |         |
| q Other Zymotic Diseases .....                               | 1               | 2  | 3       | 1       | 2  | 3       | 1           | 5  | 6       | 1        | 2  | 3       |
| <b>2. Constitutional.</b> .....                              | 5               | 2  | 7       | 4       | 2  | 6       | 3           | 5  | 8       |          | 2  | 2       |
| <b>3. Local.</b> .....                                       | 1               | 1  | 2       | 2       | 2  | 4       | 2           | 3  | 5       |          | 2  | 2       |
| <b>4. Developmental.</b> .....                               |                 | 1  | 1       | 1       |    | 1       | 1           |    | 1       |          |    |         |
| <b>5. Violent Deaths.</b> .....                              |                 |    |         |         |    |         |             |    |         |          |    |         |
| Totals .....                                                 | 8               | 7  | 15      | 9       | 6  | 15      | 7           | 14 | 21      | 3        | 7  | 10      |

# MORTUARY STATISTICS.

NUMBER OF DEATHS WITH CAUSES AND SEXES.—MONTHLY STATEMENT.—*Con.*

| MONTH OF SEPTEMBER, YEAR 1885. |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|-----------|-------------|----------|-----------|---|
|                                | HALIFAX.  |           |           | WINNIPEG. |           |           | OTTAWA.   |           |           | ST. JOHN, N.B. |           |           | KINGSTON. |           |           | ST. THOMAS. |          |           |   |
|                                | M.        | F.        | Totals.   | M.        | F.        | Totals.   | M.        | F.        | Totals.   | M.             | F.        | Totals.   | M.        | F.        | Totals.   | M.          | F.       | Totals.   |   |
| a                              |           |           |           |           |           |           |           |           | 1         | 1              |           |           |           |           |           |             |          |           |   |
| b                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| c                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| d                              | 1         |           | 1         |           |           |           |           |           | 1         | 1              | 5         | 1         | 6         | 1         | 1         | 2           |          | 1         | 1 |
| e                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| f                              |           |           |           | 1         | 1         | 2         |           |           |           |                |           |           |           | 1         | 1         | 2           | 1        |           | 1 |
| g                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| h                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| i                              | 8         | 6         | 14        | 5         | 2         | 7         | 8         | 6         | 14        | 7              | 7         | 14        |           |           |           | 2           | 1        | 3         |   |
| j                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| k                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| l                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| m                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| n                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| o                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| p                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| q                              |           | 1         | 1         | 2         |           | 2         | 2         | 5         | 2         | 8              | 4         | 12        | 3         | 4         | 7         | 2           |          | 2         |   |
| r                              | 5         | 3         | 8         | 2         | 2         | 3         | 3         | 5         | 8         | 10             | 9         | 19        | 6         | 3         | 9         | 4           |          | 4         |   |
| s                              | 17        | 8         | 25        | 6         | 6         | 12        | 5         | 5         | 10        | 10             | 9         | 19        | 6         | 3         | 9         | 1           |          | 1         |   |
| t                              | 3         |           | 3         | 1         | 5         | 6         | 9         | 6         | 15        | 3              | 3         | 6         | 5         | 6         | 11        | 1           |          | 4         |   |
| u                              | 4         | 11        | 14        | 5         |           | 5         |           |           | 5         | 2              |           | 2         | 5         | 2         | 2         | 1           |          | 1         |   |
| v                              |           |           |           |           |           |           |           |           |           |                |           |           |           |           |           |             |          |           |   |
| <b>Totals.</b>                 | <b>33</b> | <b>29</b> | <b>67</b> | <b>21</b> | <b>16</b> | <b>37</b> | <b>25</b> | <b>27</b> | <b>52</b> | <b>35</b>      | <b>24</b> | <b>59</b> | <b>16</b> | <b>17</b> | <b>33</b> | <b>11</b>   | <b>2</b> | <b>13</b> |   |

|                | SHERBROOKE. |          |           | PETERBOROUGH. |          |           | SOREL.    |           |           | FREDERICTON. |          |          | St. HYACINTHE. |           |           | GALT.    |          |          |
|----------------|-------------|----------|-----------|---------------|----------|-----------|-----------|-----------|-----------|--------------|----------|----------|----------------|-----------|-----------|----------|----------|----------|
|                | M.          | F.       | Totals.   | M.            | F.       | Totals.   | M.        | F.        | Totals.   | M.           | F.       | Totals.  | M.             | F.        | Totals.   | M.       | F.       | Totals.  |
| a              |             |          |           |               |          |           |           |           | 2         | 1            | 3        |          |                |           |           |          |          |          |
| b              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| c              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| d              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| e              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| f              | 1           |          | 1         | 1             |          | 1         | 3         |           | 3         |              |          |          |                |           |           |          |          |          |
| g              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| h              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| i              | 1           | 2        | 3         |               |          |           | 3         | 6         | 9         |              |          |          | 1              |           | 1         | 2        | 1        | 3        |
| j              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| k              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| l              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| m              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| n              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| o              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| p              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| q              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| r              |             |          |           | 4             | 2        | 6         | 2         | 2         | 4         | 1            | 1        | 2        | 1              | 3         | 4         | 2        |          | 2        |
| s              | 3           | 2        | 5         | 2             | 5        | 7         | 2         | 2         | 4         | 1            | 2        | 3        | 2              | 3         | 5         | 1        |          | 1        |
| t              | 4           | 1        | 5         |               |          |           |           |           |           |              |          |          | 7              | 3         | 10        |          |          |          |
| u              |             |          |           | 1             | 1        |           |           |           | 2         |              |          |          |                |           |           | 1        | 1        | 1        |
| v              |             |          |           |               |          |           |           |           |           |              |          |          |                |           |           |          |          |          |
| <b>Totals.</b> | <b>9</b>    | <b>7</b> | <b>16</b> | <b>7</b>      | <b>8</b> | <b>15</b> | <b>12</b> | <b>12</b> | <b>24</b> | <b>3</b>     | <b>5</b> | <b>8</b> | <b>12</b>      | <b>10</b> | <b>22</b> | <b>4</b> | <b>4</b> | <b>8</b> |

and August are always the months of greatest mortality from these diseases. As in contrast with these, and showing the uniformity in the mortality from diphtheria, we find there were in the four months—June, July, August and September, 43, 41, 47 and 42 deaths respectively. From fevers there was a steady increase in the mortality during these four months; there being 16, 25, 29 and 32 deaths, respectively, in the four months; just twice as many in September as in

