## JAMES THOMSON TESTIMONIAL FUND.

GLASGOW, 26th February, 1895.

DEAR SIR,

We have the pleasure to inform you that, in accordance with a strongly expressed desire amongst the numerous friends of Mr. James Thomson, F.G.S., to unite in making him a tangible Presentation, as an expression of the esteem in which he is held and in recognition of his long and honourable business and scientific career in the West of Scotland, a preliminary meeting was held and a Committee formed to take all necessary steps for the purpose.

It is felt that, in view of Mr. Thomson's great and self-acquired knowledge as a Geologist, and of his recent gift to Kilmarnock (his native town) of his splendid Palæontological collection— a collection formed entirely by himself during the scanty leisure snatched from a long and active business life—the present is a fitting time to mark the general and high public appreciation of his character and work. We have therefore much pleasure in inviting you to become a subscriber to the proposed Testimonial.

In order to give as many as possible of Mr. Thomson's friends an opportunity of contributing, we shall be glad if you will forward to the Secretary the names and addresses of those to whom you wish circulars to be sent.

Yours, &c.,

JAMES M'LENNAN, Chairman.

J. WILSON BAIN, Hon. Secretary.

#### Committee.

Chairman.

DEACON-CONVENER JAMES M'LENNAN, St. Andrew Street, Glasgow.

Ex-Provost John Babtie, Dunbritton House, Dumbarton. JAMES BARR, Esq., C.E., 221 West George Street, Glasgow. Ex-Bailie DAVID BOWMAN, 62 Nithsdale Drive, Pollokshields. JOHN CHRISTIE, Esq., Levenfield, Alexandria. ROBERT DUNLOP, Esq., Whiterigg, Airdrie. Ex-Bailie JOHN FARQUHAR, 13 Belhaven Terrace, Glasgow. WILLIAM FREELAND, Esq., Evening Times, Glasgow. THOMAS GARDNER, Esq., Ingram Street, Glasgow. BENJAMIN GILMOUR, Esq., Motherwell. WILLIAM GREIG, Esq., 57 Glassford Street, Glasgow. JAMES HALLIDAY, Esq., 12 Trongate, Glasgow. WILLIAM INGLIS, Esq., 58 Renfrew Street, Glasgow. WILLIAM KERR, Esq., 42 Hope Street, Glasgow. THOMAS MENZIES, Esq., Hutcheson's Grammar School, Glasgow. J. BARCLAY MURDOCH, Esq., Capelrig, Mearns. Treasurer DAVID M'KAY, Kilmarnock. THOMAS M'FARLANE, Regent Terrace, Glasgow. GRIEVE MACRONE, Esq., 3 Battlefield Crescent, Langside. Professor D. C. M'VAIL, 3 St. James' Terrace, Glasgow. ROBERT R. A. RALSTON, Esq., 25 Gordon Street, Glasgow. JOHN RENWICK, Esq., 49 Jamaica Street, Glasgow. ROBERT SORLEY, Esq., I Buchanan Street, Glasgow. Councillor ARCH. STEWART, Union Street, Glasgow. HENRY VALLANCE, Esq., 17 Royal Crescent, Crosshill. JOHN WALLACE, Esq., 104 Hill Street, Garnethill. THOMAS WATSON, Esq., 2 Lorne Terrace, Pollokshields.

Honorary Treasurers.

Ex-Bailie JOHN LAING, 20 Bridge Street, Glasgow. DAVID T. LAING, Esq., 20 Bridge Street, Glasgow.

Honorary Secretary.

J. WILSON BAIN, Esq., Accountant, 113 West Regent Street, Glasgow.

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Rooms: I29 Hollis St.,

HALIFAX, N. S.,

P. O. Box, 520.

# Walifax, 18th Feb'y, 1895.

Fir,

The Annual Meeting of the Mining Society of Nova Scotia will be held in the Rooms of the Society 129 Wollis Street, Kalifax, on Wednesday, 13th March, at 10.30 A. M.

H. M. WYLDE.

Sec'y-Trens.

#### I. MINUTES.

	**		
2.	ELECTION	OF	CANDIDATES

		ENDORSERS.	
A. C. Ross,	C. E. Willis.	G. J. Partington.	J. E. Henderson
Secretary Boston & Nova Scotia Coal Co.	, North Sydney.		
John W. Stairs,	C. E. Willis.	H. M. Wylde.	T. R. Gue.
of John Stairs & Co., Halifax.			
H. W. Johnstone, Jr.,	C. E. Willis.	J. E. Hardman.	B. C. Wilson.
Assistant City Engineer, Halifax.			
Hugh D. MacKenzie,	C. E. Willis.	J. E. Hardman.	B. C. Wilson.
Agent Intercolonial Coal Co., L'td., Hali	fax.		
W. C. Brine,	C. E. Willis.	T. R. Gue.	H. M. Wylde.
of H. H. Fuller & Co., Halifax.			vigitality
E. G. Kenny,	H. M. Wylde.	C. E. Willis.	T. R. Gue.
of Kenny & Co., Halifax.			
Wilbur L. Libbey,	J. E. Hardman.	C. E. Willis.	H. M. Wylde.
Brookfield Mining Association, North Bro			zar zar vv yrac.
Geo. A. Pyke,	J. E. Hardman.	G. W. Stuart.	H. M. Wylde.
President Richardson Gold Mining Co.			and the first of t
Edward Allison, Halifax.	T. R. Gue.	H. M. Wylde.	C. E. Willis.
And others names of whom			C. Di Hillis
And others, names of whom	ii wiii be sent out at	a later date.	

- 3. ELECTION OF OFFICERS.
  - (a) President.
  - (b) 1st Vice President.
  - (c) 2nd do.
  - (d) 3rd do.
  - (e) Secretary Treasurer.
  - (f) A Council consisting of nine members in good standing.
- 4. NOTICE OF MOTION.
  - (a) By A. A. Hayward: "That the office of Honorary Secretary be abolished."
  - (b) By C. E. Willis: "That the Society discontinue the "Canadian Mining Review" as the official organ of the Society."
- 5. Communications re Federation from the Quebec and Ontario Societies.
- 6. REPORT OF COMMITTEE ON LEGISLATION.
- 7. PAPERS.

Notes on a mineral collection prepared by the Government of Nova Scotia for the Imperial Institute, London.

By E. Gilpin, Jr., Inspector of Mines.

Boilers, tests and efficiency,

By W. G. Matheson.

On surface surveys and the necessity of contour surveys in gold districts in Nova Scotia, By Dr. Martin Murphy.

A novelty in coal mine ventilation,

By Alex. Dick, Editor "Canadian Colliery Guardian."

Notes on the behavior of some gold solvents,

By F. H. Mason.

Notes of a trip to Alaska and its gold mines,

By Geo. MacDuff.

# Annual Dinner.

In the evening the Annual Subscription Dinner and an entertainment will be held at the Halifax Hotel, particulars of which will be sent you at a later date, when you will be requested to advise the Committee whether you will be present or not.

Members attending the meeting, can do so at a single fare over the Intercolonial Railway on the usual certificate plan.

N. B. 1895 Subscriptions are due at this meeting.

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## GEOLOGICAL PROGRESS.

Reprinted from North Down Herald of 21st December, 1894.

Miss Alder to Professor G. A. I. Cole, M.R. I. A.F. G. S.
DEAR SIR,—Looking on yourself, Dr. Hume, Sir
H. H. Howorth, M.P., Mr. Joseph Wright and
others, as practical men, open to conviction, able
scientists and progressists in geology, I take this
mode of drawing attention to the great advance in
knowledge of the structure of the earth, which is
hid away from the public in your expressive books hid away from the pub ic, in very expensive books, scarce periodicals and "transactions" of learned societies, not comeatable easily by us outsiders, by addressing myself to you. Several articles in "Nature" in the Geological Magazine of London (editor, the elever and learned Dr. Woodward), and other publications have lately appeared, and should be welcomed as being most remarkable and easily understood expositions of the state of geologic science. First in order comes the displacement of the rist in order comes the displacement of the rotational axis of the earth, by Professor Foerster, "Nature," September 13, 1894, proving how the earth sways. Professor Foerster is Director of the Royal Observatory of Berlin—Yes! Geology depends entirely on astronomy. Then, proofs of the existence of radiolariaus and foramanifera in Pre-Cambrian Rocks by M. L. Cayeux, Geological Magazine, September, 1894. Next Mr. Joseph Wright's discoveries of foramanifera in the boulder class of Relfest and other places. Six H. H. clays of Belfast and other places, Sir H. H. Howorth has upset many false notions, and brought many facts to light, proving that glacial action does not do half the wonders attributed to it, but in the writer's opinion he wrongly supposes, that the Mammoth lived where well-preserved carcases of the monstrous beast are found, in the black earth, the Tchernozem of Russia. He will not believe that the remains were sea borne, and that both black earth and loess clay were products of the sea. fancies a freshwater flood drowned them, just as some geologists believe the bogs of Ireland were produced by fresh waters, because they now contain the remains of freshwater shells, and the fibres of heath and spagnum moss. No one has accounted for the greasy turf of Ireland, or the loess found under the tundra, because they will not see that the sea did it. If they lived as we do, where sleitch abounds and saw it turning into layers of black mould on the shore, they could not shut their eyes mould on the shore, they could not shut their eyes to the fact that animal and vegetable life is finely trivurated by the tides, and deposited layer about with sand or clay, forming at one time, great coal fields, at another wood coal, at another black earth, at another ocean peat, and in some places loess. Vast tracts of white loess overspread China, Russia, and other countries. The rivers, as the Rhine, the Dnieper, the Don, most rivers, in fact, cut through it, the great American lakes sleep in it, even our own turf bogs lie on it, but this will not be acknowledged. The white loess becomes brown or yellow as it mingles with the turfy soil, and in places, no doubt, it has been redistributed by floating ice or glaciers, and then by rivers and floods, and lastly by the winds of the desert, where it is not cemented by siliceous or cretaceous waters, or held together by the underlying drifted trees of a former sea, or the silicated trunks of such buried masses of wood as Egypt can boast of. To bring things home, our own bog fir and black oak is an example of the rest active of the restreeting transposition. home, our own bog fir and black oak is an example of the past action of the waters, in carrying timber from an immense distance to build a superstructure for a new land. The trees found buried in Irish black earth, probably were carried from America by our prevailing north-west winds, and at Ballipallidy, in Antrim, magnolias, laurels, cypresses, and many other exotic plants lie buried in what geologists hold to be very ancient strata, evidently connected with Lough Neagh when it was an arm of the sea. The greasy turf of County Antrim is most likely the residue of ancient animal remains, and I wish our local geologists would turn their attention to it; it may resemble the Ozokerite of Russia, which is sometimes used in making candles. Would that

Sir H. H. Howorth could lay aside the supposition that Loess came up out of the volcanoes, and that Mammoths lived in the icy deserts of Siberia. But how much more provoking is it to see a great and learned man still persisting that Gabbro flowed out of some wide-mouthed funnel with all its fine veins and sedimentary and banded structure, just as we see it to-day. Is it not the altered stratified mixture of iron, silica, copper, alumina, and other elementary matters chemically re-arranged after deposition from the sea? Lastly, may I venture to say with what deep interest I read of the Tachylites of the Mourne mountains, County Down, by Professor Cole in Magazine of Geology, May, 1894. He describes a tachylitic glass (as he calls it), found at Annalong, as a film on a dyke there of variolite. Another black kind he compares with the pitchstones of Arran; the real history of these is the very crux of igneous rocks, but the secret is yet to be solved, and I heartily hope Professor Cole will bring out all the facts about the tachylites or bottleites, the pitchstones, and all such minerals abounding in the granitic and basaltic rocks of Ireland. Obsidian, a vein of which occurs at Kilrea; isopyre, nearly related to flint; mellite, Lydian stone; all require a deeper study. How amorphous minerals crystallize is so far unknown, but mineralogists admit that felspar, quartz, calcedony, gypsum, magnetic iron ore, hornblende, nearly all minerals, segregate and crystallize out of masses of sedimentary matter, without any volcanic agency or heat other than their own change of state produces. Then why do geologists not acknowledge that granite, gabbro, and basalt are the result of a similar process? And why do they call flint isopyre, Lydian stone tachylite, and obsidian and pitchstone volcanic glasses, when it is plain they were segregated out of the mass of the incipient granite or basalt themselves? If it is clear that zeolites segregated out of sea borne materials, why not the rest, it having been verified that crystals of

Kinnegar, Holywood, Co. Down, December 13th, 1894.

P.S.—I have just had the honour to receive from Mr. Harry P. Woodward, F.G.S., Government Geologist, Perth., Western Australia, a reprint from the Geological Magazine of December, 1894, of the most lucid and splendid description of Australian geology; any one interested in the gold fields should get it at once. Although he writes from the point of view of an igneous theorist, his information is truly valuable, but I gather from it how coals were formed in sea valleys; how basalt was spread out by the sea; how quantities of soft clays appear (which he calls deposits of kaolin); how the Hornbleude rocks are very remarkable, looking at first like clay, but fractured are similar to Diorite; "with these recks are associated the principal mineral deposits of the colony: gold, tin, copper, antimony, lead, zinc, manganese, and iron." "No active volcanoes are known to exist in this colony," but many volcanic bombs (obsidian) appear, but I must not put my own construction on the talented author's words, which will be eagerly read, as conveying the best and most popular account of Western Australia extant. The fourth auriferous belt is situated immediately to the eastward of the granite belt, and is about 20 miles long.

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# RANKINE DAWSON, M.A. D., C.M. (McGill University; F.R.C.I.; M.R.C.A., L.R.C.P., Lond.

After taking his degree in 1882, Dr. Dawson was engaged in professional work in Western Canada for two years, during a part of which time he was in medical charge of the men employed in constructing the Canadian Pacific R. R. Manitoba. He then went to London, where a year or two was devoted to hospital work, and the qualifications, as above, acquired and registered. Subsequently four years were spent as surgeon in the P. & O. Company's service. After giving up this position, further time was given to hospital work in London, more especially in hospitals for the treatment of diseases of children and of the skin.

During the ten years referred to above, Dr. Dawson has travelled extensively in America, has visited India, China and the Australian colonies, and has enjoyed exceptional opportunities of studying the diseases peculiar to these countries, as well as of familiarizing himself with medical practice and hospital management in them.

## A Recall to Truths Founded on Facts.

Reprinted from North Down Herald of 14th and 21st September, 1894.

TO THE EDITOR.

SIR,-I consider it a duty to sound a note of warning, however weak, against the many false, misguiding theories of the day, trusting it may reverberate from the Press.

With only a glimmering and fitful glance into such subjects as the connection of life and matter, the forces of vitality, of electricity and of enforced motion, the Sciolists take upon them to thrust upon the public, as an established fact, that all diseases of the human frame, of animals, and of plants, are the direct result of contact with or contagion from microbes, bacilli, bacteria vibriones, &c. And inoculation of man and beast is the furore of the time.

Let me tell the public that scientists, by their own confession, are ignorant of what these microbes really are. They disagree among themselves as to whether they are animal, vegetable, or chemical atoms, and they know not whether they are the result of decay, or of growth. They say they can cultivate them, but the term "cultivate" cannot be applied to such increase of volume as comes from the action of yeast on malt, of rennet in milk, of leaven in bread, of vinegar in wine, yet such processes are analagous to the spread of microbes in the blood, and therefore, no doubt, the study of the cause of such changes is of vital importance to the human race. But the root of the matter has not yet been arrived at, and such too previous announcements as those of Koch and Pasteur are only ludicrous fiascos, not science at all. I would recall scientists to some indisputable facts, the primary one being-that no animal or plant, say mammal, or fish, or flower, dies of contracted disease, unless previously weakened by wound or hurt, or starvation, ormost fatal of all-climatic effects of extreme heat, or cold, or shock to the system by that inscrutable, invisible agent, which we name "Electricity." Our greatest men tell us, and that truly, that unseen vortices, acting as screws, pierce everything in nature, dividing asunder the most adamantine crystal or the tenderest flesh, rending at last the soul from the body! Here is the principle on which we have not calculated! Death, and destruction, are its office and its use. The plague, ravaging whole nations, the fever, decimating hot and cold countries alike; the virulent confluent smallpox; the black-death of former ages, when one small spot of blue or scarlet, on the breast, betokened speedy and agonising dissolution, are these things forgotten? Cholera is the direct effect of climatic change. What hecatombs of innocent animals have been basely tortured to uphold the lie that cholera is due to a living organism! No plant is seized on, and made a prey to living things, until its functions are disarranged by heat or cold, too much or too little moisture, injury from storm, or improper aliment-

or struck by the insidious power of electricity, more fully present when frost is changing water to ice. How much alive should we here in Ireland be to this, when the potatoe, our staff of life, becomes diseased, and vain attempts are made to save it from some microbe, which has no real existence? The vine when cold springs, or "druth" affects them, are said to be killed by phylloxera, when insect life begins to feed on the weakened juices of the dying plant, but they had already received their death blow when these hyenas of the microscopic insect world took possession of them. Fish found dying in rivers, after cold and stormy months, are seen to be infested with a fungoid growth, but the fungus only hastens the decay already begun, which perhaps had its origin in polluted waters, unfitted for the fishes' existence, the mould or the microbe being only the scavengers, not the destroyers of nature. The cruel Herod was eaten up of worms before he died, but his atrocious crimes had rendered him only a living corpse. So of consumption, tuber-culosis, or such like. Death is upon the patient before bacilli takes possession of the fated victim. A healthy person may swallow, or inhale them, but they do not kill him. The real origin of consumption is cold, over work, deleterious substances entering the lungs, and last not least, the vitiated blood inherited from vicious parents. sins of the fathers are still visited on the children. May this note of warning be heard by the reckless and the profane.

MARGARET B. ALDER.

SIR,-I could multiply convincing proofs that climatic conditions affect health much more than unsanitary arrangements or microbes, and would warn parents that colds, due to the falling temperature of September and theatrical clothing (hats pinned to the sides of children's heads, short petticoats, and long black stockings, which make poor little girls look like half-fledged swans), end in diptheria (anglice-putrid sore throat), or, where the cold attacks the mucous membrane, hooping cough, then perhaps cholera. A distinguished physician once said that the cold, strong, saltish air of Ireland, especially round the coasts, together with the fish diet used by the poor, was the cause of cancer being so prevalent here. The English race soon deteriorate in Ireland, but the real old Irish families thrive, at least those who do survive the cold are very long-lived. Mountjoy nearly died of the cold and damp when "Elizabeth" sent him over; it is the same with plants, and farmers should be warned not to set over-cultivated English seed potatoes, which are much more liable to disease than the long acclimatised Irish tubers, such as "skerries" or black potatoes, lumpers or white

potatoes, and cups, the good old red potatoe. The ash-leaved kidney is, I consider, almost a distinct species, and suits the climate. No remedy for the potato disease can be found, as it is simply cold i.e., consumption. But if some plan could be found to have them kept in the ground all year, safe from frost, it would serve, but, like many another thing. the cost would overcome the profit. Magnum bonum potatoes seem to be bred from Mongolians; it is probable that roots grown in the cold of some parts of Russian Asia, or Mongolia, and fitted to live in the tundra, or black earth of those countries, would increase and prosper here, our own bogs being so like that soil, and having once been left behind by the sea, just as those of Russia have been, although at probably a later era. I would not advise farmers, however, to keep to home-grown seeds, as few cereals, or anything else, ripen well here, and English or German seeds are decidedly preferable. The same remarks apply to cattle, the changeable air is destructive to highly-bred beasts: neither Guernsey cows nor Guernsey lilies will thrive here! Not only do certain colours characterise each month, but physicians know that particular disorders attend upon the seasons. The first flowers of the Spring are pale, white, or primrose; then very delicate lilac; then blue, as the wild hyacinth; next the sweet wild rose; soon comes bright yellow, as the gill gowan and most composites (the hardiest of all tribes). Striped plants (July), deep violet, and finally scarlet, flares out in the poppies when the August heat comes. So with disease; Spring. coughs and colds, then febrile complaints; in the warm months, apoplexy and hydrophobia; the autumn of our days brings death and disorder of all kinds, the weather—the amount of sun, heat, and light-accounts for all! Now, who will say meteorologyshould not have a first place in our educational systems? I can only touch on so large a subject, for time is all too short for our purposes and projects, and I have said enough to recall readers of these trite remarks to the dangers of the invisible forces of cold and electricity, which are much more to be dreaded than the microbes and vibriones which succeed to the ravages of worse foes—cold and electricity. The  $American\ Journal\ of\ Science\ (August)\ has\_a\ paper\ on\ Astro$ nomical Conditions, by G. F. Becker, which shows that the present abnormal weather is due to the elements of the earth's orbit undergoing slow variations. A difference of 1.9 degrees in the obliquity of the ecliptic would make the area to the north of the tropic of Cancer 1,800,000 square miles greater than it is to-day; the area of evaporation would thus be increased and the conditions would be favourable to glaciation. Always above the earth's atmosphere cold currents prevail, for, just as there are upper and under currents in the sea of water, so there are currents in the air; the passage of the earth's neighbouring sun, moon, and planets, keep both the sea and the atmosphere in continual motion, thus the weather is really the province of the astronomer. And, as I have strived to show, it is the most material factor in the health and life of beings living upon this earth, and quite worthy of the attention of the greatest philosophers. Not only do our neighbours in the sky make tides in the air and in the sea, but also in the apparently stable ground; just as a passing train shakes our roads and our houses, so does the passage of the heavenly orbs cause earth tremors over the world. These are the real origin of earthquakes, displacement of

slip last year, part of a dolomitic mountain range fell, and, banking up a river, formed a lake over 3 miles long. The tremor of an earthquake in Greece was felt in one of the deepest coal mines in England. Of course, the alterations in the waters aided largely the tides of the land, in altering strata. Now, if my humble words could reach those in power, I would strenuously urge on all connected with coal mines the fact that death-dealing explosions result entirely from atmospheric causes, and that scientific men should watch over the changes connected therewith, either at the expense of the owners of collieries or the expense of the government, and I trust and hope this serious warning will not be lost on those in authority. The theory which attributes coal mining disasters to the inflammable dust of the mines taking fire, by an accidental spark, will not hold good; the pressure of the atmosphere and its wavering tides is the true cause of these awful events; and explosions should be carefully calculated on and the loss of life prevented. I have several times drawn attention to this very serious matter, and I fain hope the excellent home secretaries for England and Ireland, Mr. Asquith and Mr. Morley, will take the matter up and enforce due precautions.

I find from the Irish News, Belfast, that Mr. Shaw Lefevre has issued a letter in regard to selfsupporting poorhouses, and that it seems the guardians are in fault as to not hiring land for the purpose of employing the poor around workhouses, as the Government is willing to entertain any scheme submitted to them for that good cause. This subject was also mooted at the meeting of British Association, 1894. This winter will be a very trying one, and everyone should assist in procuring useful work for the unemployed. Already meteors and falling stars (mere electric balls) have been seen, and they are always premonitory of the upper cold stratum of air encroaching on the warm atmosphere of the earth. I may here state that the twinkling of stars, now so plainly seen, is also a sure sign of cold. but it is, we know, not the stars which "dance," but the icy vapours which dance over them, quite an optical illusion. I am sorry to find the glass-making in Belfast is to be abandoned for the present, but I hope there is some chance of the slob-land being reclaimed on the County Down side of the lough. That will be the only cure for side of the lough. That will be the only cure for the foreshore nuisance, now so much talked of. When will the subject of the mining for iron in the Holywood Hills be taken up? Excellent iron ore abounds in the hills. I have seen some from the quarries already opened. Now, this same said magnetic iron in all its various combinations is the true origin of the Causeway, and of all basaltic formations; it underlies the North of Ireland; it is the component part and the colouring matter of gabbro, of granite, of sandstone, and of most minerals. If we only had Home Rule the difficulties about royalties, boundaries, and taxation could soon be settled without the intricacies of antiquated and obselete English Acts of Parliament, which are really dragging down England, as well as this country; like a spider's web, they paralyse the people and render the rare riches of the soil valueless.—Yours respectfully, MARGARET B. ALDER.
Kinnegar, Holywood, Co. Down.

September 18th, 1894.

P.S.-A young French chemist-Dr. de Backerhas found that the best remedy for consumption is what he calls yeast bacilli, hypodermically injected. For my part I believe a good glass of Allsopp's ale mountain masses, canons, rifts, landslips, etc. In helps consumptive people considerably, bacilli in-the Himalayan mountains there was a great land-cluded, if it must be so.



# GEOLOGIES AND DELUGES.

## BRITISH ASSOCIATION.

# Address to Working Men by Professor Sollas, F.R.S.

## CRITIQUE.

Reprinted from North Down Herald of 30th November, 1894.

your readers have read this witty and comprehensive summing up of modern ideas about geology and deluges; there is one good practical hint in it, "that England should rent Mesopotamia from the Turks, run a railway through it and thus shorten our route to India." Some beautiful sentences occur in the lecture, for instance Prof. Sollas says-"The learning of the Chaldees was the heritage of the Jews and Greeks; from these the torch was handed on to the Romans; and Jew and Greek and Roman inspired and still inspire for good and evil, the civilisation of the Nineteenth Century. There is much more of the Chaldean in each of us than we are given to imagine." Now, although this address is very amusing, I cannot believe that it was very profitable to unlearned men, incapable of judging whether Prof. Sollas's deductions were exactly final or not. We cannot really believe anything that is not exactly true, nor need we wish to do so. What is true we cannot help believing, therefore let us have truth at any cost. Professor Sollas compares the Jewish scriptures with the Chaldean myths, and pleasantly talks of several deluges, and of course several Noahs, and no doubt thinks there were several Adams and Eves; he properly says that the Egyptians, the Chaldeans, and the Jews were different branches of the Semites, and allows that whichever nation is the oldest held the earliest traditions of the human race, and that Abraham, the father of the faithful, was called out of Ur of the Chaldees; but, then, if he thinks there were several Noahs left alive after the deluge, by which God destroyed the sinful and polluted race of Adam, he teaches that the population of India and America are probably more ancient than the Semites. This is certainly calculated to puzzle the poor working men; so much for his theology. He next proceeds counted for by him if he had referred to

SIR,-I take it for granted that some of to demolish all geological theories, but his own. In this he does good service, and is quite right, but alas! his own theory, the modern theory of geology, will soon be found to be as ridiculous as all the rest. Of course, cosmogony includes geology, but Professor Sollas is not up to date as regards the sun, he evidently supposes it to be a ball of hot gas, but latterly it is known to be internally solid, with illuminated clouds floating over it. Even the material element of the sun is guessed to be carbon, it seems more probable that all the elements are there, and that the sun is no more melting lava inside than the earth is. To talk as he does of metallic elements returning to the sun as rain is only absurd, and shows how monstrous may be the beliefs of even the nineteenth century. This belief that the earth is internally incandescent is one reason why scientists think that no universal deluge ever took place. Few people believe that the deluge was universal, as the scripture account is interpreted to mean that only the earth then known and inhabited was drowned by the flood. But that internal waters and long continued rain might for a time overwhelm the lands of any planet is quite within the bounds of probability; at all events we are called upon to believe that the whole human race, with the exception of one righteous family, was destroyed. think the multitude of human beings on the earth before the flood is quite underrated, the generations of man, as stated, not being intended to be taken literally. If we suppose the deluge to have only destroyed the race of Adam, at an early date, then there were but only few people on the earth, and some high wind or tide might have drowned them all, but the whole earth was peopled; and what Professor Sollas tells us of a deluge reaching a height of only 1,000 feet on the Nizir Mountains might have been easily ac-

ancient geography, and if he had only taken in the fact that former lands were made by the sea, that Egypt was not the Gift of the Nile, nor was Mesopotamia the "Gift of the Tigris and Euphrates," but of the ocean, therefore the sea in old times came much higher up to Nineveh and to Egypt than it does now. Heroditus, who lived only 484 years before Christ, says-"The country above Memphis between the hills seems formerly to have been an arm of the sea. The name of the first king of Egypt was Menes, in whose reign the whole of Egypt, except the province of Thebes, was one extended marsh." He thought the Delta extended to the salt pits at Pelusium. He remarked also that shells are found upon the mountains, and that an acrid matter exudes from the soil, which has proved injurious even to the Pyramids. He continues-" In the reign of Mæris as soon as the river rose to eight cubits all the lands above Memphis were overflowed-since which a period of about nine hundred years has elapsed-but at present (in his time) unless the river rises to sixteen cubits its waters do not reach those lands. The sea has receded everywhere, and rivers do not make lands, except by forming deltas in the sea. The same process has gone on in Mesopotamia as in Egypt, where the ground is the bituminous residue of a former sea, which probably washed the walls of Babel, and in their ignorance the former people "tried to build towers and pyramids, and to keep as far out of the reach of the floods and the tides as they could." No doubt tradition and experience both taught them that the waters of the sky, and the waters of the earth, and of the rivers and seas, had once prevailed over the land, and in fact we have no idea now how much the waters may have exceeded the land surface before the flood, or even after the flood; for although ancient geographers like Strabo are not wholly reliable, in the mind's eye we can see Africa as they supposed it to be-the upper part an island, and the lower half not yet developed from the ocean. Strabo, Eratosthenes, and Hipparchus thought the Caspian Sea was connected with the ocean, and I believe it was, once upon a time. The water flowed, too, by what is now the Isthmus of Suez to the Red Sea, and by this route the Egyptians found their way to India and returned through the Mediterranean. I only wish I could stir up geologists to study and compare the boundaries of the former seas with the present configuration of the earth; more might be learned in that way than is generally suspected; but they must take into consideration, that not only may the waters have evaporated or sunk into the earth since it consolidated, but that they have been gradually drawn round the world and accumulated first north and then south by the changing P.S.—Belleek is in Fermanagh, and there influence of sun and moon. It is very im-

probable that the ancients, such as Solomon, had vessels sailing down through the Mediterranean and round by the Cape of Good Hope in Africa to go to Ophir. Either the Suez canal was not then choked up or he must have built his fleet at some port in Arabia, and the Egyptians must also have made their way to India in this manner. All their discoveries in Europe could have been made over land as far as Prussia, and they took Sweden for an island. The northern lands may not have been fully uncovered at that time; vast changes have taken place much more quickly than school men allow. At last the boulder clay is proved to be a marine formation, and Irish geologists, who long opposed the opinion that it was of glacial origin, have the triumph of finding their views unmistakably confirmed by that distinguished Belfast Naturalist: Joseph Wright, Esq., F.G.S., whose laborious researches have been rewarded by evidence incontrovertible of the occurrence in the clay of mollusca, which must have lived in it, and of foraminifera in a perfect state of preservatson, whose natural habitat is the sea, The clays, old and new, cannot be too much studied; they belong to all ages; they are the origin of the slate rocks, the lias limestone, the carboniferous clays which embedded the coals, and the clays preserved the salts of the former seas for our use, and numerous other treasures besides; for do not clays hold veins of all precious minerals and gems, of gold, and the diamond? Are not basaltic plateaux formed of clay? not lakes found in their clay basins? Lough Erne, Loughbrickland, are they not small but beautiful examples of the uses of clay in preventing the sweet surface waters from being lost in the friable soil? I must end with an extract from that useful old book, "The Topographical Dictionary of Ireland." "Fermanagh.—In a geological point of view this county is highly interesting. The great central limestone district of Ireland terminates in it, and the western coal and iron formation commences. Here the granite of Donegal forms a junction with the basaltic range, which with little intermission extends to the coast of Antrim. Here also the Escars (that extraordinary chain of low hills which extend from Lough Neagh to the remotest parts of Galway and Mayo) seem to form a nucleus, whence they radiate in every direction, so that within a very limited space are found almost every kind of rounded nodule, from the jaspar and agate down to the softest clay slate." Numbers of raths, tumuli, standing stones, so-called Druidical remains, etc., prevail. The sea did it all! And then retired !—Yours respectfully,

MARGARET B. ALDER.

