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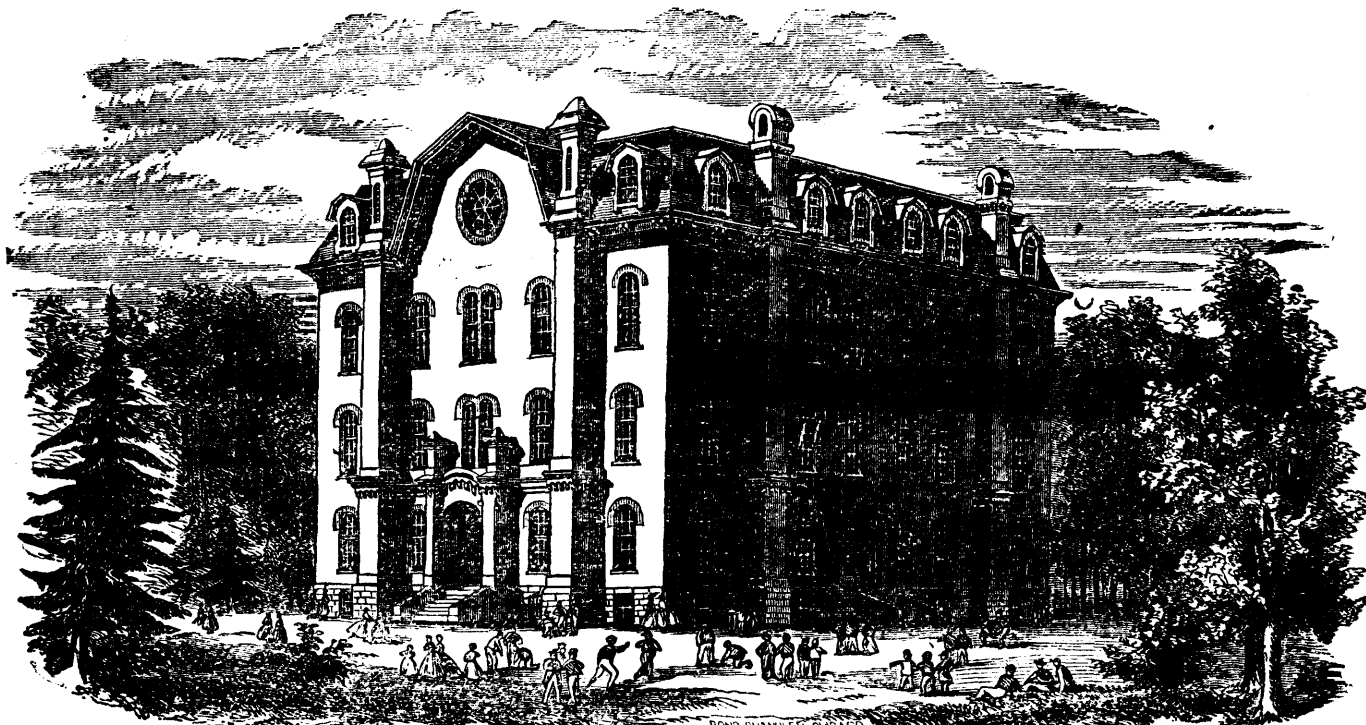
last month, together with engravings of the necessary adjuncts for the out-door physical exercise and recreation of the pupils during the short intermissions of the school during the day.

We propose, for convenience, inserting these plans and illustrations under *five* separate heads, viz., 1. The exterior of the school house; 2. Its interior fittings and arrangements; 3. Its heating and ventilation; 4. The grounds and fencing; and 5. Physical exercise and gymnastics. These subjects have to be separately considered and decided upon by the trustees, and by grouping them this way they can be more easily understood by them. We will now proceed to consider each group in detail.

1. First, in regard to the *exterior* of the school house. With a view to aid the trustees in making choice of some external elevation of a school house suited to their requirements and means, we insert quite a number of engravings of the exterior of the school house. None of them may possibly be just what might be preferred by trustees, but by selecting the best and comparing it with the details of others, a good plan will no doubt be adopted. There is sufficient variety to enable trustees

### THE SCHOOL HOUSE AND ITS ARCHITECTURE.

In connection with the article in the last month's *Journal of Education* on School Sites and School Houses, we insert in this number of the *Journal* several architectural plans of the exterior of school houses, and their external and internal fittings and arrangements, including ventilation. We also insert plans showing how the school-house grounds may be laid out and beautified in the manner indicated in the *Journal* of

