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JOURNAL OF EDUCATION,

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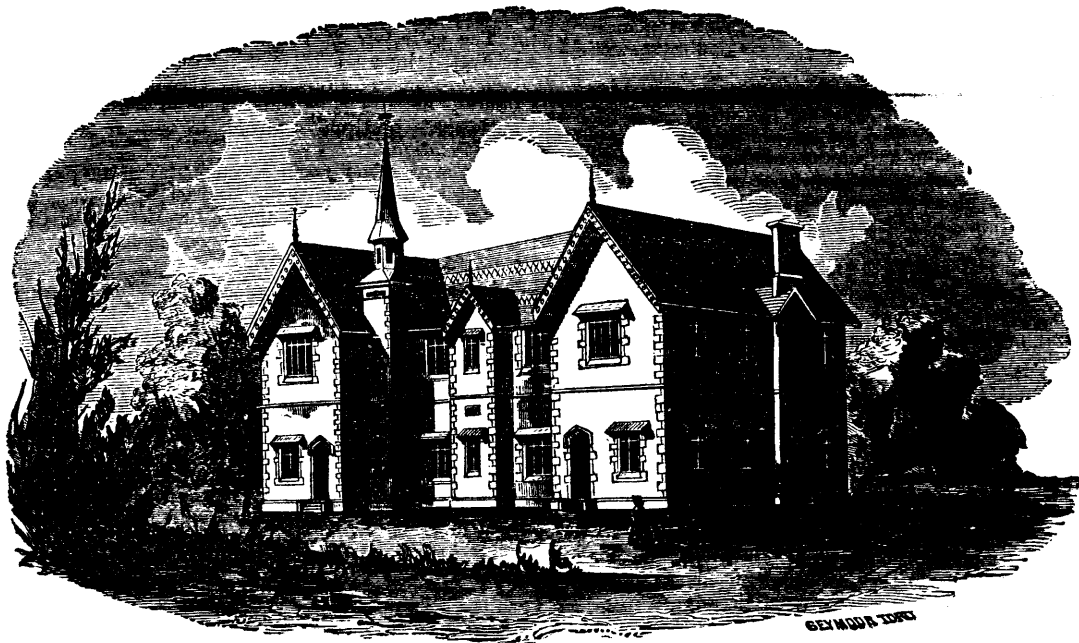
Canada.

VOL. XII.

TORONTO: SEPTEMBER, 1859.

No. 9.

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OPENING OF THE NEW BRICK SCHOOL-HOUSE, SIMCOE, COUNTY OF NORFOLK.

The *Norfolk Messenger* of the 25th ult., contains an account of the opening of this handsome brick school-house on the previous day.

The engravings illustrate designs made by Messrs. Messer and Jones, architects, Toronto, in reply to an advertisement by the School Trustees of the Town of Simcoe, County of Norfolk, for "A two-story brick School-house; cost of the building not to exceed £1,700; accommodation required for 500 or 600 children;" and to be built on a block of ground two acres in extent, near the town.

Thirteen designs were sent in from various parts of Canada

and the United States; from which, Design No. 1, as shewn by ground-plan and perspective above, was chosen.

"The corner-stone of the building," says the *Messenger*, "was laid with Masonic honors, on May 24th, 1858, and was finished by the placing of the cope-stone yesterday, by Col. Wilson, the Provincial Grand Master, with the imposing formalities of that order. The procession formed at the Court House Square, and marched to the grounds of the new school. Passing in under an evergreen arch, surmounted by the crown, the procession halted in front of the beautiful edifice which the liberality and taste of the citizens have erected.

"The Rev. Mr. Livingstone having read a Psalm and made an appropriate prayer, the ceremony of delivering the building by the Master Mason (George Jackson, Senr.), to the Grand Master; and the final ceremony of placing the cope-stone, with a shout, was duly performed, and the building was finished.

"An address by the Trustees to Dr. Ryerson, and his reply, we place before our readers.

"The Local Superintendent of Common Schools, the Rev. Wm. Clarke, closed with a short prayer; and the day's proceedings terminated, we dare say, with general satisfaction.

"Address to the Rev. Dr. Ryerson, Chief Superintendent of Education for Upper Canada."

REV. SIR,—We avail ourselves of the opportunity afforded us by your visit, of presenting you with this address, as a mark of our esteem and regard for you personally, and of our high appreciation of those unceasing exertions which have secured to the inhabitants of this Province their present school system—a system which enables the poorest and most humble classes of the community to obtain for their children a superior education, a boon which we regard as the greatest and most desirable which could be conferred upon a free and enlightened people; a system which not only confers everlasting honour upon the country which adopts it, but which will also raise 'this Canada of ours' to a proud position among the nations of the earth, and which will surround with an imperishable fame the names of all those who assisted in its formation and establishment.

"We rejoice, Reverend Sir, that your present visit to our town gives you an opportunity of uniting with us in celebrating the completion and formal opening of this handsome building, which the rate-payers of Simcoe, with a praiseworthy liberality, have erected for school purposes—an edifice which is a monument the more honorable to our school system, and to you, Reverend Sir, as one of its principal founders, which speaks a language more eloquent than thousands of such addresses in its behalf; for by exercising the powers conferred upon us as School Trustees, by the School Act, we have been enabled to erect this edifice, and to proclaim, at its opening, that the education to be obtained within its walls is free in every department to all our inhabitants, be they rich or poor.

"Your visit to this, your native county, will doubtless excite in your mind feelings both of joy and sadness. Of sadness, when memory pictures the many loved and familiar friends who have now passed away; of joy, when you interchange the warm grasp of love and friendship with the many who yet remain to you. And while we congratulate you upon your appearance among your old friends and acquaintances, we would earnestly entreat our common Father to pour out His richest blessings upon you and your zealous efforts to advance the educational interests of your country."

Dr. Ryerson's Reply.

"GENTLEMEN,—I have no language to acknowledge, in appropriate terms, the address which you have presented to me. I thank you for it with all my heart and soul. To receive such an address in my native county, and within some five miles of the place of my birth and youthful life, is as much above my merit as it was beyond my expectation, and is the highest earthly reward of years of toil and responsibility.

"The most painful privation of my own early days was the want of proper educational helps. On my entrance into public life, I found that privation to be the greatest evil of the country at large, but that the adequate remedy for it could not be reached without the full attainment of intellectual and civil freedom. To that, the unceasing efforts of nearly twenty years were directed. It then became appropriate that the noblest exercises of that freedom should be directed by our country to the education of its own youthful population. This could only be done by making education free; or, in other words, by rendering the property of the country responsible for the education of the country. In some countries in Europe, as also in some of the States of America, I found education free. In the former, it was the act of absolute despotism; in the latter, it was the act of a central legislature. My plan was to make it the spontaneous act of the people in each municipality—to uplift the rate-payers of each municipality to the noblest aspirations of a nation's noblest vocation—not to the achievements of the sword, but to the infinitely higher achievements of educating each child in the land. My plan has been for the Government to compel or command in nothing, but to counsel and aid in everything; to make the free and independent rate-payers in each municipality both the judges and the workers in the grand politics of universal education. This accomplished, the seeds of our country's greatest strength, prosperity, and happiness are sown; the essential elements of her broadest and highest civilization are secured, whatever may become of the originators and founders of her school system.

"And, gentlemen, I feel most thankful to you, and, I trust, truly

grateful to Almighty God, that, in the metropolitan town of my native county, a nation's truest mission is heartily appreciated and practically illustrated in providing a tasteful and commodious school-house, with convenient desks and seats, and other corresponding helps and facilities of school instruction, for each child in the municipality; and in offering not only a free common school education, but, what is as rare as it is patriotic, in offering a free grammar school education to every youthful seeker of knowledge.

"Since I entered this county, a feeling of desolation has chilled my heart, in not being able to ascertain a single person, except the respected Registrar of the County [Francis Walsh, Esq., formerly Member for the county], who was in public life when I entered it; but the scene of this day assures me, that when the generation on the margin of which I am now standing, shall have passed away, others will carry on vigorously and successfully the work which we have feebly but earnestly commenced, until our country shall wave its banner of law and freedom from Lake Erie to the Pole, and from the Atlantic to the Pacific, and place within the reach of each child of its teeming population the priceless blessings of a sound education, based on Christian principles, and sanctified by thanksgiving and prayer to the Creator of the rich and the poor, the Author and Giver of every good and perfect gift.

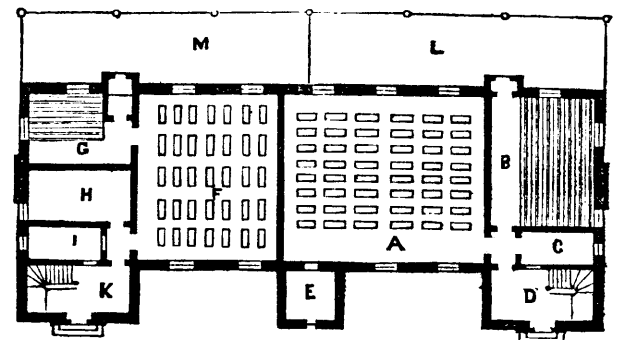
"The Doctor made a short but extremely eloquent address in return to the cheers which were given upon the conclusion of his written reply."

The building is designed in the Old English style,—the most appropriate for a red brick building,—and is finished with Ohio stone-dressings. The overhanging roofs afford protection to the walls. The windows are covered with hoods, which shade them, making the light free from the glare of sunshine, and, being glazed in small squares, are less liable to be broken.

An entirely separate entrance is provided for boys and girls: the whole of the ground-floor being appropriated to the use of the latter. The cloak-room, which is next to the entrance-hall, is provided with two doors, so that there may be no crowding when school is dismissed. The doors to school and class-rooms are made to open outwards, in accordance to the suggestions contained in the *Journal of Education* for December, 1851,—pp. 180, 181.

The gallery-room will accommodate 120 pupils, and has a door, protected by a porch, opening on the covered play-ground. The gallery room is an important feature in the construction of school-houses, and its adoption has been strongly urged by the school authorities of Upper Canada, in various numbers of the *Journal of Education*.

The large school-room accommodates 160 pupils, with fixed seats and desks, like those manufactured by Jacques and Hay, Toronto, under the sanction of the Educational Department for Upper Canada; and each class-room opening off it has similar desks and seats for thirty-six pupils.



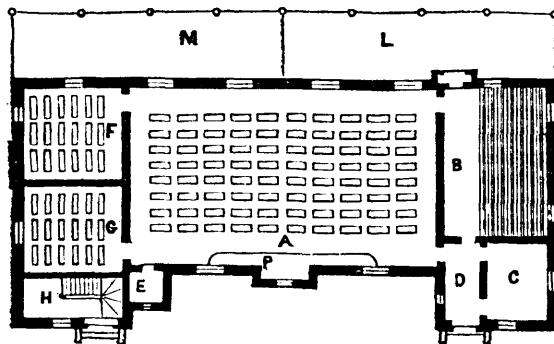
DESIGN NO. 1.—GROUND PLAN.

- | | |
|--------------------------|--------------------------------|
| A. Girls' School. | F. G. Class Rooms. |
| B. Gallery Room. | H. Staircase and Boys' School. |
| C. Cloak Room. | L. M. Covered Play Shed. |
| D. Entrance Hall. | P. Platform. |
| E. Book or Library Room. | |

The boys enter the door in the left wing, and ascend a broad staircase to the second floor, where there is a large school-room, with seats for 160 pupils; two class-rooms for 48 pupils each; a gallery for 112 pupils; and a large cloak-room. The bell-tower contains book-closets, or library-rooms, on each floor, with the bell-rope leading down into them.

The basement is 6ft. 6in. high. The whole area of the building has been excavated, so that any system of heating may be adopted. The rooms on the ground-floor are 14 feet high. The large room on the upper floor has an open roof, 17 feet to the ceiling, and the class-rooms a height of 14 feet. All the rooms are ventilated by flues in the walls, carried up into the roof, from whence the foul air escapes by an open ventilator on the ridge.

Design No. 2, of which the ground plan only is given, accommodates the same number of pupils as the preceding, but it is so arranged that the greatest number of pupils in any one room is 96. It can be adapted to the same exterior as Design No. 1, and presents another system of internal arrangement which may be adopted at pleasure. The same general remarks apply to either design.



DESIGN NO. 2.—GROUND PLAN.

- | | |
|---------------------------------|----------------------------|
| A. Girls' School. | G. Gallery Room. |
| B. Gallery, or Infants' School. | H. Class Room. |
| C. Cloak Room. | I. Cloak Room. |
| D. Staircase. | K. Staircase. |
| E. Book, or Library Room. | L. M. Covered Play Ground. |
| F. Boys' School. | |

The whole of the interior arrangements has been the result of careful study and examination on the part of the architects. The plans embrace all the valuable improvements and suggestions which have appeared from time to time in the *Journal of Education* for Upper Canada. They are most creditable to the architects, Messrs. Messer and Jones, who, in the interior and exterior of the building, have united elegance of design with economy and appropriateness of arrangements.



II. THE NEW PUBLIC BUILDINGS AT OTTAWA— ADOPTION OF PLANS.

We understand that plans for the new public buildings to be erected at Ottawa, have been adopted by the Governor in Council. The first prize of \$1,000 for the plan of Parliament Buildings, has been awarded to Messrs. Fuller & Jones, of this city. The first prize of \$1,000 was awarded to the same firm for a plan of Departmental buildings; and the second prize of \$400 to Messrs. Fuller & Jones. The plan of the Governor General's residence, to which was awarded the first prize of \$400, by Messrs Cumberland & Storm, of this city; the second prize being awarded to Messrs. Fuller & Jones, who, it will be seen carried off three prizes; the first for the Parliament buildings, and the second for each of the other buildings.