June. During the three previous months the mortality from small-pox in Montreal increased from 22 deaths in June, to 52 in July, and to 250 in August; while in September there were 829 deaths from this disease. There were no other deaths from small-pox in any of the cities during the three months, excepting one in Quebec in July, and two in St. John in August. In September there was one in Quebec, one in Ottawa and three in Sorel.

THE EDITOR.

A RECENT examination of the eyes of 618 pupils in one of the high schools in Chicago discovered only 128 whose eyesight was perfect; 31 per cent. were far-sighted and 22 per cent. near-sighted. The examination seems to have been carefully and scientifically made. The age of the pupils ranged from fourteen to twenty. The cause of this alarming percentage of defective visions was attributed to the positions which the pupils occupied during the hours of study. In younger and lower classes a smaller percentage of abnormal visions was found, thus quite conclusively proving that the schools are causing it. In the rooms, generally, the proportion of lighting surface, glass area, to the floor surface was less than 25 per cent. The best authorities claim that there should be at least 30 per cent. These facts should be kept in mind by teachers and architects.

TEACHINGS OF THE PARIS CHOLERA EPIDEMIC.—Dr. Dujardin-Beaumetz recently communicated to the French Academy of Medicine some interesting data concerning the recent epidemic of Asiatic cholera in Paris (*Deu. Med. Zeit. in Therapeutic Gaz. Phil.*) The first case appeared during the 3rd, the last on the 15th of November. November 5th, when the general condition of the city was one of remarkably good health, there were already reported in Paris, at several places simultaneously, some ten or fifteen cases. The epidemic rapidly increased up to the 10th. Comparing the mortality of this epidemic, viz., 4.05 deaths for each 10,000 inhabitants, with that of former epidemics, the following result is obtained: 1832, of 10,000 inhabitants, 234.16 died; 1873, 46 died; 1884, 4.05 died. This proves the gradual but certain decrease in

the severity of the epidemics. In Toulon last year 699 persons died of the cholera, viz; 12.6 of each 1,000 inhabitants; but considering the great number of individuals that left the city, or suffered from the disease somewhere else, the mortality-rate has in fact been a higher one. The same may be said of Marseilles, where 49.4 died of each 10,000. Certain it is that weak and sickly persons, as also specially "topers," contributed by far the greatest majority of deaths. An attempt to connect the march and spread of the disease with the distribution of the water had to be given up. But the information has been, nevertheless, gained that in the sections most affected water from the Ourcq was the one by far the most used. Of special salutary effect seem to have been the police measures for the transport and the disinfection of the sick and their residences.

LANDLORDS AND UNHEALTHY HOUSES.—The decision arrived at in a case (*Chichester v. Lance*—London, E., *Lancet*, April 25, 1885), which was tried before Mr. Justice Wills and a special jury, is another step in favor of tenants who seek to make their landlords responsible for the sanitary state of the houses which have been let to them. In this special case the defendant had effected some so-called improvements, but the work was so carried out as to be ineffectual; and typhoid fever having occurred in the house the plaintiff has secured judgment and damages to the extent of £40. Landlords will have to understand that when they let premises as dwellings it must be regarded as an essential part of the transaction that the premises are adapted to healthy occupa-

## EDITOR'S SPECIAL CORNER.

**T**RAVELLERS—and who is not something of a traveller?—should be, if they are not, more deeply and vitally interested than any others in the condition of railroads. In travelling there is something more than rapidity of transit and the cost of it to be considered. Safety is of the first importance and should first of all receive attention—safety to life and health. Unless there are some glaring defects in a road or its equipments or there have been a large number of lives destroyed upon it, people when about to trust themselves and their life upon it, rarely take into consideration the condition of the track and the cars and the stations. A road with its rolling stock which is in only a fair or even good condition is not so safe as one in a first class condition. We may bring this to bear upon the great highway of Canada—the Canadian Pacific Railway, which forms so large a part of the great Atlanto-Pacific link that will bind together the two oceans and place the people of their shores within a few days of easy reach of each other, and of which every Canadian should be proud. The road, it is well known, is most substantially built, and the rolling stock is creditably said to be superior to that on any other railroad on the continent. All classes of cars upon it are most admirably constructed, and the parlor and sleeping carriages are unequalled as they relate to both elegance and comfort. Though no railroad cars are yet so constructed as to afford good means of ventilation—and here is presented a good field for inventive genius—we have observed more than usual attention given by the officials on the Canadian Pacific to the means at command, which are the best known, for changing the air in the cars. The closets too of both the cars and stations, so far as we have been able to observe, are clean and well kept. These are all points of vital consequence to anyone travelling.