Holywood, November 28th, 1894.

P.S.—Belleek is in Fermanagh, and there



## Magazines and Reviews.

THE Expositor for September opens with a paper by Sir J. W. Dawson on the Exodus, in which he argues that the Pharaoh of the oppression was Siptah Meneptah, and that he perished in the pursuit of the Israelites through the Red Sea. If so, there disappears an illusion which some tourists have indulged that in the Boulak Museum they have gazed on the very face of the man who drove Moses from his presence. The writer promises further papers on early Bible history "should there be demand." We. at least, should eagerly welcome the fulfilment of the promise. Dr. Peter Bayne contributes a disquisition on "The Secret of Jesus," which he finds in the supremacy accorded to the Spirit, and he says some wise and weighty things, much required in these democratic days, on the need of something more and higher than "vapid flourishes about Jesus of Nazareth" if society is to be redeemed by Christ. Dr. Stalker has a short and suggestive article on the Scripture names for sin, and Mr Conybeare translates from the German of Prof. Zahn, and Dr. Rasch criticises on his suggestion that Aristion was the author of the last twelve verses of Mark. Dr. Beet, Dr. Bruce, and Dr. Dods are also contributors this month. One misprint must be noted, for it is now rather too common—viz. (p. 215, first line), straight for "strait is the gate."

The Meeting-Place of 99102 worm 47nesquares The Religious Tract Society. 18-44100 author of this book is known as an emine. geologist and also as an uncompromising opponent of evolutionary views of cosmic philosophy. In the present instance he deals with the border-territory, where geology ends and history begins. It is admittedly a difficult matter to 5 treat of topics which concern the beginnings of the human estate, but those who feel that it is a matter of first importance to reconcile geology with Scripture, apart from independent views regarding human evolution, will find in Sir J. W. Dawson's book much to comfort them. Genesis is regarded as having "anticipated modern discovery." This is a statement with which few scientists and as few liberal theo. 5 legians will agree. At the same time, there is no reason why the "other side," so ably advocated by the author of this book, should not, have a hearing.

ours month's Expositor Sir J. W. Dawson finishes his short series of papers on the Bible and Science. His subject this time is the Exodus, and a most vivid sketch he gives of the actual occurrence and what led up to it, illustrating every statement from recent Egyptological research, showing the perfect accuracy of the Scripture narrative, and vindicating in a masterly way its Mosaic authorship. The strong common sense of the real man of science is conspicuous; and we read with unfeigned pleasure, in the concluding paragraph, that Sir William expresses his readiness to resume his contributions if there should be a demand for them. We hope the Editor will assure him that they are among the most welcome things the Expositor has ever printed. The rest of the number is not noticeable. Professors Beet and Bruce continue their respective series upon New Testament Teaching on the Second Coming and upon St. Paul's "Conceptions" of the religion he preached; Dr. Stalker has a short article on the Names for Sin in the Bible; two German scholars discuss the authorship of the last twelve verses of St. Mark's Gospel; and Dr. Marcus Dod gives his periodical Survey of Recent Biblical Literature. D 9.0

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"The Meeting-Place of Geology and History" is a book which appears opportunely. It is not an exhaustive work, but ar it presents clearly and popularly the early 81 history of our world and of the human family. Sir J. W. Dawson, its author, is well known as a redoubtable champion of the general correctness of the Bible story of creation, of the Fall, and of the Flood, and herein we have his reasons for his faith. In perusing his narrative-for he rehearses and describes rather than expatiates-the reader is led to feel that he is being presented with facts, and that he has here an epitome of the subject to which only theorists and conjecturers can reasonably take exception. Sir J. W. Dawson deals throughout with the wonderful contributions which the earth has made to its own history, and in introducing the subject presents a series of word-pictures which unintentionally are in some degree parallel with the "days" of creation. maintains that the existence of miocene man has not been proven, and says that even were it proven it would not be very irreconcilable with the Biblical account of Creation, while it might become a stumbling-block to orthodox Darwinians. The oldest skeletons and skulls discovered are attributed to the mammoth age in Europe, and these show not only great development of brain, but incontestible evidences of superiority which are usually met with only in civilised We refer to this aspect the argument particularly because of the attention which it has recently obtained, and because in Sir J. W. Dawson's work we have a vivid picture of the story of the world as that has been indubitably ascertained, not a few theories, often contradictory in their issue, put forward as the key to the history of the ages. His authority as a geologist also lends great interest to his remarks, and may well cause less informed readers to hesitate ere accepting any conclusions which may be submitted by modern scientists. After a perusal of this volume many will feel that there is probably much many in the manustine

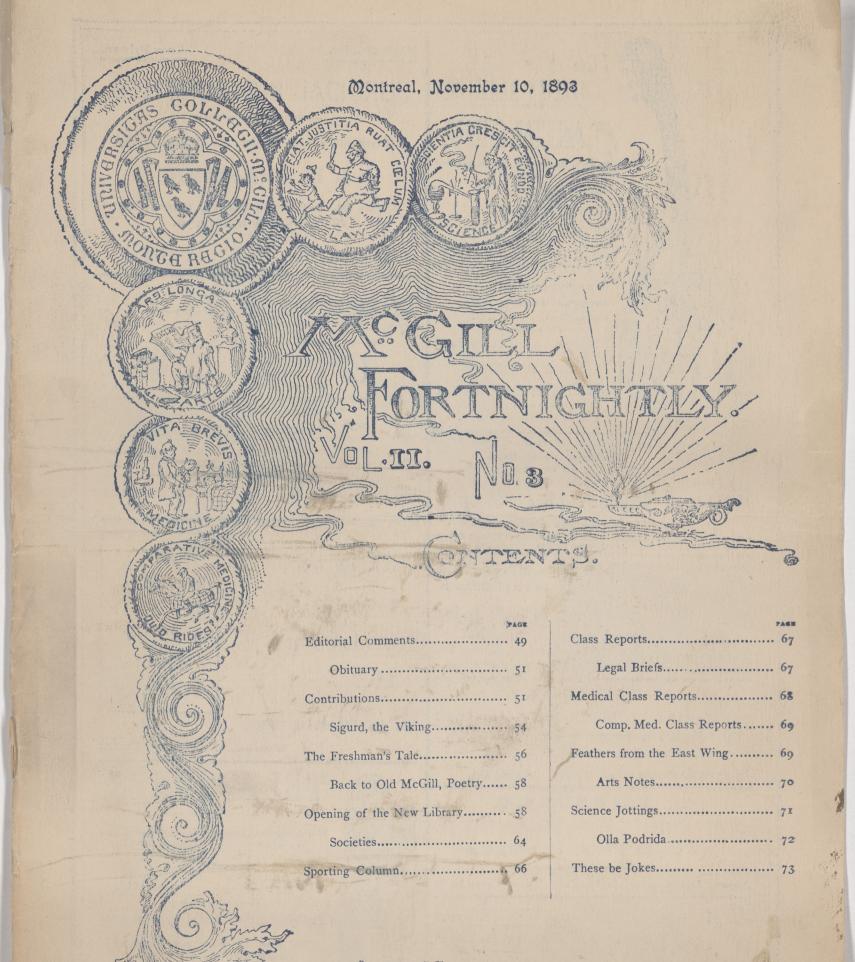
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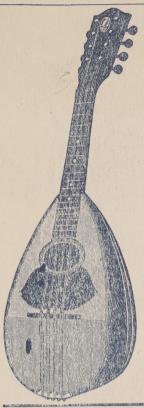
T G A re Va

H T d t n u

Pi br ar rı al p ir

Some Salient Points in the Science of the Earth. By Sir J. W. Dawson, F.R.S., &c. In this volume the veteran geologist presents his readers with what may, perhaps, be regarded as a résumé of the chief results which have followed upon his faithful labours. We may not always have been able to accept his deliverances upon some of those issues wherein the sciences of geology and theology are alike interested, but there can be no one who has watched the growth of this science of the earth, and more especially the attempts which have been made to interest others than the mere specialist in its aims and its conclusions, who has not often had cause to bless the name of Sir J. W. Dawson. There is but little in this volume that is new: the substance of it may be found in the numerous books. addresses, and review articles which the learned author has from time to time given to the world. No secret, however, is made of this; at the end of each chapter a full list is given of the various? published writings upon which it is based. But it was certainly a happy inspiration to gather in these results from little known and comparatively inaccessible periodicals, to cast them into a popular and connected form, to furnish them with suitable and explanatory illustrations, and so to insure for them a wider appreciation and a greater permanence than they could possibly have had if left interred in obscure reviews. In the course of his seventy years Sir J. W. Dawson has seen his science grow, for although there are still many problems remaining to be solved, their number is as nothing to that of those which has arisen and been dealt with in the century which is now nearing its close. There is abundant and generous recognition in this book of their labours through whom our present stage of geological knowledge has been reached, and there is no attempt made to pass over as non-existent the many difficulties that remain. Much of the contents of this volume, perhaps the largest portion thereof, is of interest to those alone who have made some progress in the science to which Sir J. W. Dawson has given his life. But there are at least two chapters—on "World-Making" and "Man in Nature" which will prove interesting and suggestive to all. It cannot fail to strengthen the faith of all reverent inquirers into the deep things of nature to read the deeply religious words in which this aged and honoured scientist traces all things up to God, and sees in the Supreme Artificer the origin of all. A mournful interest is added to these pages by the fact that each of the eighteen chapters is dedicated to the memory of some former friend and fellow student of the author's who has "gone before." It will interest many of our readers to learn that one of these dedications is "to the memory of Dr. William B. Carpenter, who, among his many services to science, devoted much time and labour to the investigation of Eozoon, and by his knowledge of Foraminifera, and unrivalled power of unravelling difficult structures, did much to render it intelligible." (Hodder and Stoughton. Price 7s. 6d.) F. T.





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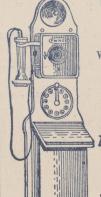
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# McGibb Fortnightby.

A Fortnightly Journal of Literature, University Thought and Event.

VOL. II.

MONTREAL, NOVEMBER 10, 1893.

No. 3

# McGill Fortnightly.

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The McGill Fortnightly is published by the Students of the University on the Friday of every second week during the College Session.

The annual subscription is \$1.00, payable strictly in advance. Remittance to be made to the Chairman of the Business Board, 58 McTavish Street, Montreal. Single copies may be obtained at E. M. Renouf's, Wm. Drysdale & Co.'s and W. Foster Brown's, Booksellers. Price, 10 cents.

Address Contributions to Editor-in-Chief, 131 Lusignan Street. Montreal.

#### EDITORIAL COMMENTS.

#### THE NEW LIBRARY.

The Students of McGill may be pardoned if they exhibit a somewhat extravagant joy in the possession of their new Library, when even those to whom it means nothing more than a fine addition to the University and to our city feel a thrill of pride in the mere beauty of the building itself.

No one will accuse us of disloyalty to our Alma Mater or her surroundings if we remark that, although under ordinary circumstances the old Library might have answered our requirements, yet when filled to overflowing with readers it was scarcely the place to induce thought or reflection except in their mildest form, namely, dreams.

But now that the Library has been formally opened, we are waiting with what patience we can command the invitation to come in and "Hold high converse with the mighty dead."

Since the beginning of this session the loss of library privileges has been keenly felt, and if there is any truth in the saying, "Out of sight out of mind," we have certainly had an opportunity to be off with the old love before we are on with the new.

The rousing cheers and hearty applause from the boys in the gallery, that greeted Mr. Redpath when he rose to present the Library formally to the University, were an expression of the grateful sentiments which animate the hearts of every son and daughter of Thanks to Mr. Redpath's generosity, we feel that amid such pleasant surroundings, the task of transferring to our minds some of that "potential energy" now lying on the book-shelves will not be so arduous; and our earnest hope is that the result will be apparent in the increased "kenetic energy," not only of our esssays but of our work in general. We highly appreciate the special gift of Mrs. Redpath—the two beautiful stained windows at either end of the reading room.

It is needless to say that at McGill, as everywhere else in our Dominion, Lord and Lady Aberdeen have won the love and esteem of all. His Excellency's evident relief, after being assured that he was all right, was extremely gratifying to those who offered the compliment.

It only remains to be added that the brilliant conversazione of the evening was a fitting close to proceedings fraught with such importance to our University, a fitting close to such an auspicious event as the gifting of the Redpath Library to McGill.

#### THE UNION CLUB.

The idea of instituting a Union Club in McGill is one that should attract general attention.

With regard to the advantages to be gained from such an institution there cannot be two opinions. It would be of the greatest benefit to the students.

For some years back there have been vague ideas of something of this kind floating about. One of our great needs, for instance, is a dining hall, where the students could get a good meal at moderate cost. A very large proportion of the students in Medicine and Science, and a fair number in Arts, would regard such a place as a great boon, for they are compelled to get meals at cafés, boarding-houses, and the like. Such places are not always convenient or desirable, and if there was such an institution as a comfortable restaurant under the ægis of the University, it would without doubt be well patronized.

Further, there is no common meeting-ground for the students in the present state of affairs, and it is quite possible for one-half of the students to be unaware of the existence, or at least the mode of existence, of the other half.

Much of this isolation would be overcome had

McGill a Union Club Building on the University grounds. If properly equipped and made attractive, this would be a rallying spot for University men. Such a building might have a library, reading-room, smoking room, billiard tables, parlors, debating rooms, refectory and many similar attractions. If cosy and nicely furnished, a spare hour could be spent very pleasantly there.

It was advised in a recent article on the subject that the club should be under the control of officers elected from amongst the undergraduate members.

In McGill, where there are relatively few students as compared with the older universities of Great Britain, it might be well to extend the privilege of membership to all such graduates as would be willing to pay the fee, although retaining at the same time the power of administration in the hands of the undergraduates. By this means stronger support would be given. Some years ago a University Club was started by some of our professors and graduates. A house was hired on University street, and furnished handsomely. For some reason or other the scheme was not well patronized, and in the second year of its existence it fell through, and everything had to be sold off at a sacrifice. At the present time, however, we think that a similar undertaking would be more successful, inasmuch as the number of students has greatly increased, and the desire for something of the kind is much more widely spread. One thing is certain, and that is, that the undergraduates must take hold of the idea and push it vigorously, if it is to succeed. Should they feel that they want a Union Club, a Union Club must come. As to ways and means, that is the difficulty. It is hardly likely that while their numbers are no greater than at present the students could, unassisted, erect and equip a suitable building. Still, were it seriously attempted, something tangible might result. Of course, if such a building could be partially endowed so as to meet a part of the running expenses, that would be an ideal state of affairs. Very likely a certain amount of help would be given by friends and alumni of the University. When we look at the magic transformations that McGill has undergone within even the last five years, it seems as if we only had to rub Aladdin's lamp and the good genii would appear and confer untold benefits upon us. Should we be so fortunate, however, as to get a building for a Union Club, it would lend a new zest to University life, broaden our views, dissipate unworthy prejudices, and do much to cement that good feeling amongst us which is so desirable. Such a state of things would throw new light upon our education, and do much to make that education more real and lasting than it has ever been in the past. The object of a University training should not be instruction, merely, important as that is, but also education, a drawing out of all that is grand and noble in a man's nature; in proportion as it fails to do this it fails to do its duty, and may even inflict a positive injury upon the student. Men as a rule come to a University at the most critical period of their lives, and on the quality of the training they receive then depends for the most part their future career, whether for weal or for woe.

We would therefore urge all the students to consider earnestly this project of a Union Club for McGill, and make their views known, so that we may before long welcome, in some measure at least, a realization of our hopes.

#### THE LATE SIR JOHN ABBOTT.

By the death of Sir John Abbott, K.C.M.G., McGill loses one of her most distinguished sons. In his life, time Sir John was the oldest living graduate of the University. Before he had left her halls many years, he was called upon to organize the Faculty of Law, and was its Dean for a considerable period. As a lawyer he soon made his mark, and his multitudinous duties in the political arena eventually compelled him to resign his immediate connection with the teaching staff of the Faculty. However, the advantages of his experience and wise counsel were not lost to the University, as he was appointed to the Board of Governors, where he rendered efficient service. On the death of the late Sir John Macdonald, Mr. Abbott became Premier of Canada, and soon after was knighted for his services to the country.

At that time was noted the gratifying fact that both the leader of the Government and the leader of the Opposition, the Hon. Wilfred Laurier, were graduates of McGill University, who, however they might differ on matters of policy, nevertheless were in perfect accord in the love which they bore to their Alma Mater. Of such men as these McGill is proud. It must always be for us a matter of congratulation that on the roll of our graduates are to be found the names of many men who have risen to high positions both in this and in other countries.

Sir John, owing to ill-health, was compelled to resign the premiership, after occupying the position for about a year and a half. A residence on the Mediterranean coast only relieved him temporarily, and he gradually sank, passing away on October 30th, at the age of 73.

Not only as Canadians but as members of the University do we mourn the loss of a distinguished figure.

The sympathy of all the members of McGill will be with the bereaved family and relatives, in the loss of one so dear to them—of one who shed so great a lustre upon our Alma Mater.

#### UNDERGRADUATES! ATTENTION!

We have great satisfaction in announcing to our readers that at a joint meeting of the Business and Editorial Boards of the FORTNIGHTLY held on the 4th inst., it was decided to offer two money prizes for the best original stories submitted to the paper.

The competition will be open to those undergraduates of the University who are or may become subscribers to our college paper.

The prizes are a first prize of twenty dollars and a second of ten.

Full particulars as to the regulations governing the competition will appear in our next number.

#### OBITUARY.

It is our painful duty to record the removal by death of another of our number, Mr. N. B. Harris, a member of the Arts class '96, who died at his home in Glencoe, October 6th. Mr. Harris went home for the Christmas holidays. He was somewhat weakened in health. He did not return. The condition of his health made it necessary that his studies should be given up for the present. His health did not improve. His lungs were affected, which resulted in his death.

Mr. Harris was not long among us, but long enough to prove himself an earnest, conscientious student. He endeared himself to all with whom he became intimately acquainted, especially with the men of his own college year. He was looking forward to the ministry of the Presbyterian Church.

The Students of the University extend their sympathy to his parents and family in their sore bereavement.

#### CONTRIBUTIONS.

#### THE NEW LIBRARY BUILDING.

I have much pleasure in responding to the request of the Editors of this Magazine to give a short description of the New Library Building erected by the munificence of Mr. Peter Redpath, and presented by him to McGill University. It would be invidious in me to express any opinion on the Building, and I must confine myself to a few facts.

I will begin by expressing my gratification at the opportunity afforded me of endeavoring to solve the problems presented in the designing of a building for such a purpose.

Recent developments in University training, especially in relation to its more practical side, necessitate buildings for which we have no absolute precedent, and therefore present intensely interesting and stimulating problems to work out. How to combine utility and beauty in harmonious relations without sacrificing the one to the other, is an interesting study.

First and foremost should come convenience of arrangement, simplicity of parts, ample light, air and commodiousness; then, as far as possible, goodly proportion, beauty in outline, thoughtfulness and suggestiveness in detail with restrained ornament.

At the time of the revival of classical architecture in England it was the fashion for the elevation or exterior to be designed first, and then the interior was made to fit as best it might; now we go on what I cannot but think to be the better principle of making the elevation fit the plan.

There are many famous libraries in the Old World, which have preserved the priceless treasures of knowledge through the centuries, but their general arrangements are not such as fully commended themselves to me for reproduction here under our altered and special circumstances.

Nowhere has modern library planning and architec-

ture been so thoroughly taken up and studied as in the United States, and of recent years such buildings have undergone extraordinary development. There are schools for the special study and criticism of Library designs, and every librarian has his own views on the ideal library, and as a rule is not slow to advocate them. There naturally follows considerable divergence of opinion, but the concensus of opinion in the main is in favor of the stack system, as it is called. This system is briefly as follows: instead of the books being placed in the Reading Room in high book-cases with narrow galleries to reach the upper book-cases, as in most European libraries, the books are placed in a portion of the building separate from the Reading room in tiers of stacks, divided up into floors by gratings or light iron and glass between the cases, just high enough to allow of reaching the top shelf of each tier without a ladder, a light stair connecting each floor. The whole is usually made fire-proof, and shut off by iron doors from the rest of the building. Under this system it is not usual to permit readers access to the books, but on presentation of slips the attendants bring the desired books to the tables.

After studying as carefully as I could the different systems, in which I have the pleasure in acknowledging generous assistance from many librarians in the States, I adopted the stack system with some modification, with the full approval of Mr. Redpath. In working out the multifarious and complex details of the fittings, I have also great pleasure in acknowledging the hearty help and co-operation of Mr. Charles Gould, the talented new principal librarian of the Library, who has devoted much time recently to the visitation and examination of many of the best existing libraries.

The arrangement of the plan of this Library was somewhat influenced by the shape of the site and the different levels of the ground, and also by the desire of the governors to retain for the present the two old adjoining houses on McTavish St., which with the vacant ground adjacent had been previously bought and donated to the College through the generosity of Mr. J. H. R. Molson.

The site of these houses is reserved for future enlargement of the stackroom of the Library, so that intending donors of books need not be dissuaded from their generous impulses by fear of want of room.

We are now prepared to examine more closely the new Building; and if the reader will accompany me on a visit to it, he will the more readily be able to understand its arrangement.

Beginning at the lowest floor, at the McTavish street end of the Building is a wide doorway and a roadway leading to same. This is for bringing in boxes of new books to the unpacking room, where they are relieved from their wrappings and sent upstairs by a lift in the circular projecting staircase, to the cataloguing room above.

Adjoining this on the lower side is the lower portion of the stock room, and on the upper side is the caretaker's house, entering from the foot of the main stairs near the entrance.

At the other end of the Building facing the campus

is a students' entrance, giving direct access to the study rooms, of which there are five. These are intended for studies in special subjects, and will be fitted up with book-cases, tables and chairs. The remainder of this floor is occupied by the heating furnaces, coal places, etc.

We will now ascend to the main floor, and starting from the main entrance we find ourselves in a vestibule lined with a marble dado and having an ornamental marble mosaic floor; from this through oak swinging doors we enter the Entrance Hall, which has also a marble mosaic floor and a high niche in the angle for a statue to be placed. From here a few marble steps lead up to the staircase hall in the tower. This is so arranged that the attendant at the counter can see everyone that comes in to the reading room or that goes up or down the stairs. We now enter the great Reading room, which is 110 feet long, 43 feet wide and 44 feet high, to the top of inner roof, and has an open timber roof having the hammer beams ornamented by carved heads of grotesque animals. At each corner of the further end of this Reading room is an octagonal bay; in the centre of the south side is a recessed inglenook or fireplace with a stone mantel inside having the following inscription cut in the stone: "Cease not to learn until thou cease to live"; at the entrance to the inglenook is a large massive curved oak mantelpiece with the following inscription cut in the frieze: "Happy is the man that findeth wisdom and the man that getteth understanding."

Round the walls are arranged oak book-cases for reference, books convenient of access to the readers, and in another spot, the exact location of which I dare not divulge, is a monument vault for the safe keeping of specially precious and costly books. At the end near the entrance is placed the Librarian's room ready of access to same, and communicating with the cataloguing room. To the right of the entrance is the men's coat room and lavatory, and beyond is the periodical room. From behind the distributing counter access is obtained to the stackroom already referred to, which is four storeys in height and capable of holding from 130,000 to 140,000 books.

We will now go up the staircase in the Tower, and on the way take note of the quotations from various authors in various languages painted on the panels of the windows. It is the intention to have other quotations painted on all the windows of the Reading room in the panels reserved for same, but the task of selection proved so stupendous both as to quality and quantity that these had to be left for the present, but suggestions for same from the readers of this Magazine will be thankfully received.

On the upper floor we enter a gallery which may be used as a Ladies' Reading room, or for cases of rare books, etc., and affords a good vantage ground for visitors to see the Reading room without disturbing the readers. From this gallery entering by two doors, access is obtained to a large room over the stackroom which is allocated as an architectural cast and sculpture room. Over the periodical room is a room of similar size, which

will probably be used as a Professors' Reading room.

We have reserved to the last, notice of the beautiful stained glass windows at each end of the Reading room, which attract immediate attention from the visitor. They are the loving gift of Mrs. Peter Redpath, who thus wishes to be associated with her husband in this expression of affection to dear old McGill. A lavish expenditure of time and thought have been spent upon them by Mr. and Mrs. Redpath and by the artists, Messrs. Clayton & Bell, and by others.

The centre window of the three light windows facing the campus is devoted to Poesy—and has portrait figures of the leading poets and writers of all ages.

The side windows are respectively devoted to Art and Music, with carefully painted figures of representative men in each department.

The five light window at the other end of the Reading room embraces the following subjects—Philosophy, Law, Medicine, Astronomy and History.

This window was purposely kept in a lighter key than the other windows, in order to diminish the light in the gallery as little as possible.

Having thus hastily gone over the interior of the building, in leaving we may just glance at the exterior. After careful consideration I decided to adopt a phase of the Romanesque style as being dignified, and at the same time picturesque, and elastic enough to suit the necessarily irregular plan.

The wisdom of the choice and the measure of success with which it has been carried out I must leave to the judgment of others.

My task is done, and I would only now like in closing to be permitted to congratulate all the graduates and undergraduates on the increased opportunity this new Library building affords for study and research; and to say that I am sure you can best shew your gratitude to the generous donor, and in the way he will most appreciate, by taking fullest advantage of your privileges.

ANDREW T. TAYLOR.

#### THE NEW LIBRARY.

"Shall my little bark, attendant sail, Pursue the triumph, and partake the gale."

POPE.

As the ceremony of opening the new library has been described elsewhere, it is unnecessary to do more than express my admiration of the building and its surroundings, its mile and a quarter of shelf accommodation, and its magnificent reading room; but it may be expected that I might add a few lines to the general praise of the event. As the occasion of opening any new place of public entertainment is frequently celebrated in verse, I may be pardoned for thus following the fashion:—

Ladies and gentlemen, I will confess,
The notion of preparing au address
On this occasion, when it was suggested,
With difficulty seemed to be invested.
"No rhyme can speak my feelings," I declared,

"No set ovation, carefully prepared "-

(For I have that within, which passeth show)
"Can truly tell of the deep debt I owe—
"A debt, no matter what that rhyme may say,
"My own heart whispers I can never pay."

The argument demolished was at length,
For in its very weakness lay its strength.
Were I to trust myself to speak my mind,
My lips must fail; whilst somebody unkind
Might add: "My friend, I have no wish to scoff,
"But if you once begin, you mayn't leave off.
"Take my advice, and get some lines by heart,
"And having done so, speak it like a part."
I did so, I'd not very far to seek them,
By heart I learnt them,—from my heart I speak them.

Nearly six years ago, I made my bow, A novice then, but as an "old hand," now, The old, old thrill comes o'er me as it then did. But with another, deeper feeling blended, The old one told me time might make amends For my shortcomings, -now, my troop of friends Tell me thus Time 's done fourfold what it seemed It ever could do; (when I fondly dreamed Of popularity, a bright position;) Tell me, in cheering tones, that in addition To the mere admiration I'd obtain There's something far more precious I might gain, The warmest sympathy and happy days! For when upon these generous friends I gaze (And cheery greeting in my ear still rings) It tells me one may aim at better things Than the mere fleeting triumph of the hour; Declares that one may wield a higher power. The power to make friends, true friends indeed, Who would stand by me in an hour of need. To one who loves his art as I love mine, This solace helps me, (if I dared repine;) I feel as one who greets the light of day After the darkness of the night has pass'd away, Which means (from metaphor plain truth to sever,) I'm now your faithful servant, more than ever.

But other thoughts, inspired by my surroundings, passed through my mind, and I may be permitted to let these thoughts find utterance:—

#### IN THE LIBRARY.

Who say these walls are lonely, these,
They may not see the motly throng
That people it as thick as bees
The scented clover-beds among.

They may not hear, when foot-falls cease,
And living voices for awhile;
The speech in many tongues and keys,
A down each shadowy aisle.

Here are the friends that ne'er betray; Companionship that never tires; Here voices call from voiceless clay, And ashes dead renew their fires.

For death can touch the flesh alone, Immortal thought from age to age Lives on, and here, in varied tone, It speaks from many a page.

Here searching HISTORY waits,—the deeds
Of men and nations to rehearse;
Here, clear-eyed SCIENCE walks and reads
The secrets of the Universe.

Here, lands and seas, from pole to pole,
The traveller spreads before the eye;
Here, FAITH unfolds her mystic scroll,
The soul to satisfy.

Here, Homer chants heroic Troy;
Here, Dante strikes the harp of pain;
Here, Shakespeare sounds the grief, the joy,
Of all of human life the strain.

Alone and silent! Why, 'tis rife
With form and sound! The hosts of thought
Are dwellers here, and thought is life;
Without it, earth and man were naught.

To war and state-craft leave the bay,—
A greater crown to these belongs;
The rulers of the world are they
Who make our books and songs.

In this hour of our joy and pardonable pride, the kind and courteous donor must not be forgotten; of Mr. Redpath, who, aforetime, had enriched the College with its Museum and his oft-repeated valuable donations of books to the Library, may we not say:

Praise to the generous friend who planned

This princely place, this treasure crowded hall!

Praise to the honored worthies of our land

Who nobly answered to a noble call!

And when these riches, which improve the heart,

Are to their fitting places here consigned,

May this transcendent spectacle of art

Be mirrored in our souls, leaving its light behind.

H. M.

#### OUR IDEALS—A FANCY.

I slept, and I dreamed a strange dream. And in my dream I opened the eyes of my spirit, and I beheld a vast expanse of air, filled with floating clouds and lighted by a multitude of stars. And far above me was the golden sun—far, yet so near that I was constrained to turn away my eyes, so dazzling were its rays; and far beneath me was the earth, and thereon was a great multitude assembled, gazing at the clouds. I, too, turned to look, and behold! I saw a great white Figure, as the form of a woman, veiled in thick mist. In her left hand was a great book inscribed with letters of gold, and in her right she held a torch above her head. But the torch burned but dimly, and the book was sealed.