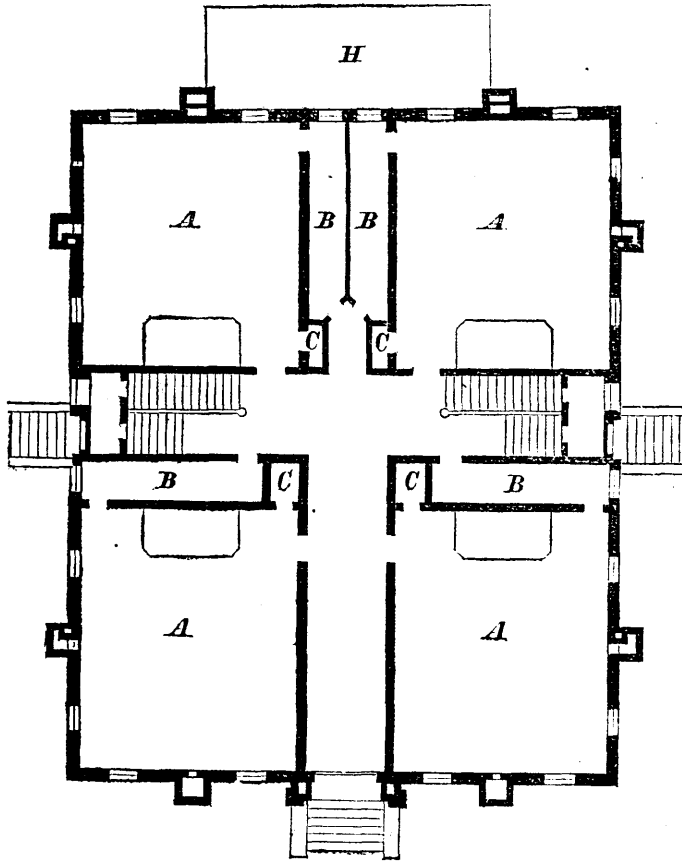


EXTERIOR OF A CENTRAL OR SUPERIOR HIGH SCHOOL FOR A CITY.—FIGURE 1.

with taste and judgment to adapt one or other of them to their wants.

The first elevation (Figure 1) is that of the Haven High School, lately erected in the city of Chicago. The Local Superintendent, in sending us the plans for insertion in the *Journal*, says of the School: "The plan is a model to us; and our new school houses are being constructed upon essentially the same model." The description given of the building is as follows: "The School House is situated on a lot having a frontage of 150 feet. It is three stories high, besides a basement and an attic. The plans here shown are

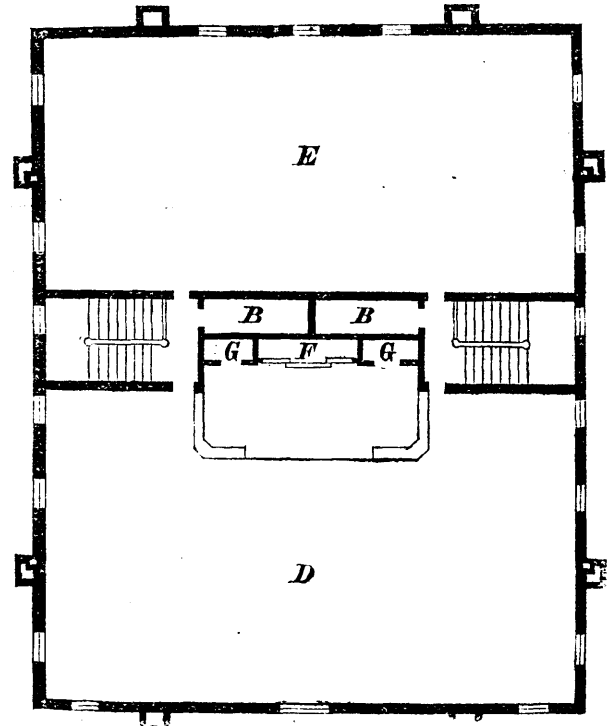
entirely devoid of anything like ornamentation, save in its bold projecting buttresses which form the ventilating and chimney shafts before mentioned; its deeply recessed doorway in front, with massive buttresses on each side; and last, but not least, its elegant *Mansard* roof, the steep sloping sides of which, covered with slate, and pierced with *Dormer* windows, gives it altogether a unique and pleasing effect. Externally, the finish of the basement to the principal floor is stone. Above this the building is faced with red pressed brick, neatly pointed, and has stone dressings to doors, windows, buttresses, etc. The building is warmed by a boiler located