BETWEEN Ottawa and New York more direct railway communication is much needed. Easy and direct communication between the capital of the Dominion and the great continental metropolis is very desirable and would be a great advantage to Ottawa. The route by way of Montreal is a round-about one. That by way of Prescott and Ogdensburg and thence by the Rome, Watertown and Ogdensburg Railway and the New York Central is much the most direct, and the shortest and easiest route. It provides elegant parlour and sleeping cars through without change between Ogdensburg and New York. Between Ogdensburg and

Rome, the road is in excellent condition, and the trains run smoothly and keep good time. The road is in no appreciable way inferior to the best lines on the continent. On the New York Central, which, with its four tracks and enormous traffic, is in itself a wonderful institution, one obtains a good view of most of the charming scenery along the Hudson. There are some most magnificent parlour and sleeping cars on this road, and everything is worked most orderly. The comfort, convenience and safety of the passengers appear to be the chief consideration in everything.

WHEN the Ontario and Pacific Railroad is built, a line connecting it, from across the river opposite Cornwall, with the Adirondack Railroad at North Creek would give the most direct and shortest route to New York from Ottawa. We trust that before many years have passed away this city will have the benefit of such a line completed.

THE approaching colonial exhibition offers to Canada the grandest opportunities ever afforded for showing to the world what the Dominion really is and can do. The time is opportune, the North-west rebellion having brought the country more prominently, perhaps, than ever before to the notice not only of Great Britain but of Continental Europe. Every true Canadian will without doubt assist in endeavouring on this great occasion to put Canada in her true place as the premier colony of the Empire. And there is not one who cannot do something, and we trust everyone will do something.

FALSE teaching, intentional or unintentional, is a serious matter for any to indulge in. It is universally conceded that bread is a food, and to teach this in the schools is quite proper. But probably not a tenth part of the civilized human race concede that alcohol in moderate quantity is a poison or injurious to the human organization, and the latest scientific investigations go to show that, on the contrary, it is a food; yet there are those who are demanding that the poison theory be taught in the public schools. As *The Week* (Oct. 22) gives it; "No false teaching can, in the end, be wholesome. The child is made to repeat an exaggerated and untenable doctrine which it believes only so long as it is a child. Going out into the world it finds that the beverage which in the textbook is called a deadly poison, and described as the drink of the vicious alone, is in fact not poison at all, and is used by all civilized nations and by many of the most virtuous of mankind, It then tramples on the false precept, and perhaps tramples on it with a vengeance."

From the earliest historical times, as many and many a time it has been written, there has not been a race of men who were not in the habit of using some form of alcoholic beverage. In the words of J. P. Stevens, M.D., of Macon, at a recent annual meeting of the medical association of Georgia, U.S.; "Wine within and oil without seem to have been regarded as the *summum bonum* for attaining the highest development in the direction of physical and mental activity. It would appear, therefore, that alcohol in some form is a necessity of the animal economy." Muntz declares that he has discovered traces of alcohol in cultivated soil, rain water, sea and river water and the atmosphere. Steinwitz says: "I feel compelled to believe, in advance of Leibig, that *alcohol is absolutely generated in the digestive process of all animals*. . . . That alcohol has not been found in the blood seems to result chiefly from the fact that it must be sought in arterial blood, or blood which has not lost a portion of its carbon *in transitu* through the lungs in the respiratory process." Again quoting from *The Week*: "What will be the condition of the child's mind when it reads in the authorized text-book that to drink wine is a sin, and in the Gospel that Christ and his disciples practiced that sin, while Christ himself performed a miracle to furnish others with the means of sinning."

INTEMPERANCE in anything is lamentable, and most so of all is it, morally and socially, if not physically, in the use of alcoholic beverages; and it is a terrible evil. The great question is, how to abate it? While, doubtless, the larger portion of "prohibitionists" are as sincere and conscientious as they are earnest, it is not easy to understand by what process of ratiocination they reach the conclusion, in the present state of scientific knowledge, that alcohol in small quantity is a poison; or, in the present state of society, that by prohibition a condition of true temperance can be reached; or that in view of the universal, long continued and almost unrestrained use of such beverages, it would not be best to first try to suppress by far the greater part of the evil, the use of ardent spirits—the direct cause of nearly all the drunkenness,—and permit the use of wine and beer. We are strongly in favour of very stringent laws in relation to the manufacture of and traffic in ardent spirits.

To avoid receiving into the body infection—the germs of infectious disease—is the one great preventive of the spread of epidemics. It is universally conceded that there never is a case of infectious epidemic disease which has not developed from the germ or seed of another

case; just as there never is a stalk of wheat that has not developed from a grain of wheat planted in a suitable soil. As regards the public, then, to perfectly isolate, or, as our French-speaking brethren have it, to segregate, all cases of any such malady is to prevent the spread of it. As to individual precautions, when one is necessarily in the presence of a case of small-pox or any contagious disease one should keep the lips closed and breathe only through the nostrils. One would undoubtedly be still safer with a bit of cotton-wool in each nostril, or with a layer of cotton batting over the nostrils and mouth. The infection will not then be likely to get into the lungs or the blood. That it may not get into the stomach, if one has handled anything in an infected room, the hands should be well washed or disinfected immediately after.

THE great philanthropist, Howard, when asked what precautions he used to protect himself from infection in the prisons and hospitals which he visited, responded: "I here answer once for all that next to the free goodness and mercy of the Author of my being, temperance and cleanliness are my preservatives. Trusting in Divine Providence, and believing myself in the way of duty, I visit the most noxious cells, and while thus employed I fear no evil. I never enter a hospital or prison before breakfast, and in an offensive room I seldom draw my breath deeply." We need hardly add that the shorter time one remains in an infected room the better.