And as I looked, great awe fell upon me, and I feared. But the Figure turned to me her veiled face, and a voice, sweeter than the sweetest music, said: "Speak; be not afraid." And trembling I asked: "Who art thou?" And the voice replied: "Knowest thou not?" And I answered: "No." And the Figure said: "Yet hast thou sought me all the days of thy life. Blind, blind are the children of men, who ever seek; yet when they find that which they have sought, they know it not. I am the Ideal of all that is good and true and pure. The torch which I hold is the torch of Truth, and the book is the Book of Wisdom wherein the wise men of old did read; and because of the folly and wickedness of men the Torch burneth but dimly, and the Book is sealed. All men seek me, but

as yet they may not find me save in dreams. And some dream of me as the highest Truth, and others as the highest Beauty, but none know of the dreams of others. And by night and by day thoughts of me are ever present with them, for, though they may not see me, yet to some is granted a glimpse of the Torch or of the Book. By some, even,—but alas! they are few—my voice may be heard, far, far above them. Once I did dwell on the earth, but the sons of men would have none of me, and forsook my ways, and the Eternal Wisdom took me and set me among the clouds, and they may see me only in dreams. Yet without their dreams of me would come despair, and life would be worthless."

And sadly I asked: "Will it never be permitted to men to see thy face?"

And the voice replied: "Yes;" and through the veil of cloud came a flash of light—the light of a glorious smile, "Yes. When by sorrow and suffering the world shall be purified from sin, then shall I dwell again among men."

And the Figure faded away in the distance. and I awoke.

M. T. W.

#### SIGURD THE VIKING.

(Continued).

Act IV.

Sigurd's and Harold's ships enter rowing towards one another. Men ready for battle.

HAROLD'S MEN :-

Where battle storm is ringing,
Where arrow-cloud is singing,
Harold stands there,
Of armor bare,
His deadly sword still swinging,
The foemen feel its bite,
His horsemen rush to fight,
Danger to share
With Harold there,
Where steel on steel is ringing.

HAROLD'S MEN:-

Advance, advance—
No helmets glance,
But blue swords play
In our array.
Advance, advance.
No mail-coat's glance,
But hearts are here
That ne'er knew fear. (Battle rages).

(SIGURD is victorious, and with other men in tow, his men row ashore, singing "Rule Britannia.")

Sigurd.—Good Dagobert, my trusty friend, another fight we've fought; and now we'll rest until our friends come up with fair Elfrida, whose presence is required, while we try this caitiff for his deeds of ill.

DAGOBERT.—Yes, we've got him this time, and we'll make him howl to beat the band. It would be better than cakes and ale to give him the Rista-orn. Well, old man, my eyes begin to water. Now the last obstacle is removed, I guess you'll be joined for better for worse to Frida dear, and give your old chum the slip?

Sigurd — Nay, nay, my friend. The love I bear for my betrothed is something so grand, elevating and sublime, that it makes all other loves and friendships more lofty and ennobling. My heart is so full of its own happiness that I can scarce feel angry with old Harold here. 'Tis true I may no longer care for the rough sport of war, with Elfrida by my side, but thou, who hast been more than another in past years, shalt e'er have a special resting place in my heart.

DAGOBERT.—Thanks, old man. Don't say more or the briny tears will start to flow. Perhaps I'll have to get married myself some of these days, but the girls are all so nice that I can't begin to choose.

SIGURD.—Wait for the breathing of the god. Hither comes Elfrida.

(Elfrida enters with attendants, old nurse, etc.).

Let me welcome thee, my beloved. (Embraces her.) 'Ere our wedding is celebrated, we must try Harold for piracy and murder. Sit thou here.

Good vassals all, I have to thank you for your aid in winning back my bride. Well have ye fought, and well the victory won. Now, 'tis our duty to try this prisoner here, and decide what shall be his fate.

OMNES.-Let him die.

Sigurd.—Hast thou, oh Harold! aught to say against this judgment? Thine has been a life of fearful deeds. Hast thou aught to say?

Harold.—I fear not death. Oft on the stormy sea and off the rocky shores of Bretland, when storms howled long and loud, I laughed at fear. When ship met ship with shuddering shock, and clash of steel rang high above the dying groans of wounded men, I've smiled at death. Thinkest thou, then, that now I'll cringe and beg my life of thee? No! Here in my bonds I curse thee for a prating imbecile and scorn thy petty triumph!

SIGURD.—Then shalt thou die!

ELFRIDA.—Nay, nay, my lord. Let clemency rest with thy victorious hand. Hast thou not won enough? This man is old, and was a king. He used me well, and only wanted me to wed his son. Now his son is slain, and he will live a lonely life. Spare him, and in old age thou too shalt find some pleasure in thy kindness.

NURSE.--Well speakest thou, Elfrida, for he is thy sire.

SIGURD.—What sayest thou?

ELFRIDA.—My sire?

HAROLD.—Can it be that she is indeed my long-lost child?

Nurse.—Aye! Thy daughter, King, who was carried off by that old robber Hakon, whom Sigurd's father overthrew. She then was taken to good Atholes' home, and there grew up. I had never known her had I not seen this scar upon her arm, that as an infant she got while playing on the hearth. Bitter were the tears I shed that day, little thinking it would be a remembrance in after time.

Sigurd —Unbind the king! Oh sire, thy daughter I restore, and trust that thou wilt not deem me an unworthy suitor for her hand.

HAROLD.—(Embracing Elfrida) No, ne'er shall I see a braver nor more abler man than thou. I have been a relent-less warrior in my day, and now I crave pardon for my crimes, and want but rest. Do thou take and protect her through life, and let me see in you the happiness that I have lost myself.

(Sigurd embraces Elfrida) and CURTAIN.

#### JOTTINGS AT THE WORLD'S FAIR.

The following has been contributed by one of our Students who attended the "big show":

I arrived home from the World's Fair only a few days ago. While there, the following suggested itself:

Mr. H. Afedy, to his spouse on examining the Statue of the Discoverer of America in front of the Administration Building:—"Gosh, Lizey, this Columbus were a good sized man, eh?"

\* \*

My last day at the Fair I spent in looking through the State Buildings. I must tell you that the Official Guide has a cut of the Canadian Building, with the words "Building of the Canadian States" printed beneath (Brebis comptées, le loup les mange!); and while looking at the mummy in the Utah one, I overheard the following remark:

"My dears, see here! This is the dead body of a mummy. It was found in the abode of the cliff dwellers this year, and was brought here to show that there were people in the world before Columbus discovered it."

The foregoing are the exact words of the speaker, a lady of about 30 years.

I had it all written in my note-book one minute later.

—L. J. B.

#### MY FIRST GERMAN LESSON.

Song I.

Oh, when shall I forget the day
Of my first German lesson?
The grim professor in his chair,
The trembling students pressed with care,
The dingy room and musty air
Made everything oppressin'.

Refrain: Oh, my first German less on Made everything oppressin'! Ah! when shall I forget the day Of my first German lesson?

II.

The gutturals made me tear my hair
At my first German lesson;
I couldn't catch their beastly sounds,
I had to clear the verbs in bounds,
And fight the rest in standing rounds,
Or get them all a mess in.

Ref. On, my first German lesson!
(Its truth I am confessin')
The gutturals made me tear my hair
At my first German lesson!

III

The Umlants almost broke my heart
At my first German lesson!
There grunting of distempered shoats,
And snarl of dogs, and bleat of goats,
And hacking from catarrhal throats
United to distress one.

Ref. Oh, my first German lesson
Was utterly distressin'.
The Umlants almost broke my heart
At my first German lesson!

IV.

The grammar drove me to despair
At my first German lesson!
The syntax was so strangely mixed
I couldn't get the order fixed,
The more I tried, the more perplexed
Grew I, beyond expressin'.

Ref. Oh, my first German lesson
Was quite beyond expressin'!
The grammar drove me to despair
At my first German lesson!

V.

I dislocated both my jaws
At my first German lesson!
The master "umph'd" and "ach'd" and "schwied;"
And when he bade me try to read,
I "auf'd" and "ach'd" and "umph'd" as he'd
Done,—all the rest was guessin'!

Ref. Oh, my first German lesson
Involved some mighty guessin'!
I dislocated both my jaws
At my first German lesson!

VI.

But, after all, I bless the day
Of my first German lesson!
At it I learned to love the tongue
In which the deepest thoughts have rung,
And sages writ, and poets sung,—
To master it I press on.

Ref. Oh, my first German lesson
Inspired me to press on!
So after all I bless the day
Of my first German lesson! JOHLE JOKHR.

#### A UNIVERSITY STUDENTS' NIGHT.

The very term University suggests unity,—all the parts of one great organization working in harmony for some common end. That end I take to be the development of the whole man. The faculties exist for specialization. The latter, however, is fatal to the highest development of the individual if carried to an extreme, because it implies neglect of general culture of head and heart. A STUDENTS' NIGHT is either a good or a bad institution, according to the conditions under which it exists. It is good if it fits into the above platform on which all can stand, unless I am greatly mistaken; and in all discussions it is just as well at the outset to know upon what principles people who differ or seem to differ can agree.

It seems that the faculties could not this year agree to make students' night a university one. Whatever the causes, is this not to be regretted? Has not university spirit suffered? Has university spirit anything to do with national spirit? Few thoughtful people will deny that while provincialism is strong enough, indeed too strong, national spirit is weak. In fact, is any people among the leaders of civilization so weak in national characteristics and national spirit as the Canadians? If this be true, why is it thus?

The Olympian Games did much to foster a national spirit in Greece.

Is it not possible to have Canadian intercollegiate sports, debates, etc.? This by the way.

About the only objection perhaps to a University

night is that with the growth of McGill the faculties might become so large that the affair would be unmanageable from the masses being unwieldy. We have not, however, arrived at this condition of things yet. But the principal object of the writer just now is to enquire whether a *theatre night* is the best for either a university or faculty annual gathering of students "on pleasure bent."

The fact that a considerable number of the students and a probably larger proportion of the parents are strongly opposed to the theatre as an institution is a serious consideration in connection with any proposal for its endorsation 'y the University.

It is known that some of the professors, who would like to join with the studentsin their pleasures, have refrained from attending students' night, because of the belief that by so doing they would seem to endorse the theatre as an institution, and thus run foul of the conscientious convictions of the parents who have entrusted, in a measure at least, their sons to their care. Some of these very professors believe themselves in the theatre as an institution that may, and as regards certain presentations does actually, tend to good. They believe that Hamlet, Macbeth and indeed most of Shakspeare's plays, with others put on the stage, are great moral levers, doing a work that neither the pulpit nor any other existing institution can equally well accomplish. Nevertheless, they cannot but respect the views of those to whom they are so peculiarly related as the parents of the students.

Is it not possible to select a mode of celebrating Students' Night which will be entirely beyond cavil, and will heartily commend itself to all? At present the students have little or no selecting power as to the play they shall witness. At all events, it is quite a subordinate part of that long series of somethings not very easy to define which make up that unique institution—Students' Night. The music will be conceded first place. Why not then let this students' institution follow entirely its natural lines of development, untrammelled by the accidental and foreign element of a play, on which the student's part is attempted to be grafted with but indifferent success for both, and change the theatre night into a concert night?

By such a change the students could develop an institution that would be entirely in harmony with their own views, traditions and feelings, and to which no one could raise reasonable objection.

Various athletic organizations in this city have held concerts, in which the genius of their own peculiar institution was admirably reflected, especially in their music. Students' music is susceptible of great development, as witness the results in Germany; while amongst ourselves, the advances in this direction are to me one of the best assurances of the progress students are making in the ethical and æsthetic. Imbued then as a solution of the problem which is before us, a University Students' Concert Night, using the term "concert" in a somewhat free sense, so as to include, if thought desirable, other features not strictly musical.

WESLEY MILLS.

AT MISSION SAN JOSE.

Moonlight on the Virgin, San José, Cal., 1892.

The sleeping moonlight lingers On Thy shrine at San José; The tender velvet shadows Shroud the rigor of decay,

While shafts of palest silver
With soft, caressing grace
Bend o'er Thy ruined altar
And light Thy Holy face.

The patient hands that carved Thee
Long have crumbled into dust;
Thy chalice bowl hath yielded
To the ravages of rust;

And they who knelt before Thee
In the days of long ago
No longer swing the censer
To the organ's rythmic flow.

But ever through the ages,
With their tender, Holy light,
The moon and stars of Heaven
Still shall keep Thy altar bright;

And though by man forgotten,
From above, the white moon's shine
By angels earth directed
Shall for ever guard Thy shrine.

Though no melodious music
From the friars' voices rise,
Yet the melody of silence
In Thy purple shadow lies,

And for e'er the stars drip glory
On Thy crumbling ruins gray,
And for e'er the mellow moonbeams
Bless Thy shrine at San José.

EDMUND DAY.

[Mr. Day, one of the prominent members of Alexander Salvini's troupe, has sent the above original poem, and in the letter accompanying it states that he "would be more than satisfied if he could think that it would reach the hearts of the "boys" in anything like the way that their kindness touched and possessed the hearts of the "mummers."

We hope that Mr Day will again favor us with another contribution, and wish him every success in his literary as well as in his histrionic career.—Ed.]

### THE FRESHMAN'S TALE.

It was one of those bitterly raw evenings in November, that I left my snug study to plough through the snow and slush of Dominion Square to have a smoke and chat with my college chum, Hugh Felton.

He occupied a very cosy bedroom and sitting room in one of the McGill College Avenue boarding houses, and any evening in the early part of the sessoin was sure to see three or four college men congregated in his den.

The very strong smell of smoke which greeted my nostrils as I came up the stairs convinced me that Hugh was not all by himself.

As I came into the room I saw an elderly-looking

man, sitting over the fire, smoking away industriously at a huge pipe; he looked like a jolly fellow, and his first greeting convinced me that he would be good company.

After we had chatted on general matters for a short time, the conversation naturally turned on college affairs, and I found out that Hugh's guest, Mr. Arthur Drummyer, was an Arts graduate. He had a lot of interesting information regarding Old McGill in her younger days, so that I was very well pleased to have met him.

Some incident which he told reminded me of a rather peculiar accident which had occurred in my freshman year, and which I recalled to Hugh's memory.

"Talking of funny things happening in one's first year," broke in Drummyer, "reminds me of a bad break that I made in mine, and one which I have never forgotten. Wait till I fill my pipe again, and I'll tell you about it."

After he had accomplished this, and emitted a huge cloud of smoke, he started:

"In the old times in McGill we quite frequently used to get up theatricals amongst ourselves, and give the public the benefit of them for a small consideration, which was devoted to some college society. We prepared a play which we acted one January during my first year, and in which I was to take the part of a girl.

"Of course we had a considerable amount of fun at our rehearsals, although there was quite a bit of solid hard work connected with it.

"As you can imagine, I felt very proud at being selected, in my first year, to take part in it, and used to be greatly amused by the big seniors coming around when I was in ladies' dress, and carried on a lively mock flirtation with the 'girl student' as they nicknamed me.

"During our first rehearsal, when I was waiting to 'go on,' a pleasant, rather elderly-looking man, who, I was informed by someone, was a graduate, came up and chucked me under the chin in quite a *chic* manner, and when I squeaked out in feminine tones, 'Go way, you great big rough man,' he laughed to beat four of a kind. We became quite friendly before our play came off, and although I did not then know his name, I felt more than proud, when I happened to meet him, at getting a cheery nod from a graduate, for at that time, as you can well understand, a graduate appeared to me to have reached the pinnacle of human greatness.

"What the cause of it had been, whether I had given too much time to studying up a play earlier in the session, whether it was that the period before Christmas had been too greatly occupied by heroic efforts, insisted on in spite of unpleasant obstacles to acquire the tobacco habit, as it is now called, or whether it was through laziness due to nothing else but "pure cussedness," I cannot say, but the melancholy fact was, that I had come considerably short in my exams at Christmas, and I was under the painful necessity of bothering the professors to give me 'supplementals.' These came off the week after our play. How I hated those beastly 'sups.," perhaps you fellows may have some idea, but they had to be taken.

"Our theatricals had taken place successfully on the 30th of January, and the 'realistic drama' of 'sups' was due three days later.

"With the logic so peculiar to the freshman, I convinced myself that I was performing a highly meritorious act in sloping all the lectures during these three days to plug up, so that I might have the evenings to devote to the many attractions that new life in a big city offered me.

"A conscientious adherence to this idea caused me to be snugly seated in the library the day previous to the dreaded 'sups.,' grinding away for dear life, and I was so busy that I forgot to look up as anyone passed through the room.

"However, I was quickly aroused by hearing a lady's voice say, 'Why, there's Arthur Drummyer.'

"I looked up to meet the smile of an elderly lady, whom I at once recalled as having shown me great kindness at Cacouna the previous summer, and to whom I had once with boyish pride confided my ideas of what I was going to do 'when I went to McGill.'

"When I came forward to speak to her I was surprised at seeing her accompanied by my graduate friend, of whom I have been speaking. I replied to her kind enquiries that I was getting on swimmingly in college, but, unthinkingly, explained my presence in the library, by stating that I was preparing for exams on the following day. She immediately exclaimed: 'Why, I did not know that you had exams at this time of the year.' I saw my mistake at once, and also noted the grin on my graduate friend's face.

"Well, you know, boys, a fellow can't always tell the truth, and as I recalled the hopes I had confided to her, I thought it might disappoint her somewhat to know that I was plucked, so I at once tipped the wink to her companion not to betray me, and stammered out: 'Well, you see, these are our 'Intercessionals.' The man turned away quickly, but an oscillating motion of his shoulders shewed that he was stirred by deep emotion of some kind. Alas! my little white lie was not destined to stop there. She said: 'Well, but do you all have to take these examinations?'

Here was a fix, and the only way out was to lie even more cheerfully, so I answered, with another wink at the graduate, who appeared more than interested, and who I knew had 'spotted' me: 'No, these exams are not what you would call obligatory on all of us,—in fact, you need not take them, but, on the other hand, they are a great help, I might almost say that some of us could hardly get along without them, although as a matter of fact they give rise to a great amount of extra work. But,'I added virtuously, as I walked with them to the door, 'there is no doubt it is absolutely useless for a fellow to come to college if he is going to shirk a little hard work, and as these are of great assistance to me, I don't hesitate to avail myself of them.'

"Why the graduate passed out of the door so quickly, and very impolitely preceding the lady, I don't know; but as she was saying good-bye, she added: 'I must say I am very glad to find you so industrious. I

was afraid that college might present too many attractions outside of your work for your own good.'

"I went back to my books, when a revered senior came up to me with the exclamation: 'Well! for a freshie you have an admirable amount of nerve. I suppose you know to whom you were telling your yarn.'

"'Of course I do, she is a Mrs. Anderson of Phila-

delphia.'

"' No I don't mean her, but the gentleman she was with."

"'No, I don't know his name, but I know him quite well, he is a graduate,' I added proudly.

"'Graduate! great guns! perhaps he is; but, you fool, do you mean to say you don't know his name."

"' No, who is he?'

"'Who is he, Well, he is only one of the senior professors in the faculty of—; that's who he is."

"Well, you fellows can imagine my feelings," said Drummyer, as he shook out the ashes from his pipe.

"Pass me the tobacco jar."

S.C

#### BACK TO OLD McGILL.

From where the vast Pacific beats against the rocky shores To where St. Lawrence in the sea his swelling wave outpours, From where the northern fields are wrapt in ruthless ice and snow.

To the gay gardens and bright mines of burning Mexico, From many a fair Canadian plain, from city, vale and hill, From many a sunny southern town we're back to Old McGill,

We're back to Old McGill again, back after work and play:
To some the summer months have sped like one long summer
day,

To some they've been a vale of gloom and grief, but now they're o'er;

The cloudy pillar is behind, we'll light the fire before, And from the cup of cheerfulness we'll each one drink his fill To youth and hope and joy, because we're back to Old McGill

No oak shall yet be sported—this is not the time for care; We'll sit, and while the hours away on lounge and bed and chair: Now shall the social pipe be lit, the mirthful tale go round; Now shall the genial jest be fired, the jovial laugh resound; We'll find in boon companionship a cure for every ill, And feel, whatever else we feel, we're back to Old McGill.

Away with dark foreboding's frown and disappointment's sting; So much of failure and success each day is bound to bring; And college life like other life will have its downs and ups; We cannot all get scholarships, and someone must have "sups." 'Tis not too late to rally yet, and, if defeated still, Why, then, the longer we shall say, we're back to Old McGill.

CAP'N GOUN.

#### OPENING OF THE NEW LIBRARY.

Tuesday, October 31st, was a red-letter day in the history of McGill College, and indeed it may be recorded as an important event in the history of the city of Montreal.

The city newspapers furnished faithful reports of the opening ceremony; we extract from the *Gazette* the following pertinent notice:—

"A treasure for the use jointly of present and future undergraduates in the Faculties of Arts, Science, Medicine and Law students at McGill that are now and are

to be. That was what the University of McGill comes into possession of, in the form of a magnificent home for the books of its library, through the munificence of Mr. Peter Redpath; a storehouse worthy of its object, for the stores of 'potential knowledge' to be accumulated there, as Vice-Principal Dr. Johnson expressed it.

"In the past, many of the princely donations McGill has received have been for special faculties; this one will be for the benefit of the University as a whole, and, as one of the speakers put it, for that of the city, the country generally, and consequently of the human race. Science has received endowments that places it abreast of any University in the world; Medicine is well provided for; Arts is in a good position, but requires many things yet, as Sir William Dawson has often hinted, for it is the faculty of the University; and Law can be trusted to look out for itself.

"McGill, as a whole, is to benefit by this, and the friends of the College have reason to rejoice.

"That Montreal is proud of its University was shown by the attendance of so many representative citizens at the inauguration by Their Excellencies of the new library building. Her graduates taking an interest in the welfare of Alma Mater naturally turned out in force, but there were many prominent ladies and gentlemen present who cannot claim that privilege, but who be took themselves from pressing business to manifest their interest by their presence. The opening was a very successful function, and passed off pleasantly. McGill is to be congratulated on being the recipient of such a gift, Mr. Redpath on presenting it, and those who had the management of the ceremony on the success of their efforts.

"Long before the hour fixed the invited guests began to arrive, and the college grounds presented an animated appearance. The Faculty gathered in the William Molson hall, attired in their academic robes, and awaited the arrival of the vice regal party. Their Excellencies and suite arrived about 2.45, and were at once escorted to the platform. With the handsome uniforms of their suite and the variously-colored gowns of the distinguished gentlemen in the audience, and the Donalda graduates in their academic gowns and caps, the spectacle was a very striking one.

"The following address was read by Mr. Hugh McLennan:—

- "To His Excellency the Right Honorable the Earl of Aberdeen, P.C., Governor-General of Canada:
- "May it please Your Excellency,

"We, the Governors, Principal and Fellows of McGill College, feel highly honored by the presence to-day in the halls of this University of the representative of our Gracious Sovereign, and we are gratified to have the opportunity of renewing the expression of our heartfelt loyalty and of that deep-seated love and reverence for our Queen which prevail here in Canada not less than in other parts of Her Majesty's world-wide dominions.

"We desire to thank Your Excellency personally for the honor of your presence so soon after your arrival in Canada, and for the favor therein implied. The countenance given to institutions of learning by those who are highly placed has always been greatly esteemed, and we are fully sensible of its value. We owe much gratitude to Your Excellency's predecessors for the great favor they have extended to this University, and we trust that we shall equally obtain that of Your Excellency, more especially as by our Royal Charter Your Excellency is the official visitor of the College, with the same powers as those exercised by those in similar position in England.

"From Your Excellency's intimate knowledge of Canada, you are probably aware of the variety of principles on which the Universities are constituted, while all work together harmoniously for one common end. This University, which is Protestant, but non-denominational in its character, presents a happy exemplification of this fact, in the co-operation received from, and given to, other Universities for common educational objects.

"It owes its origin and growth to Montreal alone. Founded by one citizen, maintained and extended by the liberality of other citizens, it offers its benefits to all Canada with a success which cannot but be gratifying to those who have striven for this end.

"It has five Faculties, together with a separate department for the education of women, which contained in all over 900 students at the end of last session. There are besides four affiliated Theological colleges in the city and outside, in this province, there are three affiliated colleges in Arts. By theans of its Normal School, the advantages of special training are given to those who are preparing for the duties of teachers.

"So great an expansion in comparatively few years fully justifies the foresight and munificence of those who by their endowments have aided in producing it. We are happy to-day that, in presenting this address of welcome to Your Excellency, we can also present, in the case of the new library building and of the land on which it is built, two instances of that remarkable generosity in the encouragement of liberal and professional studies which casts honor on the name of Montreal

"To the Countess of Aberdeen, whose strenuous efforts for the benefit of humanity in so many ways are so well known, we tender our warm thanks for the encouragement of her presence, and we hope that the special attention which the University gives to the education of women will meet with her approbation.

"It is our earnest hope and prayer that blessing and success may attend Your Excellency's administration of the duties of your high office, which may conduce to your own happiness and to that of all loving subjects of the Queen.

"His Excellency replied as follows:-

"Mr. Principal, Your Honor, Fellows of the College, Ladies and Gentlemen: Your a ldress, with its graceful and appropriate assurances of sincere and affectionate loyalty to the Queen, and good-will towards Her Majesty's representative as such, will form a pleasing and permanent souvenir of a most interesting occasion, though also there must inevitably be an under-current of sadness in the proceedings of to-day, especially for those who personally shared the friendship of the emi-

nent man who has just passed away from our midst.\*

"I appreciate the kindly and cordial manner in which you refer to our present visit to the College. It is, indeed, not surprising that, like my predecessors, I should have felt more than willing to take the earliest opportunity of responding to your invitation, especially in connection with so auspicious an event in the history of this University as that which will to-day be celebrated. For, owing to its liberal endowments, its comprehensive system, and its high efficiency, to which you allude with well-grounded satisfaction, the fame of this seat of learning has become widespread.

"It is sometimes said that 'coming events cast their shadows,' but it is also true that the unexpected most often happens; and, certainly, when, as casual visitors, Lady Aberdeen and I had the advantage, some years ago, of inspecting the museum and some other portions of the College, with the excellence of which we were greatly impressed, I could not have foreseen or expected that my next visit would be made in the high official position which I am now called upon to occupy.

"But with all the more pleasure and heartiness, as one who can claim at least some previous acquaintance with your institution, do I accept and assume the privileges of visitor of the College, which will, I trust, involve and create an intercourse of more than a merely formal and perfunctory sort during my tenure of office.

"Allow me now to express the sincere thanks of Lady Aberdeen for your particularly cordial allusion to herself, and to say that you do Her Excellency no more than justice when you attribute to her a hearty appreciation of the well-devised and enlightened extension of your educational advantages, to which reference has been made. Ladies and gentlemen, we value the good wishes which you have so thoughtfully expressed, and we join in the hope and the expectation that, with the divine blessing, a large and lasting success may ever attend the noble work of this University.

"Their Excellencies were then escorted to the library building by the Faculty and graduates, where a large audience had assembled. Many of these were ladies. In the west gallery, the front of which was hung with college and national banners, was a concourse of the 'undergrads,' who entertained those present during the wait with college songs, well sung. The procession entered with the Registrar at its head, followed by the Donalda graduates, graduates, professors, and then the vice-regal party. As the latter came in sight the students arose and sang the National Anthem with vim and correctness. As Their Excellencies were taking their seats, 'the boys' gave three rousing cheers for Lord Aberdeen, for Lady Aberdeen, for Mr. Peter Redpath, for Sir William Dawson and for His Honor Lieutenant-Governor Chapleau.

"Rev. Dr. Cornish having opened the proceedings with prayer, Mr. J. H. R. Molson briefly explained that they were present that day to receive from their old and valued friend, Mr. Redpath, the deed of the library building.

<sup>\*</sup>Sir John J. C. Abbott, ex-Premier of Canada, died the evening before.

"Mr. Peter Redpath, who was received with much applause, said: I beg Your Excellencies to accept my most sincere thanks for the honor conferred upon me by your attendance on an occasion which it has been my privilege to create. I also thank His Honor the Lieut. Governor of the province of Quebec and the distinguished company around and before me for the interest manifested in the function of to-day. There is always a feeling of satisfaction in the mere doing of what one considers will be of benefit to the University and to the city, and, possibly, beyond it. But it is pleasing also to have the approval and sympathy of those who feel an interest in the object of it. We mourn to-day the loss of a very eminent public man, who had an official connection with this University. It would have been gratifying to me, had circumstances permitted, to have postponed the proceedings for a few days. The conventional few words which are now expected from me will be devoted entirely to matters relating to the building in which we are assembled. The necessity for largely increased accommodation for the library of McGill University has been manifest for some years past. I believe that this building, with its possible extensions, will provide space for all the books that the University is likely to own for many years to come. It is the result of as much care and attention as the architect and myself knew how to bestow upon it.

"The plans of many other libraries were examined, and many other libraries were visited both by myself and the architect, with a view to arriving at the best possible plan for this building. The newly-appointed librarian, too, gave many valuable suggestions in matters of detail. I know that we have not attained perfection; but experience will show how far we have advanced towards that end. In no case has utility been sacrificed to architectural or æsthetical effect, vet I believe that the architectural design and the architectural effects have met with the general approbation of the comparatively few persons who have hitherto had an opportunity of studying them. I remember a meeting of Convocation a good many years ago, at which Principal Dawson, in a general appeal for aid to the University, described the library shelves The shelves then 'gaping' as 'gaping for books.' have been filled and the books have overflowed. But now the shelves here will absorb them all, and there will still be shelves gaping for more. Let me here take the liberty of saying to those who may desire to present collections of books to the University, that they should not diminish the value of their gifts by requiring that the books should be kept together as special collections. The librarian ought to have, and, in fact, must have, the liberty of classifying all the books under his charge and placing those on the same subject together, from whatever quarter they may come, otherwise some confusion and expense will be caused, and the donor may in that way be disappointed. The only features in the building to which I will make special reference are the painted windows at each end of the hall. They are the gift of my wife, who has heartily encouraged me during the whole progress of the building. I have much pleasure in acknowledging her and my obligations to Messrs. Clayton & Bell, of London, the designers, who have expressed the sincere pleasure they had in executing the work. They were willing to accept suggestions, and their previous experience led me to confide in their artistic taste. I hope that the result, considering that they had no Raphael to consult, will be considered satisfactory. The decorations are not quite completed. There are spaces in the windows which will hereafter receive inscriptions and texts. which may be strewed around to teach the civic, as well as the rustic, moralist—not to die but to live.

"Mr. President, I have no deed of gift to offer to-day. I know what follows when a man knowingly builds upon ground belonging to another. This building already belongs to the University, without any gift from me. I know that it is only a convenient shelter for its more valuable contents, but students will, I hope, appreciate the facilities here offered and the pleasant surrounding I have endeavored to provide.