GROUND FLOOR OF A CENTRAL OR HIGH SCHOOL.—FIG. 2.

of the principal story and the attic, the latter of which (Figure 3) is 14 feet high in the clear, and contains a hall 66 feet by 38 feet 8 inches, for general exercises of the school, with closets for apparatus, teachers' closets, and wardrobes attached; and a Gymnasium, in which the female pupils of the schools may exercise in inclement weather. Owing to the peculiar construction of the roof, this attic story is quite as serviceable for the purpose for which it was designed as would have been either of the full stories, and it cost much less. The basement is mainly divided into four large rooms, with corridors and stairways; one of the rooms being used for fuel, and the balance as a place of recreation for the boys in foul weather. The principal or ground floor, (one of the two shown in the annexed engraving—Fig. 2) has four school rooms, each having a wardrobe and teacher's closet attached; spacious corridors, with entrances on each side of the house for pupils, and a principal entrance in front. The side doors do not open directly into the corridors, but into vestibules, from which other doors open to the corridors and also to the stairways leading to the basement. The second and third floors only differ from the first in having windows in place of the outside doors and vestibules of the first floor; and the second floor has a reception or Principal's retiring room, about 10 by 20 feet, cut off from that part of the corridor towards the front of the house. By an examination of the plans it will be seen that the pupils in passing to and from the school rooms, will generally pass through the wardrobes. Each of these rooms are wainscoted from the floor up about 2½ feet, and the corridors and wardrobes from 5 to 7 feet, with boards neatly grained and varnished (as is all the interior wood-work), and above these on each side of the rooms are black-boards.

The rooms are ventilated through the large ventilating shafts or buttresses in the exterior walls. The building is 68 by 86 feet on the ground, and each school room 27 by 33 feet, and 13 feet high. The exterior is in a plain Americo-Italian style of architecture; is



FOURTH FLOOR OF A CENTRAL OR HIGH SCHOOL.—FIG. 3.

in a room at the rear of the building, and covered with a lean-to roof rising no higher than the basement. The cost of the building is not far from \$20,000.

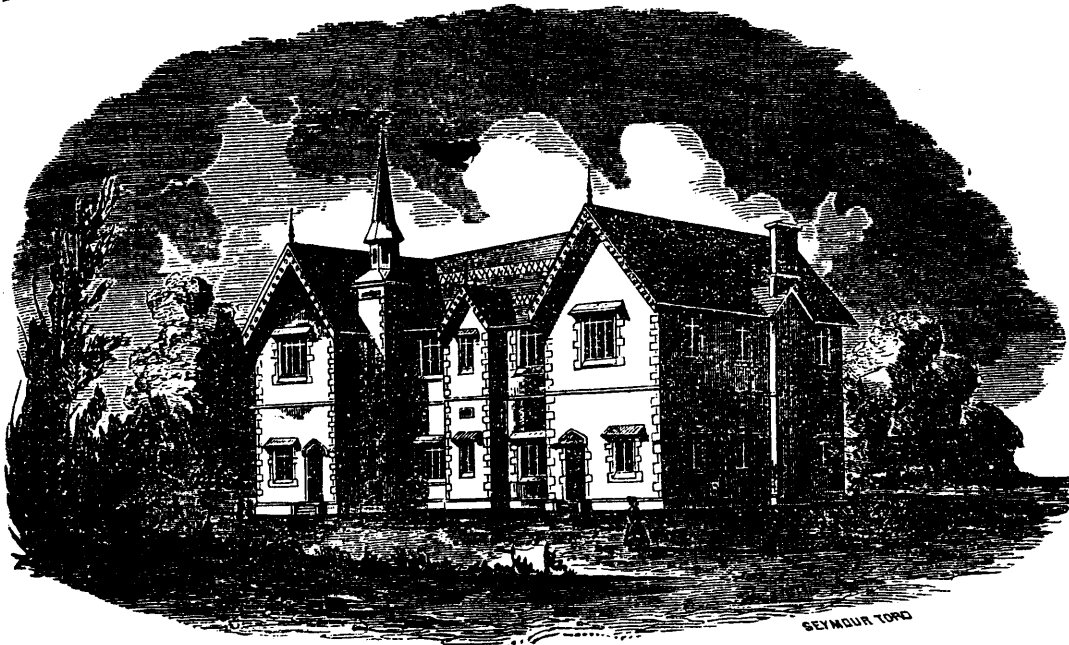
The second plan we insert (Fig. 4) is that of a Grammar and Common School, erected a few years ago in the Town of Simcoe, County of Norfolk. This building, from designs by Messrs. Messer & Jones, Toronto, is in the Old English style,—the most appropriate for a red brick building,—and is finished with 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 C, (Fig. 20, page 23) 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 the school and class-rooms are made to open outwards, in accordance to the suggestions contained in the *Journal of Education* for December, 1851. In case of a panic in the school, this arrangement will be found most desirable. The plans of the interior will be found on pages 19 and 23 (Figs. 5 and 20).