The special ventilation season is at hand. Freely open doors and windows can not be longer indulged in. How to provide ourselves with abundance of the first essential of life, in a state of purity in doors in cold weather, and to keep warm without a too great expenditure of fuel and avoid drafts, is a question not easily answered in a practical way. We have studied the question a good deal and experimented a good deal, and are convinced that the great point is, in ordinary practice, in having the foul, breathed air of a room or dwelling withdrawn by free openings into a warm chimney or stove pipe, when the outer pure air will force its way in through the cracks and crevices to take the place of the foul air.

Youth should not hear of anything that may awaken unchaste desires until they are acquainted with the dignity and loftiness of human nature. Youth should endeavor to obtain a ripe development by means of effort. Parents are the proper educators. Education should extend over the whole period of youth.—*Pythagoras*.

## OBSERVATIONS AND ANNOTATIONS.

A NEW YORK lady of fashion has made a trial of the tricycle in Central Park. An exchange says, she moved with ease, grace and moderate speed, and seemed abundantly able to sustain comparisons with the ladies in side-saddles. When the novelty is worn off, the vehicle will undoubtedly be used considerably by ladies who desire to add to their recreations the pleasure of a little muscular activity. The carriage is too quiet; the saddle too severe for delicate organizations; and walking, beyond narrow limits, is apt to become monotonous and depressing.

The United States Navy annually takes into its service a large number of apprentice boys. The first question to a boy who desires to enlist is, "Do you smoke?" The invariable response is, "No, sir," but the tell-tale discoloration of the fingers at once shows the truth. The surgeons say that cigarette smoking by boys produces heart disease, and that in ninety-nine cases out of a hundred the rejection of would-be apprentices on account of this defect comes from excessive use of the milder form of tobacco.

At a late meeting of the Royal Geographical Society Mr. Johnston gave an interesting account of his visit to the great mountain of Eastern Equatorial Africa. The cultivated zone he found ceased at an altitude of about 5,500 feet, when he entered a healthy district with pleasant grassy knolls and many streams of running water. Stunted forests succeeded, the trees being hung with ferns and creepers. At the altitude of 10,000 feet huts were necessary to protect the men from the cold, the thermometer falling below freezing point every night. Provisions were brought in by the natives in abundance and cheap, and Mr. Johnston was able to enjoy delicious beefsteaks at an altitude of 11,000 feet. The region of vegetation continues to about 15,000 feet, but after that there are stones and snow, with a cold driving mist.

DR. DRAPER, of the Meteorological Observatory at Central Park, New York city, has called attention to the fact that during the past eight years there has been an apparent connection between the death-rate from pneumonia in New York and the presence of ozone in the atmosphere.

A SCHEME is on foot, it appears, to establish a botanic garden in Montreal. A tract of seventy-five acres of land near the base of the mountain is promised by the city, and subscriptions are solicited for the means to fit it up and supply collections.

A MADRID correspondent of the *London Times* forcibly illustrates the connection between dirt and disease by an account of the bad sanitary condition of the former city, where cholera has lately destroyed so many lives. It appears that the sewers are badly constructed as to shape, which renders circulation slow, and that their porosity is such as to give rise to the belief that serious pollution of the soil has occurred.

THE Massachusetts State Board of Health continue to follow up the use of arsenic in manufactures under all its disguises, and still find the poison in dangerous proportions in papers of various colors, particularly in the glazed papers of fancy boxes, cornucopias, confectionery boxes, etc., concert tickets, and playing cards, and in children's toys and articles of clothing. "German fly-paper" contains arsenite of sodium, and is dangerous in more ways than one. The "Buffalo Carpet Moth Annihilator" contains 67.26 per cent. of crystals of white arsenic, and "Rough on Rats" contains white arsenic crystals.

The Swedish papers report that a crane, shot at Orkened, in Scania, on the 19th of June, which had previously been wounded in the wing and was much exhausted, bore a card containing the verse—

"I come from the burning sand,  
From Soudan the murderer's land,  
Where they told the lie  
That Gordon would die."

DR. R. HARVEY REED, of Mansfield, Ohio, says the *Popular Science Monthly*, after a study of the subject as it affects his own State, concludes that among the results of the destruction of the forests and the drainage of the land are more wind, more humidity, more rainfall, more dust, more sudden dashes of rain; more sudden changes from one extreme to the other of temperature and moisture; more rapid transmission of water from the periphery to the great basins; robbery of the natural regulators of distribution; and diminution of the common supply of springs and wells. These changes have been followed by a decrease of all forms of malarial diseases, and an increase of typhoid fever, catarrh, deafness, and chronic pulmonary troubles, and the increase in wind and dust favors the spread of zymotic and contagious diseases.

It is said a French oculist has replaced with a rabbit's eye the eye which he had removed from a young girl. Query: will the rabbit's eye grow as the girl grows?

Young ostriches are warmed out of their shells by incubators in California, and it is said,

manifest great astonishment when they discover they are not in an African desert. They have not yet become accustomed to being born on this continent.

DR. ERNEST TIETJEL, a physician of New York, who resided several years in Tokio, Japan, has received from the Mikado the decoration of the Order of the Rising Sun, as a recognition of services rendered to the National Board of Health, of Japan. The decoration carries with it a high political rank.

EDGAR ALLAN Poe's mother-in-law, Mrs. Clemm, was a model woman. The poet did not like to be alone and she used to sit up with him until four o'clock in the morning. "He wrote and she dozed, waking every hour or so to give him a cup of hot coffee. At home (she writes) he was simple and affectionate as a child, and during all the years he lived with me I do not remember a single night that he failed to come and kiss his 'mother'—as he called me—before going to bed."