The style of the Parliament buildings is akin to the Southern or Italian Gothic, or more properly it is the Gothic adapted to this climate. The style of the adopted plan of Departmental buildings is decorated Gothic. The parliament buildings are required to be constructed for a sum not exceeding £75,000; and the successful architects are confident that their plan can be carried out for that sum. These buildings will be about 500 feet long, and of irregular width; the central of the seven towers will be 180 feet high, and the body of the building in front about 40 feet, with slanting roofs. The Legislative Halls are placed on each side of the central court—which is about a hundred feet by 70, so that it will afford ample light and air—from which they are separated by corridors. They are on the ground floor; and in capacity are each equal to the English House of Lords; 95 feet by 45. The plan adopted is the only one in which the Legislative halls are placed on the ground floor, an advantage so manifest that we may be sure it could not have been overlooked in deciding upon the plans. There are no rooms above the Legislative halls; and from the plan of lighting which is to be adopted there could have been none. The panelled roof admits light during the day; which is in addition to that supplied by the side windows; and at night the artificial light will also descend from above. The light thus given will be of that peculiar soft kind which will render the change from day to night almost imperceptible. This is no doubtful experiment; for this plan of lighting is adopted from that actually in use in the British House of Commons. No gas will be required in the body of the Chambers. The mode of lighting is another advantage peculiar to the plans adopted. The galleries, for the accommodation of the public, which are of ample dimensions, do not protrude into the Chambers at all, but are

situated over the corridor. This arrangement is a very convenient one, but it was not peculiar to the plans adopted, as it was to be found in one of the others. But taking the three things together—the fact that the Legislative halls are placed on the ground floor, the mode of lighting from the roof, and the placing of the galleries over the corridors—form an assemblage of convenient arrangements not to be found in any of the other plans. The Reporter's gallery is placed behind the Speaker's chair; and may be of any required dimensions. A separate entrance is provided for the Reporters, as for the Governor General; and an apartment is provided for them in which to write out their notes. The library building is of a circular shape and situated in the rear of the main building; from which it is partially detached, as much as it can be said to be when connected by one story instead of two. It is on the plan of the new library of the British Museum; and is fire proof. It will be capable of holding some 300,000 volumes. Between the Legislative halls and the central court there is a corridor, a member's lobby at the end, and another corridor on the other side. Beyond this, and parallel with the Legislative halls, are wardrobes, water-closets, etc. The reading-rooms are at the back end of the Legislative halls; and the Speaker's rooms at the outer corners of the square that encloses the two chambers and the central court. Speaker's and Librarian's residences are attached; but they form no necessary part of the building; and indeed we believe were put in by the architects without express orders, so that they may or may not be constructed along with the other buildings. There is a small court in the centre of each wing; the rooms around which will serve for committees, clerks, and other needful purposes. At the further end of the central court is a room for His Excellency the Governor General. The post-office and telegraph office are placed near the main entrance, over which rises the central tower, and under which carriages may be driven. The member's entrance is on a direct line with the outer corridors, which enclose the Legislative halls; or rather an extension of these corridors to the front. The entrances to the offices and committee-rooms are in the centre of the wings, in front of the building; so that there will be no unnecessary contact of different classes of persons whose business will require them to obtain access to the Legislative buildings. The smoking rooms are in the back part of the buildings; in the one-storied part that leads from the main building to the library.

The disposition of space on the second story is precisely the same as in the first; though, as already remarked, that portion of the building which forms the Legislative halls, and that which forms the connecting link of the main building with the library, are only one story high. The arrangement for ventilation would occupy too much space for us to detail at present. We shall not, therefore, now do more than remark that the arrangements for heating and ventilating are deemed to be ample; and we trust that there may be no break down on these points, especially one so essential to health as that of ventilation. There is, of course, less danger of failure in the heating than in the ventilating arrangements; for the art of heating buildings has arrived nearer to perfection than that of ventilating them. In the new Parliament buildings, the truncated roofs of the ventilators, in perfect harmony with the towers, will add to general effect.

Such are the arrangements of the new Parliament buildings, which it is intended to erect at Ottawa. We have pointed out some of the leading advantages which they present. As to the plans themselves, we have heard but one opinion: every one who has seen them felt a preference for those which have been adopted; it is therefore probable that no portion of the public will express dissatisfaction at the choice made. It is intended to place the buildings on the bank of the river, which is some 150 ft. high; and from which they will present an imposing appearance. There is no waste of ornament or needless expense; and unless considerable alterations take place during the process of construction, we are likely to have a set of handsome Parliament buildings, without resorting to an extravagant expenditure of public money. At the rear of the buildings, which will run parallel with the river—if we can use such language where there is more or less curve in the river—the elevated library, rising 90 feet above the surface, will present a conspicuous figure.

The front, with its seven towers, the central one rising to an altitude of 180 feet, will expose one of the handsomest buildings in America. And if, as we are assured, it can be constructed for £75,000, we shall have obtained a noble structure, an ornament to the capital, and a credit to the Province, at a comparatively low figure. No more favorable time than the present could have happened for the construction of public buildings; when the cost of building is lower than it has been for years past, and only a little more than half what it was three years ago.—*Leader.*



Every kind of employment requires a particular kind of genius.

III. Papers on Physical Science.

1. THE LATE AURORA BOREALIS AND THE TELEGRAPH.

The extraordinary brilliancy of the Aurora Borealis, as it appeared at different hours on Sunday night, the 28th of August, was such as has not been witnessed for years. About half past eight the beauty of its first appearance reached its height. A brilliant light first shone out from the North-west, then broad rays of equal splendor shot upwards from all parts of the horizon, arching over and meeting in a point directly overhead, forming as it were the frame work of a vast dome covering the surface of the earth. There then appeared, resting on this magnificent arch rose-coloured clouds gorgeously yet delicately tinted, such as are sometimes seen at sunset, and in places so dense as to shut out the stars behind them. The play of the light upon the rays of the Aurora, and especially at the crown of the arch, were extremely beautiful. Towards nine o'clock this gradually faded away, but more or less of the Aurora shone all through the night.—At midnight, again, it was particularly beautiful, the light being almost as bright as that of the moon when at its full, but the heavens were much more splendid from the effects of this curious phenomenon. A broad band of exquisite crimson shot out from the western horizon, reaching to the zenith, while the coruscations from every point of the firmament were magnificent in the extreme. The whole aspect was one of the utmost splendor, and one would hardly ever tire in gazing on the enchanting scene.

From all parts of North America we have glowing descriptions of the gorgeous appearance of the Aurora Borealis on the night of Sunday last. On Thursday night, the 1st Sept, towards 12 o'clock, the Aurora again appeared with extraordinary brilliancy and richness of coloring, giving a light almost equal to that of day.

The effect of the Aurora on the telegraph lines is thus stated by the Superintendent of the Montreal Telegraph Company, under date of the 29th of August he telegraphs as follows:—"I never in my experience of 15 years in the working of telegraph lines, witnessed any thing like the extraordinary effect of the Aurora Borealis between Quebec and Farther Point last night. The line was in most perfect order, and well skilled operators worked incessantly from 8 o'clock last evening till one o'clock this morning, to get over in even a tolerably intelligible form about 400 words of the steamer Indian's report for the associated press, and at the latter hour, so completely were the wires under the influence of the aurora, it was found utterly impossible to communicate between the telegraph stations, and the line was closed for the night."

A telegraph from Boston, under date of September 2nd is as follows:—"There was another aurora last night, so that at about one o'clock ordinary print could be read by the light. The effect continued through this morning, considerably affecting and impeding the working of the telegraph lines. The aurora's currents from east to west were so regular that the operators on the eastern lines were able to hold communication and transmit messages over the line between this city and Portland, the usual batteries being disconnected from the wire. The effects were exhibited upon the Cape Cod and other lines."

The operators further say: "We have again experienced, this morning, a remarkable manifestation of magnetical influence on the wires running in all directions from this office, arising, doubtless, from a magnetic storm, which, were it night, would present a magnificent display of the Aurora. We observed the influence upon the lines at the time of commencing business—eight o'clock—and it continued so strong up to half-past nine as to prevent any business being done, except by throwing off the batteries at each end of the line, and working by the aurora current entirely! Several dispatches were in this way recived from Portland, Maine, as well as on the line between South Braintree and Fall River, where they cut the batteries off, and worked for some time with the current from the magnetic storm. The waves were longer than I have ever seen them before, lasting sometimes over a minute; but the same peculiarities of changing the poles was observed. At about ten o'clock, a. m., the storm partially subsided, so as to enable the lines to resume the use of their batteries."

The Boston *Atlas*, alluding to the circumstance, adds, that "The wire was worked for about two hours without the usual batteries, on the auroral current, working better, as the operators state, than with the batteries connected. The current varied, increasing and decreasing alternately, but, by graduating the current adjuster, a sufficiently steady effect was produced to work the line with but little interruption."

Precisely the same thing was done on the Pittsburg Telegraph line. The Pittsburg *Chronicle*, after alluding to the appearance of the Aurora on Thursday night and Friday morning, says; "After

getting the attention of Philadelphia, the battery at Pittsburg was reversed, and although the one at Philadelphia remained unchanged, and a heavy extraneous current pervaded the whole line, Philadelphia and Pittsburg were in full communication with each other, and by a way which, in the normal condition of the wires, and there were no foreign and unusual influences at work, would, of course, have been absolutely impossible. This telegraphic communication was practicable but for a few moments at a time, for this extraneous auroral current, being very capricious, and changing at frequent intervals, rendered the alteration in the poles of the battery necessary, to keep up the communication.

"Finally, in order to test the important fact just discovered still further and more conclusively, Pittsburg and Philadelphia cut off altogether the galvanic batteries, which are invariably and necessarily employed in the transmission of dispatches, and worked their instruments exclusively by means of the auroral electricity, which, while it continued, was exactly similar in its effects, though differing in kind, to that generated in telegraphic batteries—or what is known as the common atmospheric electricity. The flow of auroral electricity was steady and regular.

"A couple of messages were transmitted while the wires were under this extraordinary influence, and at intervals a lively chat was kept up by the same medium between the two operators at Philadelphia and Pittsburg, expressive of the novelty of this new method of overcoming, in a great measure, the embarrassing effects of the Aurora Borealis on telegraph wires.

"This, it is believed, is the first and only instance on record where the aurora itself—beautiful, glorious, and mysterious as it has always been considered in its brilliant manifestation,—has actually been employed to do the errands of man."

The extraordinary force of the agency has been commented on in communications from telegraph operators at various points. Mr. Toby, for example, the operator at Worcester, Mass, says:—

"The effect of the phenomena was most perceptible upon the telegraph lines. The wires seemed charged to their utmost capacity with the electric fluid, and seemed ready to flash forth with a fury that marks a vivid stroke of lightning. During ten years' experience in telegraphing I have frequently observed the effect of the Aurora Borealis on the wires, but never before have I seen it so grand and appalling."

One very remarkable circumstance connected with the auroral phenomena of last week, is their being seen simultaneously under almost precisely the same aspects, through so extensive a region of atmosphere, the phenomena visible at Quebec on the night of Sunday week being visible at the same hour at points so far south as New Orleans and Mobile. The display of aurora was also remarkable in England, as we learn by the late arrivals. At New Orleans the aurora created quite a sensation, the like having never been seen there before, within the memory of "the oldest inhabitant." The Editor of the *Mobile Tribune* says he has seen it once before in that city, but not nearly so bright as on Sunday night.

Every one must have observed that the aurora on this occasion has been the harbinger of a spell of cold weather, most unusually cold for this season of the year.

What the aurora borealis really is, and what produces or causes it, are questions which science hitherto has not been able to answer very decisively. According to some, the aurora is simply the light of the sun refracted in the higher regions of the air. According to others, it is caused by magnetic influences. Euler believed it to be a nebular substance, similar to that which forms the tails of comets. Another scientific writer maintained that it was a phenomenon resulting from a mixture of the atmosphere of the sun with that of the earth. Some have been of opinion that the auroral phenomena took place entirely beyond the region of our atmosphere—others, that they were confined to the atmosphere. With the progress of accurate observation, the opinion has now come to be very generally entertained that the aurora, like lightning, is caused by atmospheric electricity, the difference being that lightning has for its field of operations the denser atmosphere near the earth, while the aurora consists of electrical discharges through the highly rarified upper parts of the atmosphere. The fact, however, that on last Thursday night, the aurora was used on several lines to send telegraphic messages, entirely superseding the usual batteries, while it establishes the identity of the aurora with electricity, or at least its possession of like qualities, at the same time destroys the theory that its manifestations are confined to the upper regions of the atmosphere.

2. GOOD ADVICE ABOUT LIGHTNING.

It is calculated that at least fifty persons are killed by lightning every year in this country, and as the season is approaching when casualties of this kind are imminent, a few words of advice and caution upon the subject may act as a safeguard if carefully observed.

During the prevalence of a recent thunderstorm which visited the town and vicinity of St. Petersburg, Ill., two men were suddenly killed by a stroke of lightning, which descended the chimney of the house in which they were residing. One of the unfortunate victims was in the act of winding a clock that stood on the mantle piece and the other was standing immediately behind him, when both were struck lifeless. Two women were at the same time sitting in the room and escaped injury, as they happened to be seated some distance from the chimney.

When the lightning's flash and the thunder crash are seen and heard almost simultaneously, it is a sign that danger is at hand, and the next bolt may strike the tenement which affords us shelter. To know the place of greatest safety upon such an occasion is important. Armed in the panoply of science, however, man, like a weak but skilful general, can manoeuvre his forces against this otherwise destructive power, and convert danger into comparative safety.

This discovery was made when Franklin proved the identity of lightning and electricity with his little kite. Electricity possesses the peculiar property of flowing quietly along or through what are called "conductors," such as copper, gold, iron, &c.; and taking advantage of this, the American philosopher suggested the erection of tall rods of iron or copper on houses and ships, to cap the Leyden jars of the atmosphere, and convey their charges quietly and safely to the earth. This suggestion carried out, has saved thousands of lives and millions' worth of property, hence, all houses should be provided with such conductors: but as is the case now, perhaps the great majority of buildings will always be unsupplied with such agencies. In all such cases it should never be forgotten that the lightning always seeks to pass to the earth by the nearest and most prominent conductors, hence we have an explanation of the cause why trees, masts of ships, steeples of churches, towers, and chimneys, are so often struck, and why the persons referred to above should not have been standing so near the fire-place on the occasion of a thunder storm which cost them their lives. In such storms persons in houses should sit or lie in some place as far distant as possible from the chimney, and the most exposed parts of the walls—the middle of the room, if it is large, is the safest locality. Sailors on the sea should keep as far from the mast as possible, and farmers in the field should never seek shelter under the trees. Horizontal strokes of lightning sometimes take place, and several persons have been struck while sitting at open windows during thunder storms. Every window of a room in which persons are sitting, in such cases, should be closed; a flash of the fluid, which would pass through an open window into an apartment, will be conducted down through the floor and wall to the earth if the window is shut. We have thus given some directions to be followed by all persons during the prevalence of lightning, and we have set forth the science of the question, so that all may not only see the reasonableness of our remarks but their seasonableness also.—*Scientific American*.

3. PRESENCE OF MIND AND COMMON SENSE.

If any person swallow poison deliberately or by chance, instead of breaking out into multitudinous or incoherent exclamations, despatch some one for the doctor; meanwhile, run to the kitchen, get half a glass of water in anything that is handy, put into it a teaspoonful of salt, and as much ground mustard, stir it an instant, catch a firm hold of the person's nose, the mouth will soon fly open—then down with the mixture, and in a second or two up will come the poison. This answers better in a large number of cases than any other. If, by this time, the physician has not arrived, make the patient swallow the white of an egg, followed by a cup of strong coffee, because these nullify a larger number of poisons than any other accessible article, as antidotes for any poison that may remain in the stomach. If a limb or other part of the body is severely cut, and the blood comes out by spurts and jerks, be in a hurry, or the man will be dead in five minutes; there is no time to talk or send for a physician—say nothing, out with your handkerchief, throw it around the limb, tie the two ends together, put a stick through them, twist it around tighter and tighter, until the blood ceases to flow. But to stop it does no good. Why? Because only a severed artery throws blood out in jets, and the arteries get their blood from the heart; hence, to stop the flow, the remedy must be applied between the heart and the wounded spot—in other words above the wound. If a vein had been severed, the blood would have flowed in a regular stream, and, on the other hand, the tie should be applied below the wound, or on the other side of the wound from the heart; because blood in the veins flows towards the heart, and there is no need of so great a hurry.