The third plan is that of a Central or High School (Fig. 6); and, as will be seen by the arrangement of the rooms in Fig. 5, is capable of accommodating, in its three stories, 750 pupils, or 250 on each floor. Unless in very rare cases, a school building should not exceed two stories in height. In all the passages and school rooms, the doors should open outward, (not inwards, as is generally the case,) so as to admit of easy egress in case of fire, accident, &c.

The four corner rooms on each floor are, in effect, class rooms, the main room in the centre being the principal school-room, under the constant supervision and control of the first Master.

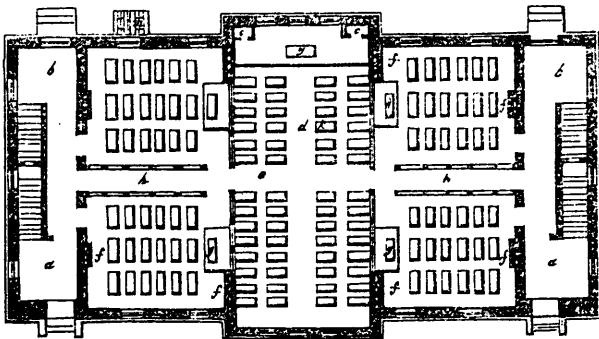
Under this system of government and instruction, for which a glazed partition throughout, and the wide central passages, afford full facilities, each story would require five teachers—a master and four assistants—and each would thus constitute one large School. The two class rooms on the second story will be found very suitable for recitation purpose, if either or both of those stories be appropriated to pupils of an advanced grade.



PERSPECTIVE VIEW OF THE BRICK SCHOOL HOUSE, SIMCOE, COUNTY OF NORFOLK.—FIG. 4.

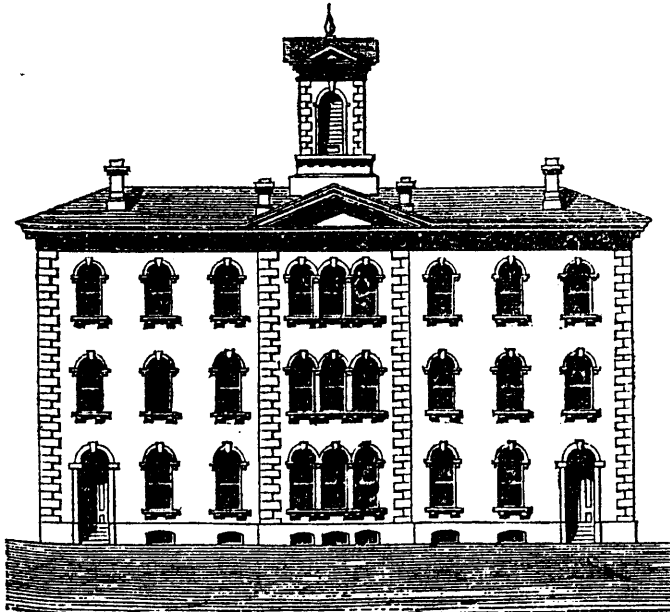
The first story is for girls, the second for boys, and is nearly similar to the first story; both open directly into the yard at the back of the building, and neither of them into the street; but a gate should lead from them to the street.

The plan of the first floor, which is adapted to figures 4 and 6, is as follows (See also fig. 20, on page 23):—



PLAN OF THE FIRST STORY FLOOR.—FIG. 5.

- a. Boys' entrance and stairs to second and third stories.
- b. Girls' entrance and clothes rooms.
- c. Closets on the teachers' platforms.
- d. First Master's class room and passage 3 ft. wide.
- e. First Master's class room and passage 3 ft. wide.
- f. Flues for warm air or gas, and ventilation.
- g. Master's Desk.
- h. Passage three feet wide.