DR. WILLIAM HAYES WARD, of the N. Y. *Independent* was in Bulgaria last year. He says, "The Bulgarians are the most ambitious of all the late subjects of the Turkish Empire, and they are perfectly crazy for self-government and education. They have had less culture than many of the Armenian races, who have an almost equal ambition to form a nationality of their own. But there are a superior vigor and executive capacity among the Bulgarians. The training they have had is almost entirely American. The leading men are graduates of American schools, and have studied American constitutional law."

SALAMON the Black President of Hayti, has a French wife of great intelligence and courage. She has helped him over many rough places, and is very popular among the Haytiens. Although a white woman, she considers herself identified with their interests and welfare."

LADY DUFFERIN, says *Harper's Weekly*, has distinguished herself by establishing in India a national association for supplying female medical aid to women. The scheme is to educate native women to be nurses and midwives as well as physicians. Skilled women physicians will be imported from Europe and America to act as teachers. Lady Dufferin has accepted the presidency of the association. She is an accomplished woman, of noble impulses and exquisite tact, and this enterprise promises to be potent in the emancipation of Indian women. Meanwhile it will relieve much suffering in a country where social customs do not allow a sick woman to consult a male physician, but permit her to languish and die in solitude.

DURING the past forty years, in the United States, there has been a decrease in the per capita consumption of distilled spirits of fully forty per cent., an increase of sixty per cent. in the per capita consumption of wines, and the enormous increase of six hundred and forty-two per cent. in the per capita consumption of beer and other malt liquors.

THE uses of paper, on side of its ordinary commercial purposes for printing, writing and wrapping, are constantly increasing; its great cheapness suggesting its employment for widely differing purposes. Some of its latest uses seem very curious, but are not more so than its employment as car wheels, in which it has been very successful. It is, in fact, one of the most adaptable products of the hand of man. One of the most remarkable uses is the manufacture of zylonite, which can be made in imitation of horn, rubber, tortoise shell, amber and glass, and adapted to a wide variety of uses, one of its most valuable being an imitation glass for cathedral windows.

ONE of the neatest retorts ever made in Cambridge Massachusetts, was a brief response lately given by a young lady to an undergraduate who offered her, with some hesitation, his seat in the horse-car. She got in with an older companion; the car was crowded, and two young men sat near. One gave his seat at once to the older lady; the other kept his place. His friend asked him—disguising it, however, in German—why he did not give his place to the young lady. He answered, in the same language, "Because she is not pretty enough." After a little reflection, however, he, too, rose and surrendered his seat. The young lady took it, and thanked him—in German. Since the world began I do not think that an extinguisher was ever more effectively dropped upon an impertinent you'h.

A BIRD, according to the London *Graphic*, has been discovered in South America, which is born with four feet. One pair of feet remain such and the other pair gradually change into wings. The writer a few months ago saw at the rooms of Mr. N. P. Melville, taxidermist, 319 Yonge street, Toronto, the stuffed skin of an entirely wingless bird, from New Zealand. Only its technical name—*Owens Aptery*—was given. It presented a pretty appearance and was of a mottled gray color, with three cross bars of a darker shade on each feather. It was about 18 inches in length, with a bill more than 3½ inches long. Mr. Melville had many other curiosities.



## DOMESTIC DEPARTMENT.

### HOUSEHOLD HINTS.

**MANAGEMENT OF SERVANTS.**—The *Herald of Health* says—choose your servants with care. If you cannot trust them, discharge them. Be firm, but do not fuss about trifles; remember they are human beings with like feelings and passions to yourself; and give a word of encouragement now and then—it is worth its weight in gold. Never take them, however, into your confidence with regard to your affairs; they look upon things from a totally different standpoint. The Mistress gives tone to the home. If she is careless and loose, they will be. If she is a scold, they will not respect her. If she is open-hearted, generous, industrious, careful and wise, the chances are those beneath her will be the same. Grave responsibilities rest upon you, and you are, in part at least, to blame if, through negligence and neglect of sanitary matters, illness comes into the house. An unhealthy home cannot be a happy one.

**PLANTS** may be watered at any hour of the day except when the sun is shining on the pot, or has just left it; for the earth gets hot when the sun shines on it, and then if cold water is poured upon the plants they will cool off too rapidly. The best time for watering flowers in summer is the evening, and in the winter time noon is preferable. Rain or brook water is the better for watering purposes.

A FINE effect for rockwork of indoor ferneries is obtained by applying two coats of boiled oil and ground black, then varnishing with oak varnish and afterwards touching up projecting points with gold bronze mixed with varnish and gold size.

**AMONG PARLOUR ORNAMENTS** is a miniature easel bearing a richly colored porcelain fan.

**CORN STARCH** makes the best paste for scrap-books. Dissolve a small quantity of it in cold water, then cook it thoroughly. Be careful not to get it too thick. When cold it should be thin enough to apply with a brush. It will not mould nor stain the paper.

**TO CLEAN** hair brushes, put a little ammonia or borax in a saucer, fill it with water, and put the brush in this to soak. A little alum added helps to stiffen the brush. When it is rinsed and placed to dry, be sure to put it in such a position that the water will run out, but do not lay the brush upon its face, it is better to hang it up.

**TO RESTORE** rusted and tarnished brass, rub with fine emery cloth or dip the metal in diluted nitric acid and then rub with sawdust; finally apply brassoline.

### NOTES ON COOKING.

The art of arranging and serving dishes for the table is an accomplishment in itself. It is very reasonable that all things that go to make up beauty and harmony at the dinner table should add, as they undoubtedly do, to the appetite and digestibility of the food. One common article of food is the potato. If properly boiled in their jackets they are excellent; but the

trouble is they are often *not* properly boiled. They should be boiled slowly, and not too long or they will become water-soaked and indigestible. Put them over a brisk fire and keep boiling briskly until done, then drain well, sprinkle a little salt over them, put again on the fire for a few minutes to dry thoroughly, when you will find them white, mealy, and delicious.