4. METEOROLOGY IN NEW YORK.

It is said that the City Inspector is about to ask the Common Council to establish in connection with the Sanitary Department of

the city, a Meteorological Bureau, having for its objects the establishment of a system of rain gauges, tidal staffs, the standard of apparent time, the measurement of the electrical currents of the atmosphere, and all other matters cognate to the sanitary condition of the city.

5. NUMERICAL RELATIONS IN NATURE.

Every one has observed that the leaves of some plants stand in pairs opposite each other, on opposite sides of the stem. In other plants the leaves are scattered over the stem; but in these cases, also, we find them arranged in the most regular manner. Commencing with any given leaf, for instance, we shall find the next leaf above this, one-third of the way round the stem; the next, another third; and the next, another third,—so as to stand exactly over the first. The series is therefore arranged in a spiral, which may be designated by the fraction, 1-3. Taking another plant, we shall find the next leaf above any given one, two-fifths of the distance around the stem. The next will be four-fifths; the next six-fifths; and so on—each leaf moving two-fifths of the circumference further round the stem. Here is a spiral, therefore, which may be expressed by the fraction, 2-5. In precisely the same way we discover, in other plants, spirals which may be expressed by the fractions, 3-8, 5-13, 8-21, &c. If, in the case of opposite leaves first mentioned, we consider each leaf as separated from the preceding by one-half the interval around the stem, we shall obtain the series of fractions, 1-2, 1-3, 2-5, 3-8, 5-14, 8-21, &c. It must be kept in mind that these fractions are ascertained by actual observations. But notice the relation which exists between them. Each numerator is equal to the sum of the two preceding numerators, and each denominator to the sum of the two preceding denominators. Knowing this law, we may continue the series to any extent; and it has been so continued, and fractions obtained, to which plants have been found to correspond. Is all this the result of chance? Is it not rather mathematics?—law?—intelligence?

But the most wonderful coincidence is yet to be noticed. Neptune, the remotest planet, revolves round the sun in 60,000 days; Uranus, the next, in 30,000 days—which is one-half the preceding number; Saturn, the next, in 10,000 days—which is one-third of the period of Uranus; Jupiter revolves in 4,000 days—which is two-fifths of the period of Saturn. And so we go on through the system, and find a law regulating the revolutions of the planets, which is identical with that which determines the arrangement of leaves upon the humble stem of a plant. This wonderful law is so exact and uniform in its application, that, before the discovery of the planet Neptune, the botanist in his garden could have predicted its existence and its place in the heavens, with greater precision than the French astronomer in his observatory. Moreover, an examination of this series of fractions renders it impossible that any planets should exist exterior to Neptune, though more may exist within the orbit of Mercury. Astronomers will therefore please take notice, and not be found planet-hunting in the deserts of space beyond the orbit of Neptune.—*Prof. A. Winchell*.

6. FEEBLE POWER OF THE MOST POWERFUL TELESCOPES.

Prof. Mitchell, in a recent lecture "On Astronomy," in New York, thus closes his address:—Light traverses space at the rate of twelve million miles a minute, yet the light from the nearest star requires ten years to reach the earth; and Herschel's telescope revealed stars two thousand three hundred times further distant. The great telescope of Lord Rosse pursued these creations of God still deeper into space, and, having resolved the nebulae of the Milky Way into stars, discovered other systems of stars—beautiful diamond points, glittering through the black darkness beyond. When he beheld this amazing abyss—when he saw these systems scattered profusely throughout space—when he reflected upon their immense distance, their enormous magnitude, and the countless millions of worlds that belonged to them, it seemed to him as though the wild dream of the German poet was more than realized: "God called man, in dreams, into the vestibule of heaven, saying, 'Come up hither, and I will show thee the glory of my house.' And to his angels, who stood about his throne, he said, 'Take him, strip him of his robes of flesh; cleanse his affections; put a new breath into his nostrils; but touch not his human heart—the heart that fears, and hopes, and trembles.' A moment, and it was done, and the man stood ready for his unknown voyage. Under the guidance of a mighty angel, with sound of flying pinions, they sped away from the battlements of heaven. Some time, on the mighty angel's wings, they fled through Saharas of darkness—wildernesses of death. At length, from a distance not counted, save in the arithmetic of heaven, light beamed upon them—a sleepy flame, as seen

through a heavy cloud. They speed on in their terrible speed to meet the light; the light, with lesser speed, came to meet them. In a moment, the blazing of suns around them—a moment the wheeling of planets; then came long eternities of twilight; then, again, on the right hand and on the left, appeared more constellations. At last the man sank down, crying, 'Angel, I can go no further; let me lie down in the grave, and hide myself from the infinitude of the universe, for end there is none.' 'End is there none?' demanded the angel. And from the glittering stars that shone around there came a choral shout, 'End there is none!' 'End there is none?' demanded the angel again; 'and is it this that awes thy soul? I answer, End there is none to the universe of God! Lo, also, there is no beginning!'

7. REVELATION OF THE TELESCOPE.

By means of the powerful telescope of Lord Rosse, the class of planetary nebulae may now be fairly assumed to have no existence, as all of them which have been examined prove to be either annular or of a spiral character. Thus M. 97, which was considered by Sir John Herschel the finest specimen of them, and seemed even in his eighteenth-inch reflector an uniform disc, presents in the six feet a most intricate group of spiral ones, disposed around two starry centres. H. 2,241 is a ring of stars, with faint nebulae within, and a fine double star near its edges. H. 2,075 is of the same kind, but with a bright star almost exactly central, and nine others round it, evidently part of the same group. H. 450 is an extraordinary object, the ring being exactly circular its light mottled and flickering, and within it what is evidently a globular cluster. Scarcely less surprising, but more magnificent from its association, is the planetary nebulae at the edge of M. 45. It is a resolvable double ring, or rather spiral, with a centre star; and from the improbability of two objects so rare as a splendid cluster, and one of their compound rings being casually connected, it seems reasonable to think that they constitute one system.

8. HEAT FROM THE STARS.

The late Dr. Lardner says: "It is a startling fact, that if the earth were dependent on the sun for heat, it would not get enough to make the existence of animal and vegetable life upon its surface. It results from the researches of Pouillot, that the stars furnish heat enough in the course of a year to melt a crust of ice 75 feet thick—almost as much as is supplied by the sun. This may appear strange when we consider how immeasurably small must be the amount of heat received from any one of these distant bodies. But the surprise vanishes when we remember that the whole firmament is so thickly strewn with stars that in some places thousands are crowded together within a space no greater than that occupied by the full moon."

IV. Papers on Physical Geography and Commerce.

1. THE PHILOSOPHY OF COMMERCE IN THE LAST CENTURY.

Some time back Lord Overstone caused to be printed for distribution among his friends a selection of scarce tracts on the currency. He has now given a similar selection on commerce from pamphlets by Evelyn, Defoe, Richardson, Tucker, Temple, and others. The volume has been edited by Mr. McCulloch, and the dates of the various articles extend from the reign of James I, to 1788. They comprise:—"Observations touching Trade and Commerce with the Hollanders," ascribed, it is thought erroneously, to Sir Walter Raleigh; a treatise "On Navigation and Commerce," by John Evelyn, author of the "Sylva," which includes a vindication of his Britannic Majesty's claim to the dominion of the sea, subsequently admitted by the author himself to have been written merely to bolster up pretensions he knew to be entirely illogical; a "Plan of the English Commerce," by Defoe; an "Essay on the Causes of the Decline of the Foreign Trade," published in 1744, and attributed by Adam Smith to Sir Matthew Decker, M. P.; an "Essay on the Advantages which respectively attend France and Great Britain with regard to Trade," by Dr. Tucker, Dean of Gloucester; "Proposals by the Prince of Orange to the States General of Holland for redressing and amending the Trade of the Republic;" "A Vindication of Commerce and the Arts," by Mr. William Temple, a clothier of Trowbridge; and finally, "New and Old Principles of Trade Compared," in which the doctrines of Adam Smith, published twelve years previously, are well upheld. The whole are interesting, some of them strikingly so, not merely from the terse and quaint illustrations with which they abound, and the light they throw upon the

condition and morals of the country a century back, but for the remarkable way in which they show that all the principles now recognized were seen and advocated in an unanswerable, although a fragmentary manner by a few clear-minded men, who were not destined to witness even the earliest results of the good seed they were sowing. In the tract attributed to Sir Matthew Decker, in 1744, the question of our navigation laws is treated with a liberal philosophy which in 1859 the British Minister for Foreign affairs has yet to reach.

In 1753 Dr. Tucker was fighting strenuously against the monopolies of the India, Turkey and Hudson's Bay Companies, and particularly the latter, possessing the reckless grant of King Charles II., "without any bounds of seas, mountains, rivers, or degrees of latitude or longitude," and the agitation of whose claims has, nevertheless, formed one of the most sturdy topics of the past few years. The same shrewd writer also urged the legislative union with Ireland, the establishment of bonded warehouses, the construction of canals, &c. Of course, however, he was not free from fallacies and crotchets, and a tax on bachelors and widowers was one of the means by which he proposed to aid the public finances. In 1798, the anonymous writer "On the New Principles of Commerce," whose pamphlet is eloquently practical, was able to discern the commercial future that might await the new governments of North America, and read them a lesson which at the present day they are unable fully to appreciate.

The policy of directing attention to agriculture, of admitting the manufactures of Europe without regard to her own manufactures, "which will always be established with ease when their establishment is beneficial," and avoiding all the intricate plans of older nations, whom the discipline of experience had not yet been able to instruct, would, in his view, place America in a position where nothing could check her population, depending upon a facility of subsistence; or oppress her strength, springing from numbers, situation and knowledge. One great effect of the entire volume is to strengthen the old moral, that Reformers should never be discouraged by the slow progress of their views, but rather rely that it is only by such gradual means solid advancement can be attained. If all the beneficial changes desired by these intelligent writers could have been carried out at a word, they would have been misapplied by a people wholly unprepared in other respects to adapt themselves to such alterations. The descriptions of the low state of morality universally prevalent confirm this fact, and at the same time demonstrate, that although the true philosophers of that period may have been constantly discouraged by their inability to perceive any progress, the contrast of the present century with the past is such as to fill the student with astonishment, that, in such a space of time, so much could have been effected.—*Times' City Article.*

2. CURIOSITY OF COMMERCE.

Turning over the pages of the Cyclopaedia of Commerce, just published, a few matters attracted our attention as curiosities, which we propose to transcribe for our readers. We were looking for the small things in commerce—matters, that, in taking a magnificent, broad, and comprehensive view, would be overlooked—just as the invention of the greatest importance for domestic purposes would be overlooked and unnoticed in its homely attire when placed in exhibition and surrounded by works of polished art, costly machinery and gorgeous furniture. An humble inventor once placed in such an exhibition a few bunches of friction matches. They were unnoticed. Visitors went there looking for some great thing, not realizing that the despised package of splints, tipped with chemical fire, was the thing in that proud collection, destined to work a revolution in the means of procuring artificial light, and to become a universal necessity, to be deprived of which would be one of the greatest inconveniences that could happen.

It is not more than twenty years ago since the tinder-box was in universal use. It is abolished now. The invention of the friction match spread slowly; but who at this day would venture to say they could do without it? Insignificant as they appear to be, single factories, with expensive machinery, cut up large rafts of timber annually for matches.

Under the head of pins, we find that the manufacture of this indispensable little instrument was commenced in the United States, between 1812 and 1820, since which time the business has extended greatly, and several patents for the manufacture of pins have been taken out. The manufacture in England and other parts of Europe is conducted upon improvements made in the United States. Notwithstanding the extent of our own productions, the United States imported in 1856 pins to the value of \$40,255.

Still keeping our attention directed to small things, we find that the imports of needles into this country for 1856, amounted to \$346,000. It is said that needles were first made in England in the time of the bloody Mary by a negro from Spain; but he would not

impart his secret ; it was lost at his death, and not recovered again till 1568, in the reign of Queen Elizabeth, when a German taught the art to the English, who have since brought it to the greatest perfection. It is stated that the construction of a needle requires about 120 operations, but they are rapidly and uninterruptedly successive.

The temperance people will find argument to enforce their doctrines in the fact that 41,071,636 bushels of grain, paying \$25,000,000 duty, are annually converted into malt in Great Britain for ale and porter. It may reasonably be inferred that a great quantity of these beverages is drank here.

Ground nuts are quite an institution with Young America, 800 tons having been imported into the United States from Gambia in one year. We, however, dissent from the encycloped list when he says they are most used here as a dessert, roasted as chestnuts are elsewhere. But France is the great market for ground nuts, where they are used for oil, of which they contain large quantities. The insignificant hazel-nut, so agreeable to the palate, but so difficult to get, is exported from Tarragona to the extent of 25,000 or 30,000 bags, of four to the ton. A kind of chocolate is prepared from them and they sometimes have been made into bread. The pressed oil of hazel-nuts is little inferior to that of almonds.

The original inventor of the Ayrshire snuff-boxes was a cripple, hardly possessing the power of locomotion. They are made of wood, admirably jointed, painted and varnished, and were first manufactured only sixty years since. Instead of taking out a patent, the inventor intrusted his secret to a joiner in the village, who in a few years amassed a great fortune, while the other died, as he had lived, in the greatest poverty. Speaking of snuff-boxes, snuff taking took its rise in England in 1702.

Under the head of hair, the Cyclopædia says that 200,000 pounds weight of women's hair is annually sold in France, that the price paid for it is usually six cents an ounce.

One hundred thousand roses are required to give a yield of 188 grains of attar or oil of roses.

There are, doubtless, in this compendious work, many curious, interesting, and instructive facts, if one had the time to search them out. And now, as we are closing, we notice quite a number of items, such as, that a bale of Sea Island cotton weighs 333 pounds and measures 35 cubic feet, while a bale of East India cotton weighs 383 pounds and only measures 15 cubic feet—a fact of great importance in the question of transportation. What makes this great difference in cubic proportion!—*New York Tribune*.

3. PROGRESS OF EUROPEAN COUNTRIES.

Two "blue books" have recently been published in England by order of Parliament, somewhat similar in their character to the four volumes on the "Commercial Relations" of the United States, from which the London Journals compile some interesting statistics. It is said for instance that Austria and her dominions have increased in population from 36,950,547 in 1846 to 39,411,309 in 1855; the taxes which yielded £21,789,931 in 1851, in 1856 produced £27,316,227. Between 1850 and 1855 the value of the imports rose from £15,895,548 to £23,646,491, and the exports from £10,484,746 to £23,250,870. The tonnage of her shipping advanced thirty-seven per cent. from 1849 to 1856. Her mineral products, valued in 1851 at £2,697,891, were in 1855, £3,724,644. In 1853, 993 miles of railway were opened, and in June of the present year, 2,086, and the remuneration for labor has advanced in every year since 1849.