"Mr. J. H. R. Molson, in the absence of the Chancellor, Sir Donald A. Smith, then accepted the gift on behalf of the University. He referred to the pleasure it afforded him to do so from his old friend and schoolfellow. The University now had two fine buildings as a visible sign of the great good it had received from Mr. Redpath, and they now had to express their thanks, remembering that the man who did good to posterity was the greatest benefactor. How long and how faithfully he had worked for the University only those who were associated with him knew. Since he had been called to live in Europe he had not forgotten them. He would conclude by thanking Mr. Redpath on behalf of the University, which would long remember his venerable colleague. He used the word venerable because Mr. Redpath was his senior. After again thanking Mr. Redpath, the speaker closed with an eloquent tribute to his generosity to the College in the

"Mr. Redpath then presented His Excellency with a gold key to the library, suitably engraved, enclosed in a beautiful silver case, with the remark that it was not so large as the famous one at Abbottsford, but it was large enough to unlock the front door of the building. At the command of Lord Aberdeen the students gave three cheers for Mr. and Mrs. Redpath, and added to this by declaring Lord Aberdeen 'all right.'

"His Excellency then spoke as follows:—Mr. Principal, Your Honor, Mr. Redpath, Ladies and Gentlemen—Once more the governing body and friends of this University have assembled to receive and to celebrate a magnificent contribution to the equipment and material for its work. McGill College has, indeed, become in a real and active sense a monument of the enlightenment and generous public spirit of several of the most successful and esteemed of the sons of Montreal. I trust it will be a cause of happiness to Mr. and Mrs. Redpath, as it will assuredly be to their friends, that they are personally present on this occasion. Many years of a successful and upright career, and of much public usefulness, have rendered the worth and the name of Mr. Peter Redpath so familiar,

that it is unnecessary, nor would it in his presence be acceptable to himself, to dilate upon his claims to public esteem and good will; and now, si monumentum quaris, circumspice, I confess that I regret somewhat that there was no actual deed of conveyance from Mr. Redpath by way of outward sign and symbol of this splendid gift; but, after all, we have this golden model of the key. I confess I did not quite understand Mr. Redpath's reference to the risk of dealing with land not absolutely in one's own possession. I do not think that there need be any misgiving on that account. I can, if I may quote once more, mention a favorable example where no difficulty has arisen. I refer to the case of the University college of Oxford, which I claim as my Alma Mater. That college was founded by King Alfred. On the one thousandth anniversary of that foundation many men of mark were present, among them being the late Dean of Westminster, Dean Stanley. He entered into a very learned disquisition as to whether King Alfred actually had been the owner of the land and the founder of the college, and I am afraid that he did not absolutely argue in favor of that. Lord Sherbrooke, who was present, said that he had never doubted the fact; but, after all, the Dean's summing up tended to incredibility, because he had remarked that probably it was not founded by King Alfred, because the land did not belong to him but was in the hands of the Danes. Mr. Lowe said: 'This increases my conviction, because it is not always easy to give away what belongs to us, but it is easy when it belongs to somebody else.' Whatever may be the conditions as to the land, I am sure the building placed here will be secure, and I trust that it will remain as long as the world lasts. It is not necessary to enlarge upon the personal aspect of this noble gift to the University, but we may, at least, remark that Mr. Redpath's munificence may be justly regarded as, on the one hand, in some sense the result, and, on the other hand, certainly a conspicuous token of the earnest appreciation of education and knowledge that prevails, not only in this city of Montreal, but throughout Canada as a whole. This fact is full of hopeful significance. Mr. Molson has already alluded to the unavoidable absence of the esteemed Chancellor of this University, and I am sure we all regret, and none more than Mr. Redpath, his absence on this occasion. Sir Donald A. Smith is a man whose name has become a household word for energy, for public spirit, and especially for practical and princely generosity in promoting works of public utility and benefit; and that is nowhere more fully exemplified than in the case of this College, in which he so worthily occupies the position of Chancellor.

"The roll of former students of McGill who have attained to mark and merit is already considerable, and none surely will rejoice in the fact more than the learned Principal, who, for so many years, has ably presided over the work of the College, and who, on his retirement from the active duties of his position, will be followed by the warm and grateful good wishes of his colleagues and many friends.

"I see some of the present students of the College in

this hall, and I should like to take this opportunity of thanking you, gentlemen, for the cordial welcome which you extended to Lady Aberdeen and myself upon our arrival. Will you also permit me to thank you, not only in my own name, but in the name of this large and brilliant assembly, and I would venture to say in the name of Her Majesty the Queen, for the manner in which you rendered the National Anthem on the entrance of the procession into this hall. The words and the melody of 'God Save the Queen' are tolerably familiar-but there is a right way and a wrong way of singing it, as well as a right and a wrong way of understanding the principle represented thereby. Therefore, I appreciate such a rendering as that you gave, which was not only characteristic of the evident spirit of strength which entered into the singing, but of correctness of time, measure and expression. Well, gentlemen, I need not, I think, attempt to address to you words of exhortation or incentive. You are doubtless actuated by a sense of the far-reaching importance and responsibility of the opportunities for your equipment in the great work of life which are here provided for your use. Any utterance which I might venture to offer to you would, therefore, be that of congratulation and of confident expectation. Surely we may say in the words of the text inscribed on that mantelpiece: - 'Happy is the man that findeth wisdom and the man that getteth knowledge.' In acquiring knowledge there is happiness and real conscious satisfaction. At all times and everywhere the work of education is of sacred importance; but if any condition of things could enhance its value, it is the case of a young country with vast capabilities and scope for future development and influence. Nor should we forget that every intellectual or scientific advance, in this or any other country, is not for the benefit of that country alone, but indirectly, and sooner or later, for the benefit of the whole human race.

"And again, with reference to this fair land, the fact that she is within the British Empire in no way detracts from the distinction accruing to Canada by reason of the success of her sons in any branch of literature, science or art. The Canadian student, author, poet, scientist or theologian, who rises to eminence does so as a Canadian, and brings fame to his country as such, because of the happy combination of Canadian nationality and patriotism with attachment to the mother country and her constitution, in harmony with which Canada may look forward to an everincreasing influence and success.

"Mr. Principal, it is impossible to speak in public to-day, especially in connection with this College, without reference to the announcement which has reached us this morning, and which necessarily imparts a sombre hue to this gathering. The distinguished man who has just passed away was one of the most eminent of the many who have claimed McGill as their Alma Mater. The close of Sir John Abbott's career has taken place in the midst of the sympathy and sorrow of many attached friends, and with the respect and esteem of the public at large. His loss is mourned,

but here especially, in this centre of preparation for future work, we must not use language of gloom or despondency. The former Prime Minister of Canada would have been the first to recognize and rejoice in the fact that when one worker resigns his commission of service in this world, others are coming forward to fill up the ranks of the great army of all who, in whatever sphere, are striving to press on in the service of God by serving their fellow-men. No better wish can be expressed for this College than that such a spirit may be the key note of its operations and its influence. I now declare the new library building to be opened.

"Sir William Dawson being called upon was heartily received. He felt, he said, too deeply for words, but there were a few things that might be appropriate on such an occasion. Such a gathering brought up matters relating to the past, the present and the future of the University. Some of those present probably remembered in 1855 when they had no library except a few books belonging to the medical faculty. In 1858 they purchased a few books on English History, and in 1860, when they moved to the present site from the old Fraser building, they carried up some 1,500 volumes. Two years later, when Mr. William Molson generously undertook to complete for the College the old buildings, part of his plan was to fit up a library room for 20,000 volumes, and they had only 2,000 This probably books to place on these shelves. accounted for his old and, to him, forgotten address, referred to by Mr. Redpath, when he said that the shelves were gaping for books. Some people even smiled at the idea of their calling it a library at all. However, the disparity between the number of shelves and the number of books acted as a stimulus to their friends, and donations were freely given until in 1870 they had 10,000 volumes, in 1882 20,000 volumes, and now they had about 35,000. Long before they were prepared to leave the old building the shelves were filled to overflowing. That was the story of the past. As to the present, he pointed out the value all who had any experience in educational work placed on a library. Hitherto they had labored under the disadvantages of a crowded room and poor light, but now they had this magnificent reading-room, which he knew was not surpassed on this side of the Atlantic for beauty and utility. He had no doubt that reading, study and original research would be promoted by this library. He touched on the beauty of the room and the beautiful gift of the stained windows by Mrs. Redpath, and expressed the belief that the history of the past would be repeated in the future. They now had four times more room than they had books for, but he had no doubt but that the shelves would fill up more rapidly than they had in the past.

"Lord Aberdeen had referred to the loss sustained, the shadow cast upon the gathering by the death of Sir John Abbott, and he wished to add a word more. Sir John was their oldest living graduate. Not only that, when some years ago they wished to establish a law faculty, the corporation pitched on Sir John Abbott, who had only graduated a few years previously,

to form it, a tribute of Judge Day, Judge Dunkin and others of that day to his ability, and a recognition of what was before him, showing the prescience of the corporation as to his future career. When, more recently, his public employment necessitated his withdrawal from these duties, he remained a member of the Board of Governors, and, as he could testify, was always ready to give aid and sagacious counsel. He could recall many occasions upon which Sir John did good service for himself and the University that was never heard of. Were Sir John with them to-day he would have rejoiced, for he loved learning for its own sake. In conclusion, he said that every student, graduate, professor and well wisher of McGill thanked Mr. Redpath for his noble addition to the University.

"Dr. Johnson read the following communication from Sir Charles H. Tupper, who, it had been expected, would be present:—

"'I find that the Hamilton ceremony for the unveiling of Sir John Macdonald's statue takes place on Wednesday. Of course, I must be there. This prevents me attending on Tuesday night on the opening of the Redpath library at dear old McGill. I am very sorry. I wished most sincerely to be with you to join in your rejoicing, and to say how much Mr. Redpath's public and generous spirit is to be admired. McGill University is not only flourishing among Canadian schools of learning, but it can now claim to be one of the best on the continent of America."

"The speakers than went on to refer to the value of a library, and said that value could most readily be seen when it was remembered that the great function of a University was to maintain the continuity of human knowledge. The function of the library was, therefore, obvious; it was the storehouse of that intellectual food from which the professor drew those supplies required day by day for the needs of the Students. After speaking of the warm thanks which were due to Mr. Redpath for his splendid gift, he said that the building might be called a suggestion in stone on a magnificent scale, and he felt certain that the citizens of Montreal, when they saw the vacant spaces in the interior, would not fail to interpret the suggestion aright

"In the absence of Sir Charles Hibbert Tupper, Dr. J. G. Bourinot, C.M.G., president of the Royal Society of Canada, was called on. After alluding to the fact that there was one thing he had learned by sitting at the head of a table in the House of Commons, that one could not be too careful of what one said in public, he discursed on the friendship of books. Being a Nova Scotian, there was one name he was always taught to respect, and that was Dawson, a Nova Scotian. Having since made his acquaintance, he had learned to love him, and now congratulated him on seeing his labors in the cause of education so satisfactorily crowned. Let the cities of Hamilton, Quebec, Halifax and Toronto follow this example and then he would be able to say Canada possessed great libraries. He pointed out how many fine libraries there were throughout New England, and said that McGill ought to have 100,000 volumes. In conclusion, he urged everyone to do their best to

increase the value of McGill's collection by donating good books.

"Hon. J. S. Hall spoke on behalf of the graduates of McGill, and expressed the pleasure they felt on the occasion of the opening of a grand library built by Mr. Peter Redpath on the grounds of Mr. J. H. R. Molson. Lord Aberdeen as visitor to the University would besides be able to see the whole benefactions of a Smith, a Macdonald, a McLennan, and would have the satisfaction of saying that for its age McGill stood unequalled on the American continent. He alluded to the donations of Mr. Molson and Mr. Redpath, complimented Mrs. Redpath on her beautiful gift, and urged the graduates to assist in stocking the shelves of the new library.

"His Excellency then said: Mr. Principal, Your Honor, Ladies and Gentlemen, I hope you won't think that a very dangerous precedent is being set if I inflict myself upon you for a moment once more, -in fact, I believe it is one of the several prerogatives the Governor-General of Canada has that he may rise a second time in a Canadian community without being greeted with cries of 'spoke.' I heard no such utterance proceed from anyone in this hall when I rose again. I wish to be allowed to express in a more definite manner than I did before, because I did not quite realize the significance and the extent of my gratitude for the beautiful and handsome present I received from Mr. Redpath; I mean the golden key. It bears an inscription, the reading of which conveys to me the certainty that it is not merely a model to be placed in some conspicuous place in the library, but is to be carried away by me as a souvenir of a most interesting event. The inscription reads: 'To His Excellency the Right Honorable the Earl of Aberdeen, Governor-General of Canada, from Peter Redpath.' On the beautiful box in which it is placed are the arms of the University, with the words: 'McGill University Library.' I need hardly say that it is a most valuable token of his kindness and of this memorable occasion. I only hope that the librarian will not look upon it with any misgivings so far as I am concerned.

"We all know that libraries are afflicted with people who have a way of taking out books and not returning them. I must not forget that I am now a Visitor of this College, and if at some unseasonable hour I make use of this key and extract a book, it might happen that this would cause some difficulty; but I trust that if on any occasion a book should be missing, none of the students will suggest to the librarian that the Governor-General is the culprit. Ladies and gentlemen, I am sure that the excellent hint thrown out by Mr. Molson at the outset, that the speeches should be short, has been admirably followed. Indeed, I could have wished myself that we could have heard a little more of that silver speech to which Mr. Bourinot alluded, and of which he gave us such an excellent specimen. Perhaps he was unconsciously speaking of some I see upon this platform when he spoke of silence not being golden, but criminal. But we must feel that the proceedings have been most pleasant and attractive.

My reason for rising is that I have to make an intimation, and it is that I hope I may be allowed, like, I think, my predecessors have been, to present a gold medal for competition by the students of this University, by some test to be arranged by the governing body and the professors, if they will give me the satisfaction. I am only sorry that the students of this University have reached those riper years of discretion which would make anything like the suggestion of a holiday superfluous and out of place. I suppose the best thing I could do would be to ask that the professors should arrange for an extra course of lectures. But, perhaps, the professors would demur to an addition to their labors. However, I again beg to thank those who have arranged these proceedings for the interest they have taken in them.

"His Honor Lieutenant-Governor Chapleau,in a brief and eloquent address, offered congratulations to McGill on the splendid donation it had received, and said happy were those who could receive such princely gifts, and happy and happier still were those who could make them. He had read somewhere that the three great enemies of libraries were moths, mildew and fire. Mr Redpath, by his prudent gift, had provided against the first, the students would themselves take care to provide against the second, and the high spirit of the country would guard against the third.

"Rev. Dr. Barbour then pronounced the benediction, which brought the ceremony to a close, after three cheers, on the call of Lord Aberbeen, had been given for the Queen."

The opening of the Library was brought to a fitting close by a brilliant conversazione held in the new building. The guests entered through a lighted covered passage way from McTavish street. The building was illuminated from top to bottom and presented a gay spectacle.

The guests were received by Mr. and Mrs. Redpath, Sir William and Lady Dawson, Mr. and Mrs. John H. R. Molson, and Mr. W. C. Macdonald. About 9.30 His Honor Lieutenant Governor and Mrs. Chapleau and their party arrived; at 10.30 their Excellencies Lord and Lady Aberdeen came in from the Caledonian Society's Concert. Presently, to the strains of "God Save the Queen," the distinguished guests entered the room, Lady Aberdeen escorted by Mr. Peter Redpath, followed by His Excellency, who was in full Highland costume, wearing the tartan of the Clan Gordon, Lady Aberdeen wore a sash of the same tartan.

For this event about 700 invitations were issued, and nearly 600 persons were present; doubtless many familiar faces were missed owing to the death of Sir John Abbott. The scene from the gallery was a very gay one. There was nothing to mar the beauty and symmetry of this truly beautiful building. The architect may well feel proud of his work; and the memory of the donors, Mr. and Mrs. Redpath, together with that of Mr. John H. R. Molson, will be held in loving gratitude by all the students, present and future, of old McGill.

The songs given by the Glee club were well rendered and warmly received during the evening, and

also selections by the Banjo Club, whose dulcet playing would not prepare one for the force with which they give their college cry, "Fac. App. Sci." An orchestra also contributed very much to the general brightness of the evening in their selections, principally Scotch music in honor of "Hallowe'en."

#### SOCIETIES.

#### DELTA SIGMA.

The second regular meeting of this Society was held on Thursday the 26th inst.

It is pleasant to see that the wives of some of our Professors find time to attend our meetings, and that the majority of the regular members were also present. The house was crowded, and the early promise of the Society bids fair to be fulfilled.

On this particular operation excitement ran high among the members, and their eagerness to hear the anticipal discussion was scarcely outprosted until the business of the day had been concluded.

The subject chosen for debate was:

Resolved: That Scientific Research is conducive to Scepticism.

Miss Warner and Miss Cameron argued on the affirmative, while the negative was supported by Miss McKenzie and Miss Armstrong. By petition, owing to the vastness of the subject, a few minutes extra was granted to each speaker, which, it is needless to say, was used to the best advantage by them. The vote was taken according to the merits of the debate, and resulted in a majority for the affirmative.

Miss Milda Leach, B.A., acted as critic, and in this capacity her criticisms were tempered with the leniency of one who had not so long ago emerged from her chrysalis into the full effulgence of a graduate.

The Logic of the second year was referred to, and those laws of parliamentary debate which had been broken, cited.

The sympathy of the audience was with her when she said that all the speakers had shown a clear grasp of the meaning of the subject under discussion.

#### BANJO AND GLEE CLUBS.

It is encouraging to note that music in McGill is not going to die out, if one can judge by the enthusiasm with which the Glee and Banjo Clubs have begun their work for the season. The ranks in both clubs are full, and consist of the following men, which are seen to be fairly divided among the three leading Faculties: Glee Club leader, Mr. W. D. Lambly; 1st Tenors, W. D. Lambly, Med. '95; F. H. Graham, Arts '94; R. O. Ross, Med. '96. 2nd Tenors, T. Tetreau, Med. '96; R. H. Burrell, Med. '97; O. S. Finney, Sc. '97. First Bass, M. C. Hopkins, Arts '95; F. W. Horney, Arts '94; A. T. Bazin, Med. '94. 2nd Basses, F. M. Fry, Med. '94; E. J. Williams, Med. '97; W. R. Askwith, Sc. '95.

The Banjo Club is comprised of Mr. R. H. McDun-

nough, leader; Bandolas, R. H. McDunnough, Sc. '95; H. D. Herdt, B.A.Sc.; G. A. Walkem, Sc. '96; W. F. Carter, Sc. '95; F. Lambert, Sc. '94; O. L. Bickford, Sc. '97. Mandolins, G. W. Oliver, Med.; J. K. Kennedy, Arts '96. Banjos, S. Graham, Arts '96; J. K. Larmonth, Sc. '94. Guitar, R. D. Gunn, Sc. '94.

Mr. Donald Guthrie, who won such praise in Montreal and Burlington last year for his excellent readings, is again with the new club this year.

The clubs made their *debut* at the opening of the new library, and were enthusiastically received, rendering two selections in splendid time and manner.

Arrangements have been effected with the manager of the Grand Opera House, Ottawa, to appear there on Dec. 22nd, when the Ottawa Valley Graduates' Society are expected to turn out *en masse*. The clubs have also arranged to appear here in the Windsor Hall on Jany. 9th. They also desire to arrange additional concerts in the towns near Montreal.

All business and other communications to be addressed to R. A. Gunn, App. Sc. '94.

#### YOUNG MEN'S CHRISTIAN ASSOCIATION.

The address by Sir William Dawson on "Bible Study," Oct. 27th, was eagerly listened to by some ninety men. The address dealt with Devotional Study, Sir William emphasizing the power of the Old Book to sustain and develop the Christian life and character. His personal testimony of its continued interest to him was very helpful to hear.

The Association has made provision for Bible Study this year, and already 30 men are meeting weekly, and pursuing "devotional" and "practical study." Members are invited to communicate with the General Secretary with a view of entering a class. There is no habit more important than that of "Systematic Bible Study,"—formed in college, it will be retained; neglected now, it will likely remain so.

The fact that no "Freshmen's Reception" has taken place in Molson Hall may have caused some disappointment and surprise to not a few. It was with regret that the Social Committee concluded to do away with this established custom for this year; but after careful consideration they could arrive at no other conclusion, on the ground that it failed in its ultimate object, and the expense which a successful reception entailed did not justify its continuance. The Committee have arranged a number of private receptions, made possible through the kindness of friends who opened their homes for the occasion; in all, 75 members of the Freshmen class have been welcomed in this way. This has proved a very successful medium of getting acquainted with the new students, and is greatly appreciated by them.

The Semi-Annual Business Meeting took place on Friday evening, Nov. 3rd, in the Arts Building; Pres. Day in the chair. Over 70 new members were elected and welcomed to the ranks of the Association. The

## Chinese Mission Work

- IN -

#### MONTREAL.

DEAR SIR,

As a citizen interested in the welfare of the Chinese in our city, I desire to request your attendance at a meeting of a few friends to consider the advisability of, and plans for, mission work among them.

The meeting will be held in the Y.M.C.A. Building, on MONDAY Evening, April 30th, at 8 o'clock.

The Rev. J. C. Thomson, of Canton, who has gone over the ground here during the past two weeks, will give a report of the prospects.

Your attendance will not in any way commit you to the object.

Trusting you will come,

Yours respectfully,

GEO. R. LIGHTHALL, 303 New York Life Bldg.

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## Chinese Mission Work

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203 N. LICHTHALL;

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It is understood that in addition to the formal expression of their appreciation of Sir William's invaluable services to the university, conveyed in the foregoing resolution, the Board of Governors has decided to make the retiring Principal a handsome allowance during his lifetime, as a practical mark of the esteem in which he is held by them, and their recognition of his worth and work. It may be added, in this connection, that Sir William has always been a generous contributor to the funds of the university, and that as the need and occasion arose he was among the first to extend a helping hand. Although relieved of the

labor and responsibility of the principalship, the governors hope to have the benefit of Sir William's advice, assistance and experience for many years to

Assignee, Collecting Attorney, &

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orders, four mail orders and several customers early Monday morning. I thus find "Herald advertising" a great success.

Yours truly,

S. H. Martel.

# GF THE DAILY

Since March, 1892,

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THE PRINCIPALS HIP OF MCGILL.

THE PRINCIPALS HIP OF MCGILL.

THE PRINCIPAL SHIP OF MCGILL.

The widespread interest evoked by the breignation by Sir William Dawson of the biprincipalship of McGill is testified to by in the number many hundreds of influential amen in Montreal and the adjoining country, and they naturally take a keen interest in a matter so deeply affecting to they are anxious to know the exact particulars of Sir Williams retirement. As something that a recumply take a keen interest than one of our correspondents have pointed out, there are some peculiar circumstances which the Board of Government from the south in apparently restored health and resumed his address there was nothing to indicate that he was then, for the last time, taking part in convocation as Principal. We, within a very few weeks, his resign action is tendered and is accepted, to take offect in a month. The Governors hasten is to good reason why it should an augition is tendered and is accepted, to take offect in a month. The Governors medium, the acceptance of the resignation, but a single and the acceptance of the resignation, but a surveying and where is no good reason why it should an estated that there is so a strong and a growing impression that Sir Williams is a strong and a growing impression that Sir William is a strong and a growing impression that Sir Williams is a strong and a growing appead is always best, and where is no good reason why it should and the stated that there existence is in disputable, and the Governors mast groundless; but their existence is in disputable, and the Governors mast groundless; but their existence is in disputable, and the Governors in sust give heed to them. Possiby there will be no hesitation should any should any about ratifying the action of the Governors of his duties, there will be no hesitation is almore sor. To take up the work where Sir William hays it down and earry it on along ever-broedening linear with the growth of the Corporation of the selecting linear which hear of the

spects also a most sensible one. The deferman proposes that the council Medicing the Licentanni-Governorie council for the sease the namber of Profestant School Commissioners to eight, two of these to be increase the namber of Profestant Covernorie council for the council of the sease to be laid; at least of the year of the form of the property of the council of the sease to be laid; at least of the year of the form of the form of the property of the form of

The New York Press is a paper which first is habitually insolent. Usually it is ignorant as well. Perhaps its insolence is due to its ignorance. In a late issue I it says that something at any rate has been gained by the Behring Sea Commission, because England is now willing to discourage pelagic piracy, having through to discourage pelagic piracy, having through to discourage pelagic piracy, having through to discouse with the United States arrangements for the joint protection of the seals. The Press ought to know, though it probably does not, that so long ago as well in probably does not, that so long ago as well in the press of th

# CORRESPONDENCE.

The Principalship of MoGill.

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To the Editor of The Herald:

Dear Sir,—The great majority of graduates and friends of McGill will have a learned with profound regret of Sir William Dawson's resignation as Principal of the University, and of its too hasty a acceptance by the governors of the institution.

Fortunately the Corporation has yet to pass upon this matter, and in view of the early meeting of that body. I would urge those with whom the initiation of such a movement rests, to call a general meeting of graduates—to be held at once—in of graduates—to be held at once—in of graduates—to be held at once—in go dexpressing our opinions, both as to the resignation of the Principal and the suppointment of his successor, if unfortunately such appointment should become tunately such appointment should become necessary.

E. M. ETC.

Montreal, June 14th, 1893.

o the Editor of The Herald:

Sir,—The business of McCill College a has been conducted on the broadest of the perincipals, with but one aim in view, the best interests of the institution to the country at large. The Board of Governors, so far, have never been moved by narrow measures or petty interests of men—or cliques; hence the high position it to-day occupies before the people of this continent. There seems but one man able to fill Sir Wm. Dawson's position, and that is Prof. Grant, of Kingston, and the is first a Canadian in the prime of life, an able man in every respect, and broad in his general views on every question, and the only man most fitted and best qualified from every standpoint to fill the gap.

Montreal, June 13.

Protection Means Ruin.

To the Editor of The Herald:
Sir,—After charging Mr. Dalton Mc.
Carby with ignorance, your contemporary. The Gazette, to-day proceeds in a leading article to deny the palpable fact that our trade with Great Sritain has fallen off as a consequence on National Policy. The serious decline in shipping at Quebec, and the lessened ocean traffic in our own port (see Harbox Commissioners' returns), will convince any one that we are the progressing. In face of the heavy in

conclus writes "Ho of Sir Donald A. Smith, in-Sir WILLIAM of the acceptance of friends beautif As long kindne MY DEAR SIR WILLIAM,—While we all deeply regret the necessity for your leaving your long life work in the University, we wish you to feel assured that we are actuated in every way by a desire to do that which may be most in the interest of your own came Quele Christile health, and altogether acceptable to you and Lady Dawson.

It is therefore my duty, on behalf of my colleagues of the Board and myself, to hand you the enclosed resolutions come to, after considering your letter of resignation of the 26th ultimo, and in doing so let me assure you that you-have, and shall always, retain the warmest regard of every member of the governing body with whom you have so long co-operated, and the relations between whom and yourself have throughout been of the most cordial nature.

With much esteem and every good wish for Lady Dawson and yourself,

Believe me,

Very sincerely yours,

DONALD A. SMITH,

Chancellor.

Sir William Dawson, C.M.G., LL.D., etc., T Five Offic ictv New Sir William Dawson, C.M.G., LL.D., etc., McGill College, Montreal.

The following is a copy of the resolutions referred to by the Chancellor and adopted at a meeting of the Board of Governors held on May 31st:— H on or M TING Hog M stant. pain is ac lace on H ing, at Croc

referred to by the Chancellor and adopted at a meeting of the Board of Governors held on May 31st:—

"Having given their most careful consideration to this communication, the Board, while contemplating with extreme regret the severence of the relations which have subsisted for the long period of thirty-six years between the governing body and the honored Principal of the University, are of opinion that the reasons given by Sir William Dawson for tendering his resignation, viz., the impaired state of his health, and the injunction consequently laid on him by his medical advisers, that he must in justice to himself relinquish the duties of his position of Principal and Professor, leave them no alternative but to accept his resignation of those important offices, as at the end of the current educational year.

"It is therefore resolved that the resignation of Sir John William Dawson, C.M.G., LL.D., be and is hereby accepted, to take effect on the 31st July, 1893.

"While deeming it wholly unnecessary to enlarge on the value of the eminent services rendered to McGill University by the Principal, services recognized and appreciated, not alone by every one connected with the University, but by the whole body of Canadians, the board desire to record their sense of the deep and lasting obligation under which the University lies to one who, from very small beginnings, has done so much to raise it to its present gratifying standing among schools of learning.

"The board have very great pleasure in appointing, and do hereby appoint Sir William Dawson, emeritus Principal and Professor and Governors' Fellow, as well as honorary Curator of the Peter Redpath Museum, and direct that a room in the museum building be set aside for his use so long as he may desire to occupy it.

"The board trust that Sir William Dawson may be spared yet many years to pursue those

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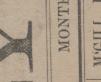
"The board trust that Sir William Dawson may be spared yet many years to pursue those valuable researches in natural science, to which he has specially and with so great success devoted much of his life, and it is their earnest hope that he and Lady Dawson may have a long enjoyment of health and happiness."

It is understood that in addition to the formal expression of their appreciation of Sir William's invaluable services to the University, conveyed in the foregoing re-Solution, the Board of Governors has decided to make the retiring Principal a handsome allowance during his lifetime, as a practical mark of the esteem in which he is held by them, and their recognition of his worth and work.

#### SPORTING NEWS.

THE COMING LACROSSE MATCH. A great deal of interest is taken in the

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# McGILL.

The Royal Institution of Learning

DURING THE ACTIVE LIFE WORK OF ITS PRINCIPAL.

IN DEFENCE OF HOWLEY.

NOVELTIES

Bridesmaids' & Groomsmen's Presents

HENRY BIRKS & SONS,

Manufacturing Jewellers,

235-7 St. James street, Montreal.

SPRING HANDICAPS M.A.A.A. GROUNDS, FLIDAY Evening, June 16th, Commencing at 8.15 Sharp.

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3. "On Burrows and Tracks of Invertebrate Animals in Palæozoic Rocks, and other Markings." By Sir J. William Dawson, LL.D., F.R.S., F.G.S.

This paper, which is illustrated by photographs and drawings, indicates some new facts in connexion with the markings produced by the burrows and tracks of animals and by other causes. Rusichnites and Cruziana are regarded, like Climactichnites and Protichnites, as representing probable burrows of Crustaceans and Chetopod worms. Scolithus canadensis is shown to be a cylindrical burrow, with accumulations of earthy castings at its mouth. The relation of these burrows to the forms known as Scotolithus, Asterophycus, Monocraterion, and Astropolithon is pointed out.

Under the new generic name of Sabellarites the Author describes certain tubes, composed of shelly and other fragments cemented by organic matter, found in the Trenton Black-river Limestone. They resemble the burrows or tubes formerly described by the Author from the Hastings and Quebec Groups, and appear to be the tubes of worms allied to the recent Sabellariæ; but they are liable to be mistaken for Algæ of the genera Palæophycus and Buthotrephis.

Some large cylindrical bodies from the Potsdam Sandstone are described as having been supposed to be trunks of trees; but the Author regards them as probably concretions formed around slender

stems, like some now forming in the alluvial mud of the St. Lawrence.

Some curious combinations of worm-tracks with ripple-marks and shrinkage-tracks are described; as also branching or radiating worm-trails, which present some resemblance to branching Fucoids. Finally, the Author describes the formation of rill-marks on the mud-banks of the tidal estuaries of the Bay of Fundy, and indicates their identity with some impressions in slabs of rock which have been described as Fucoids under several generic names.