Baked potatoes are great favourites with most people. Select medium sized smooth-skinned potatoes; wash and dry carefully, put in a medium oven for three quarters of an hour. Serve very hot in a dish *without* a cover.

Fresh meat (unless for soup) should be put to cook in boiling water.

Salt meat requires much longer boiling, and should be put to cook in cold water, and boiled slowly.

Both meat and poultry will cook quickly if a little vinegar be added to the water in which they are boiling.

If there is a doubt about the odor of poultry, a little soda added to the water in which they are cleansed will remove it.

Cauliflower should be tied in a cloth to cook.

Keep celery in the dark, and either in water, which should be changed once a day, or with a wet cloth wrapped about it.

Neither baked nor boiled potatoes should be covered after being taken from the fire.

A good blanc-mange is made as follows:—Sweeten and flavor one quart of very rich milk to taste, and set it over a slow fire; when it boils stir into it one ounce of gelatine which has been dissolved in a little water, stir steadily until it boils for a few minutes, then pour into moulds. A very nice blanc-mange is made by using cream instead of milk, or part cream and part milk.

Delicious blanc-mange is made thus: One quart of new milk, four table-spoonfuls of corn-starch dissolved in one pint of milk; set the milk over the fire, add three table-spoonfuls of sugar; when it boils stir in the milk in which the corn-starch has been mixed; as soon as it begins to thicken add two cupfuls of grated cocoa-nut, stir lightly, then pour quickly into a mould, and set away to get ice cold. Serve with cream. The cocoa-nut must be freshly grated, and not packed in the cups when measured.

Another kind of blanc-mange is made by adding grated chocolate to gelatine blanc-mange.

If the B mt put :  
If the B . putting :

Otherwise rendered

If the grate be empty put coal on [.]

If the grate be full stop [.] putting coal on [.]

## NOTES ON CURRENT LITERATURE.

THE FIELD OF DISEASE, A BOOK OF PREVENTATIVE MEDICINE, by BENJAMIN WARD RICHARDSON, M.D., LL D., F.R.S., Fellow of the Royal College of Physicians, and Honorary Physician to the Royal Literary Fund. Philadelphia: Henry C. Lea's Son & Co.; (over seven hundred pages in one octavo volume). This was a most valuable contribution to the literature of preventative medicine, well calculated to interest both professional and non-professional readers. As the author writes in his preface—"I have written this work for those members of the intelligent reading public who, without desiring to trench on the province of the physician and surgeon, or to dabble in the science and art of medical treatment of disease, wish to know the leading facts about the diseases of the human family, their causes and prevention. Any one, therefore, who opens this work with the expectation of finding in it receipts and nostrums will not have that expectation fulfilled, and will discover reference to no remedies except such as are purely preventative in character." The author treats the "Field of Disease" under such heads as the following: General Diseases Affecting Mankind; Local Diseases; Acquired Diseases, from physical agencies and from mental agencies; Origins and Causes of Diseases; and Practical Summary on Preventions of Disease. It is quite a different book from the usual works on public health or sanitary science. There is no other work in the language in which the information given in this book can be found so systematically, conveniently and intelligibly arranged and presented to the reader.

HOW TO DRAIN A HOUSE: Practical information for householders. By GEORGE E. WARING, JR., M. Inst. C.E. New York: Henry Holt & Co. Pp. 222, with twenty illustrations; price \$1.25. We have already briefly mentioned this excellent little book, but it is worthy of a more extended notice. Colonel Waring has given long and attentive study to the subject of house drainage, and as a result he has views of his own upon the subject which will be found stated in the present volume. Not that by any means the book has been written merely to promulgate the author's own views; it is rather a guide in a field of unsettled methods. The author holds that there has been unquestionably a steady improvement in recent years in dealing with the difficult problems of the disposal of household waste: each step, however imperfect in itself, being better than the condition of things which preceded it. Such, indeed, have been the progress made and the success achieved as greatly to strengthen the expectation [that an ideally perfect system of house drainage may soon become an accomplished and accepted fact. The book abounds in practical common-sense suggestions, and is certain to prove valuable to all house-constructors and house-keepers who are seeking correct information upon the subject. The preliminary remarks on house drainage and health are very impressive and decisive, and the explanation of principles and the description of plans and construction are full, clear and intelligible.

HARPER'S MAGAZINE for November concludes the seventy-first volume. It is an exceptionally good number, richly illustrated. The frontispiece is a masterly engraving by BRNSTROM of "The Other Hunt," one of Sir Edwin Landseer's most characteristic paintings. The number opens with a very interesting article by LUCY C. LILLY, entitled "An Indian Journey." The article and its illustrations faithfully and vividly reproduce the features of a New England autumn, and at the same time are retrospectively associated with the scenes of early con-

flicts with the savages. The illustrations are from drawings by Mr. and Mrs. R. SWAIN GIFFORD. A striking paper in the number is DR. WHEATLEY'S article on "The New York Stock Exchange." It is a thorough exposition of a most remarkable institution, and is superbly illustrated. While the article is not a denunciatory sermon against the evils of speculation, it clearly shows that much more than one-half of the brokerage business consists of fictitious sales. MR. EDWARD HOWLAND'S paper on "The Familistere at Guise, France" is a timely and important social study, based upon M. Godin's recent experiment of associating his workmen with himself in such a way that they are not only wage-earners but participants in the profits of the industry carried on by him at Guise. The HON. JOHN BIGELOW contributes "Some Recollections of Lord Houghton." Act II. of "She Stoops to Conquer" is concluded in this number, with six illustrations by E. A. ARNEY. MISS WOOLSON'S "East Angels" and MR. HOWELL'S "Indian Summer" are continued. There are two excellent short stories—a humorous sketch, entitled "The Singular Case of Mr. Samuel Spoolin," by F. ANSFREY (author of "Vice Versa")—especially good—illustrated by REINHART; and "The Captain of the Heather Bell," by the late HELEN HUNT JACKSON. The poems of the number are exceedingly good. MR. G. W. CURTIS opens the *Easy Chair* with an interesting study of the importance of the individual as illustrated in history; and MR. WARNER opens the *Drawer* with a humorous delineation of some old and once familiar types of American character, now rapidly disappearing. The publishers announce that the December issue will be a brilliant and attractive Christmas Number.