Even Spain has progressed rapidly during the last few years. Her population in 1854 was reported at 12,168,774; in 1857 it was 16,301,851. Its revenue in 1852 was £11,379,274; in 1857, it was £18,126,314. The total tonnage in 1850 was 244,854; in 1857, 349,762. Its imports and exports together were in 1851, £11,857,559; in 1857, £23,677,851. In 1855 the number of miles of railway opened was 130; in 1858, 456.

Switzerland has also progressed considerably within the last few years, though the statistics of that country are incomplete. Between 1853 and 1856 the increase in her chief imports was 12 per cent., and in 1857 still greater. The value of the exports of seven principal articles rose in those years from f.246,019,148 to f.373,246,817. The watch trade of Switzerland, however, suffered largely in 1857 from the revulsion.

Nearly every European state has given similar evidence of commercial progress during the last six or seven years, and of increase in population.—The *London News* commenting on these facts, justly remarks that "increase of population and trade carries with it increase of intelligence, and in due time will leave no institution standing which is not founded on the great laws of man's moral being, and justified by his experience."

4. THE NAVY OF ENGLAND.

The last number of the Edinburgh Review, has an interesting article on the state of the English navy, which contains information not generally possessed on this side of the Atlantic. The Navy estimates in 1852 were £5,707,988. In 1855-6, the years of the war with Russia, they rose to £11,857,506. In 1857-8, they fell to £8,010,526. For the present year, they are £9,813,181, exclusive of a supplementary estimate for the recent addition of the fleet, which will probably raise the whole naval expenditure of the present year to more than twelve millions of pounds sterling—say sixty millions of dollars.

Such an expenditure for the navy in a time of peace is without a parallel in English history. But the increased expenditure has been going on ever since 1852. The estimates for 1858-9 were £8,440,871. The increase extends to almost every branch of the service. The number men has been augmented. The pay of all ranks has been increased. The average pay of all ranks per man was in 1852, £39 14s. 8d.; in 1858, it was £43 3s. 0d. The reviewer says:

The transformation of the fleet from a sailing fleet to a fleet propelled by steam power, has caused an enormous augmentation in every portion of the estimates. In the construction of ships, the whole cost of the machinery must be added, amounting in a ship of the first class, like the Duke of Wellington, to £46,000, with a charge of nine or ten per cent. per annum for keeping the mechanism in perfect order. A whole establishment of engineers and stokers, skilled workmen, must be maintained in every ship, in addition to the ordinary complement of men for working the ship and her guns: this addition amounts to about ten per cent. on the number of the ship's company, and twenty per cent. on the seamen's wages. An immense sum is of course spent in full. So again the immense increase in the size of ships has led to a vast extension in the dockyards. Between 1852 and 1858 this vote alone has increased 120 per cent. There exists in Her Majesty's yards forty-two building ships, but only nine of them are large enough for modern first rates; there are thirty-three docks, but only four which will hold the largest ships, and to these five others are now being added at a great but inevitable outlay.

The year 1809 is considered to be that in which the British navy put forth its strongest force. There were then 140,000 men upon the boats, and the Navy List reported 985 cruisers and 77 troop and harbor vessels. Yet the tonnage of the fleet in 1858 was greater by fifty tons than that of 1809. The present force employed in the dock yards is 16,334, and in the steam factories connected with the Navy Department, 2361, and yearly expenditure for marine engines is nearly £600,000. 1858, according to the report of the Surveyor of the Navy, England had 29 line of battle ships (screw steamers), 11 in course of preparation, and 10 more building, block ships 9, and frigates 34, with the addition of corvettes, gun-boats (162), troop-ships, &c. The whole navy comprised 464 steam-ships and vessels, carrying 8,246 guns, with a nominal horse-power of 105,062, and a tonnage of 457,801. To this it may be added that, according to the same report, England possessed in 1858, 35 sailing line-of-battle-ships, 70 frigates, and about 190 sailing vessels of smaller dimensions. Of these line-of-battle-ships, 6 are forthwith to be converted into screw vessels.

There are in the merchant service of England at the present time 24,406 registered sailing vessels and 1813 steamers; of the former 763, and of the latter 119, are above 800 tons burthen. All these of course would to some extent be serviceable to the government in case of war.

It is known that in 1858 a commission was appointed to enquire into the best means of manning the navy. In their report are some important recommendations. They advise that two thousand boys should annually be received into the navy; (at present only 500 are received;) that a reserve of four thousand seamen be always maintained at the home ports; the augmentation of the marines by at least five thousand men, making the number on shore 11,000, and these, with the 12,000 coast guard men, and some volunteers, be considered as available for defence in case of invasion; and that from the 100,000 of merchant seamen who are never absent for any length of time from port, 20,000 be formed into a body of naval volunteers, liable at any time to be called upon to serve in the fleet, certain privileges being conceded to them in consideration thereof. It also recommended that three line-of-battle ships should be built every year. Other recommendations, of minor moment, but all looking to the perfection of the navy, are made by the commissioners. By following up the suggestions thus made it is expected that in 1860 England will have fifty-six line-of-battle ships, besides a large addition of frigates.

Of one hundred admirals at present in the British navy, thirty-nine are between the ages of 70 and 87; and only fourteen are employed. Of three hundred and fifty-eight captains on the active

list, thirty-one are above the age of 60; ninety are employed, and one hundred and eighty have never served afloat in their present rank. It is proposed to "adopt the system of retirement at a given age, and thus secure the advancement of younger men to posts which their age and physical strength qualify them to fill."—*N.Y. Com. Adv.*

5. A CANADIAN'S OPINION OF GREAT BRITAIN.

Mr. D. Wylie, editor of the *Brockville Recorder*, who has returned from a tour in Britain, thus asks himself. "Have we learned anything in our journey abroad? Are we more convinced that England is the best and greatest country in the world, notwithstanding that there is much yet to be improved within her borders? Have we attended to and studied the signs of the times? Do we feel more sure that come what will, though many of the old dynasties will crumble to pieces and pass away, England, amid the throes and struggles of other countries will stand like a rock, unshaken, her foundation being laid upon the hearts of her people, cemented with that love of freedom which can yield to no tyrant!—Yes, on all these subjects we have thought and pondered, and the conclusion we have arrived at is, that there are powers and appliances within the 'little isle' to repel attacks and maintain her position as one of the great powers of the world, and that the flag, which 'for a thousand years has braved the battle and the breeze,' will never be torn from the masthead, but continue to wave 'great, glorious and free' till the reign of 'universal peace and brotherhood' be inaugurated. Such at least is our sincere hope.

"In our journeyings throughout England and Scotland, (and from all we could gather respecting Ireland) we observed the working classes appeared better fed and better clad than at any former period within the last twenty years. Nothing the eye rests upon gives any idea of decay. The trade of particular towns may have changed from one staple manufacture to another, and with the mode of employing the masses, but there are few poorly clad people, and equally few of those half-starved phantoms in human shape which might once be met with, and such as are observed in this condition, belong to a class who, under any circumstances, would be miserable—they are the dregs of society, vice and dissipation have become to them sweet morsels, in the enjoyment of which they are ready to sacrifice not only the comforts of life, but the happiness of their immortal souls when this world and all its vanities have passed away from them."

6. FRENCH AND ENGLISH OPINIONS OF AMERICA.

At a recent meeting of the Massachusetts Historical Society, the president called upon Mr. Jared Sparks, who made an interesting relation of things he had seen abroad. At Florence he found valuable papers relating to Vesputius, which he ordered to be copied and should present to the society for publication. The members of the family, who, though not opulent, are in good circumstances, informed him, that some years ago they parted with an original portrait of the great navigator, to an American gentleman who avowed that he desired it for an American public institution; and it had been traced to New York, but its present place of deposit is not known. It was a matter of deep regret to the family that this original is not in our national halls. Copies of it represented the same melancholy face, with a map in the hand, which is seen in this country.

Mr. Sparks then spoke at some length of the British state paper office, where there was an invaluable collection of materials relating to Massachusetts, copies of which ought to be taken. Here Mr. Sparks alluded to the liberality of New York as to its documentary history, and suggested that Massachusetts ought to follow her example. Especially, too, at this time, when the rule of the British Government, as to allowing copies to be taken, was remarkably liberal. He found no difficulty in getting almost anything he wanted. Even the private and curious diplomatic correspondence of Lord Stormont, who was on the continent in 1775-76-77, was freely thrown open to him. The rule simply required that the matter copied should be bound and submitted to a responsible officer. It was held that now public policy required no concealment, and it was time to bury up all feuds. Mr. Sparks found Holland, also, very liberal; but France less so. Mr. Sparks, in concluding, spoke of our national reputation abroad.

On the continent, and especially in Paris, he judged the reputation of the United States was bad, and he remarked at length, on the disposition of the Paris press and of monarchists generally, to magnify against us such things as our quarrels, mobs, duels, and political troubles. There were two classes of minds, the monarchial and the red republicans—and both dislike the United States—the latter think our government is bad because the people have no more liberty, and the aristocratic circles dislike us because we are a re-

public. In England the tone of opinion was widely different. He found there a profound respect for the United States. It was considered a nation worthy to be conciliated, worthy of closer ties with England, and looked to as an ally in the future great contests with absolutism. Reverting to Paris, Mr. Sparks said that occasionally a favourable account was seen in the papers, and he instanced as an exception, a publication by Baron Charles Dupin of a paper read to the Academy of Sciences, and printed in the *Moniteur* of March 2, 1858. This had the following allusion to Massachusetts:—

"At the west of the Atlantic, Massachusetts, small by its territory, incomparably less fertile than the basins of the Mississippi, of the La Plata, of the Amazon, is made great by agriculture, and above all, by industry. It takes the lead in science and art among the one hundred and twenty states of the new world. To its too limited territory it adds two oceans; toward the polar circles, to attack the great cetacea, it sends more seamen than all other nations put together. It seeks even in Asia the treasures of the equator; and the aromas, the priceless perfumes of the torrid zone, it pays for with the ice of its lakes. To turn its running waters to a course more astonishing, it transforms its cataracts, its rapids, into regular motive powers, rivals of steam. It is not enough for this State to create its Cambridge Alma, to push further out the boundaries of science, and add even stars to its conquests, it founds at once its Manchester, its Glasgow, its Leeds, and its Halifax. During the half century which continues the one we describe, it prepares against the colossus of British industry, a giant's wrath. The struggle has begun. New England braces herself to the second war of independence; and triumph will be the independence of art."—*Boston Post.*

V. Papers on Colonial Subjects.

1. CENTENNIAL CELEBRATION OF THE SURRENDER OF QUEBEC.

The one hundredth anniversary of the surrender of Quebec occurred on the 13th of September.

The Historico-Genealogical Society of Boston celebrated the lapse of one hundred years since Quebec was surrendered by the French to the English, with a gathering to listen to an oration by the Hon. Lorenzo Sabine, Secretary of the Boston Board of Trade. We learn also, that at the meeting of the Maine Historical Society, held in Brunswick last week, a committee was appointed to consider the propriety of a similar celebration by the members of that Society. The *Portland Advertiser* says:—

"One hundred years ago, France held five-sixths of the continent, including the months of the Mississippi and the St. Lawrence, and a fierce war was then raging between England and France for possession of the vast domain. The population of what is now Canada and the United States, did not exceed at that time 1,500,000. It now exceeds 33,000,000 of people. At the end of another century this same region will contain more than four hundred millions of population."

Upon the same subject the *Argus* remarks as follows:—

"A century has since elapsed. What a change it has wrought! How striking the contrast! The 13th of September, 1759, witnessed one of the most brilliant and important achievements of arms; the 13th of September, 1859, will witness the virtual accomplishment of one of the greatest triumphs of the arts of peace, the completion of the Victoria Bridge and extended lines of railway of which it is the cementing link! The subject is full of suggestion. It clusters with historic memories—it is pregnant with auspicious auguries."

‡ The anniversary was celebrated in Hamilton by a public dinner, at which Sir Allan MacNab presided. In introducing the toast of the evening, Sir Allan remarked: Our object in meeting is not to exult over the French, but to recognize and celebrate a distinguished event in our history. He could have wished that he had with him a copy of a deeply interesting letter which Montcalm wrote to a cousin, in which he explained the particulars of his position, and avowed his belief that the time had come when France would lose her Western Empire. He said that he was prepared to meet the British army, and to die at the head of his forces; but Canada must be given up. His words were prophetic as a few days showed. He fell in advance of his men; and with him fell the power of France in America. It had been well said of Wolfe that "he grasped conquest in the arms of death." He received his death-wound in the moment of victory.—Twice he was wounded but pressed on. Another ball gave him a fatal wound. As he sank to the ground the cry was raised,—"They run." "Now God be praised, I die happy," said the hero, and breathed his last. Lord Dalhousie had connected together the names of Wolfe and Montcalm, and they were worthy to be so united. They both died like soldiers, and supplied an example to the youth of both races. In recalling these glorious records there need be no

unkind rivalry between the British and the French Canadians. We have now too much in common to admit of jealousy. There are none more faithful to Britain than the Lower Canadians; as had been shown in times of trial.

The next toast proposed by Sir Allan, was "Wolfe and Montcalm. May their descendants imitate their virtues and their valor." This toast was drank in silence.

Isaac Buchanan, Esq., M.P.P., the Vice-Chairman, proposed the next toast, "United Canada—may her distinguished militia render her more and more secure from encroachments from without." The meeting of this evening he said was not designed to throw any slur upon the people of the Lower Province. We inhabit a common country, and share in many common glories. He thought this toast was appropriate to the object they had met for. The militia of the United Province had much to boast of; and perhaps on the hour of trial the militia of Lower Canada had done more service to the empire than had that of Upper Canada. He proposed the toast with great pleasure. (Cheers.)

Mr. Buchanan, proposed the next toast. "British America—one and indivisible. May her sons, in her defence, rival the heroism of her immortal Conqueror; and, from the Atlantic to the Pacific, may it be their mission to consolidate an empire which, in peace and war, stands side by side with that glorious old Isle that rules the seas."

It was scarcely possible, said Mr. Buchanan, that a man could have so noble a monument as had Wolfe. British North America was his memorial. The prominent idea which had been expressed by this meeting in relation to it was that advanced by the Latin poet,—"More lasting than brass." It was an interesting incident that was recorded of Wolfe, and an example of the ready manner in which a great man recognized the greatness of another, that on receiving a copy of Grey's Elegy, then just written, a short time before his death, Wolfe declared that he would rather have been the author of that poem than the winner of a great battle. With reference to the British empire in North America, Mr. Buchanan said that his hope and confidence was that it would remain "the brightest jewel of the English Crown," "the likeliest like England." (Cheers.)