GEOMETRICAL ELEVATION OF A CENTRAL OR HIGH SCHOOL.—FIG. 6.

**SPECIFICATION.**—This plan represents a building 47 x 92 feet three stories high, first and second fourteen and third thirteen feet each in the clear; pitch of roof seven feet, and height of the first floor two feet six inches.

This building is three stories high, divided into class rooms, separated by glass partitions, the first story being for girls, and the second for boys. It is intended to be of stone and stuccoed; but if brick is more economical, it would answer equally well.

In this building the two transverse partitions are to be supported by piers in the cellar, the girders to bear on the top of the piers and the walls of the flank; and the joists, arranged longitudinally, to be doubled under the other glass partitions. If the building should be built

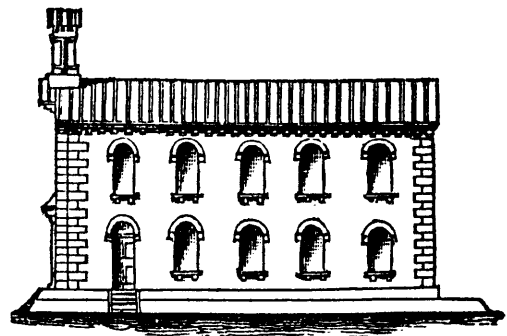
of stone, the walls will be—cellar 24, first story 22, and the second 20 inches thick; but if of brick, they will be respectively 24, 22, and 18 inches thick. The doors and window sills, and the platforms and steps, are to be of cut stone.

The fourth plan (Fig. 8, next page) is that of one of the City Schools of Toronto. It is a pleasing design, and compact in its appearance.

In 1854, the Board of Trustees for the City of Toronto, erected three School-houses similar to the above in the city. Others of a different construction were erected at other times. This building will accommodate near 500 pupils. The cost of this building, including fittings, etc., was \$12,000. The plan of the interior arrangement, seats, etc., has not been published. It, however, includes the recent improvements as detailed in the accompanying diagrams. Play-yard and sheds are in the rear.

The fifth (Fig. 9) is a neat perspective view of a good sized two-story building. The dimensions of the building are 62 feet by 44 on the ground. It is built of brick. Each room is ventilated by openings, controlled by registers, both at the floor and the ceiling, into four flues carried up in the wall, and by a large flue constructed of thoroughly seasoned boards, smooth on the inside, in the partition wall. The whole building is uniformly warmed by two furnaces placed in the cellar. Every means of cleanliness are provided, such as scrapers, mats, sink with pump, wash-basin, towels, hooks for outer garments, umbrella-stands, &c.

The sixth plan (Fig. 7) is the reduced drawing of a large two-story building, with side and front entrances, designed for a Grammar or



SIDE ELEVATION OF A BRICK GRAMMAR SCHOOL-HOUSE.—FIG. 7.

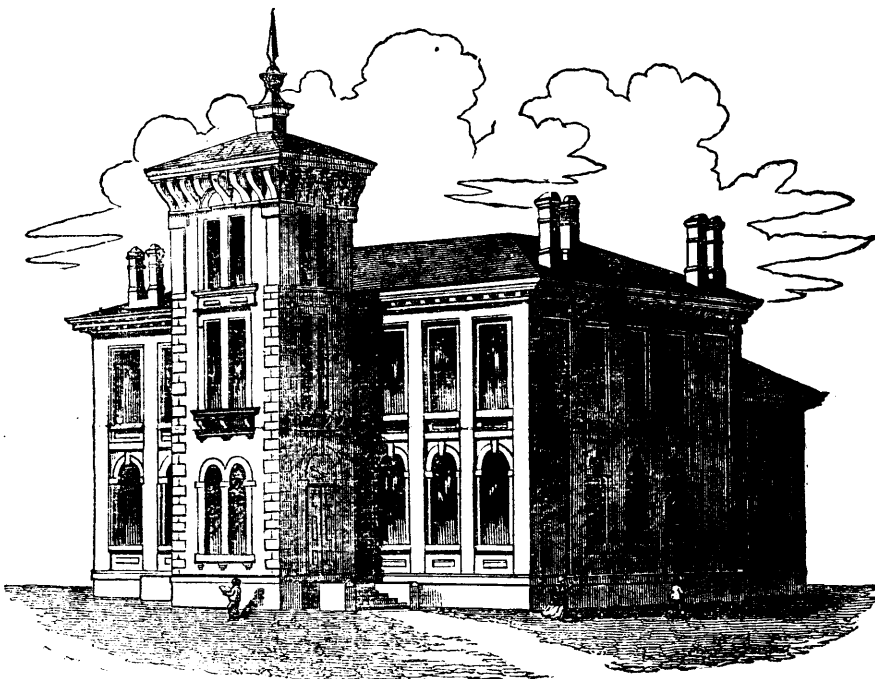
High School. It is a very chaste and ornamental building, and in excellent keeping with the correct proportions requisite in a School-house of this description.