IN THE CENTURY for October the space commonly taken up with the War Series has been devoted to articles and illustrations relating in a timely and important way to the life and services of General Grant. There are a number of papers relating to the general, abundantly illustrated. "Riverside Park," where his body lies, and a charming place, is the subject of a paper by William A. Stiles, which is illustrated with several drawings by Alfred Parsons and Harry Penn. Other illustrated articles of the October number are Lieutenant Schwatka's second and concluding paper on his explorations in Alaska; Mrs. Lizzie W. Champney's description of "The Haunts of American Artists," profusely illustrated with pictures of country studies; and Mr. Howell's "Tuscan Cities," illustrated with numerous etchings by Pennell. A portrait by the late Samuel Boyles, the famous editor of the *Springfield Republican*, is the frontispiece of the number. His career is described by George S. Merriam, in a paper entitled "A Study of Independent Journalism." Principal Grant, of the Queen's University, Kingston, Can., writes a timely paper on "The Canada Pacific Railway." Brander Matthews contributes the short story of the number, which is called, "Love at First Sight." The subjects discussed in "Topics of the Time" are "North and South," "Prejudice and Progress," and "Civic Rivers." In "Open Letters," some of the papers are Mrs. E. S. Willard's account of life in "The Chilcat Country," Alaska, and "Police Reform" by L. E. Dudley. There are some good poems, and altogether the number is an exceedingly good one.

ST. NICHOLAS for October is the twelfth and last number of the current volume—the last course—in the feast of good things which the generous old Saint has spread before his readers during the year. And as we usually reserve for our dessert some specially savory delicacies, so in this number are

some of the cleverest contributions that have appeared during the year, notably the "Garden of Girls" story, by Celia Thaxter, entitled "Peggy's Garden, in which the author shows that she is a poet, even when writing prose. The boys who have been playing ball all summer will enjoy the story by a baseball expert of "How Science Won the Game," which contains practical directions for pitching the "out" and "in" curves. E. S. Brooks tells about another "Historic Girl," "Pulcheria of Constantinople," and how she afterward became an Empress. In the "From Bach to Wagner" series, Agatha Tunis writes about Mendelssohn, whose bright and happy boyhood stands in pleasant relief to the lives of many great musicians. Palmer Cox relates in his inimitable and very funny pictures and verses the adventures of the Brownies at School." Mr. Trowbridge finally extricates his hero from the difficulties in which he had been involved by "His One Fault," and Mr. E. P. Roe disposes of the happy family that has been "Driven Back to Eden"—the two serial stories that, like all other good things, must at last come to an end.

THE POPULAR SCIENCE MONTHLY for November commences with an illustrated article by T. W. Mather on the subject of "Flying-Machines." It gives a history of the chief inventions of that kind, and a great deal of information on the scientific problems and conditions involved and the reasons for believing that the navigation of the air is practicable. "Modern Science and Modern Thought" is a readable and vigorous article from a new English work under that title by S. Laing, M.P. The liberal tendencies of modern opinion following the revolution of scientific ideas are presented in a very effective manner. The first and principal portion of Sir Lyon Playfair's address before the British Association at Aberdeen is given on the "Relations of Science to the Public Weal." This elaborate discourse will be finished in the next number, and will be memorable as the most thoroughgoing defence of state intervention in scientific matters that has been given. Sir Lyon, the "prince of scientific politicians," is president of the association, and better prepared to talk on this subject than any other man of his time. His biography and portrait are also given. "A Free Colony of Lunatics," by Henry de Varigny, is a fresh and instructive account of the remarkable experiments at Gheel, in Belgium, concerning the treatment of the insane, which have long attracted the attention of the world. The brilliant and versatile writer, Professor Grant Allen, discourses charmingly on the rural subject of "Clover," and John F. Hume offers some important "points" on "The Art of Investing." There is a strong article by Professor Eggert, of the Iowa University, on "The Problem of Higher Education." He takes the liberal side on the classical question, and throws a good deal of light on the historical study of Greek, and especially on the treatment of that subject in the higher schools and universities of Germany. "The Motor Centers and the Will" is an able paper, by Dr. Horsley, and well illustrates the steady progress that is being made in unraveling that mysterious subject. The number is one of more than usual interest.

LITERARY LIFE (Elder Publishing Co., Chicago) continues to improve with extraordinary rapidity under its new editor, Mr. W. R. Bradshaw, and is now by far the best magazine published in the West, and no unworthy rival of the big monthlies in the East. The

September number was especially interesting to Canadian readers because of its containing the article by our very popular, readable, and industrious Canadian author, Mr. J. Macdonald Oxley, of Ottawa, which carried off the prize in the extensive epitome competition which attracted so much attention; while the October number has in it a beautiful poem by the editor, upon Lord Dufferin's home in Ireland, an attractive feature for all who remember the genial Governor-General. Besides this there is a capital paper by E. P. Roe, upon "Literary Inspiration"; a continuation of Joaquin Miller's remarkable poem "The Sword of the South," with many other valuable articles and a wealth of illustrations, at the absurd price of one dollar a year. *Literary Life* is a marvel of cheapness, and a better literary investment of the money could not be made.