#### DISCUSSION.

Prof. Hughes did not gather that there was any new explanation of the familiar objects displayed. He would like to see a combination of geologists and zoologists discussing each one of the various marks. He had paid most attention to *Cruziana*, and thought it impossible to refer it to any surface-track, and difficult to explain it on the hypothesis of its representing the form of any soft-bodied animal such as *Nereis*.

Dr. Hinde observed that for many years the origin of these marks had been discussed. He thought that most of them were the tracks and filled-up burrows of marine organisms. The fact that no carbonaceous matter had been found with these forms in the different countries where they occurred was opposed to the theory of their plant-origin. On the other hand, he had obtained undoubted Annelid remains from some of the very beds containing these markings.

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the side of the British geologists so far as to include the "Malière" of Normandy (zone of Amm. Murchisonæ and opalinus) in the Bajocian. On purely paleontological grounds he thought the best line between Upper Lias and Inferior Oolite was the base of the Opalinus-zone.

Mr. H. B. WOODWARD did not wish to assert that the forms identified as Amm. radians and A. striatulus were common in the

Marlstone or Upper Lias.

The President thought that there was a tendency to aim at a too artificial precision of palæontological zones, and to regard these as everywhere applicable. He believed that in Nature there were no hard-and-fast lines, either lithological or palæontological. As regards tracing lines for cartographical purposes, he did not know how this could be done without some lithological characters upon which to depend, and he would be very sorry to see the line which Mr. Woodward had drawn done away with.

2. "On some new Mammals from the Red and Norwich Crags." By E. T. Newton, Esq., F.G.S.

This paper contains descriptions of mammalian remains from the English Pliocene belonging to eight species, nearly all being new to the Crags, and four of them new to science. A remarkable low-

for by the passage of highly heated water. Other evidence points

to the changes having been brought about slowly.

Among the minerals produced in the contact-zone are secondary quartz, felspar, brown and white micas, chiastolite, sillimanite, and garnet, their modes of occurrence being described in detail, in rocks of various degrees of alteration up to those in an abnormally high state of alteration near the granite, which resemble rocks of doubtful origin in other localities.

#### DISCUSSION.

The Chairman (Mr. Hudleston) remarked on the satisfaction he felt in seeing microscopic examination of rocks taken up by ladies. He noticed that there were no chemical analyses given in the paper.

Mr. Harker had never seen gritty rocks so highly metamorphosed as those laid upon the table. The mode of occurrence of nodular masses of garnet and quartz struck him as interesting, and he would ask whether it was concretionary or connected with folding. Highly garnetiferous rocks were found elsewhere, as in the Ardennes, coming in in a lenticular fashion. The large quantity of mica would ceem to indicate an arkose rather than a grit, but he would await the publication of the paper.

April 1911

# AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THIRTY-NINTH MEETING AT INDIANAPOLIS, IND., BEGINNING WITH THE COUNCIL MEETING ON AUGUST 19, 1890.

#### CIRCULAR OF LOCAL COMMITTEE.

The Local Committee for the Indianapolis meeting begs to announce the following arrangements for the convenience and entertainment of the members attending the meeting.

#### TRANSPORTATION.

Members desiring to attend the Indianapolis meeting are expected to pay full fare at the point of starting, and should have the ticket agent furnish a certificate which will entitle the holder, upon being endorsed by the Secretary of the Association to a return ticket at one-third of the regular fare. If agent is not supplied have him order.

The railroads of the country are divided into different passenger associations, and if the member's route covers more than the territory covered by one such association, a separate certificate must be taken covering each association's territory traversed.

Ticket agents will be able to give full information as to the limit of each association's territory, and if not supplied with the proper certificate will procure the same upon request.

Upon the presentation of such certificate properly filled in and signed and stamped by the agent at the starting point, and endorsed by the Secretary at Indianapolis, a return ticket will be sold, within three days after the meeting, for one-third the regular first-class fare.

The railroad companies have established the following rule: "No refund of fare will be made on any account whatever because of the failure of the parties to obtain certificates."

#### TRANSFERS

The hotels of the city are within a few blocks of the Union Station and can be reached by any street car passing the station.

#### TEMPORARY OFFICE.

The Local Secretary, or assistant, will be in attendance at a temporary office in the Union Station, or immediately opposite, during the first two days of the Association, while members are arriving, to furnish any special information which may be desired.

#### HOTELS AND LODGINGS.

The following special rates have been offered to those attending the meeting at Indianapolis:

Denison House, \$5.00 rooms, with bath \$4.00 \$4.00 " " " \$3.00	Grand Hotel
\$3.00 " without " \$2.00	Circle Park Hotel
Bates House—Regular rates, \$3.00, \$4.00 and \$5.00 per day. 50 cents off regular rates.	Brunswick Hotel
Sherman	Circle Hotel
Spencer House, \$2.50 rooms \$2.00	Weddel House
\$2.00 "	Roosevelt House
Occidental	Pyle House

A few members also can be accommodated at boarding houses at \$1.00 per day. Accommodations will be secured in advance for those making such request by letter to the Local Secretary, stating the accommodation desired.

#### REGISTRATION AND BADGES.

Members arriving on the 19th and after, will register at the office of the Secretary in the Capitol Building. Upon paying their assessment and registering, each member and associate will receive a badge (numbered according to the register), which should be worn during the meeting, in order to secure the privileges extended to members. Special badges distinguishing the Local Committee, officers and others will be announced in the daily programme.

#### INVITATIONS.

Invitations to the entertainments and excursions to be given by the Local Committee will be delivered to each member and associate upon arrival, and an immediate reply is requested by the Committee to each invitation issued.

#### PLACE OF MEETING.

The place of meeting provided by the Local Committee is in the magnificent new Capitol Building, where rooms will be furnished for all the officers, sections and committees under one roof, where the temperature in the hottest weather is always pleasant.

The Capitol Building stands in the heart of the city, within three squares of the principal hotels.

#### MAILS.

The post-office authorities have kindly arranged for a branch office at the Capitol, so that all mail matter will reach its proper destination if addressed, "Care of A. A. S."

#### EXPRESS PACKAGES.

A room will be provided for storage of apparatus and specimens sent by express, and all packages may be addressed "in care of the Local Secretary."

#### PUBLICATION IN THE PRESS.

It is expected that the daily papers will publish liberal reports of the daily proceedings. Authors will oblige by preparing in advance two abstracts of their papers (other than those sent to the Permanent Secretary), so that the same will be ready for publication after the papers have been read in the Sections.

#### PROGRAMMES, EXCURSIONS, ETC.

The Council will meet at the Denison Hotel parlors at noon on Tuesday, August 19th. And the opening general session of the Association will be on Wednesday morning at the Capitol Building, in the House of Representatives, when President Mendenhall, Superintendent of the U. S. Coast Survey, will resign the chair to his successor, Prof. Goodale, of Harvard University. Addresses of welcome will then be made and after the announcements by the several secretaries, the general session will adjourn and the several sections meet for organization.

On Wednesday evening the retiring President will give his address in Plymouth Church. This will be followed by a reception of the Association by the Local Committee and citizens at the Institute for the Blind.

With the exception of Saturday, which will be given to the excursion through the Gas Belt, and Sunday, the sections hold morning and afternoon sessions until Tuesday evening, when the general closing session takes place.

#### SPECIAL FREE EXCURSIONS.

On Monday afternoon a special train will take the botanists to South Waveland, where carriages will be provided to take them to the "Shades of Death." A cold lunch will be served before returning.

The Science Club, of Terre Haute, has invited Sections B, C and D, to hold their session at Terre Haute on Friday, August 22d, where a visit will be made to the Rose Polytechnic Institute. A lunch will be served by the citizens of Terre Haute.

The citizens of Lafayette have extended an invitation to Section F to visit Lafayette. The above invitations from Terre Haute and Lafayette will be accepted if approved by the Council.

#### MAMMOTH CAVE.

A special excursion rate will be secured from Indianapolis to the Mammoth Cave, of Kentucky, to which an excursion will be run on Wednesday, August 27th, for the accommodation of all who desire to visit the Cave.

#### ENTERTAINMENTS.

The ladies' reception committee has arranged for a reception for the visiting ladies and for evening garden parties to which all will be invited.

#### NATURAL GAS EXCURSION.

On Saturday, August 23d, an extensive trip has been arranged by the Local Committee to cover the immense gas territory of Indiana.

A special train will be provided which will leave the city in the morning going north over the Lake Erie & Western, through Noblesville to Kokomo, where the gas field will be explored, and a visit made to the largest plate glass factory in the United States, and other concerns where natural gas is applied to manufacturing uses.

From Kokomo the party will be taken to Marion, from there to Muncie, and from Muncie to Anderson, where a magnificent display of gas at night will be given, embracing a beautiful and fantastic feature, by the introduction of a gas main under the river. From Anderson the party will return to Indianapolis, arriving before midnight.

#### LECTURES.

During the week two popular lectures in compliment to the citizens of Indianapolis will be given by prominent members of the Association.

#### PROGRAMMES

The usual daily programmes will be issued by the Local Committee during the week of the meeting.

#### SPECIAL NOTICES.

The Entomological Club of the A. A. A. S. will meet at 9 A. M., on Wednesday, August 20th, in the room provided in the Capitol Building, where members of the Club will register and obtain the Club badge. Members intending to contribute papers will send titles to the President, Prof. A. J. Cook, Agricultural College, Michigan, or the Secretary, Dr. F. M. Webster, Lafayette, Ind.

The Botanical Club of the A. A. A. S., will hold a meeting as usual on Thursday, August 21st, in the room of the Capitol Building which will be provided. Communications should be sent to the President, Dr. N. L. Britton, Columbia College, New York, or to the Secretary of the Club, Dr. Charles R. Barnes, University of Wisconsin, Madison, Wis.

The Society for the Promotion of Agriculture will hold its eleventh meeting at Indianapolis, beginning on Monday preceding the Association meeting and continuing on Tuesday. For further information, address Prof. W. R. Lazenby, Secretary, Ohio State University, Columbus, Ohio.

The American Geological Society will hold its semi-annual meeting in one of the rooms of the Capitol Building, on August 19th. Prof. J. D. Dana, New Haven, Conn., President, and Prof. J. J. Stevenson, University of City of New York, Secretary.

For all matters pertaining to membership, papers and business of the Association, address the Permanent Secretary, Prof. F. W. Putnam, until August 15th, Salem, Mass.; after August 15th, at the Denison Hotel, Indianapolis, Ind.

#### OFFICERS OF THE LOCAL COMMITTEE.

CHAIRMAN OF THE EXECUTIVE COMMITTEE:
DR. GEORGE W. SLOAN.

TRANSPORTATION COMMITTEE:

Chairman: HENRY R. DERING.
Secretary: J. O. VANWINKLE.

RECEPTION COMMITTEE:

Chairman: THOS, L. SULLIVAN. Secretary: HERMAN LIEBER.

FINANCE COMMITTEE:

Chairman: WM. SCOTT.
Secretary: ARTHUR GILLET.

PRESS COMMITTEE:

Chairman: J. H. HOLLIDAY. Secretary: H. S. NEW.

Chairman: MISS LAURA REAM.

TREASURER:
NOBLE C.BUTLER.

ALFRED F. POTTS.

COMMITTEE ON HOTELS:

Chairman: J. B. CONNER.
Secretary: THOS. TAGGART.

COMMITTEE ON POST OFFICE, TELEGRAPH AND EXPRESS;

Chairman: JOHN F. WALLICK. Secretary: C. S. PHILLIPS.

COMMITTEE ON ROOMS FOR MEETINGS :

Chairman: J. A. LEMCKE. Secretary: S. K. FLETCHER.

COMMITTEE ON EXCURSIONS:

Chairman: C. W. FAIRBANKS. Secretary: W. D. EWING.

LADIES' RECEPTION COMMITTEE:

Secretary: MRS. S. E. MORSS. Ass't Secretary: MISS MARY DEAN.

第一次。

THE THIRTY-NINTH MEETING

OF THE

### AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

WILL BE HELD AT INDIANAPOLIS, IND.; BEGINNING ON TUESDAY, AUGUST 19, 1890.

THE THIRTY-NINTH MEETING of the Association will begin in Indianapolis on Tuesday, August 19, 1890, at noon, by a meeting of the Council at the Denison House, where will be the hotel headquarters of the Association. By special favor of the State authorities, the General Sessions and the Meetings of the Sections will all be held in the new and commodious State House, where also will be the offices of the Local Committee and of the Permanent Secretary.

This meeting will be the fiftieth anniversary of the organization of the Association of Geologists and Naturalists the parent of the A. A. A. S., which will add to the interest of the meeting. The arrangements made by the Local Committee for the comfortable entertainment of the large number of members and their friends expected to be present, and the unusual accommodations offered, by which all the Sections will meet in large halls under one roof, will probably make this the most important meeting ever held in the west. Indianapolis is as comfortable in August as any city away from the sea-coast. Its streets are wide and well shaded, and its hotels are large and comfortable, so members need not be deterred from going there by the fear of extra heat and discomfort.

On Wednesday, August 20, the first General Session of the meeting will begin at ten o'clock in the fore-noon in the House of Representatives.

After the adjournment of the General Session the several Sections will organize in their respective rooms.

In the afternoon the Vice Presidents will give their addresses before their respective Sections, and in the evening there will be a General Session when the retiring president, Professor T. C. Mendenhall, will deliver his address.

The sessions will continue until the Tuesday evening following, and on Wednesday morning Aug. 27, a meeting of the Council will be held. Saturday, August 23, will be given to excursions. The meeting will close with excursions extending to August 30.

The citizens of Indianapolis are invited to be present at the General Sessions of the Association, at the Meetings of the Sections, and at the special evening lectures given under the direction of the Association.

The LOCAL COMMITTEE will secure board and lodging for members and their families at moderate rates in several hotels and boarding houses within easy reach of the place of meeting, and as the Local Committee will provide a lunch at the State House members will not be obliged to leave the cool and comfortable building during the heat of the day. In the evening, when not otherwise engaged, it is expected that the members of the Association and of the Local Committee will meet socially in the reception rooms at the Denison House.

A special circular in relation to railroads, hotels, excursions and other matters will be issued by the Local Committee, and members who are about changing their address for the summer should notify the Local Secretary at once, and he should be addressed upon all matters relating to local arrangements and in relation to transportation.

For all matters pertaining to membership, papers and business of the Association, address the Permanent Secretary at Salem, Mass., up to August 15. From Aug. 15 until Aug. 30, his address will be The Denison House, Indianapolis, Ind.

Members remitting back assessments before Aug. 15 will receive their receipts and volumes of Proceedings at once from Salem; those paying by mail after that date (and not present at Indianapolis) must not expect their receipts and volumes until after the meeting. The Toronto volume of Proceedings will be sent early in July to all members who have paid the assessment for that meeting.

The assessment receipt for the Indianapolis Meeting must be shown at the time of registering in order to obtain the Association badge, which entitles the member to the privileges of the meeting. If members pay

the assessment for the Indianapolis meeting in advance, and *remember* to take their ticket (the assessment receipt) to Indianapolis, they will save standing in the crowd before the Secretary's desk, and can register at once on arrival after the opening of the register on Aug. 19.

Under the rule which took effect in 1884, members have the privilege of registering members of their families (not including men over twenty-one years of age) by paying the sum of three dollars for each individual to be registered. These Associate Members will receive badges entitling them to all the privileges extended to members generally by the Local Committee.

Special information relating to any of the Sections will be furnished by their officers.

Arrangements have been made by the Local Committee for the proper care and exhibition of instruments and specimens, for the details of which and for all other local matters, members should address the LOCAL SECRETARY.

Extracts from the Constitution relating to Members, Fellows, Life Members, Patrons and Assessments.

ART. 3. Any person may become a member of the Association upon recommendation in writing by two members or fellows, and election by the Council.

(Blank forms for recommendation to membership will be furnished on application to the Permanent or Local Secretaries, and, until the day of the meeting, they will receive the recommendations; after the meeting has begun recommendations should reach the Secretary of the Council before nine o'clock of each morning.

ART. 4. Fellows shall be elected by the Council from such of the members as are professionally engaged in science, or have by their labors aided in advancing science. The election of fellows shall be by ballot and a majority vote of the members of the Council at a designated meeting of the Council.

(Special blanks for the recommendation of fellows to the Council can be had on application to the Permanent Secretary.)

- ART. 5. Any person paying to the Association the sum of one thousand dollars shall be classed as a Patron, and shall be entitled to all the privileges of a member and to all its publications.
- ART. 7. The name of any member or fellow two years in arrears for annual dues shall be erased from the list of the Association, provided that two notices of indebtedness, at an interval of at least three months, shall have been given; and no such person shall be restored until he has paid his arrearages or has been reëlected.
- ART. 34. The admission fee for members shall be five dollars in addition to the annual assessment. On the election of any member as a fellow an additional fee of two dollars shall be paid.
  - ART. 35. The annual assessment shall be three dollars.
- ART. 36. Any member or fellow who shall pay the sum of fifty dollars to the Association, at one time, shall become a Life Member, and as such shall be exempt from all further assessments and shall be entitled to the Proceedings of the Association. All money thus received shall be invested as a permanent fund, the income of which, during the life of the member, shall form a part of the general fund of the Association; but after his death, shall be used only to assist in original research, unless otherwise directed by unanimous vote of the Council. (New members becoming Life Members must pay their admission fee of five dollars in addition to the fifty dollars.)
- ART. 37. All admission fees and assessments must be paid to the Permanent Secretary [or his Assistant] who shall give proper receipts for the same.

#### Papers.

- ART. 28. All members and fellows must forward to the Permanent Secretary, as early as possible, and when practicable before the convening of the Association, full titles of all the papers which they propose to present during the meeting, with a statement of the time that each will occupy in delivery, and also such abstracts of their contents as will give a general idea of their nature; and no title shall be referred by the Council to the Sectional Committee until an abstract of the paper or the paper itself has been received.
- ART. 31. Authors must prepare their papers or abstracts ready for the press, and these must be in the hands of the Secretaries of the Sections before the final adjournment of the meeting, otherwise only the titles will appear in the printed volume. The Council shall have power to order the printing of any paper by abstract or title only.
- ART. 24. A paper shall not be read in any Section or Subsection until it has been received from the Council and placed on the programme of the day by the Sectional Committee.

In anticipation of the circular to be issued by the Local Committee, it is only necessary here to give the names of Dr. George W. Sloan, Chairman of the Committee; and of Alfred F. Potts, Esq., Local Secretary, Indianapolis, Ind.

F. W. PUTNAM.

# AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. BLANK FOR TITLE AND ABSTRACT OF COMMUNICATION.

No.

Section preferred by author,

Date of Reception by Permanent Secretary.

Title of Paper:

Time Minutes-

Name and address of Author:

By instructions of the Council, the following notice is given: — A paper will not be accepted by the Council unless accompanied by a suitable

abstract; but titles alone may be sent at any time to the Permanent Secretary in order to secure precedence.

The Council request the abstracts be sent to the Permanent Secretary before the meeting when practicable. Authors will please take note, that only abstracts of communications are likely to be accepted by the Council for publication in the Proceedings, and copy ready for printing must be given to the Secretary of the Section before the adjournment of the meeting, otherwise only the title of the paper will appear in the printed Proceedings.

Copies of this blank will be supplied at the office of the Permanent Secretary, SALEM, MASS., and at the meeting.

ABSTRACT OF PAPER ENTERED ABOVE.

#### OFFICERS ELECTED FOR THE INDIANAPOLIS MEETING.

#### PRESIDENT.

GEORGE L. GOODALE of Cambridge, Mass.

#### VICE PRESIDENTS.

- A. Mathematics and Astronomy-S. C. CHANDLER of Cambridge, Mass.
- B. Physics-Cleveland Abbe of Washington.
- C. Chemistry-R. B. WARDER of Washington.
- D. Mechanical Science and Engineering-James E. Denton of Hoboken, N. J.
- E. Geology and Geography—John C. Branner of Little Rock, Ark.
- F. Biology-C. S. MINOT of Boston, Mass.
- H. Anthropology-Frank Baker of Washington.
- I. Economic Science and Statistics—J. RICHARDS DODGE of Washington.

#### PERMANENT SECRETARY.

F. W. Putnam of Cambridge (office Salem, Mass.).

#### GENERAL SECRETARY.

H. CARRINGTON BOLTON of New York.

#### SECRETARY OF THE COUNCIL.

James Loudon of Toronto.

#### SECRETARIES OF THE SECTIONS.

- A. Mathematics and Astronomy Wooster W. Beman, of Ann Arbor, Mich.
- B. Physics-W. LeConte Stevens of Brooklyn, N. Y.
- C. Chemistry-W. A. Noves of Terre Haute, Ind.
- D. Mechanical Science and Engineering-M. E. Cooley of Ann Arbor, Mich.
- E. Geology and Geography—Samuel Calvin of Iowa City, Iowa.
- F. Biology-John M. Coulter of Crawfordsville, Ind.
- H. Anthropology-Joseph Jastrow of Madison, Wis.
- I. Economic Science and Statistics-S. Dana Horton of Pomeroy, Ohio.

#### TREASURER.

WILLIAM LILLY of Mauch Chunk, Pa.

#### COUNCIL.

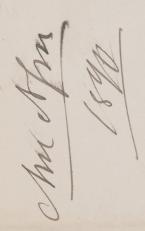
The Officers above named and

Past Presidents.—James D. Dana of New Haven; James Hall of Albany; J. S. Newberry of New York; B. A. Gould of Cambridge; T. Sterry Hunt of Montreal; Joseph Lovering of Cambridge; J. E. Hilgard of Washington; Simon Newcomb of Washington; O. C. Marsh of New Haven; George F. Barker of Philadelphia; George J. Brush of New Haven; J. W. Dawson of Montreal; C. A. Young of Princeton; J. P. Lesley of Philadelphia; H. A. Newton of New Haven; Edward S. Morse of Salem; S. P. Langley of Washington; J. W. Powell of Washington; T. C. Mendenhall of Washington.

Vice Presidents of the Last Meeting.—R. S. Woodward of Washington; H. S. Carhart of Ann Arbor; William L. Dudley of Nashville; James E. Denton of Hoboken; Charles A. White of Washington; George L. Goodale of Cambridge; Garrick Mallery of Washington; Charles S. Hill of Washington.

From the Association at Large.—A fellow elected from each section. (The eight fellows acting at the Toronto meeting hold over until the new election.) E. W. Hyde of Cincinnati (A); W. A. Rogers of Waterville (B); H. W. Wiley of Washington (C); Cady Staley of Cleveland (D); N. H. Winchell of Minneapolis (E); W. H. Dall of Washington (F); J. O. Dorsey of Washington (H); Joseph Cummings of Evanston (Deceased) (I).

A Meeting of the Council will be held at the Denison House, Indianapolis, at noon on Tuesday, August 19.



#### SPECIAL NOTICES.

THE ENTOMOLOGICAL CLUB OF THE A. A. A. A. S. will meet at 9 A.M., on Wednesday, August 20, in the room of Section F, State House, where members of the Club will register and obtain the Club badge. *President*, Prof. A. J. Cook, Agricultural College, Mich.; *Secretary*, F. M. Webster, Lafayette, Ind. Members of the Club intending to contribute papers will send titles to the Secretary.

THE BOTANICAL CLUB OF THE A. A. A. S. will hold a meeting as usual on Thursday, August 21, at the State House. Communications should be sent to the President, Dr. N. L. Britton, Columbia College, New York, or to the Secretary, Dr. Charles R. Barnes, University of Wisconsin, Madison, Wis.

THE SOCIETY FOR THE PROMOTION OF AGRICULTURAL SCIENCE will hold its eleventh annual meeting in Indianapolis, beginning on Monday evening, August 18, in the room assigned to Section I in the State House, and continuing on Tuesday. For further information address Prof. W. R. LAZENBY, Secretary, Ohio State University, Columbus, Ohio.

THE AMERICAN GEOLOGICAL SOCIETY will hold its semi-annual meeting at the State House in Indianapolis on August 19. Prof. J. D. Dana, New Haven, Ct., President, and Prof. J. J. Stevenson, University of City of New York, Secretary.

MEMBERS OF THE ASSOCIATION arriving in Indianapolis before the meeting should call for information at the temporary office of the Local Secretary, No. 19½ N. Pennsylvania Street. A few days before the meeting a local office of information will be established near the railroad station, as will be stated in the circular of the Local Committee.

A MEETING OF THE COUNCIL will be held at noon, on Tuesday, August 19, when all nominations for membership received by the Permanent Secretary up to that time will be acted upon.

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# Geological Society of America.

The By-Laws of the Society, Chapter I, Sect. 1, provide for commutation of annual dues by a single pre-payment of One Hundred Dollars.

Several of the Original Fellows stipulated that their dues for 1889 should be counted as part of the commutation, when the amount of the pre-payment had been fixed. The Council have decided that this privilege should be extended to all of the Fellows, as commutation was promised at the initial meeting in Cleveland.

The Treasurer, Prof. Henry S. Williams, Ithaca, New York, is authorized to regard dues for 1889, as well as dues already paid for 1890, as making part of the "single pre-payment of One Hundred Dollars". So that Fellows remitting ninety dollars prior to June 1st, 1890, (or if the dues for 1890 have been paid, eighty dollars,) will receive the commutation receipt.

Moneys paid in commutation will be invested and the interest used for general purposes during the payor's life, but after his death it will become part of the Publication Fund.

Dues for 1890 should be paid as soon as possible. Fellows will please acknowledge receipt to the Secretary for the number of the Bulletin just issued. Any changes of address should be made known promptly, as other numbers of the Bulletin will be ready very soon.

JAMES D. DANA, President.

JOHN J. STEVENSON, Secretary.

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Geological Pocinty of America.

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The Treasurer, Prof. Henry S. Williams, Ithaca, New York, is authorized to regard dues for 1859, as well as dues already paid for 1890, as making part of the "single pre-payment of One Hundred Dollars". So that Follows remitting ninety dellars prior to June 1st, 1890, (or if the dues for 1890 have been paid, eighty dellars,) will receive the commutation receipt.

Moneys paid in commutation will be invested and the interest used for general purposes during the payor's life, but after his death it will become part of the Publication Fund.

Dues for 1870 should be paid as soon as possible. Bellows will please acknowledge receipt to the Secretary for the number of the Bellstin just issued. Any changes of address should be made known premptly, as other numbers of the Bellstin will be ready very soon.

JAMES D. DANA, President JOHN J. STHVENSON, Secretary

### [ANNUAL MEMBER'S INVITATION CIRCULAR.]

N.B.—By presenting this Letter on your arrival in

### LEEDS, and the past year. The CEDS,

at the RECEPTION ROOM at the VICTORIA HALL in the TOWN HALL, the arrangements for the issue of Tickets will be much facilitated.

You will also find it convenient to inform the Local Secretaries at Leeds of your intention to be present, and to communicate with them as to the Lodging Accommodation which you may require.

# British Association for the Advancement of Science.

SIXTIETH MEETING,

Commencing WEDNESDAY, 3rd of SEPTEMBER, 1890,

UNDER THE DIRECTION OF THE FOLLOWING OFFICERS:

ed of the PRESIDENT ELECT. SIR FREDERICK AUGUSTUS ABEL, C.B., D.C.L., D.Sc., F.R.S., V.P.C.S.

VICE-PRESIDENTS ELECT.

HIS GRACE THE DUKE OF DEVONSHIRE, K.G., M.A., LL.D., F.R.S., F.G.S., F.R.G.S.

THE MOST NOBLE THE MARQUIS OF RIPON, K.G., G.C.S.I., C.I.E., D.C.L., F.R.S., F.L.S., F.R.G.S.

THE RIGHT HON. THE EARL FITZWILLIAM, K.G., F.R.G.S.\*

THE RIGHT REV. THE LORD BISHOP OF RIPON, D.D.

THE RIGHT HON. SIR LYON PLAYFAIR, K.C.B., Ph.D., LL.D., M.P., F.R.S., F.C.S.\*

THE RIGHT WORSHIPFUL THE MAYOR OF LEEDS.

SIR JAMES KITSON, BART., M.INST.C.E., F.R.G.S.

SIR ANDREW FAIRBAIRN, M.A. W. L. JACKSON, Esq., M.P., F.S.S.\*

rives, at which coportunity will be afforded for

edit dilw terliegot di lace lliw ed GENERAL TREASURER.

PROFESSOR A. W. WILLIAMSON, Ph.D., LL.D., F.R.S., V.P.C.S., 17 Buckingham Street, London, W.C.

todanA adj od dramavnooni ad blogENERAL SECRETARIES.

CAPTAIN SIR DOUGLAS GALTON, K.C.B., D.C.L., LL.D., F.R.S., F.L.S., F.G.S., F.R.G.S.

A. G. VERNON HARCOURT, Esq., M.A., D.C.L., LL.D., F.R.S., F.C.S.

SECRETARY.

ARTHUR T. ATCHISON, Esq., M.A.

J. RAWLINSON FORD, Esq.
SYDNEY LUPTON, Esq., M.A., F.C.S. PROFESSOR L. C. MIALL, F.L.S., F.G.S.
PROFESSOR A. SMITHELLS, B.Sc., F.C.S. PROFESSOR A. SMITHELLS, B.Sc., F.C.S.

LOCAL TREASURER FOR THE MEETING AT LEEDS. vienodimiero evices estados E. BECKETT FABER, Esq.

We beg leave to inform you that the Sixtieth Meeting of the British Association for the Advancement of Science will commence in LEEDS on WEDNESDAY, the 3rd of SEPTEMBER, 1890, and to request your attention to the following Notices of Arrangements for the Meeting.

In order that the arrangements for the issue of Tickets in the Reception Room at Leeds may be facilitated, the Invitation Circular to which this slip is affixed *must* be presented when applying for your Admission Ticket.

If the Ticket is required before the Meeting, application must be made, between August 20th and August 28th, either to the Office, 22 Albemarle Street, or by letter to Professor A. W. Williamson (General Treasurer), 17 Buckingham Street, London, W.C. Annual Members must accompany their application by their Invitation Circular and Subscription of £1. Post-office Orders are to be made payable to Professor A. W. Williamson, at the General Post Office, St. Martin's-le-Grand, London.

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The General Committee will meet on Wednesday, the 3rd of September, at 1 p.m., for the Election of Sectional Officers, and the despatch of business usually brought before that body. On this occasion there will be presented the Report of the Council, embodying their proceedings during the past year. The General Committee will meet again on Monday, September 8, at 3 p.m., for the purpose of appointing Officers for 1891, and of deciding on the place of Meeting in 1892. The concluding Meeting of this Committee will be held on Wednesday, September 10, at 1 p.m., when the Report of the Committee of Recommendations will be received. The First General Meeting will be held on Wednesday, the 3rd of September, at 8 p.m., when the President will deliver an Address; the Concluding Meeting on Wednesday, the 10th of

September, at 2.30 P.M., when the Association will be adjourned to its next place of Meeting.

At two Evening Meetings, which will take place at 8.30 P.M., Discourses on certain branches of Science will be delivered.