The *Hamilton Times*, in reporting these proceedings, says: "History does not record a more striking instance of magnanimity to a conquered people than that which was displayed by the British towards the French in Canada. Left in the full possession of their property, and secured in the free exercise of their language, religion and laws, they have only felt the power of their conquerors by the benefits which their power has entailed. In imitation of the conduct of the government, the British inhabitants of Canada have ever exhibited the utmost tenderness and delicacy towards the French Canadians. Even on the centenary of the glorious day which saw Quebec fall, and the supremacy of Britain finally established on this continent, they abstain from an adequate celebration of the event lest the *amour propre* of the Lower Canadians should be wounded. An occurrence of so much interest and importance could not, however, be permitted to pass altogether without notice; but the commemoration in this city was conducted in a spirit which the most fastidious Frenchman could not object to. It, however, gave occasion for the display of this determination—the really practical feature of the denomination—that what our fathers won in 1759 at the sword's point, the present generation are determined to retain, at the sword's point if necessary."

2. THE CENTENARY OF THE DEATH OF MONTCALM.

The 14th instant will be the hundredth anniversary of the death of the gallant Montcalm, whose defeat on the Plains of Abraham does not detract from the heroism he displayed. On that day the centennial anniversary of the death of Montcalm, will be commemorated with a religious ceremony in the Ursuline Convent, the place of his interment. After the ceremony the inauguration of a new monument which has just been erected to the deceased hero will take place; and there is no doubt that an overflowing congregation will gather round to shew their respect for the memory of the gallant warrior. The monumental tablet has been prepared by Mr. Felix Morgan, the well-known statuary of this city, and is remarkable for its elegance and simplicity of style. On a polished block of Irish black marble is fixed the tablet, on which the inscription is engraved. The tablet presents a surface of as pure a specimen of statuary or white marble, as perhaps can possibly be found. The inscription, which we subjoin, is in elegant Latin; it was composed by the Academy of Inscriptions and Belles Lettres in 1761, at the request of the deceased warrior's companions in arms. Beneath the inscription are the arms of Montcalm-Gozon, engraved in the same Parian marble with the most complete skill and accuracy. The present Marchioness of Montcalm, widow of the grandson and direct inheri-

tor of the title of the French commander, and the Marquis of St. Maur Montausier, and Count Victor de Montcalm, his descendants, naturally take a deep interest in the proposed celebration, and have been corresponding with Canada on the subject. The Count de Montcalm writes to a gentleman in Quebec:—"My happiness would be complete, if I could be with you on the 14th September, and express my acknowledgments to my compatriots. But, unfortunately, feeble health keeps me fixed on the soil of our old France. Believe me, sir, and be good enough to say so to all, that the Canadian heart of my grandfather will beat in my breast on the day of that glorious anniversary, with as much force as formerly did his, in defending Quebec." The following is the inscription which is to be placed on the monument:

HIC JACET.

Utroque in orbe æternum victurus
Ludovicus Josephus de MONTCALM-GOZON
Marchio sancti Verani, Baron Gabriaci
Ordinis Sancti Ludovici Commendator
Legatus Generalis Exercituum Gallicorum
Egregius et Civis et Miles
Nullius rei appetens præterquam veræ laudis
Ingenio felici et litteris excolto
Omnes Militiæ gradus per continua decora emensus
Omnium Belli, Artium, temporum, discriminum gnarus
In Italia, in Bohemia, in Germania
Dux industrius
Mandata sibi ita semper gerens ut majoribus par haberetur
Jam clarus periculis
Ad tutandem Canadensem Provinciam missus
Parva militum manu Hostium copias non semel repulit
Propugnacula cepit viris armisque; instructissima Algoris inediæ,
vigilarum labori patiens
Suis unice prospiciens, immemor sui
Hostis acer, Victor mansuetus
Fortunam virtute, virium inopiam peritiâ et celeritate compensavit
Imminens Coloniæ fatum et consilio et manu per quadriennium
sustinuit
Tandem ingentem Exercituum Duce strenuo et audaci
Classemque omni bellorum mole gravem
Multiplaci prudentia diu ludificatus
Vi pertractus ad dimicandam
In prima acie, in primo conflictu vulneratus
Religioni quam sem er coluerat innitens
Magno suorum desiderio nec sine hostium mœrore
Extinctus est
Die XIV. Sept. A. D. MDCCLIX. ætat, XLVIII.
Mortales optimi ducis exunias in excavate humo
Quam globus bellicus decedens dissiriensque defodera
Galli lugentes deposuerunt
Et generosæ hostium fidei commendaverunt.

(TRANSLATION.)

"Here lies one, whose memory will live for ever in both hemispheres, Louis Joseph de Montcalm-Gozon, Marquis de St. Veran, Baron de Gabriac, Commander of the Order of St. Louis, Lieut.-General of the armies of France, distinguished as a citizen and a soldier, ambitious of nothing but true glory, of a happy genius trained by study; he gained all his steps of military promotion through successive glories, skilful in all the arts of war, in taking advantage of opportunities and facing dangers; an energetic general in Italy, in Bohemia, in Germany, always performing the labors committed to him in such a manner as to prove himself equal to greater. When already illustrious by his daring deeds, he was sent to defend the Province of Canada, he often with small bands of soldiers defeated the forces of the enemy and took their forts well supplied with men and arms; capable of enduring cold, want, watching, toil; careful only for his men, regardless of himself, a strenuous foe, a merciful conqueror. He counterbalanced adverse fortune by his bravery, the want of men by skill and energy; and during a space of four years sustained the impending fate of the colony by his prudence and his vigor. At length, after having with consummate ability long kept at bay a numerous army under an active and bold general, and a fleet provided with all the munitions of war, being forced to an engagement, wounded in the foremost rank, at the commencement of the conflict, relying on the efficacy of that religion which he had always revered, he expired, to the great regret of his countrymen, and not without the sympathy of the enemy, on the 14th September, A. D. 1759, in the 48th year of his age. The mortal remains of this distinguished commander his sorrowing countrymen deposited in a cavity of the ground formed by the bursting of a shell, and entrusted the same with confidence to the generous care of his enemies."

VI. Biographical and Personal Sketches.

No. 19. THE HON. HORACE MANN.

The telegraph informs us that Mr. Horace Mann, President of Antioch College, died at Yellow Springs, Ohio, yesterday afternoon. Mr. Mann was born in Franklin, Mass., in May, 1796. He was educated at Brown University; studied law at Litchfield, Conn., and practised in Massachusetts, until about 1840, when he was chosen by the Government of Massachusetts to fill the newly created office of Superintendent of Public Instruction, and in that capacity earned for himself a most honorable reputation. The present high character of the Massachusetts schools is largely indebted to the industry and energy of Mr. Mann. In 1836 he was elected to the Senate of Massachusetts from Boston, and on the death of John Quincy Adams he was elected as his successor in Congress, in 1848. In 1853 he accepted the post of President of Antioch College. It was chiefly as an educator and a lecturer that Mr. Mann was distinguished. As Superintendent of the Massachusetts schools, he published twelve able reports, one of which, under the title of Report of an Educational Tour in Germany, Great Britain, &c., was republished in London, and has attained the rank of an authority. He also published in 1850, in a small volume, *A Few Thoughts to Young Men*, and a companion volume entitled, *A Few Thoughts on the Power and Duties of Woman*. In 1852 he published two lectures on "Intemperance."

He hoped at Antioch College to realize some of his theories of education. In this he has been thwarted by the pecuniary embarrassments of the College. These were relieved during the past year, and the College seemed about to put its plan to the test of practice. Mr. Mann was a fine speaker, a graceful, ardent and vigorous writer, and in his private character pure and irreproachable.—*N. Y. Com. Advertiser*.

No. 20. A SELF-MADE MAN.

The Right Honorable David Wire, Lord Mayor of London, who is so popular in all classes of society, is a self-made man. His father sold pies in the streets of Colchester. The boy came up to London, and his first occupation was sweeping out the office of Daniel Whittle Harvey, now the head of the city police, but then in practice as a solicitor. Mr. Harvey soon perceived the lad's talent, and advanced him to a stool in the office. There he progressed until he set up in business for himself. He married the daughter of a very respectable man, who kept the "Home,"—a well-known and excellent tavern in Kensington. His father-in-law was a man of influence, and by exerting it caused Mr. Wire to be appointed Solicitor to the Licensed Victuallers' Society—a situation worth a thousand a year. So, little by little, he has crept on until he now finds himself the magistrate in the first city in the world. Not a bad lesson (and a true one) for industrious apprentices.—*Inverness Courier*.

No. 21. POLITICAL PROMOTION OF BRITISH SCHOLARSHIP.

It is a prevalent superstition among what are called "reading men" at college, that the "plodders," who confine themselves assiduously to the regular studies of the academic course, rarely succeed in practical affairs after their entrance upon the duties of active life. This theory signally fails of confirmation in the case of the present British Ministry, a large proportion of whom, it is said, were "first-honor" men in one or the other of the two great universities of England. To this effect, the *London Times* remarks as follows:

"In one sense especially, Lord Palmerston's new Ministry may be entitled a first class one, as so many of its members have taken first-class honors at Oxford or Cambridge, but chiefly at the former university. Thus in the Cabinet Mr. Gladstone, Mr. Cardwell, Sir C. Wood, Sir G. C. Lewis, the Earl of Elgin and Sir George Grey are all first class men of Oxford, the first three being, moreover, double-firsts, while Mr. Gibson is a wrangler or first-classman of Cambridge. Out of the Cabinet there are Lord Wodehouse, Mr. C. Fortescue, Mr. Lowe, Sir R. Bethell, all Oxford first-classmen; and Mr. F. Peel and Mr. Headlam, Cambridge men of similar rank. There are four more Oxford men in the Cabinet besides the six already mentioned, viz., the Duke of Somerset, Earl Granville, the Duke of Newcastle and Mr. Sidney Herbert, the first three graduating without honors and the latter obtaining a fourth class in classics. Thus, out of the sixteen noblemen and gentlemen comprising the Cabinet, ten are Oxford men."

No. 22. LOWLY ORIGIN OF MANY OLD ENGLISH FAMILIES.

Examples are not wanting in this country of peers whose first notable ancestor was a tradesman. Thus, the Duke of Leeds recognizes in Edward Osborne, the courageous apprentice of Sir William Hewitt, the goldsmith, a very sufficient noble ancestor. The Wentworth Fitzwilliams, again, are the worthy descendants of the worthy London merchant knighted by Henry the Eighth; and where would the Mulgraves have been but for that strong-armed and strong-headed mechanic whose wits and hard labor laid the basis of such future greatness! We think that only to look back to William Phipps, who is said to have made the diving bell a practicable machine must be a more pleasantly proud retrospect for a Mulgrave than the Foresters can see in that fountain of their honor who is remembered for nothing, except that he received from Henry the Eighth the privilege of always wearing his hat in presence of the king.

There is a vast amount of nonsense uttered about the excellence of "blood," and the humbleness of trade. But it is not "blood" that makes the man; an honest mason is a more respectable man than a disreputable owner, if there be one of "all the blood of all the Howards." Cornwallis and Coventry, the Earls of Radnor, Essex, Dartmouth, Craven, Warwick, Tankerville, Pomfret, Darnley, Cowper, and Romney, are respectively descended from a city merchant, a London mercer, a silk manufacturer, a city alderman, a member of the Skinners' Company, a merchant tailor, "flower of wool-staplers," (so Greville was called, from whom the Earl of Warwick is lineally descended), a mercer, a Calais merchant (such was Fermour, the ancestor of the Earls of Pomfret, who had Will Summers in his service before the latter became fool to Henry the Eighth), and good London citizens were the ancestors of the other noble families named above. Of no better, or no worse descent, are the Dacres and Dormers, the Dudley Wards, the Hills, the Caringtons, and more recently ennobled persons, whose ancestors, more or less remote, were connected with the trade, as goldsmiths or bankers.

A hundred and eighteen years ago all Yorkshire was gossiping about the refusal of a scornful young lady to marry the handsome son of Mr. Langdale Smithson. This handsome son succeeded his grandfather in a baronetcy then about eighty years old, and the romance of the peerage has handed down to us the well-known name of Sir Hugh Smithson. When the story of the refusal above alluded to was told to Elizabeth Percy, a young lady who was sole heiress of the wealth of the Earls of Northumberland, through her mother, and of much of that of the Duke of Somerset, of whom she was the only child—when she heard, we say, of the above incident, she exclaimed "that the lady in question was the only woman in England who would refuse to marry Sir Hugh Smithson." This speech came to the ears of the young baronet, and his consequent immediate action thereupon gained for him the hand of the heiress, and ultimately enabled him to exchange his modest, but at this day in which we write, most pleasant residence at Stanwick, for the castle of Northumberland, to which he was taken by the bride.—For no other merit than this was Sir Hugh created Duke of Northumberland; and he was the only individual raised to such dignity by George the Third.—*London Athenæum*.

No. 23. THE PRINCESS FREDERICK WILLIAM OF PRUSSIA.

It will interest many of our readers to learn that the Princess Frederick William of Prussia sedulously cultivates her talents as an artist in her new home. The Princess makes practical use of her skill in drawing in the furnishing and decorating of her residence, and is having a studio fitted up in her new palace at Berlin. Her Royal Highness appears to be a great favorite, and many anecdotes are told to show her kindness. Shall we step out of our way to give one? At the last fair in Berlin, where everything was to be bought that pleases young and old, there was one stall which was filled with things that are comforting and useful, such as felt shoes and slippers, worsted stockings, and woollen gloves. The Princess had been looking from the windows of the palace upon the various groups and knots of people in the fair, noting the harmony and contrast of color with an artist's eye, when her attention was called to this stall, in which sat a lone woman to whom none went. The following day the same scene presented itself—the solitary figure and no customers. The Princess at last determined that there should be one customer, at any rate, and accordingly intimated that her pleasure was to walk. On reaching the bottom of the stairs she told the attendants that they could remain there, while she advanced to the gate. Entering the stall, she asked the price of the contents; to which the woman replied that it would far exceed the purse of a young lady—it would amount to 24 thalers. The Princess had but 20 in her purse at the time, but the Prince luckily appeared in sight; four thalers

were borrowed, and more old women than one made happy, for the contents of the stall were distributed as soon as bought. The story is told as characteristic of the kind heart of the English Princess.—*The Builder.*

No. 24. CARLYLE'S PICTURE OF FREDERICK THE GREAT.