AMERICAN NEWSPAPER ANNUAL, 1885. Philadelphia: N. W. Ayer & Son. The publishers have evidently taken great pains to make this work complete and correct up to the day of going to press. It contains a fully descriptive list of newspapers and periodicals in the United States and Canada. Another list, descriptive as to distinctive features and circulation, of newspapers inserting advertisements; a third list, of class and professional publications, and publications in foreign languages; with a great deal of other information about newspapers. The book also contains an alphabetical list of cities, towns and villages in the United States having a population of five thousand and upward. Altogether it is probably the best newspaper director published, and highly creditable to Messrs. Ayer & Son.

THE SANITARIAN for September is well filled with highly instructive matter. There are elaborate papers on "Rules for the Hygienic Treatment of Pulmonary Consumption," by B. W. Richardson; "Diet in Relation to Age and Activity," by Sir Henry Thompson; and "Cholera Reminiscences of the Past and Lessons for the Present," by W. H. Watkins, M.D., Sanitary Director of the New Orleans Auxiliary Sanitary Association. The danger from, and disinfection of, rags are treated of, as are also Railway and Municipal Sanitation. The "Editor's Table" contains some valuable notes and comments.

CHOLERA, ITS NATURE, SYMPTOMS, HISTORY, CAUSE AND PREVENTION, with an outline review of the German theory of the disease, by J. B. McCONNELL, M.D., Professor University of Bishop's College, Medical Department, Montreal.

MEDICAL EDUCATION, by HENRY LEFFMANN, M.D., D.D.S., of Philadelphia. (Reprinted from the Proceedings of Society).

CO-OPERATION OF CITIZENS IN PREVENTING THE SPREAD OF DISEASE, by REV. W. A. MASKER, of East Saginaw.

THE PUBLIC HEALTH SERVICE OF MICHIGAN, by HON. JOHN AVERY, M.D., of Greenville, President of the State Board of Health.

employment and more in excellence of achievement, While what we do unquestionably influences what we are, it is equally true that what we are influences and determines the real value of what we do.

## WHAT OTHERS SAY OF "MAN."

### OPINIONS OF THE PRESS,

A new candidate for public favor, which seems in every way worthy of it, has presented itself in Ottawa under the comprehensive designation of MAN. The editor, Dr. Edward Playter, is already well known as a hygienic writer of ability, and has the reputation of being an accomplished scholar as well as a man of science. His staff of contributors comprises some of the best names in Canadian literature, such as the Rev. Dr. Scadding, author of "Toronto of Old"; Mr. J. G. Bourinot, F.R.S., the first constitutional authority in Canada; Roberts, the New Brunswick poet and author of "Orion"; our old colleague, Fred. Colson; the Rev. Principal Nellis; Stewart and Collins, the historians; Dr. J. B. Hurlbert, A. J. Morgan, J. Macdonald Oxley, A. Lammpan, one of the most promising of our youthful writers, Bengough, and others.—*The Gazette, Montreal.*

Dr. Edward Playter has assumed the role of editor. . . He is promised literary assistance from well-known Canadian writers, some of whose names appear to papers in the initial issue. Both on account of its excellent programme as formulated in the salutatory editorial, and on the ground of its attractive get-up. . . MAN appears to merit the sympathy of cultivated readers.—*The Week, Toronto.*

The programme laid out by the journal is ambitious, and if it realizes a tithe of its aspirations it will achieve a great work. There is room for the publication, and it should meet with popular favor.—*Free Press, Ottawa.*

MAN is the concise title of a new journal, published in Ottawa, under the editorial supervision of Dr. Edward Playter, assisted by a corps of the first writers in the country. The opening number is really very able and spirited, and contains a nice variety of well balanced reading matter. Dr. Playter is one of our best writers, and a good and well conducted journal may confidently be expected from him.—*Morning Chronicle, Quebec.*

The new journal has a formidable staff of contributors consisting of the best literary talent in Canada. The first number is an exceedingly interesting one, and if its high standard of literary excellence and interest can be maintained, MAN will meet with success.—*Peterboro' Examiner.*

It will provide first class family literature by some of our best Canadian writers. It is well written and well printed, and deserves . . . success.—*London Advertiser.*

MAN is very neatly gotten up, and the number now before us contains excellent and interesting reading matter . . . The above names [of contributors] are sufficient guarantee of the high standard of excellence of the new publication and demand for it a liberal patronage.—*Daily Times, Brockville.*

From the perusal we have given it we can recommend it strongly to our readers as a first class publication, one which will repay its cost many times over within the year to any person, man and woman.—*Morning Times, Peterboro'.*

It is well written and neatly printed on excellent paper . . . Aside from the managing editor, it publishes the names of fifteen of the finest writers in Canada, which is sufficient guarantee of the success we wish it.—*Palladium of Labor, Hamilton.*

It will be a relief to many to get a journal which deals with all important living questions and subjects of general interest, without throwing its space away dosing its readers with ideal discussions on politics. Healthful information is its object.—*Whitby Gazette.*

The first issue presents a very promising appearance. An excellent corps of contributors will aid to render MAN a success.—*Presbyterian Witness, Halifax.*

The field which MAN has entered upon is at present untilled, and we trust a rich harvest will reward the publishers.—*Hastings Star.*

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Communications, which must not be of great length, on all important living questions or subjects of general interest will be gladly received.

Communications not acceptable will be returned to the writer if stamps are sent to prepay the postage.

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