There will also be other Evening Meetings, at which opportunity will be afforded for

general conversation among the Members.

Sectional Meetings. The Sections are:—A. Mathematical and Physical Science; B. Chemical Science; C. Geology; D. Biology; E. Geography; F. Economic Science and Statistics; G. Mechanical Science; H. Anthropology.

The Presidents, Vice-Presidents, and Secretaries of the several Sections are nominated by the Council, and have power to act until their names are submitted to the General Committee for Florian.

From the time of their nomination they constitute Organising Committees for the purpose of obtaining information upon the Memoirs and Reports likely to be submitted to the Sections, and of preparing Reports thereon, and on the order in which it is desirable that they should be read, to be presented to the Committees of the Sections at their first meeting. The Sectional Presidents of former years are ex officio members of the Organising Sectional Committees.

The Organising Committees may hold such preliminary Meetings as the President of the Committee thinks expedient, but shall, under any circumstances, meet on the first Wednesday of the Annual Meeting, at 11 A.M., to settle the terms of their Reports, after which their functions cease.

The different Sections will assemble in the rooms appointed for them, for the reading and discussion of Reports and other Communications, on Thursday, September 4, Friday, September 5, Saturday, September 6, Monday, September 8, and Tuesday, September 9, at 11 A.M. precisely.

Notice to Contributors of Memoirs.—Authors are reminded that, under an arrangement dating from 1871, the acceptance of Memoirs, and the days on which they are to be read, are now as far as possible determined by Organising Committees for the several Sections before the beginning of the Meeting. It has therefore become necessary, in order to give an opportunity to the Committees of doing justice to the several Communications, that each Author should prepare an Abstract of his Memoir, of a length suitable for insertion in the published Transactions of the Association, and the Council request that he will send it, together with the original Memoir, by book-post, on or before August 6, addressed thus—"General Secretaries, British Association, 22 Albemarle Street, London, W. For Section . . . . . . Authors who comply with this request, and whose Papers are accepted, will be furnished before the Meeting with printed copies of their Reports or Abstracts. If it should be inconvenient to the Author that his Paper should be read on any particular days, he is requested to send information thereof to the Secretaries in a separate note.

Reports on the Progress of Science, and of Researches intrusted to Individuals or Committees, must be forwarded to the Secretaries, for presentation to the Organising Committees, accompanied by a statement whether the Author will be present at the Annual Meeting.

No Report, Paper, or Abstract can be inserted in the Report of the Association unless it is in the hands of the Secretary before the conclusion of the Meeting.

Tickets.—The Reception Room will be opened on Monday, September 1, at 1 P.M., and on the following days at 8 A.M., for the issue of Tickets to Members, Associates, and Ladies, according to the statement given below, and for supplying Lists and Prices of Lodgings, and other information, to strangers on their arrival. No Tickets will be issued after 6 P.M.

Members and Associates.—New Members and Associates can join the Association on the following conditions:—

I. New Life Members for a composition of £10, which entitles them to receive gratuitously the Annual Reports of the Association which may be published after the date of payment.

II. New Annual Members for a payment of £2 for the first year. These receive gratuitously the Annual Reports of the Association for the year of admission and for every following year in which they continue to pay a Subscription of £1 without intermission.

of III. Associates for this Meeting only for a payment of £1. They are entitled to receive the Report of this Meeting at two-thirds of the publication price. Associates are not eligible to serve on Committees or to hold any office.

LADIES may become Members or Associates on the same terms as Gentlemen, or they can obtain Ladies' Tickets (transferable to Ladies only) on payment of £1.

Persons who have in any former year been admitted Members of the Association can renew their Membership, without being called upon for arrears, on payment of £1. They will, however, not be entitled to receive any Reports.

Compositions and Subscriptions are received during the Meeting in the Reception

Room, and at all other times by the General Treasurer, whose address is subjoined.

The Journal, President's Address, and other Printed Papers issued by the Association during the Annual Meeting will be forwarded daily by post to Members and others unable to attend, on application and prepayment of 2s. 6d. to the Clerk of the Association, Mr. H. C. Stewardson, on or before the first day of the Meeting.

The Report of the Association for 1890 will be forwarded according to the following specifications, viz.:-

1. Gratis and carriage paid.—To Life Members who have paid a composition for Annual Payments.

To Annual Members who have not intermitted their Annual Subscription.

2. At reduced or Member's price, viz., two-thirds of the Publication Price. To Annual Members who have intermitted their Annual Subscription.

To Associates for the year.

Members may purchase (for the purpose of completing their sets) any of the Volumes of the Reports of the Association up to 1874, of which more than 15 copies remain, at 2s. 6d. per volume.

Applications under the above Rules to be made at the Office of the Association,

22 Albemarle Street, Piccadilly, London, W.

We have the honour to be, SIR,

Your faithful and obedient Servants,

DOUGLAS GALTON, A. G. VERNON HARCOURT,

General Secretaries.

A. T. ATCHISON, Secretary

22 Albemarle Street, London, W., May 19, 1890.

#### AN INDEX

to the REPORTS of the MEETINGS of the BRITISH ASSOCIATION, from 1831 to 1860, is printed, and is sold to Members at 12s., carriage included.

#### GENERAL COMMITTEE.

The General Committee consists of the following classes of Members:

CLASS A. PERMANENT MEMBERS.

- 1. Members of the Council, Presidents of the Association, and Presidents of the Sections for the present and preceding years, with Authors of Reports in the Transactions of the Association.
- 2. Members who, by the publication of Works or Papers, have furthered the advancement of those subjects which are taken into consideration at the Sectional Meetings of the Association. With a view of submitting new claims under this Rule to the decision of the Council they must be sent to the Secretary at least one month before the Meeting of the Association. The decision of the Council on the claims of any Member of the Association to be placed on the list of the General Committee is to be final.

#### CLASS B. TEMPORARY MEMBERS.

1. Delegates nominated by the Corresponding Societies. Claims under this Rule to be sent to

the Secretary before the opening of the Meeting.

2. Office-bearers for the time being, or delegates, altogether not exceeding three, from Scientific Institutions established in the place of Meeting. Claims under this Rule to be approved by the Local Secretaries before the opening of the Meeting.

3. Foreigners and other individuals whose assistance is desired, and who are specially nominated in writing, for the Meeting of the year, by the President and General Secretaries.

4. Vice-Presidents and Secretaries of Sections.

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No Postage needed, will be paid at destination.

#### CHARLES ALDRICH,

WEBSTER CITY,

United States of America.

IOWA.



DEAR SIR:

The undersigned, Editors of OUR DAY, desirous of effecting improvement in the religious reading of educated circles, respectfully request brief answers from yourself to the questions printed below.

A list of five or six books under each of these heads, with or without added remarks, as you may choose, is particularly desired, and it is hoped a reply may be received as early as October 15, or at latest by November 1. The results of this correspondence will be published as a symposium in OUR DAY.

JOSEPH COOK,
MISS F. E. WILLARD,
PROF. E. J. JAMES, Ph. D.
PROF. L. T. TOWNSEND, D. D.
ANTHONY COMSTOCK,
EX-PRES. CYRUS HAMLIN, D. D.
REV. WILBUR F. CRAFTS.

What volumes, aside from the Holy Scriptures, have been the most serviceable to yourself in

I. Christian Evidences?

Answers.

II. Church History?

III. Religious Biography?

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III. Religious Biography

IV. Devotional/Literature?

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## Sabbath School Association of Ontario.

Toronto, April, 1889.

Dear Sir.

The Semi=Ennual Meeting of the General Executive Committee of this Association, of which you are a member, will (D.V.) be held in the Carlton Street Methodist Church, Toronto, which has been kindly placed at their disposal, on Thursday Afternoon, the 16th day of May next, at 3 o'clock, for important business, viz.:

Report of the General Secretary.

Report of the Treasurer.

Programme and Work of next Provincial Convention, to be held in the City of Toronto in October, 1889.

New Business, Suggestions, etc.

A public Meeting will be held in the same building in the evening, at 8 o'clock. Abram Shaw, Esq., of Kingston, President of the Association, will take the Chair; and Addresses will be delivered by Rev. J. A. Williams, D.D. General Superintendent of the Methodist Church, on "Normal Training for Sabbath School Teachers: its Need, and Nature;" Rev. G. M. Milligan, B.A. on "The Place and Power of the Sabbath School in the Church's Mission to the World;" J. K. Macdonald, Esq., a member of the Central Executive Committee, on "Reminiscences of the S. S. Association of Ontario,"—and others.

A Question Drawer will be provided; questions deposited during the afternoon, or up to 8 o'clock, will be answered at the evening meeting.

The Choir of the Church will conduct the Service of Song.

A Collection will be taken up in aid of the Funds of the Association.

ALFRED DAY,

J. J. WOODHOUSE,

LEWIS C. PEAKE,

General Secretary.

Corresponding Sec. and Treas.

Chairman of Executive Committee.

NOTE.—"THE WORLD'S SUNDAY SCHOOL CONVENTION" is to be held in London, England, July 2nd, 3rd, 4th and 5th, 1889. Of this gathering, notice has already been given in the newspapers. Ontario is entitled to send 25 Delegates, with the same number of Alternates. This quota has not yet been filled; but any duly qualified S. S. Workers desirous to attend should apply without delay to the Corresponding Secretary above-named. Appointments are made by the Executive Committee.

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# Qonfrent Safe So., Jitd.

Principal Subscribers up to February 1st, 1889.

REV. DR. CAMPBELL. " Dr. WELLS.
" Dr. ANTLIFF, M.A. " JOHN NICHOLLS. " JAMES FLECK. HECTOR McKENZIE, ESQUIRE. EDGAR JUDGE, ESQUIRE. JAMES WILLIAMSON, Esq. JAMES BAYLIS, W. D. STROUD, H. A. HODGSON, JOHN MURPHY, J. A. MATHEWSON, JAS. ROBERTSON, WALTER PAUL, F. C. EMBERSON, JAS. PATON, DAN'L. GILMOR, JOSEPH EVELEIGH, DAVID SEATH, Messrs. BOWES & McWILLIAMS. " JOHN H. JONES & CO. H. S. CUTHBERTSON, Esq. R. H. JONES, FRED. McC. JONES, R. N. SCOTT. J. H. JOSEPH, ALBERT D. NELSON, G. W. REED. JOHN DATE, THOS. F. SMITH, J. A. HARTE, A. C. LESLIE. A. G. FENWICK, WM. SCLATER, DAVID ROBERTSON, GEO. CRUIKSHANK, WM. COOPER, JAMES MOORE, J. CRADOCK SIMPSON, " H. L. PUTNAM, G. DURNFORD, R. B. BOYCOTT, R. HY. HOLLAND, D. CAMERON, JONATHAN HODGSON," T. E. HODGSON, WARDEN KING, JAS. KING, J. MURRAY SMITH, WM. GREIG, GEORGE SUMNER, ALDERMAN McBRIDE, WM. ABBOTT, WM. T. COSTIGAN,

Montreal Cafe Company, Ltd.

Capital \$12,000, in 1200 Shares of \$10,00 each.

(Half only is expected to be at present called up.)

The stock is being largely and influentially subscribed for, and Share Lists can be signed and all particulars obtained, at the office of

D. C. BARKER, 17 St. Sacrament Street.

In an English paper of the 10th instant it is stated that "there is a vast reformation as respects intemperance in Liverpool," and this is traceable, in great measure, to the establishment of superior Cafés, daily crowded, increasing in value, and improving all contiguous property. The success of the "Liverpool Café Co'y, Limited," from its inception six years ago, was assured, the plan having the support of all temperate citizens; and the stock was applied for several times over—the shares, 20s. (one half only being paid up) being now worth 35s., with no sellers.

To come nearer home:—in September last, Toronto had 99 Coffee houses, and as that is a city with which we have "only friendly rivalry," Montreal stands behind in respect to Temperance Restaurants, which are few in number, and manifestly insufficient for the present demand, and rapidly increasing population. The public may rest assured that the Montreal Café Company purpose opening an establishment which will be useful to the community, and attractive by good management.

Montreal, 31st January, 1889.

with respectful Compts, of Dicharker

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### NOTICE OF BUSINESS CHANGE.

233 St. JAMES STREET,

MONTREAL, DECEMBER, 1888.

MESSRS. DAWSON BROTHERS beg to announce that on and after January 1st, 1889, they will withdraw from the retail business as Booksellers and Stationers, carried on by them in this City for the past forty years. They take this opportunity of expressing their gratitude to their many friends for the patronage conferred during that period.

Two firms will result from the re-organization of the business,—CHARLES F. DAWSON, son of their senior, will carry on the Mercantile and Manufacturing Stationery Business, of which he has for a long period been the Manager. WM. FOSTER BROWN, for the past twelve years with them, will succeed to the Book and Periodical business, which has for a long time been under his special care.

Messrs. Dawson Brothers would solicit on behalf of their successors a continuance of the patronage which has so generously been extended to themselves in the past, and they do so with confidence, because they know that their successors have the capacity and experience to give the fullest satisfaction to all their customers. Both businesses will be continued in the same premises as heretofore without any interruption.

### DAWSON BROTHERS.

With reference to the above, I have the pleasure to announce that on January 1st, 1889, I will take over and continue the Stationery business, in all its branches, carried on for so many years past by Messrs. Dawson Brothers. I trust by fair dealing, promptnesss and strict attention to business, to merit the patronage which has hitherto been accorded to my predecessors.

CHARLES F. DAWSON.

With reference to the above notice, we beg to say that we shall continue the Bookselling and Periodical business as successors to Messrs. Dawson Brothers in the same premises. We shall at all times have a large stock of the latest and best Books, and shall continue to supply Periodicals wherever published. We trust by promptness in the execution of orders, and by a courteous attention to customers, to receive a continuance of the patronage accorded to our predecessors.

WM. FOSTER BROWN & CO.

### NOTICE OF BUSINESS CHANGE.

33 ST. JAMES STREET,

MONTREAL, DECEMBER, 1888.

MESSES. DAWSON BROTHERS beg to announce that on and after January 1st, 1839, they will withdraw from the retail business as Bookscilers and Stationers, carried on by them in this City for the past forty years. They take this opportunity of expressing their gratitude to their many friends for the patronage conferred during that period.

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WM. FOSTER BROWN & 00.

### ₩JUBILEE \* GELEBRATION

\_\_OF\_\_

REV. DR. McCulloch's Ordination and Induction.

On the 14th February, 1839, the Rev. W. McCulloch, D. D., was ordained to the office of the Christian Ministry and inducted into the pastorate of the Presbyterian Church, Truro. On the 14th February, 1889, the jubilee of that most important event will have arrived, and in order to do honor to this venerable man, who has been connected with this congregation ever since (for 47 years as Pastor in charge and for the last 3 years as Pastor Emeritus), the Presbytery of Truro agreed to celebrate the Jubilee on the above date and appointed the following committee to carry out arrangements: Rev. J. Robbins (Convener); Jas. Pitblado, C. P. Blanchard, L. B. McElhinney, Rev. T. Cumming, J. K. Blair, J. F. Blanchard, Rev. A. L. Geggie, D. Fraser, J. P. McDonald, Rev. Dr. Bruce, J. C. Archibald, W. Dickson, Rev. J. D. McGillivray, S. Black, E. Archibald and J. L. Archibald.

The Committee desire to give Dr. McCulloch some tangible evidence of their regard, and hope to accomplish this by the presentation of a purse of money, to be presented February 14th, 1889.

The Committee remember that very many of those who formerly comprised the congregation are now resident elsewhere. In order therefore that these may have the pleasure of participating with those who are still at home, a copy of this circular will be sent to every one whose address the Committee can obtain.

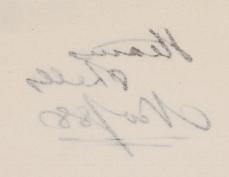
Contributions should be by money order or registered letter and forwarded to the treasurer, C. P. Blanchard, Truro, N. S., by February 1st, 1889.

Copies of the day's proceedings will be sent to all contributors.

By order of Committee.

JOHN ROBBINS, Convener of Committee. L. B. McELHINNEY, Secretary.

Truro, Dec. 21. 1888.



### NOTE.

Referring to the circular enclosed, I desire at this date—October. 1888—to increase my private collection of the

LAND. FRESH WATER AND MARINE SHELLS
of this country. If you have duplicates to sell or exchange, will you send me a list with species and prices.

I also desire now to increase my collection of FUSSILS, and would like to have collectors who have duplicates to dispose of, to send nie a list of species and prices.

To those who prefer to exchange, I can offer hundreds of species of Shells, L., J. W., and Marine; many Minerals and Precious Stones, Birds' Eggs, Pre-historic Objects, etc. Polygraphic lists of which will be sent when desired. Address,

FREDERICK STEARNS (Personal),
371 Lafayette Avenue,
DETROIT, MICHIGAN, U.S.A

Steams of les

### Circular to Collectors.

I wish to increase the number of my correspondents, among those persons, who are interested in science as students and collectors.

I desire also to add to my private collections first-class specimens in Natural History, such as marine, land and fresh water Shells, Fossils, Birds' Eggs and Nests, Minerals, Crystals, Gems and Precious Stones.

Pre-historic relics of the stone and bronze ages.

Pottery and Glass, ancient and modern.

ETHNOLOGY.—Arms, Implements, Dress, Jewels, Tools, Hunting and Fishing Utensils, Pipes and Utensils for use of Tobacco and other Narcotics, and for Beverages; Toilet Articles, Trinkets and Ornaments; Idols and Images, Charms and Religious or Political Symbols; Basketry; Shoes, and other Foot-wear; Gloves, and other Hand-wear; Hats, and other Head-covering; Utensils and Processes for making Fire; Sculptures, Carving, Metal Work, Embroideries, Musical Instruments, Etc., Etc.

Persons having such articles and willing to sell the same for cash, will please send a descriptive list with prices.

On the other hand, I can serve those making collections, with many similar articles from the United States and elsewhere. Lists of which will be sent on application. Address,

FREDERICK STEARNS (Personal), 371 Lafayette Ave.,
DETROIT, MICH., United States of America.

Deséo aumentar el número de mis corresponsales, y de formar el conocimiento de aquellas personas interesadas en la ciencia como coleccionadores y estudiantes.

Deséo tambien añadir á mis colecciones privadas, espécimens de primera clase de HISTORIA NATURAL; Fósiles, Conchas marinas y terrestres, y de agua dulce; Nidos y huevos de aves; Minerales, Cristales, Yemas y Piedras preciosas.

Reliquias prehistóricas de las edades de piedra y bronce.

Vidrios y Alfarería, prehistórica, antigua y moderna.

DE ETNOLOGIA; Armas, Implementos, Trajes, Alhajas, Herramientas, Utensilios de caza y pesca, Pipas y otros utensilios para Tabaco; Objetos de tocador; Joyas y Ornamentos; Idolos é Imágenes; Hechizos y Símbolos; Canastos y Cestas; Abrigos de pié y manos; Modos y utensilios para hacer fuego; Esculturas, Trabajos de metal, Bordados, Instrumentos de Música, &., &.

Muy agradecido les que daría á las personas poséedoras de algunos de los objetos expresados, que deséasen venderlos, me remitiesen una lista de ellos con sus precios respectivos.

Tambien puedo servir á aquellos que se dedican á hacer colecciones similares, suministrándoles muchos de estos artículos de los Estados Unidos y de otras partes, lista de los cuales remitiré á los que las soliciten. Dirección,

FREDERICK STEARNS (Personal) 371 Lafayette Ave.,

DETROIT, MICHIGAN, Estados Unidos de America.

Unterzeichneter erlaubt sich hiermit anzudeuten dass es ihm angenehm sein würde seine Correspondenz mit wissenschaftlichen Herren die sich für Alterthums-Kunde und Natur-Wissenschaft interessiren, zu vermehren.

Ich wünsche ebenfalls zu meinen Privat-Sammlungen hinzu zu fügen, Exemplare erster Klasse aus der Natur-Geschichte, wie-Muscheln des Meeres, des Landes und Süsswassers, Fossilien, Vögel-Eier und Nester, Mineralien, Krystalle und Edelsteine.

VOR-GESCHICHTLICHE RELIQUIEN des Stein-und Bronz-Alters.

Töpfer-Waare und Glas, alt und modern.

ETHNOLOGIE: Waffen, Gəräthschaften, Kleidung, Juwelen, Handwerkzeug, Jagd-und Fischerei-Utensilien, Pfeifen und Utensilien für den Gebrauch von Taback und anderen narcotischen Substanzen und für Getränke. TOILETTE-ARTIKEL, Kleinode und Zierathen. Götzen und Bildnisse, Zauterei-Gegenstände, und religiöse oder politische Symbole. KORBMACHEREI-ARBEIT, Schuhe und andere Fussbekleidung, Handschuhe und andere Handbekleidung, Hüte und andere Kopfbekleidung; Utensilien und Processe zum Feuermachen. SCULPTUREN, Holtzschnitzereien, Metall-Arbeiten, Musikalische Instrumente, etc., etc.

Personen welche solche Artikel haben und geneigt sind dieselben zu verkaufen wollen gefälligt Beschreribungen und Preise einsenden.

Anderseits kann ich auch Denen die Sammlungen machen mit vielen ähnlichen Artikeln aus den Vereinigten Staaten und anderen Ländern dienen. Liste von dissen werden auf Wunsch zugesandt.

Adresse:

FREDERICK STEARNS (Personal), 371 Lafayette Ave.,
DETROIT, MICHIGAN, United States of America.

Je voudrais augmenter le nombre de mes correspondants parmi ceux qui s'interressent a la science comme étudiants et comme collecteurs.

Je vondrais aussi augmenter ma collection particuliere par des échantillons d'histoire naturelle, tels que des coquillages de mer, d'eau douce, et de terre; des fossiles, des oeufs et des nids d'oiseaux.

Des Minéraux et des cristaux, des joyaux et des pierres precieuses.

Des reliques de l'âge préhistorique, de l'âge de pierre et de l'âge d' airain; de la Potterie et de la Verrerie ancienne et moderne.

Ethnologie; des armes, des ustensiles, des habits, des bijoux, des outils de chasse et de pèche, des pipes à fumer le tabac, et d'autres narcotiques; des vases à boire. Des articles de toilette, des ornements de la personne, des idoles et des statuettes, des talismans et des sym-

boles de nation et de réligion; la chaussure, la ganterie, les chapeux, ou couverture de tete, les outils ou les moyens de faire le feu, des sculptures, des gravures sur bois, des ouvrages en métal, des broderiès, des instruments de musique, etc.

Ceux qui ont de tels objets et veulent les vendre à l'argent comptant, qu' ils m'envoyent une liste raisonné avec le prix. De ma part je puis fournir à ceux qui veulent faire une collection, avec des articles pareils, des Etats-Unis et d'ailleurs. Une Liste sera expediée sur demande. S'adresser à

FREDERIC STEARNS (Personnel), 371 Lafayette Ave.,
DETROIT, MICHIGAN, United States of America.

Desejo augmentar o numero de meus correspondentes, e de formar o conhecimento d'aquellas pessoas interessadas na sciencia como collectores e studantes.

Desejo tambem adquirir para as meus collecções privadas, specimens ou mostras de primeira classe, de HISTORIA NATURAL; Fosseis, Conchas marinhas e terrestres, e d'agua doce; Ninhos e ovos d'aves; Mineraes, Crystaes, Gomas e Pedras preciosas.

Reliquias prehistoricas das idades de pedra e bronze.

Vidros e Olaria, prehistorica, antiga e moderna.

D'ETHNOLOGIA; Armas, Utensilios, Vestuarios, Ferramentas, Ninharias, Utensilios de caça e pesca, Cachimbos e outros utensilios para Tabaco; Objectos de toucador, Joias e ornamentos; Idolos e Imagemes; Symbolos; Cestos e Canastras; Roupa de pés e maôs; Modos e utensilios para fazer fogo; Esculpturas, Bordados, Instrumentos de Musica, Trabalhos em metal, &., &.

Ficaria-lhes muito agradecido as pessoas possuidoras d'algumos dos objectos expressados, que desejasem vender-lhos, me remitteram uma lista d'ellas com seus preços respectivos. Tambem posso ministrar á aquelles que dedicam-se á fazer collecções similares, muitos, destes artigos dos Estados Unidos e de cualquer outra parte, lista dos quaes remittiré aos que as solicitarem. Direcção:

FREDERICK STEARNS (Personal), 371 Lafayette Ave.,
DETROIT, MICHIGAN, Estados Unidos d' America.

#### REFERENCES.

### REFERENCIAS.

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LONDON—THOS. CHRISTY & CO., imposters of rare drugs, etc., 25 Lime st., E. C. NEW YORK CITY—AMERICAN EXCHANGE NATIONAL BANK.
SAN FRANCISCO—STEARNS, WORDEN & CO.
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### GEOLOGICAL MAP

OF

### NEW YORK CITY AND ENVIRONS,

BY

#### DANIELS. MARTIN.

The attention of teachers, professors and librarians is particularly called to this map, for the following reasons:—

I. It is the only map giving in detail the geology of the entire region surrounding the great metropolis.

II. It is compiled with much care from a number of separate sources, not easily accessible to the general student, and also from unpublished notes of later field-observations.

III. It is almost, if not quite, the first American map that employs on any large scale the new scheme of coloring provisionally adopted by the International Congress of Geologists, at the Berlin meeting of 1885.

IV. It exhibits the relations of nearly all the geological systems and series that occur in the Middle States, East of the Central Alleghanies.

V. It shows the most striking features connected with the Glacial Age, viz, the Great Terminal Moraine of the ice-sheet, and the ancient channel of the Hudson River, now submerged beneath the sea.

In combining these several features, the map is new and unique, and affords means of instruction in geology, that could not otherwise be obtained without extensive study, and access to many authorities.

A pamphlet of explanation accompanies every copy, and places the user of the map in possession of the principal facts.

For all students and teachers of geology, this map has therefore peculiar advantages. It familiarizes the user with the new International scheme of coloring; it is large enough for considerable detail, without being unwieldy; it is handsome and distinct, an ornament to any class-room or library; it has been prepared with the aid and approval of leading specialists; and it embraces material nowhere else to be found in published form. It would be a valuable acquisition, for all these reasons, to every college, academy, high-school, and public library, in New York and the adjacent states.

Size: 50 by 40 inches.

Area: 68 miles from N. to S.; 55 miles from E. to W.

Price: Ten Dollars, either mounted on rollers, or folded, including the pamphlet.

The number of copies is limited; the first edition is all taken, and the extent of a new one will depend upon orders received.

The map shows the whole width of the Triassic belt of New Jersey, with its great series of trappean ridges entire, and its relation to the including

crystalline belts of the Highland range on the west and the Atlantic gneiss on the east, with the Palæozoic north-west of the former, and the Cretaceous and Tertiary south-east of the latter. In the Cretaceous, it shows the northern part of the entire series of divisions made by the New Jersey State Survey (including the three marl-beds), to their disappearance beneath the sea. It comprises also, the recent deposits of the New Jersey and Long Island Coast region. The Great Terminal Moraine is laid down conspicuously across the entire area, combined from several independent maps; and the lines of deep soundings, which mark the submerged pre-glacial channel of the Hudson River, are also made prominent as far as the limits extend. All these important features—never before brought together in one representation—can be clearly seen by an audience or a class.

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Among the institutions that have already subscribed for this map—besides individuals and schools,—are the following:

Harvard College Library, Cambridge, Mass. University of the City of New York. Columbia College, N. Y. City. College of the City of New York. Union College, Schenectady, N. Y. Cornell University, Ithaca, N. Y. Ohio State University, Columbus, O. Michigan University, Ann Arbor, Mich. University of West Virginia, Morgantown, W. Va. Vanderbilt University, Nashville, Tenn. Vassar College, Poughkeepsie, N. Y. Packer Collegiate Institute, Brooklyn, N. Y. The Collegiate and Polytechnic Institute, Brooklyn, N. Y. The Adelphi Academy, Brooklyn, N. Y. Board of Education, Poughkeepsie, N. Y. Peekskill Military Academy, Peekskill, N. Y. Department of Public Parks, N. Y. City. Croton Aqueduct Board, N. Y. City. American Institute of Mining Engineers. The Mercantile Library, N. Y. City. Rensselaer Polytechnic Institute, Troy, N. Y. Stevens Institute of Technology, Hoboken, N. J. and others.

All orders should be addressed to

PROF. DANIEL S. MARTIN,

RUTGERS FEMALE COLLEGE,

West 55th Street,

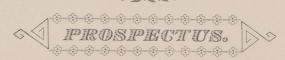
New York City.

September, 1888.

Marling

### PROPOSAL TO ESTABLISH A

# "MONTREAL CAFÉ COMPANY" LIMITED.



PREAMBLE.—It being acknowledged that the best and most effective method to combat the drinking habits of a community is to provide counter attractions, it is proposed to establish a superior Café in the first instance, (to be followed by others if there is scope for such). Therefore, it is suggested that a Company be formed to rent, or acquire, premises in a central part of the city, to carry on a business under the above designation, the promoters being satisfied it will pay, handsomely, as a commercial investment.

The Liverpool Café Company realized, net, in the four years ending 31st December last, £5,743 18s 8d, and attention is requested to the details below.

PRINCIPLES, &c.—No intoxicating liquors will be served in any establishment of the Company, and (besides having smoking rooms for gentlemen) games of Chess, Draughts, Dominoes, &c., will be provided (as in British Cafés) and Newspapers, &c., will be kept

SHARES.—As the bulk of the shares in the English Companies is taken up by clerks and other employés, it is thought best (in order to widen the number of supporters) to issue, as a commencement,

Half payable on allotment and remainder on call.

(N.B.—The Shareholders in the Liverpool Company, on 31st December, 1887, were 9,930 in number, with only half of the £1 Shares called in, and in 1884 two Cafés existed, while now eight establishments are *flourishing* there.)

MANAGEMENT.—The Shareholders will be made safe by the appointment of Secretary-Treasurer, Auditor, and Manageress, being arranged by a small committee selected by them.

Already several influential gentlemen have promised to take stock, and the scheme has the countenance of some of the ministers of the city churches.

The public will be invited to take up the shares when the arrangements are more complete, and at the most moderate estimate it is thought the first year may show  $12\frac{1}{2}$  per cent. dividend, and future returns should at least double that.

### STATISTICS OF THE LIVERPOOL CAFE COMPANY FOR FOUR YEARS:

Number of Shar Issued at £1 eac	CALLED UP H. 10/ PER SHARE.	NET RESULTS.	
18844,183	£2,091 10 0	.2 Cafés£ 471 16	1, including a small reserve.
1886 7 191	£2,091 10 0	.3 " $$ £1,011 7	1, reserve ditto.
1887 9 930	£4,965 0 0 2 shape 8	.6 "£1,788 1 ]	0, reserve £485 19 0.
	$\dots £4,965  0  0 \dots 2 \text{ shops } \&$	0 do£2,444 10	10, reserve £1,000.
7) 1	(1004.00)	£5,715 16	8
Deduct to	vo (1884-86) reserves, included	$l \text{ in } \pounds 1,000$ , 571 18	0
	Net profits in four years.	£5,143 18	8 sterling.