About fourscore of years ago there used to be seen sauntering on the terraces of Sans-Souci for a short time in the afternoon, or you might have met him elsewhere at an earlier hour, riding or driving in a rapid business manner, on the open roads or through the scraggy woods and avenues of that intricate amphibious Potsdam region, a highly interesting lean little old man, of alert although slightly stooping figure, whose name among the strangers was King Frederick the Second, or Frederick the Great of Prussia, and at home among the common people, who much loved and esteemed him, was Vater Friz—Father Fred—a name of familiarity which had not bred contempt in that instance. He is a king every inch of him, though without the trappings of a king. Presents himself in a Spartan simplicity of vesture; no crown, but an old military cocked hat—generally old, or trampled and kneaded into absolute softness, if new; no sceptre but one like Agamemnon's, a walking-stick cut from the woods, which serves also as a riding-stick; (with which he hits the horse "between the ears," say authors) and for royal robes, a mere soldier's blue coat with red facings, coat likely to be old, and sure to have a good deal of Spanish snuff on the breast of it; rest of the apparel dim, unobtrusive in colour or cut, ending in high over-knee military boots, which may be brushed (and, I hope, kept soft, with an underhand suspicion of oil), but are not permitted to be blackened or varnished; Day and Martin with their soot-pots forbidden to approach. The man is not of god-like physiognomy, any more than of imposing stature of costume; close shut mouth and thin lips, prominent jaws and nose, receding brow, by no means of Olympian height; head, however, is of long form, and has superlative grey eyes in it. Nor what is called a beautiful man; nor yet, by all appearance, what is called a happy. On the contrary, the face bears evidence of many sorrows, as they are termed, of much hard labor done in this world; and seems to anticipate nothing but more still coming. Quiet stoicism, capable enough of what joys there were, but not expecting any worth mention; great unconscious and some conscious pride, well tempered with a cheery mockery of humor—are written on that old face; which carries its chin well forward, in spite of the slight stoop about the neck; snuffy nose, rather flung into the air, under its old cocked hat,—like an old snuffy lion on the watch; and such a pair of eyes as no man or lion or lynx of that century bore elsewhere according to all the testimony we have. "Those eyes," says Mirabeau, "which at the bidding of his great soul fascinated you with seduction, or with terror (portaient, au gré de son âme héroïque, la séduction ou la terreur)." Most excellent, potent, brilliant eyes, swift-darting as the stars, steadfast as the sun; grey, we said, of the azure-grey color; large enough, not of a glaring size; the habitual expression of them vigilance and penetrating sense, rapidly resting on depth. Which is an excellent combination; and gives us the motion of a lambent outer radiance springing from some great inner sea of light and fire in the man. The voice, if he speaks to you, is of a similiar physiognomy; clear, melodious, and sonorous—all tones are in it, from that of ingenious inquiry, graceful sociality, light-flowing banter (rather quickly for most part), up to definite word of command, up to desolating word of rebuke and reprobation: a voice "the clearest and most agreeable in conversation I ever heard," says witty Dr. Moore. "He speaks a great deal," continues the doctor; "yet those who hear him regret that he does not speak a good deal more. His observations are always lively, very often just; and few men possess the talent of repartee in greater perfection."

VII. Papers on Natural History.

1. MOSQUITOES.

The *Scientific American* describes the origin of these annoying insects as follows:

These pests of summer proceed from *animalcules*, commonly termed the "wiggle tails." If a bowl of water is placed in the summer's sun for a few days, a number of wiggle-tails will be visible and will continue to increase in size until they reach three-sixteenths of an inch in length, remaining longer on the surface as they approach maturity, as if seeming to live on the influence deprived from the two elements of air and water; finally they will assume a chrysalis form, and by an increased specific gravity sink to the bottom; a few hours only will elapse when a short black furze or hair will grow

out on every side of each, and it assumes the form of a minute caterpillar. Its specific gravity being thus counteracted, it is wafted to the side of the bowl by the slightest breath of air. In a short time a fly will be hatched and escape, leaving its tiny house on the surface of the waters. Any one who has had a cistern in the yard, has doubtless observed the same effect every summer, although he may be ignorant of the beautiful and simple process of development. If a pitcher or cistern or other water is placed in a close room over night, from which all mosquitoes have been excluded, enough mosquitoes will breed in it during the night, to give any amount of trouble. The necessity of keeping yards and the surface of the ground near houses entirely free from stagnant water, in order to diminish the number of these "night birds," is evident.

2. THE LANGUAGE OF ANIMALS.

"That animals have each a language of their own to one another," says James Hogg, (the Scottish "Etrick Shepherd,") "there can be no doubt. I know a good deal of their language myself. I know by the voice of the raven when he has discovered one of my flock dead—I know also his prelude to the storm and to fine weather. The moor-fowls call one another from hill to hill. I learned to imitate their language so closely that I could have brought scores of them within the range of my shot of a morning. The blackcock has a call, too, which brings all his motley mates around him, but the females have no call. They are a set of subordinate beings, like the wives of a nabob. They dare not even incubate upon the same hill with their haughty lords. But the partridge, and every mountain bird, have a language to each other, and though rather circumscribed, it is perfectly understood, and, as Wordsworth says, 'not to me unknown.' Even the stupid and silly barn-door hen, when the falcon appears, can, by one single alarm note, make all her chickens hide in a moment. Every hen tells you when she has laid her egg; and lest it should not be well enough heard or understood, the cock exerts the whole power of his lungs in divulging the important secret. The black-faced ewe, on the approach of a fox or a dog, utters a whistle through her nostrils which alarms all her comrades, and immediately puts them upon the look out. Not one of them will take another bite until they discover whence the danger is approaching. If the dog be with a man, sundry of them utter a bleat which I know well, but cannot describe, and begin feeding again. If the dog is by himself, they are more afraid of him than any other animal, and then you will again hear the whistle repeated through the whole glen.

But the acuteness of the sheep's ear surpasses all things in nature that I know of. A ewe will distinguish her own lamb's bleat among a hundred lambs, all bleating at the same time, and making a noise. Besides the distinguishment of voice is perfectly reciprocal between the ewe and the lamb, who amid the deafening sound, run to meet one another. There are few things which have ever amused me more than a sheep-shearing, and the sport continues the whole day. We put the flock into a fold, set out all the lambs to the hill, and then send out the ewes to them as they are shorn. The moment that a lamb hears its dam's voice, it rushes from the crowd to meet her, but instead of finding the rough, well-clad, mamma, which it left an hour, or a few hours ago, it meets a poor, naked, shrivelling,—a most deplorable looking creature. It wheels about, and uttering a loud, tremulous bleat of perfect despair, flies from the frightful vision. The mother's voice arrests its flight—it returns—flies, and returns again, generally ten or a dozen times before the recognition is perfect.

VIII. Papers on Practical Education.

1. THE EDUCATION OF THE PLAYGROUND.

A PAPER READ BEFORE THE OSWESTRY CHURCH SCHOOLMASTERS' ASSOCIATION BY A CLERGYMAN.

But let us examine somewhat minutely the opportunities which the play ground offers for the exercise of those habits of morality and religion which are the result of the principles instilled into the mind in school. Let us take a simple game to pieces, and see how many of the noblest powers, faculties, and principles it continually calls into action.

Look at that game of cricket going on in the middle of the field: it is England's noblest game, so I need make the less apology for asking you to look upon it for once as a serious business. And I say that you will find it calling into play virtues and powers, some common, some rare, among men; but none unimportant, because all given by God, to be used and cultivated and improved for His glory.

To speak first of those that are more common.

If you were to take the bat in your hand, and stand up to that swift bowler, you will soon find that *courage* was required in no in-

considerable quantity to enable you to stand there at all. And if some one else were occupying that eligible post, and should be fortunate enough to hit the ball (weighing five and a half ounces) straight into your face, three courses would be open to you : either to stand up like a man and catch it, in which case your courage *would* have been called into play ; or to bob your head down and let the ball pass by, in which case you *would not* have been courageous ; or to take a middle course, making a prodigious effort to reach the ball just after it has gone safely by, but taking very good care *not* to touch it,—in which case I will leave you to judge yourself as to whether you would have been courageous or not. And wherever you stood all through the game, you would be called upon, from time to time, for a similar exercise of courage, or the contrary.

Then there is a great opportunity for the exhibition of *firmness, calculation, and self-reliance*. Some cricketers, you must know, are what are called “tremendous swipers,” which means, that when they take the bat in their hands, they only try to hit with all their might whenever the ball comes near them. If they succeed in catching it on the face of their bat, they often hit it very far away ; but then the worst of it is, they are never to be trusted ; they hit so hard, that they often miss the ball altogether ; but a good bowler will so pitch the ball that they are enticed to swipe very hard just before the right moment, and while they are beating the air the ball is quietly flirting with their stumps or bails behind their back, and consequently they are out. Now a firm batsman will look first whether the ball is coming well or ill, straight or crooked, and will either hit, stop, or just tip it accordingly ; and very often the whole issue of a game depends on the firmness and precision and *patience* of a single player. It was only the other day that, in one of the great cricket-matches between Eton and Winchester, a boy belonging to the latter body went in the last of his side, to get two runs. The issue of the whole game, which had lasted throughout the day, depended upon him and his companion in arms. If he could get two runs, Winchester won the game ; if he was bowled out, Eton won. He succeeded in getting one of the two runs, and then no less than seven “overs ;” twenty-eight balls were bowled before he could get the other. It was about as critical a moment as he could well be imagined in the world of boy-life ; the utmost strength and skill of the opposite side were pitted against him ; the spectators were numerous ; the issue of the whole day's work depended in that moment upon his single arm : it was enough to make him tremble ; but *firmness* won the day ; one crooked ball came, he caught it at the right instant, sent it away to the other end of the field, and Winchester won the game.

And I have myself seen a similar trial of firmness in a match between the elevens of two National schools. Again the result of the whole game depended upon a single player ; and (alas, that I should have to confess it, for he was one of my own school-boys) a want of firmness, a fatal catch, lost the day.

I remember reading in that excellent book, *Tom Brown's School-Days*, what I thought a very true remark about our great English games : “The beauty of cricket and football,” it was said, “is, that they are so well adapted to merge the individual in his side ; he doesn't play that he may win, but that his side may.” And this is a fact which calls for the exercise of several more mental and moral qualities. The feeling of *responsibility* in a game of this sort is immense. “Stand there, and don't let the ball pass you on any account : if it comes, stop it with your hands ; but don't run out to meet it, or leave this post, whatever happens.” Such are the orders given to a small “goal-keeper” in a game of football ; and he feels as much responsibility to his side, and as much pride in the strict performance of his *duty*, as an officer in battle who is left to guard a certain post, on the retention of which the issue of the fight may depend. And the same thing occurs in cricket ; each has his allotted business, and knows that all may depend on him.

Then the “captain of the side”—what an important and responsible person is he ! He needs to have the eye of a general, and the inflexibility of a great commander, if he would do his duty properly. He has to place his men out judiciously in the field, each in the position best suited for him—a good catcher here, a good thrower over there, a sharp field just there ; he has to send in his men in good order, and to be firm when he is tempted, for the sake of favouritism, to change that order ; he has to see that every one else does his duty, and yet not to neglect his own ; he has to make changes in his former arrangements when necessary, and see that all works well. “Now then no talking there !” “Look alive, Jack !” “Now, Joe, IN-N-N with it !” “Back up there, he can't throw all the way.” “Stand a little further back, Long Hit ; this fellow is a swiper.” “Tom, will you change places with Bill ?” Such are the orders of the captain, as the game goes on ; and I assure you it is the most serious business in the world.

Then, what a grand field for the learning and practice of *good temper* ! Curious as you may think it, I believe there are few things in

the whole of a man's life so fit to try his temper, for the moment, as “getting out at cricket.” You may watch the different “tempers” as they get bowled out. One fellow dashes his bat at the stumps, and gives somebody a good deal of trouble to put them up again. Another vows it was a mistake, and declares he *wasn't* out. Another drops his bat down, and walks *sulkily* away. Another is never content to get out in an ordinary way, but insists upon explaining to every body what a *curious* ball it was that got him out, how it turned, what he intended to have done to it, &c. Another says, “Ah, I told you so, I knew I should be out,” all good-humouredly enough, but cannot help a little curl of his lip, and a little flush on his cheek, when he hears his antagonists clapping for joy. But the boy I like to see playing cricket comes out with his bat over his shoulder, looking very nearly as content as when he went in, because he has done his best ; and as he meets the next boy coming to take his place, pats him on the back, and wishes him “better luck,” and shows that he is thinking all the time more of his side than of himself.

But I am dwelling too long upon our game. I need not tell you what there is for *emulation* here : I need not point out how, while one is learning to *command*, the rest are learning to *obey* ; I need not go into the intricacies of the game, to explain how often *self-denial* is called into requisition—*self-denial* sometimes for the good of a friend sometimes for that of the side ; I need not tell you, where the whole game often depends on the command of temper, what a premium is put upon *self-restraint* and *good-humour*. I could show you how much *more* qualities even than these, moral as well as physical, are called into play ; I could even show how Christian principle shines forth in all its beauty when the vain oath or unclean word is drowned by the rebukes of the majority, or checked by the serious and well-respected command of the captain, when the bully and the coward and the quarrelsome find there is no place for them there, because the many will rule and order : and I think I could never show you by mere description that which is the crowning beauty of all,—the manner in which the virtues I have mentioned, and many more, are so combined with what is naturally pleasant and agreeable as to produce for the example and encouragement of all that most beautiful character of “Christian manliness ;” and teach all, in a way that they cannot resist, how, in order to be a Christian, it is not necessary to be stupid, gloomy, and disagreeable ; and how, generally speaking, unless there be some plain reason to the contrary, the good Christian is the good scholar and the good cricketer now, because he is in earnest about every thing, and bids fair to be the good labourer or the good tradesman, as well as the *religious* man, for the same reason, hereafter.

And is it nothing that the playground may be made the means of creating in *English boys*, a taste for rural and manly sports, which, when they become *English men*, may take the place in some degree of *England's curse*—soaking in a pot-house and getting “drunk on the premises ?” The sole delight of the male population of many a village, the only recreation and enjoyment craved and longed for by many a farm-boy upon an occasion of rejoicing, is to sit inside a dirty house, perpetually drunk for two or three days together. What is our “education” worth if it cannot counteract this ? what is the use of our schemes and improvements, if they can make no inroad, no impression upon *this* ? Cricket and football will at least bring Englishmen out of doors, if they will do no more (though I believe they will) ; and I would rather see a crowd of Englishmen as noisy and riotous as they liked in the field, than I would see them lounging against a street-corner hatching wickedness, or soaking in a pot-house in an atmosphere of poison. Create and encourage in childhood a taste for something better, and you will have made one step at least towards the object we all have at heart.