This exceeds the present paid-up capital by about £180 sterling, and the Company closed 1887 with eight tasteful and attractive establishments,—a splendid property, daily improving in value.

N.B.—The balance sheets, from which the above is an extract, can be seen at the office of Mr. D. C. Barker, 17 St. Sacrament Street, Montreal. Indirect testimony as to the results of similar institutions in a midland industrial town in England is given in the following, which appeared in the Montreal *Witness*, on the 10th instant:

"The Duchess of Rutland calls attention to the success which is attending the establishment of the coffee public-houses in Leicester. The company, which commenced eleven years ago with one house, has to-day a dozen, the receipts for twelve months being £25,120 and the capital £80,000. The dividends being limited to six per cent. has enabled the directors to put by £10,000. The company's largest house, the "Victoria," erected in the centre of the town at a cost of £20,000, is about to be opened by the Duchess."

P.S.—The merchants and employés of the city may rest assured that the utmost endeavor will be put forth to furnish the best material in lunches, beverages, etc., as in the superior London, Liverpool and Glasgow Cafés.

EMMITED.

#### BRITISH ASSOCIATION

FOR

#### THE ADVANCEMENT OF SCIENCE.

22 Albemarle Street, London, W.
October 26, 1888.

There will be a Meeting of the Council at this Office on Friday next, November 2, at 3 P.M.

### Principal Agenda—

- (1.) To confirm the Minutes of the last Meeting.
- (2.) To receive a report from the General Treasurer.
- (3.) To inform the Council of the acceptance of the office of Vice-President for the Meeting at Newcastle-upon-Tyne, 1889.
- (4.) To elect a Local Executive Committee for the Meeting at Newcastle-upon-Tyne.
- (5.) To consider the list of names suggested for nomination as Sectional Officers, and to nominate Evening Lecturers for the Meeting at Newcastle-upon-Tyne.
  - (6.) To elect Corresponding Members of the Association.
- (7.) To settle the days for the regular Council Meetings during the coming year.
- (8.) To consider a letter from the Secretary of the Royal Scottish Geographical Society.
  - (9.) To consider applications from
    - a. Wimbledon Free Library for early numbers of the Report.

- b. Cambridge Free Library for early numbers of the Report.
- c. Circolo Matematico, Palermo, for exchange of publications.
- d. Society of Naturalists, Kieff, for exchange of publications.
- e. Dr. Borns for back numbers of the Report.
- (10.) To consider a letter from the Secretary of the Liberty and Property Defence League.
- (11.) To consider applications from the Committees on Provincial Museums and on Science Teaching in Schools for additional copies of their Reports.
- (12.) To consider the following resolutions referred to the Council by the General Committee—
  - That the Council be requested to memorialise Her Majesty's Government in favour of establishing a permanent Census Sub-Department, and taking the Census of the United Kingdom every five years.
  - That the Council be requested to consider what measures if any, it may be desirable to take with respect to apparatus purchased from time to time out of funds voted by the Association.
  - That the Council of the Association be requested to urge upon the Corporation of Bath the desirability of laying bare a further portion of the unique Roman baths of that city, with the view to their permanent preservation; and that the part already laid bare should be protected from the weather.

And other business.

A. T. ATCHISON,

Secretary.

### FIRST LIST

OF THE

### Committee of the Bowman Testimonial Fund.

Sir HENRY ACLAND, K.C.B., F.R.S. Sir Rutherford Alcock, K.C.B. Dr. LIONEL BEALE, F.R.S. GEORGE WM. BELL, Esq. Sir Fredk. Bramwell, D.C.L., F.R.S. Dr. LAUDER BRUNTON, F.R.S. Sir Andrew Clark, Bart, F.R.S. FREDK. LE GROS CLARK, Esq., F.R.S. WARREN DE LA RUE, Esq., F.R.S. Professor DEWAR, F.R.S. J. E. ERICHSEN, Esq., F.R.S. JOHN EVANS, Esq., D.C.L., Treas. R.S. Professor Flower, F.R.S. Professor MICHAEL FOSTER, Sec. R.S. Francis Galton, Esq., F.R.S. Sir Alfred B. Garrod, M.D., F.R.S. Rt. Hon. Sir W. R. GROVE, F.R.S. Sir Wm. Gull, Bart., F.R.S. F. SEYMOUR HADEN, Esq. Sir Prescott Hewett, Bart., F.R.S. Sir Joseph Hooker, F.R.S. J. W. HULKE, Esq., F.R.S. Professor Humphry, F.R.S. JONATHAN HUTCHINSON, Esq., F.R.S. Professor Huxley, F.R.S. Dr. Hughlings Jackson, F.R.S.

Sir Wm. Jenner, Bart., F.R.S. Professor KLEIN, F.R.S. Sir Joseph Lister, Bart., F.R.S. Sir John Lubbock, Bart., M.P., F.R.S. Professor John Marshall, F.R.S. Rt. Hon. VISCOUNT MIDLETON. Rt. Hon. Sir John Mowbray, Bart., M.P. His Grace the DUKE OF NORTHUMBERLAND, K.G. Dr. John W Ogle. Sir George Paget, K.C.B., F.R.S. Sir James Paget, Bart., F.R.S. HENRY POWER, Esq., F R.C.S. Dr. W. O. PRIESTLEY. Rt. Hon. LORD RAYLEIGH, Sec. R.S. Professor Burdon Sanderson, F.R.S. W. S. SAVORY, Esq., F.R.S. Professor Schäfer, F.R.S. Sir John Simon, K.C.B., F.R.S. Professor STOKES, M.P., Pres. R.S. Sir John Tomes, F.R.S. Professor Tyndall, F.R.S. Rev. Dr. WACE. Sir Spencer Wells, Bart., F.R.S. Professor John Wood, F.R.S.

GEORGE JOHNSON, M.D., F.R.S., Treasurer,
11 Savile Row, London, W.

W. A. Brailey,

11 Old Burlington Street, London, W.

W. H. JESSOP,

73 Harley Street, London, W.

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Sie Sersche, Whale Bart, F.R.S.

emevical Servants

W. A. BRAILEY,
Old Budington W. H. JESSOPAN

73 Harley Street, London, W.

At a Meeting recently held at Dr. George Johnson's house it was proposed to make Sir William Bowman some acknowledgment of the appreciation in which he is held on account of his high character, and professional and scientific attainments.

A Portrait of himself was suggested, and also possibly, a reprint of some of his publications.

Dr. George Johnson, Mr. J. W. Hulke and Professor Burdon Sanderson undertook to see Sir William Bowman and ask his acceptance of the proposal.

This consent having been received, a Provisional Committee was at once constituted, at whose invitation the subjoined have formed themselves into the first list of the "Committee of the Bowman Testimonial Fund."

Since this body is already large and widely scattered, the practical carrying out of the scheme has been relegated to a Sub-Committee, consisting of the Treasurer and the Secretaries, together with Mr. Power and Professor Klein.

It is not proposed to place any limit in either direction to the amounts of individual subscriptions, though the Committee is generally of opinion that large subscriptions will be found unnecessary, and that the compliment is a greater one when paid by a longer list of comparatively small subscriptions. They also hope that the funds will allow the distribution of a good reproduction of the portrait to Subscribers of at least Two Guineas.

It will doubtless be gratifying to the subscribers to know that Mr. Ouless, R.A., has undertaken to paint the portrait.

We are requested to ask if you will allow your name to be added to the Committee of the Bowman Testimonial Fund.

We remain, Sir,

Your obedient Servants,

W. A. BRAILEY, W. H. JESSOP, Hon. Secs.

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Harvard College Library. Cambridge Mass. University of the City of New York. Columbia College, N. Y. City. College of the City of New York. Cornell University, Ithaca, N. Y. Ohio State University, Columbus, O. Packer Collegiate Institute, Brooklyn, N. Y. The Collegiate and Polytechnic Institute, Brooklyn, N. Y. The Adelphi Academy, Brooklyn, N. Y. Board of Education, Poughkeepsie, N. Y. Vassar College, Poughkeepsie, N. Y. Poughkeepsie Military Institute, Poughkeepsie, N. Y. Peekskill Military Academy, Peekskill, N. Y Department of Public Parks, N. Y. City. American Institute of Mining Engineers. The Mercantile Library, N. Y. City. Rensselaer Polytechnic Institute, Troy, N. Y. Stevens Institute of Technology, Hoboken, N. J.

All orders should be addressed to

PROF. DANIEL S. MARTIN,

and others.

RUTGERS FEMALE COLLEGE,

West 55th Street,

July, 1888.

New York City.

clapit

American Association for the Advancement of Science.

CLEVELAND MEETING, 1888.

### ASSESSMENT RECEIPT.

THIS IS TO CERTIFY

Tie William

Has paid the assessment for the Cleveland Meeting.

F. W. PUTNAM, Permanent Sec'y.

By b, a. Watsac Ass

### The Proprietors of 'The Scots Observer,'

II THISTLE STREET.

EDINBURGH.

The Proprietors of 'T	HE SCOTS OBSERVER,'		
Care of Messrs. T	. & A. Constable,		
	Thistle Street, Edinburgh.		June 1888.
Sirs,			
	Please forward to n	ne weekly	Сор
	cots Observer,' which I he first number.	agree to prepay	for one year on
	Signature		
	Name in full		

The rate of Subscription for one year, post free, is 28s. 4d. per copy.

In the beginning of October next will be published the first number of "THE SCOTS OBSERVER," which will be a Review, issued in each week, of the current Politics, Literature, Science, and Art.

It is desired to bring under your notice the three leading aims which the promoters have in view.

First. The Review will be distinctively Scottish. While giving due prominence to imperial and general affairs, it will deal fully also with subjects of national interest. In this respect there is at present much to be desired, as the well-known London weeklies not only fail to treat adequately of Scottish affairs, but rather make it a matter of pride that they are not well informed on matters so provincial.

Second. In politics the Review will be distinctively Conservative. It is designed to remedy, in some degree, the present deplorable state of the party press in Scotland. With the solitary exception of one journal, there is no Conservative morning newspaper published north of the Tweed. At this juncture in politics, it is true, the Conservative party is practically independent of this, because the two leading newspapers in Scotland are Unionist in their views. But this independence may be only for the moment. It is impossible to forecast how long the present position of parties may last; and it is rash to rely on its long continuance. The present, however, may not be a favourable occasion for starting a Conservative daily newspaper. There can be but small opening for such, so long as the Unionist journals continue to direct their efforts to the support of the Government. But in so far as a weekly paper, advocating Conservative principles, can help to make good this serious deficiency, it is proposed to endeavour to do so by the present venture. In this way a monopoly of the Scottish press will no longer belong to the Liberal party.

Third. The Review, though Conservative in politics, will be quite independent of the present party organisation in Scotland. It is not, to any extent whatever, connected with that organisation. Its aim will be to criticise all political subjects from a perfectly independent standpoint.

With these aims, it is hoped that the Review will have the hearty support of all Scottish Conservatives.

Literature, Science, and Art will be fully treated from an independent point of view by the best writers available on the various subjects.

THE SCOTS OBSERVER will be published weekly, at a cost of 6d. In order that the necessary arrangements may be made, it will be obliging if you will fill up and return the enclosed Form.

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CONGRÈS INTERNATIONAL DES AMÉRICAL. LS À BERLIN 1888.

BERLIN, juin 1888.

VII me Session.

Du 2 au 5 octobre.

Toutes les lettres et les communications seront adressées à M. le Dr. HELLMANN Secrétaire général du Comité d'organisation

Berlin SW., Königgrätzer-Strasse 120

im Königlichen Museum für Völkerkunde.

### Monsieur,

Nous avons l'honneur de vous faire parvenir le programme du Comité d'organisation du Congrès International des Américanistes pour 1888.

Nous espérons que, dans l'intérêt de la science, vous voudrez bien honorer le Congrès de votre souscription et de votre présence.

Il ne sera pas possible de donner au Congrès de Berlin le caractère brillant que les Congrès précédents ont si bien su réunir avec les études graves et utiles.

Le Comité d'organisation, voyant que le Congrès doit se restreindre au travail scientifique tracé par le programme, se sent doublement porté à offrir une réception cordiale à tous ceux qui voudraient lui prêter leur précieux concours.

Agréez, Monsieur, l'assurance de notre parfaite considération.

Le Président du Comité d'organisation

REISS.

Le Secrétaire général du Comité d'organisation

HELLMANN.

### CONGRÈS INTERNATIONAL DES AMÉRICANISTES

Septième Session — Berlin 1888.

#### PRÉSIDENT D'HONNEUR.

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  - " Dr. J. J. von Tschudi, Jacobshof bei Edlitz, Nieder-Oesterreich.
  - " Dr. Voss, Direktor am Kgl. Museum für Völker-
  - " Dr. Wilmanns, General-Direktor der Kgl. Bibliothek.

## PROGRAMME.

Par décision du Congrès international des Américanistes tenu à Turin en 1886 la ville de Berlin a été désignée comme siége de la septième session qui aura lieu du 2 au 5 octobre 1888.

Le Congrès international des Américanistes a pour objet de contribuer au progrès des études scientifiques relatives aux deux Amériques, spécialement pour les temps antérieurs à Christophe Colomb, et de mettre en rapport les personnes qui s'intéressent à ces études.

Toute personne s'intéressant au progrès des sciences peut faire partie du Congrès en acquittant la cotisation qui est fixée à 12 francs (10 Mark).

Le reçu du trésorier donne droit à la carte de membre et à toutes les publications.

Les adhérents sont priés de faire parvenir le plus tôt possible le montant de leur cotisation au trésorier du Congrès M. le Consul général W. Schönlank (Köpnicker Str. 71, Berlin S.O.), soit par un mandat postal, soit par un chèque sur Amsterdam, Berlin, Bruxelles, Londres, Paris.

Les communications seront orales ou écrites et ne pourront durer plus de vingt minutes. Les mémoires dont la lecture exigerait plus de vingt minutes seront déposés sur le bureau, et il en sera présenté au Congrès un résumé soit écrit, soit oral, faisant connaître l'objet, ainsi que les points importants et les conclusions du travail.

Les auteurs qui enverront des mémoires auxquels cette dernière disposition serait applicable devront en adresser en même temps une analyse.

Les mémoires des personnes qui ne pourraient se rendre à Berlin, devront être adressés au Secrétaire général du Comité avant le 15 septembre 1888. De même les membres qui voudraient en personne faire des communications, sont invités à en aviser le Secrétaire général avant le 15 septembre, afin qu'on puisse distribuer le programme détaillé du Congrès à l'ouverture de la réunion.

Les auteurs qui prendront part personnellement aux travaux du Congrès sont instamment priés de substituer à la lecture un exposé oral.

Les livres, manuscrits ou autres objets offerts au Congrès seront acquis à la ville de Berlin; leur destination définitive sera déterminée par le Comité d'organisation après la clôture de la session.

D'accord avec le bureau de la session de Turin, le Comité d'organisation propose les questions suivantes pour être soumises à la discussion du Congrès:

### GÉOGRAPHIE, HISTOIRE ET GÉOLOGIE.

- 1. Sur le nom "America" (rapporteur M. Cora).
- 2. Les dernières recherches sur l'histoire et sur les voyages de Christophe Colomb (rapporteur M. Gelcich).
- 3. Publication des écrits et dessins relatifs à Christophe Colomb et à son temps, à l'occasion de la célébration du quatrième centenaire de la découverte de l'Amérique (rapporteur M. Cora).
- 4. Les voyages entrepris au nouveau monde dans les premières années du XVI. siècle et spécialement les voyages entrepris par les Français (rapporteur M. Gaffarel).
- 5. Des nationalités qui existaient dans l'Amérique centrale avant l'invasion des Aztèques et des autres peuples septentrionaux, et de la formation de l'empire mexicain.
  - 6. Les Huastèques et leur influence sur l'histoire du Mexique (rapporteur M. Seler).
  - 7. Sur la chronologie des invasions barbares dans l'ancien empire du Mexique.
  - 8. Histoire primitive et migrations des Chibchas (rapporteur M. Uhle).

### ARCHÉOLOGIE.

- 9. L'Architecture et les produits de certaines industries, surtout les ustensiles en pierre (jade) et la poterie, de l'Amérique précolombienne peuvent-ils servir comme preuve d'une communication directe entre l'ancien et le nouveau monde?
  - 10. Antiquités de l'état de Vera-Cruz [Mexique] (rapporteur M. Strebel).
- 11. Les antiquités récemment trouvées à Costa Rica sont-elles les produits d'un peuple préhistorique qui n'existait plus au temps de la conquête? (rapporteurs M. Polakowsky et M. Peralta).
- 12. Valeur religieuse et emblématique des divers types d'idôles, de statuettes et de figures que l'on trouve dans les tombes péruviennes; classement des canopas par types.
- 13. L'emploi des moules dans la fabrication des poteries au Mexique et au Pérou (rapporteur M. Reiss).
- 14. Fabrication et ornementation des tissus dans l'Amérique précolombienne (rapporteur M. Stübel).
  - 15. Classification par âges des monuments architectoniques du Pérou.
  - 16. Les débris de cuisine (Sambaquis) du Brésil (rapporteur M. G. H. Müller).

### ANTHROPOLOGIE ET ETHNOGRAPHIE.

- 17. Les provinces géographiques illustrées par l'ethnologie de l'Amérique (rapporteur M. Bastian).
- 18. Nomenclature des peuples et peuplades de l'Amérique avant la conquête. Carte ethnographique du territoire occupé par chacun d'eux.
- 19. Classification anthropologique des peuples sauvages anciens et modernes de l'Amérique. Atlas craniologique (rapporteur M. Virchow).
- 20. L'étude des cheveux peut-elle servir à résoudre la question de l'unité ou de la pluralité de la race américaine? (rapporteur M. Fritsch).
- 21. Les études craniologiques actuelles permettent-elles d'affirmer que la race Américaine existait en Amérique dès la période quaternaire (diluvium), et que la conformation de leurs crânes était la même que chez les Indiens d'aujourd'hui? (rapporteur M. Cora).
- 22. Peut-on dire que toutes les variétés de la race Américaine sont originaires de l'Amérique même et qu'elles n'ont pas subi d'altérations essentielles par des influences étrangères? (rapporteur M. Cora).
- 23. Sur les déformations artificielles du crâne chez les anciennes peuplades Américaines, comparées avec les déformations en usage chez les peuples de l'Asie, de l'Europe et des îles du Pacifique (rapporteur M. Virchow).
- 24. Existe-t-il chez les Indiens de la côte nord-ouest de l'Amérique des caractères distinctifs indiquant des affinités avec les peuplades asiatiques? (rapporteur M. Aurel Krause).

- 25. Anthropologie des peuples habitant le Mexique au temps de Cortez (rapporteur M. Hartmann).
  - 26. Morale et droit dans l'ancien Mexique (rapporteur M. Grossi).
- 27. Anthropophagie et sacrifices humains dans l'Amérique précolombienne (rapporteur M. Grossi).
  - 28. La crémation en Amérique, avant et après Christophe Colomb (rapporteur M. Grossi).
  - 29. Les races des animaux domestiques dans l'ancien Pérou (rapporteur M. Nehring).
  - 30. Les plantes cultivées chez les anciens Péruviens (rapporteur M. Wittmack).

### LINGUISTIQUE ET PALÉOGRAPHIE.

- 31. Les principales familles linguistiques des bassins de l'Amazone et de l'Orénoque (rapporteur M. Adam).
- 32. Linguistique des peuples qui habitent le centre de l'Amérique du Sud (rapporteur M. von den Steinen).
- 33. Différences d'essence et de forme entre les langues des côtes et celles des montagnes du Pérou; analogie des premières avec celles de l'Amérique Centrale.
  - 34. Le Quichua et l'Aymara appartiennent-ils à la même famille? (rapporteur M. Steinthal).
- 35. Les idiomes de la côte occidentale de l'Amérique présentent-ils quelques affinités grammaticales avec les langues polynésiennes? (rapporteur M. Steinthal).
- 36. La composition avec emboîtement et l'incorporation du pronom personnel ou du nom régi sont-elles des procédés communs à la majorité des langues américaines?
- 37. Existe-t-il des ressemblances entre les caractères chinois et les caractères toltèques (rapporteur M. Charnay).

La première journée du Congrès sera consacrée à l'histoire de la découverte du Nouveau Monde, à l'histoire de l'Amérique précolombienne et à la Géologie américaine; la seconde à l'Archéologie; la troisième à l'Anthropologie et à l'Ethnographie; la quatrième à la Linguistique et à la Paléographie.

Les Musées royaux de Berlin seront ouverts à MM. les membres du Congrès pendant toute la durée de la session.

MM. les membres qui désireraient des renseignements sur les prix des hôtels, etc., sont priés de s'adresser au Secrétaire général avant le 15 septembre 1888.

MM. les membres sont priés de donner très-exactement leurs noms, prénoms et qualités, ainsi que leur adresse.

Avis. — Le Bureau du Congrès sera ouvert au "Museum für Völkerkunde" à Berlin (Königgrätzer Strasse 120, S.W.) à partir du 29 septembre.

Toutes les lettres et communications concernant le Congrès doivent être adressées à M. le Dr. Hellmann, Secrétaire général du Comité d'organisation du Congrès, 120, Königgrätzer Strasse, Berlin S.W.

### BULLETIN D'ADHÉSION.

# CONGRÈS INTERNATIONAL DES AMÉRICANISTES. SEPTIÈME SESSION À BERLIN 1888.

Le Congrès sera ouvert le 2 octobre 1888 sous la présidence de M. W. Reiss.

M

demeurant à

déclare accepter l'invitation au Congrès.

On est prié de bien vouloir renvoyer ce bulletin comme lettre affranchie. Prière d'écrire très lisiblement.

Timbre-poste.

## Monsieur le Docteur HELLMANN

SECRÉTAIRE GÉNÉRAL DU COMITÉ D'ORGANISATION DU CONGRÈS INTERNATIONAL DES AMÉRICANISTES DE 1888

BERLIN S.W

Königgrätzer Strasse 120.

## CONFIDENTIAL CIRCULAR TO CONTRIBUTORS.

->> OFFICE OF .

# A Presbyterian & Gollege & Fournal &

67 McTAVISH STREET, MONTREAL. P.Q.

June 20th, 1888.

Dear Sir =

at the beginning of the second year of our enlarged fournal, use again turn to our friends for assistance. We believe that you are interested in this College and in its fournalistic entroprise, and that you will not be a oftier evident me deinemb est en plan of the continue first-class Magazine. Delous use give a list of promised and probable Contributors, in it you will find your own name. We hope that, during the summer months, you may find time to verite on the subject suggested, or on some other of your own selection. Findly let us know at ower, whether or not use many count upon you for an Onticle. Thould you be pleased to write, will you favor us as soon as possible with the full title and the date at which we may expect to receive your manuscript. We would like to have the eopy for those articles before the first of October, so What we many be able to arrange them in such a war, as to give unity to each fournal.

Brspietfully yours.

C. W. WHYTE,

Editor-in-Chief.

## 

- "Presbyterian Revivalism," by Rev. J. K. Smith, D.D. Promised.
- "Personal Dealing with Souls," by Rev. D. L. McCrae. Promised.
- "How to Secure and Train Church Workers," by Rev. W. J. Dey, M.A. Promised.
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- "The Class of Young Men wanted in our Colleges," by Rev. F. M. Dewey. Promised.
- "Why City Young Men Avoid the Ministry," by Rev. G. C. Heine, B.A. Promised.
- "Possible Improvements in College Equipment," by Rev. L. H. Jordan, B.D. Promised.
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- "The Advantages of a Collegiate Education," by Rev. G. E. Ackerman, D.D. Promised.
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- "In the Woods," by Rev. C. A. Doudiet. Promised.
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- "French Canadian Literature," by Rev. A. B. Cruchet.
- "Literary Associations in Connection with Churches," by Rev. D. Mackay, B.A.
- " Poetical Taste," by Rev. M. H. Scott, B.A.
- "Conversation," by Rev. W. A. McKenzie, B.A., B.D.
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- "Practical Heresies," by Rev. G. D. Bayne, B.A. Promised.
- "Congregational Economies," by Rev. J. Anderson, B.A. Promised.
- "Apologetic Preaching," by Rev. S. Lyle, B.D. Promised.

## \* \* \* \* \* \* \* \* Sontributions. \* \* \* \* \* \*

- "Theological Honors." by Rev. J. H. Graham, B.A. Promised.
- "The Infancy of the Canadian Churches," by Rev. D. McRae. Promised.
- "Canadian and English Presbyterianism," by Rev. J. Mitchell, B.D. Promised.
- "What is New in Apologetics," by Rev. J. R. Beattie, D.D. Received.
- "Woman's Position in the Church," by Rev. J. Nichols, Received.
- "A Layman's Plea for Systematic Giving," by Mr. J. Moodie. Received.
- "Spare Hours and Authorship," by Rev. J. A. R. Dickson, B.D. Promised.
- "The Minister's Reading," by Rev. R. D. Fraser. Promised.
- "Development of Doctrine in Scripture," by Rev. W. J. Smith, Ph. D. Promised.
- "The Future of Palestine," by Sir William Dawson, LL.D., K. C. M. G., &c.
- "Strength and Weakness of Church Finance," by Rev. R. H. Warden, D.D.
- "Blunders in Church Architecture," by Mr. A. C. Hutchison, R. C. A.
- "Christian Didactics," by Rev. Prof. M. McVicar, LL.D.
- "Theology and Philosophy," by Rev. Prof. J. Clark Murray, LL.D.
- "Intellectual Discipline," by Rev. Jas. Watson, D.D.
- "Pioneer Work in Manitoba and the North-West," by Rev. Jas. Robertson, D.D.
- "Schools of Oratory," by Rev. G. Whillans, B.A.
- "Justifiable Aspirations," by Rev. S. Rondeau, B.A.
- "The Call to Stay at Home," by Rev. T. Bennett.
- "Unrecognized Privileges," by Rev. J. K. Baillie.
- "True Happiness," by Rev. R. Gamble, B. A.
- "Steadfastness in Doctrine," by Rev. J. W. Mackenzie, B.A.
- "Church Music," by Rev. R. W. Stewart, B.A.
- "Being all to all Men," by J. F. McLaren, B.A.
- "Leisure Moments," by Rev. J. Henry.
- "The Duty of Tithe Giving," by Rev. J. M. McAllister.
- "Church Entertainments," by Rev. J. Reid, B.A.
- "The Harm of Card Playing," by Rev. N. Waddell.
- "Reserved Power," by Rev. M. McLennan, B.A.
- "Asceticism," by Rev. W. E. Wallace, B.A.
- "The Printing Press an Instrument in Church Work," Rev. R. Henderson.

# RESBYTERIAN OLLEGE JOURNAL.

## PROSPECTUS FOR 1888-1889

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## This Fournal

Is Published under the auspices of The Philosophical and Literary Society of the Presbyterian College, Montreal.

During the current session it has been greatly enlarged and has, we trust, met with approbation from its readers. Pleasing were the words of praise and gratulation which have come from exchanges, subscribers and friends.

The staff of Editors appointed for the session of 1888-1889 hope to merit the commendation which has been given to their predecessors, and wish at this early date to present to friends, old and new, their plans for the coming session.

## The Montreal Presbyterian Pulpit.

The opening article in each number will be one of a series of sermons by the Presbyterian ministers of the city.

## Contributed Articles.

In this department subjects of interest to all Christians will be discussed in short and readable articles. There will be papers on practical church work, college interests, and general literary subjects. These will be supplied by graduates of the College, and by eminent clerical and lay writers in Canada and elsewhere. The students have promised to prepare articles during the summer months, and our readers may expect a fair share of writing from their hands.

## The Mission Crisis

Will continue to direct attention to the pressing need of Heathendom and to the duty of the Church in its behalf. Interesting facts from the fields of labour will be given each month. The students who are preparing for foreign mission work will be large contributors to this department.

## Partie Française.

Nous somme heureux de pouvoir annoncer à nos lecteurs que l'élément françaiscontinuera à être représenté l'année prochaine dans les colonnes du Journal du Col-LEGE, où nous disposerons de quatre pages ce qui nous permettra de publier un joli article.

Nous aurons des articles, comme à l'ordinaire, des différents pasteurs français du Canada et des Etats-Unis, et des étudiants sur divers sujets que nous ne leur prescrirons pas sachant bien qu'ils sauront choisir des sujets convenables à notre ofurnal et propres à intéresser nos lecteurs.

## Editorial Department.

The Journal will continue to be an organ of student opinion, and the editors will

keep this in view. College affairs will be freely discussed.

Protestantism in Canada, and especially in the Province of Quebec, will be faithfully supported, and the conduct of the Roman Catholic Church fearlessly criticised The practical work of our own Church wil also receive attention.

## College Note Book.

Events of interest in and around the College will be reported in concise and racy form by the Local Editor, who will also examine the exchanges and give an unbiased opinion as to their merit.

The Reporting Editor will give a correct account of all Society meetings and

Collegiate gatherings.

## Wur Graduates.

One of the attractions in next year's Journal will be a Catalogue of all the graduates of the College, giving a short account of their college and pastoral life. This will be

prepared and published under the supervision of the College Senate.

The Personal Column will be fully sustained, and every effort will be made to procure late and trustworthy information as to the doings of graduates. We take this opportunity of introducing to the Alumni our Corresponding Editor, Mr. W. Russell, B.A., who will have charge of this department, and we bespeak for him their hearty co-operation.

## Walks about Books.

We are happy to state that the Rev. John Campbell, M.A., S.T.P., will continue his delightful Talks on Current Literature, which have attracted so much attention during the past session.

In conclusion, we desire to thank our friends for their support in the past, and to

respectfully solicit their continued patronage in the future.

Every graduate and student of this College is an authorized agent for the JOURNAL.

The subscription price is ONE dollar.

All business communications should be sent to the Treasurer, James Naismith, B.A., 67 McTavish street, Montreal, P.Q.

All matter for publication should be addressed to the Editor-in-Chief, C. W. WHYTE, B.A., 67 McTavish street, Montreal, P.Q.

#### OPINIONS OF THE PRESS.

The Presbyterian College Journal occupies a prominent position among academic papers. It is conducted with great ability and spirit. Its articles are written with much care, and embrace a wide range of subjects. Its missionary intelligence is fresh and interesting. It has also its French column for its French readers. In short, as its conductors hold that there "is no particular merit in being seriously unreadable," this journal aims, and with success, at holding the middle path between pompous. heavy, lettered dulness and flippant, supposedly smart, triviality. We wish it all success in what we have no doubt is regarded by its conductors as a work of faith and labour of love.—Toronto 413.he

A rich college journal-now one of the best extant. - Montreal Witness.

Much enlarged and greatly improved in style and appearance, with many other pleasing indications of fresh vigor and vitality. It is virtually a new magazine, and a credit to all concerned in its production.—Toronto Presbyterian Review.

Entitled to rank with the very best ecclesiastical periodicals of the day. -Montreal Presbyterian Record.

It is well worth the subscription price of ONE dollar. - Montreal Protestant Pillar.

Very handsome, and well filled .- Halifax Presbyterian Witness.

In merit and make-up it is not to be compared with its former self .- Knox Monthly.

Its articles are varied, well written and of general interest. -Canada Presbyterian.

Deservedly one of the most popular of our college monthlies. Its articles are of a h igh character well written and practical in their bearing. - Dalhousie Gazette.

The best Canadian theological review which reaches our table. It shows an amount of enterprise which is most commendable. Toronto Varsity.

Rather heavy reading .- McGill University Gazette.

MONTREAL, MARCH 1st, 1888

# The Fresh-Air Fund.

(From the MONTREAL STAR.)

## WILL A NEW START BE MADE?

The summer is upon us, and in a few days the insufferable heat will be driving thousands of families to the seaside and pleasant country places. Hundreds of romping boys and girls are wild with delight as the eventful day draws near when they will go out into the fresh, pure air, away from the heat and dust of the great city, to come back in the autumn braced up for the battle of their dear little lives. But, boys and girls, and mothers, there must come to you as you are packing up your summer things, a pang of bitter regret-regret for those who must stay at home and yet so sadly need the restoring virtues of country air and food. There is many a puny boy and many a sickly girl whose very life may depend upon a few days or weeks in the country air. Shall we pass them by, closing our eyes to their pitiful condition, or will we take pity on these little human specks, who, if cared for now, may grow up to be useful men and women?

Will the Fresh-Air Fund be continued? This is a question that naturally suggests itself at this time. The answer to this question must be given by those who can support it and work for it. Those who feel that their own summer vacation and out of town life of their families will be all the more enjoyable, and all the more profitable, by giving something to provide a few days of fresh-air to poor city children and mothers, will answer this question in the affirmative. If we are wrong in this view, the Fresh-Air Fund movement cannot be perpetuated.

Upon the givers—the generous givers—who sympathize with the children whose very child nature is choked out of them, and upon the committee of noble-hearted men and women, must depend the question of carrying the work forward. Their answer means life or death to the movement

the movement.

As the STAR, perhaps, had special opportunities for seeing the good of last summer's work, the STAR, with much pleasure, gives for itself a subscription of five hundred dollars to the Fund, which amount will be handed over to MR. CHARLES ALEXANDER, the Treasurer.

The object of the Fund is to send out of the city during some portion of the hot summer months, delicate children of poor parents, and worn-out, working mothers. To this Fund, the rich and poor may contribute, little or much as they please—the smallest coin will be accepted. Every contribution will be publicly acknowledged. Contributions may be sent to the STAR office, which, after acknowledgment, will be handed over to MR. CHARLES ALEXANDER, the veteran philanthropist, who has kindly consented to act as Treasurer.

# THE FRESH-AIR FUND.

MONTREAL, May 21st, 1888.

DEAR SIR,

It has been decided to test public approval of the project, by re-opening for the season the Fresh-Air Fund to provide means for sending to the country during a portion of the hot summer months, delicate children of poor parents and wornout working mothers.

With the results of last summer's work fresh in your memory, it is probably unnecessary to point out the claims which this movement has upon citizens who are able to contribute to it. They are so palpable as to be readily admitted by nearly every one.

If the plan has your approval, perhaps you will be disposed to send a small contribution in the enclosed envelope. Every donation will be acknowledged in the press, and then handed over to Mr. Charles Alexander, who has kindly consented to act as Treasurer. A full statement of all receipts and disbursements will be published, and the accounts of the Committee duly audited by Mr. P. S. Ross.

Yours truly,

GRAHAM & CO.

The object of the Fresh Air Fund is to give to sick and weak children and mothers of the poorer classes, fresh air and wholesome food, during the hot days of summer.

# THE FRESH AIR FUND.

Mo. 13

Montreal, 1888.

Enclosed find

as a contribution to the Tresh Air Fund.

To GRAHAM & CO.,

165 ST. JAMES STREET.

The Fresh Air Fund is administered by a committee of benevolent men and women, without recompense. The Treasurer is MR. CHARLES ALEXANDER. Books audited by MR. P. S. ROSS.

## From the Slums to the Fresh Air Fund Resorts.





## FRESH-AIR FUND.

# GRAHAM & CO, PUBLISHERS "STAR," 165 ST. JAMES STREET, MONTREAL.



1887-8.

## President:

SIR WILLIAM DAWSON, LL.D., F.R.S., F.R.S.C.

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WM. T. COSTIGAN.

A. T. DRUMMOND.

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ALFRED H. MASON, F.C.S., F.R.M.S.

Pononany Connesponding Secretary: D. P. PENHALLOW, B.Sc.

Monogany Theasuren:

P. S. Ross.

Monorany Recording Secretary ALBERT HOLDEN.

Monogary Libragian: J. A. U. BAUDRY, C. E.

The Regular Monthly Meeting will be held at the Lecture Hall of the Museum, 32 University Street, on MONDAY EVENING next, April 23rd. The Chair will be taken at Eight o'clock precisely.

Each Member has the privilege of introducing two visitors, and Ladies are invited to attend

#### BUSINESS.

Reading of the Minutes of the previous meeting. Announcement of donations. Proposals for membership. Election of members. Miscellaneous communications.

SPECIAL COMMUNICATIONS:

Notes on some of the Birds and Mammals of the Hudson's Bay Territories and the Arctic Coast. By JOHN RAE, M.D., LL.D., F.R.S.

Note on Chicago Boulder Clay. By Dr. Andrews.

The Hon. Librarian will be at the Library every Friday from 4 to 6 o'clock p.m. All subscriptions are due in advance on the 1st of November, and may be paid to Mr. P. S. Ross, No. 18 St. Alexis Street

Members and others desiring to read Papers, or exhibit articles of interest, at the meetings of the Society, or to contribute Books or Specimens, will oblige by communicating with Dr. Harrington, McGill University, or to the Hon. Rec. Secretary, No. 28 St. John Street.

32 University Street. 20th April, 1888.

A. HOLDEN.

Hon. Recording Secretary.

## Lord Lansdowne's Departure From Ottawa.

HIS ADMINISTRATIVE RECORD IN CANADA.

(Ottawa Citizen, 14th April, 1888.)

As the time draws near for severing his official connection with Canada, the feeling of regret everywhere felt at Lord Lansdowne's departure finds frequent utterance. It is officially announced that Their Excellencies, with the vice-regal household, will embark at Quebec on 24th proximo. Therefore, it is a question of a few weeks only, indeed, we might say of almost a few days—so rapidly does the time approach—when the present Governor-General will bid farewell to the Dominion.

Lord Lansdowne has been not only a most acceptable, but also a very popular representatitive of the Crown in Canada, and nowhere is his popularity more apparent and more firmly fixed than at the Capital and throughout the Ottawa Valley. Here both Lord Lansdowne and his distinguished consort have a very warm place in the hearts of the people. In proof of this we need only recall the magnificient reception accorded to Their Excellencies a few months since, on their return from the West.\* That demonstration, so unanimous and wildly enthusiastic, was a display not only of the loyalty of the people to the representative of the Sovereign, but of their personal attachment to the man. Remembering the exhibition of regard and admiration manifested at that time, and knowing that Lord Lansdowne's public course has since in no way varied, we were not unprepared for the movement lately made to give His Lordship a hearty "send-off" on his departure from the country. On the present as on the occasion to which we have alluded, a Citizens' Committee, appropriately headed by His Worship the Mayor, has been named to make the requisite arrangements. The programme adopted, we understand, includes a banquet and a public reception, at the latter of which an address from the city will be presented. Some movement, we believe, was made towards providing a separate banquet to be given to His Excellency by members of both Houses of Parliament in the Senate Chamber, but this proposition has been wisely, we think, abandoned with a view to making the civic banquet a thoroughly representative gathering. Parliament being in session it seems not unlikely, though we have no official knowledge of the fact, that a joint address from the Senate and Commons will be adopted and presented to the retiring Governor-General, as has been usual on like occasions since Confederation. The custom is a good one, affording as it does an opportunity for the Viceroy to take a personal farewell of the great men In this connection, many of our readers will recall the impressive scene in the Senate Chamber in the spring of 1878, just prior to Lord Dufferin's departure from Ottawa, when the then leader of the Government (Mr. Mackenzie), surrounded by many of the prominent

<sup>\*</sup> After the O'Brien fiasco.

public men of the day, including the then leader of the Opposition (Sir John Macdonald), read an eloquent acknowledgment of the great diplomatist's untiring efforts on behalf of the Dominion. We have no doubt that Ottawa's demonstration on the forthcoming occasion will be entirely successful, and that her example will be followed by other centres of intelligence and public opinion. All, of course, cannot hope to secure His Excellency's presence at a dinner, but addresses will doubtless be either presented or forwarded to him so as to voice the general sentiment—a sentiment which while including the highest regard for the Queen's representative is strongly impregnated with love of England and reverence for the Queen's Person and Government. Thoroughly concurring in and upholding this view, we desire to see all suitable homage paid to a ruler who, during his term of office, has wisely and judiciously administered the important trusts committed to his charge with an eye solely to the advancement of the best interests of one of the foremost portions

of the British Empire.

Lord Lansdowne, it is true, has been with us but for a limited period. He assumed the duties of office in the autumn of 1883, and he will therefore leave Canada some considerable time before completing the official term usually allotted to a Governor-General. His period of service, however, though brief, has been fruitful of many important and remarkable events. The completion of the Canadian Pacific Railway from ocean to ocean, opening up a new pathway over British territory to the East; the rebellion in the North-West Territories, which, however much to be deplored for the causes of its origin and the loss of life involved in its suppression, was not devoid of public advantages; the final settlement of the Atlantic fisheries dispute, a matter of long standing contention between two of the great powers, and one which might at any moment develop into a serious international complication; and the initial step towards securing the admission of the ancient colony of Newfoundland into the Canadian Union, thus ensuring the complete political unification of British North America are some of the matters of weightiest import which have engaged the attention of Lord Lansdowne, and with respect to which, as in his general administrative course, he has displayed consummate ability, tact and judgment, affording proofs of the possession of the highest gifts of statesmanship. In the ordinary routine of office he has, it is said, evinced a careful, conscientious, interest in the administration of justice, with results which have frequently been attended with advantage to society and to the Government. The best test of the success of his administration is the entire absence from its record of friction or complaint. He has ruled constitutionally, and from first to last, apparently, has been in entire accord with his Ministers.

Space will not permit us to-day to enlarge on His Lordship's general services to Canada—on his warm interest in Education, particularly Higher Education, in Literature, in the Fine Arts, and in Science; on his efforts to promote among the youth and manhood of the country,

healthful out-door Sports and Amusements; and on his sympathetic encouragement of the Volunteer Militia Force. Let it suffice that he has devoted his time and his means to the promotion of all good and deserving works. Socially, his hospitality has been boundless. Like his immediate predecessors, Lords Lorne and Dufferin, he has, at various times, visited each of the several Provinces of the Dominion, as well as the outlying Territories, thus familiarizing himself with the character of the people and the resources of the country, and the speeches and addresses delivered by His Lordship on these occasions, while models of eloquence and pure diction, have practically tended not a little to produce beneficial results, by attracting abroad increased attention to Canada.

In a few days His Excellency will leave Canada to assume new official duties in a far distant and in a more important sphere of action. Though loath to part with him, we all rejoice at his promotion in the public service, and, it is needless to say, will watch his future career with feelings of the deepest interest. Our best wish for His Lordship is that the same neasure of prosperity and success may attend his government of the great Indian Empire as have crowned his administration in the

Dominion!

It would not be fitting to conclude this article without a special reference to the gracious and accomplished lady who so admirably has supplemented His Excellency's efforts for the well-being of our country, and whose panegyric was pronounced so recently by that master of sincere and eloquent compliment, the Earl of Dufferin. Lady Lansdowne's highest praise is that she has not, in any degree, fallen short of the exalted responsibilities—responsibilities none the less important because largely social—incumbent on her high position. Rather, indeed, has she more than justified the anticipations of kindliness and excellence which four years ago heralded her advent to Canada.

"Better lo'ed ye canna be Will ye no come back again?" Jansdonne Sansdonne

SOCIÉTÉ BELGE DE GÉOLOGIE

DE PALÉONTOLOGIE

ET D'HYDROLOGIE

fondée à Bruxelles, le 17 février 1887.

# Monsieur et cher Confrère,

Nous avons l'honneur de porter à votre connaissance que, par suite du changement de jour et d'heure de la séance de Février dernier, le Bureau a décidé de modifier la date et l'heure de la séance de Mars, qui devait être une séance de jour.

Les travaux qui n'ont pu être communiqués à la dernière séance par suite de l'importance de la communication de M. Ed. Dupont sont reportés à l'ordre du jour ci-dessous.

Nous vous prions de bien vouloir assister à la séance mensuelle de Mars, qui, exceptionnellement, aura lieu **Vendredi prochain** 30 courant, à 8 heures précises du soir, à l'ANCIEN HOTEL DE BRABANT, rue Marché aux Charbons, à Bruxelles.

## ORDRE DU JOUR:

- 1º Correspondance ; dons et envois reçus ; élection et présentation de membres.
- 2º Communications scientifiques:
  - a. A. Renard. Notice sur les roches de Pico di Teyde (Ile de Ténériffe).
  - b. C. Ubaghs. Étude paléontologique sur les couches crétacées de Folx-les-Caves.
  - с. A. Rutot. Contribution à l'étude du sous-sol des Flandres, à propos du puits artésien creusé à Roulers par MM. Ibels et Lang.
  - d. A. Rutot. Sur deux puits artésiens creusés à Anderlecht, à la manufacture de bronze phosphoreux, et à Saint-Gilles, par M. Axer.
  - e. E. Van den Broeck. Sur la différenciation des amas de cailloux roulés des hauteurs bordant la vallée de la Meuse.
  - f. E. Van den Broeck. Notes sur l'exploration géologique et hydrologique faite par MM. Rutot et Van den Broeck à l'emplacement des nouveaux forts de la Meuse.
  - g. L. Dollo. Sur la morphologie des Ptérodactyles et la crête occipitale de Pteranodon.
  - $h.\,$  M. Simettinger. Die Cokesbare Tertiär-Kohle Untersteiermarks. Eine geognostische und bergmänische Skizze.
  - i. E. Pergens. Remarques sur la réunion du Calcaire de Mons et du Tufeau de Ciply dans un même groupe stratigraphique.
  - j. St. Meunier. Notes sur le puits artésien de la place Hébert, à Paris.
  - k. Communications diverses.

Nous comptons, Monsieur et cher Confrère, que vous voudrez bien assister à cette séance et nous vous prions d'agréer nos salutations empressées.

Le Secrétaire,

Le Président,

E. VAN DEN BROECK.

A. HOUZEAU DE LEHAIE.



## BULLETIN DE VOTE, A DÉTACHER

En vertu de l'art. 14 de nos Statuts, l'Assemblée ordinaire du 30 mars 1888 aura à se prononcer sur l'admission, au sein de la Société, des personnes dont les noms suivent, et qui ont été présentées par le Bureau à la séance du 4 mars dernier :

Membres effectifs:

MM. Otto Lindner, Ingénieur, Secrétaire de la Compagnie du Congo pour le Commerce et l'Industrie, 39, rue d'Autriche, à Bruxelles.

Charles Demanet, Ingénieur, Directeur de Charbonnage, à Havré.

Edmond Masson, Ingénieur à la Société Solvay et Cie, à Havré.

Enrico Nicolis (Chevaller), Corte Quaranta, à Vérone.

Gaston Vasseur, Dr-ès-Sciences, 1, boulevard Saint-Michel, à Paris.

Membre associé régnicole:

M. Richard Schweisthal, Traducteur à l'Agence Havas, 13, rue d'Argent, à Bruxelles.

Veuillez détacher cette liste de candidats pour la déposer, en entrant en séance, comme bulletin de vote, après rature des noms dont vous désireriez le rejet.



En vertu de l'art. 14 de nos Statuts, l'Assemblée ordinaire du 30 mars 1888 une à se prononcer sur l'admission, au sein de la Société, des personnes dont les noms

Membres effectifs

MM. Orro Empire, Ingenieur, Secretais de la Compagnie du Congo pour le Commerce et l'Industrie, 39 roe d'Auriche I Bruxelles.

CHA LLES DEMANTA, Ingenieur, Dryk aur de Charbonnage, a Hoyre.

Exaco Moons (Chevaller), Cor/s Quaranta, à Vérone. Castor Vassera, Dr.ès-Sciences, l. boulevard Saint-Michell à Paris,

Membre assucié régnicole

Beyn Mus

d. Bidiano Seiweistian, Traducteur à l'Agence Huvas, 13, rde d'Argent, à Bruxultes

Veuilles détacher cette liste de candidats pour la déposer, en entrant en séance, onunc bulletin de vote, après rature des nons dont rous desirertes le reint

## EVANGELICAL ALLIANCE.

MONTREAL BRANCH.

## **Doctrinal Basis**

As Adopted at the Organization of the Alliance in London in the Year 1846.

- 1st.—The Divine Inspiration, Authority, and Sufficiency of the Holy Scriptures.
- 2nd.—The right and duty of private judgment in the interpretation of the Holy Scriptures.
- 3rd.—The Unity of the Godhead, and the Trinity of Persons therein.
- 4th.—The utter depravity of human nature in consequence of the Fall.
- 5th.—The incarnation of the Son of God, His work of Atonement for sinners of mankind, and His Mediatorial intercession and reign.
- 6th.—The Justification of the Sinner by Faith alone.
- 7th.—The work of the Holy Spirit in the Conversion and Sanctification of the Sinner.
- 8th.—The Immortality of the Soul, the Resurrection of the Body, the Judgment of the World by our Lord Jesus Christ, with the eternal blessedness of the righteous, and the eternal punishment of the wicked.
- 9th.—The Divine Institution of the Christian Ministry, and the obligation and perpetuity of the ordinances of Baptism and the Lord's Supper.

It being, however, distinctly declared that this brief summary is not to be regarded in any formal or ecclesiastical sense, as a creed or confession; nor the adoption of it as an assumption of the right to define authoritatively the limits of Christian brotherhood, but simply as an indication of the class of persons whom it is desirable to embrace within the Alliance.

The conditions of membership are the written assent to the above basis, and the payment of an Annual fee of fifty cents.

J. W. DAWSON, C.M.G.F.R.S.

REV. W. JACKSON,

President.

Sec.-Treas., 58 FORT STREET

Having read the Doctrinal Basis of the Evangelical Alliance and approving thereof, I desire the Secretary to enroll my name among the members of the Montreal Branch.

	Name		
			 ***************************************
	Address		
		***************************************	 
Date			

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# REPORT OF THE COUNCIL

TO THE

# Members of the Montreal Sanitary Association.

JANUARY, 1888.

GENTLEMEN,

The work of the Association during the first eight months of its existence, has amply justified its formation.

Its purpose, which was to furnish a thorough scientific and independent examination and supervision of the Sanitary appliances now used in every dwelling of any pretensions, has been fully attained, within the limits of our membership.

The appended report of our engineer, Mr. Fleming, gives a full statement of his work, exemplified by selected cases, and will show how urgently such work as his is called for.

The council has to express its satisfaction with Mr. Fleming, not only as regards his industry and thoroughness, but also in regard to the confidence which the council have in his skill and professional capacity.

The finances are in a satisfactory condition, and it will be for our successors from time to time to revise the scale of charges to meet the varying circumstances in which the members may be placed, the object being not profit but efficient service. The financial statement is appended.

The council confidently anticipate a marked improvement in the quality and style of sanitary work throughout the city as a result of the operations of the association, and it will be matter for consideration to what extent and in what directions we can extend in the future the usefulness of the association.

The whole submitted,

GEORGE A. DRUMMOND,

President.

## ENGINEERS' ANNUAL REPORT FOR 1887.

JANUARY 4TH, 1888.

STANDARD BUILDINGS, ST. JAMES STREET.

To the Council of the Association.

GENTLEMEN,

Since the start of the practical work of the Association in the last week of May 1887, the work has been continuous, except for a week in June when I was confined to the house, by illness, and for a few weeks in the summer time, when it was frequently impossible to arrange for inspections, owing to the absence of a great number of the members from town.

About 261 visits of examination, superintendence, and final testing have, however, been made to members' houses and properties, up to December 31st of the past year. Of these 111 were first examinations, and about 150 supplementary visits of superintendence and testing.

The total membership for the past year, including public buildings and offices, is 205, which is an increase of about 40 since May, and leaves 94 examinations yet to be made.

Several of the members, however, refused examinations when offered, and others postponed them indefinitely. The total number of first examinations offered was 143, which would have enabled me to overtake the whole original membership by the end of this month. As it is, however, the remainder will be overtaken early in the present year, considerably within a year from the starting of the practical work of the Association, and the whole of the annual examinations will be easily overtaken before the end of this year. There is every prospect also of a large amount of new work. If this is the case, there will be ample work for an assistant engineer, who would in fact become necessary.

The results of the examinations during the past seven months have been varied, but have fully exemplified the necessity for such examinations, and amply justified the Association's existence. A few examples of what has been found will not be amiss in this report.

In one large house the air pipe ventilating the soil pipe was eaten through so as to be quite open, and permitted the foul gases from the sewer to escape freely into the interior of the house.

In another house on Peel Street about 60 feet of 9 inch fire-clay pipe drain was found to be almost level, and to be very imperfectly jointed and leaky.

In a new house in Mackay Street the drains, which consisted of fire-clay pipes, were discovered to have been laid on a shifting bed of clay, and in consequence to be disjointed, without fall, out of place, and at one point broken by the settlement of the front wall of the house. The joints of the soil pipe were also found to be very faulty. A new main drain had to be laid right out to the street sewer, the part inside the house being of heavy cast iron.

A house on Sherbrooke Street, where great annoyance was experienced from offensive smell, was found to have wooden box drains discharging into a large cesspit in the back yard, and having no connection with the sewers, except by means of an untrapped overflow pipe, which only served to make matters worse.

In two houses where the drains were in comparatively good condition a perfect lake of water was found under the basement floor, causing great dampness, and consequent unhealthiness, and proceeding from leakage of the water supply pipes.

In a house in Union Avenue examined recently, and suspected by the medical adviser of the family to be in a bad sanitary condition, the main drain had free ventilation into the house though the waste pipe of the bath which had an untrapped connection with it.

In a house on Drummond Street the drains and soil piping were who'lly unventilated, and basins and a slop sink in bedrooms had unventilated connections with the soil pipe. The trap of the slop sink was in consequence unsealed when the w. c. on the floor below was used, and a free ventilation of the drains and public sewer into the bedroom was the result.

These examples are merely typical of what is being discovered all the time, but I need not multiply them.

In the great majority of houses there still exist old "pan" w. c.'s which are very filthy appliances, and should not be allowed to exist in any dwelling.

The practice of ventilating soil pipes with galvanized iron air pipes is also very common and is very objectionable. Such air pipes are never reliable, and seldom stand the smoke test.

Several cases where illness had evidently been caused by the condition of the drainage or plumber work were also met with.

The most frequent defect met with is leakage of drains or soil pipes. This defect which is a very serious one, has occurred in 50 per cent. of the houses and buildings examined.

I have invariably recommended the disconnection of house drains from the public sewers by a suitable trap and fresh air inlet, as a precaution of the utmost importance in every case, where possible; and have to report that the insertion of these traps has not been accompanied as yet by any inconvenient results such as were anticipated by some as likely to occur during the winter season.

The manner in which the reports have been acted upon by householders is also very gratifying, the recommendations in the reports having been given effect to in fully 70 per cent. of the houses reported upon. This percentage is probably under the mark, as it only includes cases reported to the Association. Alterations have no doubt been effected in some cases without notice being given to the Association.

The Association is becoming daily better known and its work more appreciated; and as already stated the prospects of new work for the ensuing year are very satisfactory.

I am, gentlemen,

Your obedient servant,

RICHARD P. FLEMING,

Engineer.

## MONTREAL SANITARY ASSOCIATION.

1887.  Dec. 31. To amount received for annual sulscription and examinations, as per Cash Book	r	1887.  Dec. 31. By Amount paid for Preliminary Expenses as Ocean Passage and R.R. fares for Engineer, Cables, Books, Printing, Stationery, Desk, Signs, Salary of Temporary clerk, Smoke Testing Machine and rent of Mechanics Long Room.  By Postage Stamps.  "Office Rent, 6 months.  "Engineer's salary, 7 months, at £300 stg  "Engineer's expenses  "Collecting portion of subscriptions.  "Balance on hand	\$472 5 40 851 36	68 10 00
	\$1,794 00		\$1,794	00

Sauchas

# Royal · Society · of · Canada ·

OTTAWA, 25th January, 1888.

SIR,—

I beg leave to call your attention to Rule VI of the Society, and to the nominations proposed to the two vacancies in your Section.

Yours truly,

Hon. Sec.

The following Rule was substituted for the Sixth Rule in the Session of 1887:-

## RULE VI.

"The Fellows shall be persons resident in the Dominion of Canada, or in Newfoundland, who have published original works or memoirs of merit, or have rendered eminent services to Literature or to Science.

"The number of members in each Section shall be limited to twenty. Nominations to fill vacancies in any Section may be made at any time in writing by any three members of that Section, and the nomina-

tion papers shall be lodged with the Honorary Secretary, who shall make a record of them.

"When a vacancy occurs the Honorary Secretary shall notify the members of the Section in which it has taken place, and transmit to each a printed list of the Candidates nominated, together with the reasons, in writing, for such nomination, at least four months before the Annual Meeting of the Society. Each member may then place a mark (X) opposite the name of the Candidate for whom he votes, and return the voting paper to the Honorary Secretary, who shall report to the Council, at a meeting to be held at least two months before the Annual Meeting, the number of votes obtained by each Candidate. Should any of these have obtained two-thirds of the votes of the whole Section, the Council shall so report to the Society, which shall consider such Candidate elected. Should this result not be attained, then the Council may select one or more of the Candidates obtaining the highest number of votes of the Section, and cause the members of the Society to be advised of the names of the Candidates so selected, at least one month previous to the date of the Annual Meeting, when the election shall take place by vote of the members

NOMINATIONS, SECTION IV.

ROYAL SOCIETY OF CANADA:

JUNE, 1887.

There being a vacancy in the membership of Section IV of the Royal Society of Canada, in consequence of the resignation of Mr. J. M. Jones, of Halifax, N.S., we, the undersigned, members of said Section, do hereby recommend for nomination, as a Candidate for membership, Mr. A. H. Mackay, B.A., B. Sc., Principal of the Academy, Pictou, N.S., knowing him to be a patient and successful worker in Natural Science, especially in certain departments of Zoology and Botany. A list of original papers published by Mr. Mackay accompanies this recommendation.

> GEORGE LAWSON, EDWIN GILPIN, J. W. DAWSON.

1881 (MAY 9TH).—" Lichens of Nova Scotia," in Proceedings and Transactions of the Nova Scotia Inst. of Science, Vol. V, Part III.

1884 (MAY 12TH).—Notes on Nova Scotian Fresh-Water Sponges." Proceedings and Transactions

of the Nova Scotia Inst. of Science, Vol. VI, Part II.

1884 (Sept. 2nd).—"Nova Scotian Fresh-Water Sponges." Communicated by Mr. E. Potts to Academy of Natural Sciences, Philadelphia. (Proceedings Acad. Nat. Sci., Phil.)

1884 (Sept. 2nd).—"A Preliminary Examination of the Silicious Organic Remains in the Lacustoine Deposits of Nova Scotia." Oral abstract given before Section C, British Association, Montreal meeting.

(See Report Sect. C, No. 9, Page 742.)

1884 (Sept. 2nd).—"Diotomacéous Tests in the Lakes of Nova Scotia." Read before Sect. D, British Association. (See Report Sect. D, No. 13, Page 783.)

1885 (Jan.)—Communications by H. J. Carter, F.R.S., &c., to "Annals and Magazine of Natural History," (London.) (Pages 18, 19, 20, 21 and 22.)

1885.—"Classification of Nova Scotian Mammalia." Four articles, in Nos. 2, 3, 4 and 6 of Vol. I, "The Academy."

1885.—"Birds of Pictou, Mounted by the Ornithological Section of the Pictou Academy Scientific Association." "The Academy," Vol. I, No. 6.

1885 (FEB. 24TH).—Communication to the Academy of Natural Science, Philadelphia, through E.

Potts. (See Proceedings).

1885 (MAY 11TH).—" Fresh-Water Sponges of Nova Scotia." (Read before Nova Scotia Institute of Science. See Proceedings in Vol. VI, Part III.)

1885 (MARCH).—" Organic Silicious Remains in the Lake Deposits of Nova Scotia." (Read before the Natural History Society of Montreal. Published in Canadian Record of Science, Oct. 1885, Vol. I,

1885 (Ост. 26тн). — "New Fresh-Water Sponges form Nova Scotia and Newfoundland." (Read before the Natural History Society of Montreal. Published in the Canadian Record of Science, Vol. II,

бтн)—"Fresh-Water Sponges of Newfoundland." Communicated to Academy (APRIL

Natural Science of Philadelphia, through E. Potts. (See Proceedings.)

1887.—" Marine Algae of the Maritime Provinces of Canada," jointly with Geo. N. Hay, of St. John. (Read before the Natural History Society of New Brunswick. Published in "Bulletin Natural History Society," N.B., for 1887.)

We beg to propose the Abbe Provancher, of Cape Rouge, Quebec, as a fit and proper person to fill one of the vacant fellowships in Section IV of the Royal Society of Canada. Abbe Provancher is the author of a Flora of Canada, a work on the Entomology of Canada, and has long been editor of "The Canadian Naturalist." He is well known throughout Canada as a scientist. For these reasons he is eligible for election in the above section of the Society.

ROBERT BELL, F.R.S.C. J. C. K. LAFLAMME, D.D., F.R.S.C. J. A. GRANT, K.C.M.G. JAMES FLETCHER, F.R.S.C.

June 11, 1887.

Dr. J. G. BOURINOT,

Hon. Sec. Royal Society, of Canada.

DEAR SIR,-The undersigned, Fellows of the Society, beg to propose for election as a member in Section IV, Dr. T. Wesley Mills, M.A., M.D., Professor of Physiology in McGill College, Montreal, and whose reputation as an original investigator in Biology and Physiology is of the highest character, not only in this country, but abroad.

Dr. Mills has published in various Scientific and Professional Journals more than forty papers on Biological and Physiological subjects. Of these thirteen are on purely scientific subjects, and record original researches. Of the latter especial mention may be made of papers published in the Journal or Physiology, Cambridge, England, and in the Edinburgh Journal of Anatomy and Physiology, on the physiology of voice and on the structure and functions of the heart in amphibious, fishes and other animals, and a recent paper on the Zoology of the Bahama Islands in the Canadian Record of Science.

Dr. Mills is actively pursuing his researches in comparative Physiology, and will be able from time to time to present very important contributions to the Society.

> J. WM. DAWSON, F.R.S.C., D. P. PENHALLOW, F.R.S.C., J. F. WHITEAVES, F.R.S.C.,

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