But I think (as I said) that you may do more. I have supposed (and I know from experience that I have a right to suppose it) that where the games of the playground are well conducted, the best boys will ever be foremost in the field, as well as elsewhere. The really good-tempered, honest, manly, and earnest boy in school will be the same in the playground ; and I think I have said enough to show that these qualities will be of as much advantage in the game as in the lesson, and make their possessor shine as much in the cricket-field as in the class-room. If, then, we may suppose that *noble* games serve to develop *noble* powers may we not hope that by the due use and encouragement of them we may collect together the more *noble* sort of mankind. Many a friendship has been formed in a favourite game, as many a friendship has been formed in the same trade or profession or pursuit. And is it not of immense importance that such friendships should be formed, in the eyes of the world, among the class whom we profess to educate ? Half the strength of *evil* men lies in their habit of drawing together to encourage one another in vice. Half the weakness of the better sort of men, and their want of influence in a town or in a country parish, lies in the fact that they *timidly keep aloof* from one another, and, upon the plea of “minding their own business,” never unite enough

to know their real strength. Any practice, pursuit, employment, or recreation, which may be the means of bringing or keeping together the better sort of boys or men, and of creating a fellow-feeling among those whom we want to see more conscious of their own strength, must be of incalculable advantage. I, for my part, can trust the greater English games to do this, if, as I said, they be well conducted,—if they be encouraged and, as it were, *taken possession of* by the good. But if, as is too often the case, they be left alone by the good, if they be discouraged, and tacitly handed over to the bad, as (let me warn you) you will always find old women and people who know nothing about the matter inclined to do, then the effect will of course be exactly the reverse; the games themselves will never come to perfection, and will always promote evil. Upon the line which is taken with regard to the playground by those engaged in education, the moral result of the games must mainly depend.—*The English National Society's Monthly Paper.*

2. MUSICAL INSTRUMENTS IN SCHOOL.

The utility of music in schools is no longer problematical. All those objections and doubts which found place in many honest minds formerly have vanished in the light of experimental facts. School Teachers and Trustees, almost every where, regard it favorably; not only those who themselves have a practical acquaintance with music, and can sing, but others. It is no uncommon thing to hear teachers say, "I can not sing myself, but I have found it to be a capital thing among scholars." A little singing diffuses a spirit of cheerfulness which makes pleasant that which otherwise often proves irksome. Harmonious voices inspire harmonious feelings. The school-song makes the school-room attractive. When the place is attractive the lessons are easy.

How shall singing be made in the highest degree to fulfil its design? Any thing which has the effect to draw out the voices is of importance. All teachers of singing are accustomed to avail themselves more or less of instrumental assistance in imparting instruction. In Germany, from whence we have drawn so much that is valuable in educational matters during years past, musical instruments are considered as indispensable to the complete furnishing of the school-room. If an instrument, say a piano-forte or melodeon, assists the singing-teacher, it may also be made in a degree to supply the place of one. A great deal of early instruction must of course be by imitation. Now if a tune be played over in the hearing of the pupils, they having the words before them, they soon begin to sing it. In almost any place where a school of eighty scholars is in operation, more than one miss can be found among the number capable of playing the tunes in our school singing-books. As far as singing of tunes is concerned, an instrument correctly played will insure correct performance without the presence of the living teacher, when the teacher without the instrument would be obliged to leave some things faulty. The pitch of instruments like those named is fixed, and so offers a standard to the ear to which the voices must conform.

Not only the melody may thus be taught, but also accompanying parts. Many a singing-teacher has found himself nonplussed by certain kinds of 'natural second-singers,' who follow or accompany the melody persistently at the interval of a third, whatever may be the harmonic requirements of the part. If it diverges to a sixth or takes a direct motion, still the third is as inseparable as a man and his shadow. If he attempts to have the pupil learn the part by itself, and sings it with her, she provokingly *sings second to that*. Now an instrument capable of presenting the parts in their true relation remedies this difficulty at once, and makes correct singers at least as far as pitch is concerned.—*Illinois Teacher.*

3. LORD PALMERSTON AND THE "TIMES" ON EDUCATION.

Lord Palmerston recently presided and distributed prizes at London University. Among the topics discussed was the various modes of education. The *Times* says:—

"One hears in these days a good deal of controversy on the comparative claims of a concentrated and general interest. There are those who stand out for a young man giving all his attention up to twenty-two or three, to either one of the old courses of study, whether mainly classical, as at Oxford, or mathematical, as at Cambridge. Again, there are those who, on much the same grounds, maintain the professional system of education, and would divide boys into soldiers, divines, lawyers, physicians, engineers, or men of business, from the age of fifteen, if not earlier. A man they say, can never learn too soon that which he will have to do, though he may defer to a more convenient time, or to leisure hours, the subject which he will only take for amusement, or as auxiliary to the

main chance of his life's plan. On the other hand, a very zealous class deprecate this slavery of the mind to one profession, one faculty or one province of knowledge, and would either let a youth follow his genius wherever it led him, or develop him, as far as possible, to the whole circle of human knowledge, teaching him all he can learn. England has hitherto gone on the first plan; of late it has made great steps in the direction of the latter, not only in her institutions, but even in her venerable Universities on the Cam and the Isis. Lord Palmerston seems to us to decide the question with his accustomed felicity, and also with the authority of a great example. "Every man, I take for granted, intends to devote himself to one particular career. Let him make the objects of that career the subject of intense and earnest study, but do not let him devote himself singly and entirely to one pursuit." He rightly judges that besides what a man must learn for his post in life there is much more that he would do well to learn for the enlargement of his mind, for his own amusement, and for his social duties. Even these subjects, though not followed up to the same extent as those of a man's special profession, Lord Palmerston urges should be learnt thoroughly and exactly. This adjustment between the conflicting claims of one study and what is called general knowledge is so obvious when stated, that one almost wonders it should want any authority. But there is a sort of professional, or rather trading prejudice, against all knowledge that does not directly prepare a man for his special duties, or supply the means of comparing various degrees of intellectual progress. It is simply the prejudice of the tradesman, who thinks every half-hour given to the book, the newspaper, the reading-room, to society, to any amusement, as so much lost to the ledger, and sure to tell in the annual profits. Even here it is a mistake; how much more in the higher professions? Nature did not intend any man to be an animal just doing one thing, like a spoke in a wheel or a cow in a milkman's stable. Unless he has eyes, ears, and sympathies for something else about him, he is sure to settle and shrink up into something very dull, useless, and miserable. There are very few people indeed who do not lament deeply, and with reason, that their early education was not more comprehensive, and that they were not better prepared to profit by the opportunity that offered. The just complaint is, that when the occasion, or even the necessity, surprised them, they had to get up the grammar of the study instead of reaping the profit of its thorough acquisition. They had thus always been behindhand. How many a new acquaintance can only be half appreciated, how many an interesting conversation but a quarter understood, how many a column of the newspaper reluctantly passed over, just for lack of some elementary knowledge! With the elements of a subject well mastered, one's whole life is an almost spontaneous course of acquisition, and every day brings its increase. But the mind, whether you will or not, must roam out of the rugged path of business and the stiff lines of the profession. It will unbend itself in one subject or another. If it is not provided with wholesome and dignified subjects it will resort to others which will be morbid and debasing; and when Lord Palmerston tells young men they must pick up all the knowledge they can, so as not to neglect the main business of their lives, he is lending a helping hand to religion itself against the many foes sure to invade the idleness or the weariness of the empty and unfurnished mind.

IX. Papers for the Young.

1. ADVICE ON THE PURSUITS OF YOUNG MEN.

A contemporary concludes an article on "Capital and labour" with the following excellent remarks in reference to the pursuits of young men, which contain a great deal of valuable and wholesome truth, and are well worth remembering:—

"Nor should the crisis be allowed to terminate without one of its most obvious lessons being pondered by the youth of the province. The essential superiority of rural life established; and the appeal which the New York *Tribune* addresses to the rising generation of the Atlantic States, we would press upon the corresponding class in Canada. Old though it be, it needs to be kept continually in view. The professions are overstocked. Of law and physic there are far too much already; and the country would be better should neither a lawyer nor a doctor be added to those departments of Mr. Lovell's Directory for the next ten years. Unless the lawyers sue each other and the doctors kill one-half of their number, not an addition is wanted to either. The same is true of merchants—the men who live by transferring commodities from one to another. There are thousands too many in Upper Canada; and still parents place their boys behind the counter and desk, to do women's work, and to swell the ranks that are already overstocked. Of those who now keep stores, only a small per centage will ever do more than get a bare living; a

living beset with anxiety and temptation, and only better than law or physic because less mischievous to those who keep it going. The farm and the workshop offer the only certainties. The farmer or the mechanic, if intelligent, industrious, and thrifty, may always secure independence on this continent; and this is a privilege of which no other vocation can boast. The fact cannot be too strongly, too constantly, pressed upon the attention of our young men. If they would escape the perils of panics, and cultivate the self-reliance which is the truest attribute of manhood, let them devote themselves to some handicraft, or learn to hold the plough and ply the flail. The hands will be less velvety, and the dress less fine; but there will be an ample substitute, a conscious ability to meet the vicissitudes of commerce and seasons without apprehension, and to turn to the best account the opportunities which a young country and an expanding territory will ever present."

There can be no doubt about the fact that the professions are overcrowded, and the mercantile business is overdone—but the farming business can never be overcrowded or overdone. Let young men then turn their attention to farming, instead of to law, physic or storekeeping. The farmer is, without exception, the most independent man in the community. He produces what must be consumed, and what there is always certain to be a demand for, and he has the means of living within the limits of his own productive resources. His occupation gives him health of body and vigor of mind, and he is free from all those numberless harassing cares and annoyances which are inseparably connected with professional and mercantile pursuits. His body is strong and healthy—his mind is vigorous and clear. He works hard—he sleeps sound—and has an easy conscience. It is of no consequence to him whether the Banks are "discounting" or not—he has no "bills" or "acceptances" maturing every two or three months, and he is not obliged to go down on his "marrow-bones" to get "accommodation" to meet them. Let young men then turn their attention to farming, or some handicraft, by which they are certain to attain competency and independence, as free from "care" as it is possible to be in a world where "man is born to trouble as the sparks fly upwards."—*Perth (U. C.) Courier.*

2. OUR UNEMPLOYED YOUTH.

It is painful, even to an ordinary observer, to see the number of youths, from fourteen and upwards, prowling about our city in idleness. It is true, times are anything but cheering—that our manufacturers are, comparatively speaking, doing nothing, and our merchants not over crowded. Nevertheless, opportunities not unfrequently occur, wherein many of these youths could make themselves useful. We were taken aback a few months since at the remarks of a poor widow, applying at a grocer's in this city for a vacant situation for her son, a fine healthy lad of seventeen. What is it to do, sir? said she. Work, was the reply. Grind coffee, carry a basket, lend a hand anywhere and everywhere; in short, work. The poor woman paused a few moments, evidently meditating on what course to adopt, and with mother's love, perhaps thinking she would rather endure any hardship herself, than impose any arduous duties on her boy, she replied, "he has never been accustomed to work, and I fear can't do it," and thanking the grocer, she retired. That lad might have obtained this situation, and by ordinary perseverance might have placed himself soon in a better position; but soon after, the result of idleness, he found himself in the city jail! Pride has been the beggary of hundreds and thousands. This lad, we will suppose, has been well brought up; but what folly was it, what ruin to his prospects has not befallen him, by that mother's reply? This is not a country where young men should be pampered, taught to look for easy berths, and turn up their noses at honest labor. On the contrary, it is infinitely more honorable to be a menial, than an idler, whose end is not unfrequently similar to the one just related. There is a good deal too much of this sort of thing, for a new country—too many scented fops a drag on their friends, instead of being made to work for a living—too many useless parsons, and too many lawyers—too many note shavers at forty per cent, with the view of ultimately owning a poor man's property—and all this is the result of people looking down upon honest labor. It is difficult to find our youth willing to learn a business now-a-days—even if they are in want of a good dinner. They all want something easy. For a government office some have waited years, to be disappointed at last; whilst for an office with nothing to do, and consequently little pay, there are scores of applications. Not long since a circumstance came to our knowledge of a family in a very distressed condition, and who wanted a situation for their son, a fine, healthy looking young man. He was employed by a gentleman of this city, to do anything that was wanted, but his friends were horrified to think that he carried a bucket of water; it was such a disgrace? and although his wages were to be four dollars a week to commence with, he never returned to his employer, or sent any other reason than the above. Ever since he has been idle, and the hand of the stranger has since supplied him

with bread. Being employed by an excellent firm, this youth had every prospect of a speedy and honorable advancement. A youth of promise must rise in the social scale. Often then is it we hear complaints of nothing to do; but we fear they go upon the old adage—when looking for work, praying they may never find it.

There is plenty employment for these useless idlers. Let them turn farmers, carpenters, blacksmiths, tailors, anything rather than idleness. The history of every country is rich with the biographies of illustrious men, who have struggled with the world in every kind of calling, and advanced themselves by honest labor, from the humblest positions to the highest pinnacle of success. Some of the richest men in Canada are those who have risen from poverty and obscurity by their perseverance. These are facts which those who look down upon the sons of toil would do well to remember.—*London, (U. C.) Prototype.*

3. FARMING—THE BEST PURSUIT.

In the history of the world, it will invariably appear that seasons of panic and financial difficulty have been followed by seasons of great prosperity for the farmer. To trace the causes of this would be an interesting and profitable employment, and to draw lessons of instruction therefrom, would show some wisdom.

Perhaps these commercial troubles show the necessity of making the most of every thing, and induce the tiller of the soil to "make every acre tell;" and thus, when the better days come, he finds that he has a large crop, which commands a ready sale at good prices.

Again, many persons, in seasons of commercial reverses, fly to the farm, knowing it to be the safest and most profitable business; and thus by the multitude who, with little means, commence farming, everything in the shape of produce is reduced in price, as such must sell to get money necessary to carry on the farm, and such a state of things will, without doubt, reduce the profit of the farm, and tend to poverty. Now, when good times return, such will be drawn, through the desire to make "large fortunes in a day" by some lucky stroke, into the vortex of city business, leaving their farms for others to till; while the man of sense, who is content to do well, and make a fortune by the slower but more certain process, remains where he is, and, when the golden days of harvest come, finds that he has acted wisely and well.

Another reason is, that many farmers have had a little of their instability removed. It is a lamentable fact, that some farmers are always on the wing—roving about from place to place, in the vain hope of finding a better location. Now, while this foolish idea floats in a man's brain, how is he likely to succeed? A man who is always thinking about "selling out," is not so likely to cultivate his land as he who intends to remain, hence the following query: "What is the use of doing this or that, when, perhaps, before another year, I shall sell out?" Now, in seasons of commercial trouble, a man sees no prospect of selling, and, for this reason, cultivates his soil with a will: the result is, he will receive a greater return, and even the farm itself will increase in cash value. We have seen a great deal of selling and changing and dissatisfaction among farmers, but we have very seldom known a man to prosper until he had learned to settle down and thoroughly cultivate his land.

Stick, then, to the farm. Farming is honorable. Farming is healthful. Thorough farming is profitable. If one-half of the mechanics who now starve in our cities, would go on to a farm, it would be better for their families and far better for the nation.—*Western Journal.*

4. TAKE CARE OF THE YOUNG MUSCLES.

At this season it seems to me it were well to utter a word of caution to farmers, be they masters or servants, who have the care of boys. Many a boy is ruined for life in harvesting or chopping. Boys are generally ambitious to become men and do "men's work:" the father is glad to see so much "grit" and the lad of fourteen perhaps is allowed to scythe or cradle, and go into the field with full grown men and see how near he can keep up. With what result? His "grit" keeps him along for a while, but the muscles of his arms, and far worse than this, those of his chest soon become strained by what is to him unnatural labour, and he "gives out." Yet the vital energies of youth are strong and he soon seems to recover his exhausted strength, and again he repeats his efforts. But the forces of nature each time rally more feebly, he becomes weak in the chest his joints become enlarged, the action of the whole system becomes dull, the animus of youth is gone, in too many cases never to return. He enters manhood, not with the spirit that goes to daily toil with a song, and returns at evening with a shout, but with a spiritless step as if it were a hateful drudgery, and such to him it is. Farm

pursuits become distasteful and are left at the first opportunity. We wonder sometimes at the iron constitutions of foreigners who seek their homes with us. The main secret is here. Boys are not put to hard labour there. You scarcely ever find a young emigrant of twenty that has handled a scythe previously to coming here. It is considered there to be work only fit for full grown men. Think of this, farmers, when your boys want to "pitch in" with the men, and give them lighter toil, that shall give healthful exercise, not over straining labour.—*A Lover of the Farm.*

5. AN ITEM FOR BOYS.

It is one of the besetting sins of the young men of this extravagant age to endeavor to get rid of work—to seek for lazy employment—and the consequence is that many of them turn out to be worthless vagabonds. Boys, avoid this whirlpool as you would a plague spot, banish from your mind forever the dangerous desire to live without work. Labour is honourable, dignified; it is the parent of health, wealth and happiness; never consider it a burden and a curse. Shun idleness and sloth; pursue some honest calling, and be not ashamed to be useful.

6. TWENTY USEFUL PROVERBS.

1. Plough deep while sluggards sleep, and you shall have corn to sell and to keep.
2. Pride is as loud a beggar as Want, and a great deal more saucy.
3. Silks and satins, scarlets and velvets, put out the kitchen fire.
4. Diligence is the mother of Good Luck.
5. Pride breakfasted with Plenty, dined with Poverty, and supped with Infamy.
6. Extravagance and improvidence end, at the prison door.
7. It is easier to build two chimneys than to keep one in fuel.
8. If you would know the value of money, try to borrow some.
9. The eye of a master will do more work than both his hands.
10. What maintains one vice would bring up two children.
11. He that goes borrowing returns sorrowing.
12. Rather go to bed supperless than rise in debt.
13. Sloth, like rust, consumes faster than labor wears.
14. A life of leisure and a life of laziness are two different things.
15. Three removes are as bad as a fire.
16. Creditors have better memories than debtors.
17. The rolling stone gathers no moss.
18. If you would have your business done, go; if not, send.
19. It is foolish to lay out money in the purchase of repentance.
20. Buy what thou needst not, and it will oblige thee to sell thy necessaries.

X. Miscellaneous.

1. AUTUMN.

The summer's departed so gentle and brief,
And autumn has come with its sere yellow leaf;
Its breath's in the valley, its voice in the breeze,
A many-hued robe is spread over the trees.

In red and in purple the leaves seem to bloom,
But winter, cold winter, has spoken their doom;
And while they are seeming with rubies to vie,
They tell us that beauty blooms only to die.

While sad as the whispers of sorrow its breath,
And mournful its hues as the garment of death,
Tho' faded the flower, and leafless the tree,
Yet autumn, with ripe fruit, is welcome to me.

2. THE BROKEN STICK;

OR, THE YOUNG CRIMINAL CONVICTED.

My mother was of a family of the Puritans. Over us, her little children, she held the reins of government lovingly, yet most firmly. She has really punished us in love as she kissed us in love. She went to her rod one day, and found it broken, and broken in such a way that it must have been with hands. "Some one of the children," she said, "has done this." We all denied. Mother grew in earnest, and said the one that did it had better own it for she should find it out. We all denied it again, and mother turned away.

By and by, one of the children went softly up to her and told her that I did it, and she saw me. Mother came to me alone, and laid it to my charge. I denied it, but she produced her evidence. I began to be silent. "As soon," she said, "as I get baby to sleep, I

shall reckon with you." I noticed she felt deeply, and could not sing to baby as usual, but would once in a while cast her black piercing eyes upon me.

Soon she made all ready. The moment of trial had arrived. She took me by the hand. She summoned her witness, and took the Bible in the other hand, and led me away to the barn. And when she had closed the barn-door she sat down and placed me before her. She opened the Bible, and read very distinctly the words, "All liars shall have their part in the lake that burneth with fire and brimstone." Then she looked to me with anger, being grieved. She asked me again if I was guilty. I pleaded not guilty. She called up the witness. Witness testified that I did it. Witness cried and I cried. But the court was firm. The court sent for the very stick that had been broken. And when I looked at it, and my sister told the court how I did it, all in a moment I knew I did it. But even now my head is gray, I can say I really thought myself innocent until I saw how the stick was broken. Solemn day, solemn moment. The judge was convinced—the culprit convicted. I told her I forgot—I forgot, but she bade me not to add sin to sin.

Mother told us it was not for the stick she cared; it was the lie. I told her I was sorry, and never would do so again. "Oh, you are sorry now because I am going to punish you." She went on and explained the crime. She rehearsed the evidence and aggravations attending the sin, and how God looked down on my wicked heart. She told how one little sin would lead to a greater, and that to a greater. "And now, my son, you are come to this." I looked at her, and tears stood in her eyes. And every time I looked at her I fell a-crying as if my heart would break. She still kept her finger on the passage about liars, once in a while reading it. That passage was the law, the verdict, and my warrant. And all the hope I had was that mother said she was sorry for me, and hoped that God, for Christ's sake would forgive me.

She asked if I thought it was right that she should punish me, and I told her I thought it was. But she said she wanted time to talk with father about it; and she bound me over to receive my final trial before him; then she arose from her seat, and we all left the court-house. I knew mother pitied me, and so did all the children.

When father came in she rehearsed the whole matter to him, and asked him what she had better do. He sat down and looked at me, and went on to tell me what a wicked thing it is to tell a lie, and how he had hoped better things of me. But he told mother that she must do with me what she thought best. If she thought best to punish me, he would not object.

Then mother called me to her, and told me it was the first time she had ever found me in a lie. She hoped that I would ask God to forgive me, and give me grace never to do so again; and with many other such words did she persuade me to hope that there was mercy for me. I kept close to my mother. I rocked the cradle, and brought her water, and swept the room. I loved her more than ever. But never again did she have occasion to accuse me of that great sin. And never did she or any of the family allude to that trial until I became a minister, and she was on her death-bed. I asked her if she could remember it. She wept, and I wept again. I thanked, her and she said, "Thank God, I have never done more than my duty."—*British Mother's Journal.*

3. OBEDIENCE TO A MOTHER.

"Come away; come instantly, or I will tell your father;" I heard a mother say to her child, who was playing in the street before her window. I did not stop to learn the result; but I pitied the poor mother who had not power enough within herself to control her child, and who so unhesitatingly declared her inefficiency.

A mother should never thus appeal to the father's authority to strengthen her own, nor should she admit, by thought, word or deed, that her power is inferior to his, God never made it inferior, and he requires as prompt obedience to the one as to the other. The mother who allows herself thus to appeal to another is continually weakening the authority she should exercise over her children. She is herself teaching them to disobey the 'commandment with promise,' for what child can honour a mother too weak to govern him?—*Mothers' Magazine.*

XI. Educational Intelligence.

CANADA.

— UNIVERSITY OF VICTORIA COLLEGE —The Academic year of 1859-60 of the University of Victoria College has lately commenced. As some changes have been made in the Faculty of Arts since last Session we subjoin a list of the Staff of Professors and Teachers. PRESIDENT: Rev. S. S. Nelles, A.M., Professor of Mental Philosophy, Logic, &c.;—Wm. Kingston A.M., Professor of Mathematics, &c.; John Wilson, A.B., Professor of the

Latin and Greek Languages; Rev. Geo. C. Whitlock, LL.D., &c., Professor of the Natural Sciences; Elijah P. Harris, Ph. D., &c., Professor of Modern Languages; John Campbell, M.A., Classical Tutor; N. Burwarsh B.A., Mathematical Tutor. W. S. Thomson, Rector of Collegiate School; Wm. A. Whitney, First Assistant Master. Alex. Burns, Second Assistant Master. We will only add that the Professor of Modern Languages, Dr. Harris, has recently returned from France and Germany; from the well-known University of Gottingen he obtained his doctor's degree as the well-earned seal of his studies at that seat of learning, and we have no doubt that he will add very considerably to the efficiency of the very able staff of gentlemen composing the Faculty of Victoria College.—*Cobourg Star.*

UNITED STATES.

— EDUCATION IN THE CITY OF NEW YORK, 1858—The system of public instruction in the city and county of New York, as organized by the Board of Education, in accordance with the provisions of the existing law, comprised a Free Academy for the complete collegiate education of boys; four small Normal Schools for the instruction of teachers; fifty-seven Ward Schools, including fifty-one grammar-schools for boys, forty-eight grammar schools for girls, and fifty-five primary departments for both sexes; thirty-five primary schools; forty-two evening schools (twenty-three of which are for male and nineteen for female pupils,) and eleven corporate schools. The number of pupils under instruction in the Free Academy is 775; in the boys' grammar schools, 29,309; girls' grammar schools, 27,991; primary departments, 59,276; primary schools, 23,760; evening schools, about 20,000, normal schools, 850, and corporate schools, 10,697. The whole number on register in the several ward and primary departments is 139,441, and the average attendance 51,430.

The whole number of teachers employed in the several schools under the charge of the Board is 1,400; two hundred of whom are males and twelve hundred females. There are also eleven corporate institutions in different sections of the city, which participate in the distribution of the school fund, but are in no other respect under the jurisdiction of the Board.

The whole amount of money expended during the past year to December 29, for the maintenance and support of these schools, was \$1,166,266.99, of which sum \$556,445.93 was paid for the salaries of teachers in the ward schools and janitors of the school buildings; \$288,810.13 for the erection of new school-houses, the purchase of sites, and repairs and alterations of existing edifices; \$25,217.08 for the purchase of fuel; \$105,328.31 for books stationary and school apparatus; 23,998.51 for salaries of superintendents, clerks and officers of the Board; \$45,834.73 for support of the Free Academy, including repairs; \$64,515.03 for support of evening schools; \$16,290.22 for support of normal schools; and \$45,427.05 for contingent expenses connected with the administration of the system.

Of the aggregate sum thus expended, \$212,889.55 were apportioned by the State Superintendent from the income of the Common School Fund, and the balance raised by taxation of property in the city of New-York.

The Superintendent is happy in being able to state, that at no preceding period in the history of the system have the schools of the city, collectively considered, been in a more flourishing condition. With very few exceptions, in unfavourable localities, a decided advancement has been made during the past year, in both the grade and scholarship of the several departments—the average attendance has been considerably increased, and the general character and efficiency of the schools have been sensibly augmented. The course of instruction prescribed by the Board has been more fully and generally carried out than has heretofore been found practicable; while in many of the schools and departments additional branches of study have been pursued.

— GRADUATING CLASS OF 1809 at UNION COLLEGE.—A correspondent of the Albany *Evening Journal* describes a visit paid to President Nott, by ten members of the class of 1809, at the recent commencement. Dr. Nott, unable to leave his chair, received these old pupils sitting. They presented an address to Dr. Nott, who replied in touching language. The writer says,—"The impromptu response from Dr. Nott was thrilling in the extreme. After a short effort to suppress his own deep feeling, his voice became clear, enunciation distinct, and words of wisdom fell on the open ear as in days of yore. With a fatherly feeling he counselled them as "his boys" to look well to the great object of life, the securing a durable inheritance beyond the grave, to which they were all hastening. He then commended them in fervent prayer to the throne of all grace. To the bystander, who writes this, it was a scene for the painter;—the venerable Dr. Nott, encir-

led by his aged pupils, already convulsed with deep feeling, their eyes intent on his benign countenance, while they were bathed in tears of love and tenderness."

— THE UNIVERSITY OF TEXAS is nobly endowed for a new institution. From a sale of a portion of certain lands appropriated for its benefit, \$280,000 have been realized. The lowest price obtained for the lands was \$3 per acre, and the highest \$11.50. At the former price they would realize \$650,000, and at \$5, \$1,250,000. It has also \$1,000,000 appropriated to it from the State Treasury for buildings.

— WOMEN ALLOWED TO VOTE ON SCHOOL MATTERS IN KANSAS.—In the constitution formed for Kansas, women are allowed to vote in school matters. They are allowed to vote for school officers, school taxes, and everything pertaining to the organization of the common schools, equally with men. Conferring this much of the elective franchise upon females is intended as an experiment.

— TEACHING GIRLS COOKING AT SCHOOL.—A Dublin paper says:—"An attempt has been made at the *Hibernian* schools to instruct the girls in the most important of female duties, domestic cookery, and we are glad to learn from the annual report just issued, that the experiment is successful. The report says:—"The apparatus is much on the plan and of the size usual in small cottages, and is found to answer admirably. The class consists of eighteen of the older girls, and more are anxious for admittance as vacancies occur. They cook in turn each day a dinner for the mistress and pupil teachers, and some soup or other dish for such of the children as dine at school, and prefer that to bringing provisions from home. Most of the last year's class are now able to cook without superintendence, the dishes commonly in use. The committee hope soon to add to this lesson on cookery for the sick."

BISHOP'S COLLEGE, LENNOXVILLE.

JUNIOR DEPARTMENT AND GRAMMAR SCHOOL.

RECTOR :

The Rev. J. W. WILLIAMS, M.A., Pembroke College, Oxford, late Classical Master in Leamington College, England.

ASSISTANT MASTERS :

A. CAPEL, Esq., Corpus Christi College, Cambridge; J. S. PROCTOR, Esq., St. John's College, Cambridge.

IN this department pupils are prepared, at the option of their parents, either for entering the University or for commercial life.

English Grammar and Composition, the French Language, Writing, and Arithmetic, are carefully taught throughout the School.

Those boys who are preparing for commercial life may omit the study of Greek and Latin, and devote the time thus gained to their further advancement in arithmetic and writing, under the supervision of a master who is always disengaged during such hours to give them special attention.

Religious Instruction is given by the Rector to all pupils who are members of the Church of England.

Elocution is carefully taught in all the classes.

Instruction in *Vocal Music* is imparted to those pupils whose parents may desire it.

TERMS: Tuition. Board.

From August 1st to December 20th	£3 15 0	£15 0 0
From January 6th to April 6th	2 12 6	12 10 0
From April 6th to July 6th	2 12 6	12 10 0

There are no extra charges.

Parents may, if they please, provide for the boarding of their sons in the village.

Sons of Clergymen of the Dioceses of Quebec and Montreal are received, under certain conditions, at reduced charges.

All payments to be made in advance to the Bursar of the College.

The School is situated in a healthy and beautiful locality, is a short distance from the Station of the Grand Trunk Railway, on which line the pupils travel at half fares.

For further particulars apply to the Rector.

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All communications to be addressed to Mr. J. GEORGE HODGINS, Education Office, Toronto.