The seventh plan (Fig. 10) is that of a very neat battened School-house, designed for a small village or rural school section. The plan is designed for sixty-four pupils. This building will be found convenient and ornamental when properly surrounded with trees, shrubbery, &c.

The size of this building is thirty by forty feet on the outside, story thirteen feet high in the clear, and pitch of roof nine feet, but the size may be increased or diminished as desired by the Trustees. For the convenience of the Trustees we insert the following specifications, which may be modified to suit each case at the pleasure of the Trustees.\*

**SPECIFICATION.**—The materials of the walls should be brick, and the cellar walls built up above the level of the ground, eighteen inches thick, with cellar door-way, and window openings secured with iron guards. A cut stone door sill will be required for the front door, twelve inches on the top face and eight inches rise. The walls from the surface of the ground upwards will be of brick; the outside four inches, to be the best quality dark stretchers with the joints smoothly struck; the thickness of the wall at the base and pilasters will be sixteen inches; in the recesses twelve inches, being a nine inch wall spread on the base, making an opening of three inches in the centre of the wall; the two surfaces to be bonded together with alternate headers every fifth course; the projection of the base to be finished on the top with headers. The flues will be made eight by twenty-four inches, thoroughly and smoothly pargeted and topped out on the roof for ventilators. The work to be done in a substantial and workmanlike manner, with mortar composed of clean, sharp sand, and wood-burnt lime. Plastering on the interior will be done in the same manner as the last; the jambs of the windows will be plastered and the angles rounded.

**CARPENTER WORK AND MATERIALS.**—The flooring joists will be eight by fourteen inches, and ceiling joists two by twelve, placed sixteen inches between centres, and the flooring joists strengthened with two lines of lattice bridging, well secured to the same; a raising piece will be spiked on the ceiling joists, and the rafters heeled against it; alternately the rafters will be continued over the wall, forming cantilevers to support the eaves; those from the gables will be framed into the outer rafter. The rafters will be framed and one and a half inch plank collar beams well spiked across the same. The rafters will be lathed and covered with the best white pine shingles, butted and jointed. A bell turret will be built according to the plan. The window frames will be made plank front or casing, and double hung. The sash and shutters to be made and hung as usual on the flank and back of the building; but on the front, inside shutters in one pair to each window will be made and hung to open against the wall, and recesses in wall will be made to receive them; the sub-sills of the windows will be made of heart pine. A circular transom sash will be made over the front door. The doors will be made and secured as usual, excepting that the partition between the lobby and clothes rooms, folding doors will be made and hung, so that they may be opened into one room



PERSPECTIVE VIEW OF ONE OF THE TORONTO CITY WARD SCHOOLS.—FIG. 8.

for recitation or class purposes. The closets will be shelved in the usual manner, and the platform for the Teacher's desk made with eight inch rise. Wainscoting, black-board, inside dressings and jambs of doors, pinrails and hooks in recitation rooms, slats in main room for maps, cellar door and steps, and outside steps (of wood) and privy and fencing, will be done in the best manner.

**PAINTING AND GLAZING.**—The wood work usually painted will receive three coats in plain colours, with pure white lead and linseed oil. The sash all to be glazed with the best glass; the size of the glass will be thirteen by sixteen inches, eighteen lights in each frame on the side and back; the front frames to have twelve lights in each.

All the materials and workmanship to be of the best quality, and every thing to be furnished, requisite to complete the building in all its parts, in a substantial and workmanlike manner, and to the satisfaction of the Trustees.

The eighth plan (Fig. 11) is also designed for the School-house of a small village or rural school section.

This plan is designed for forty-six pupils, but can be arranged for more or less. It may be of stone or brick.

A separate entrance for boys and girls can be provided, though they are to sit together in the same room.

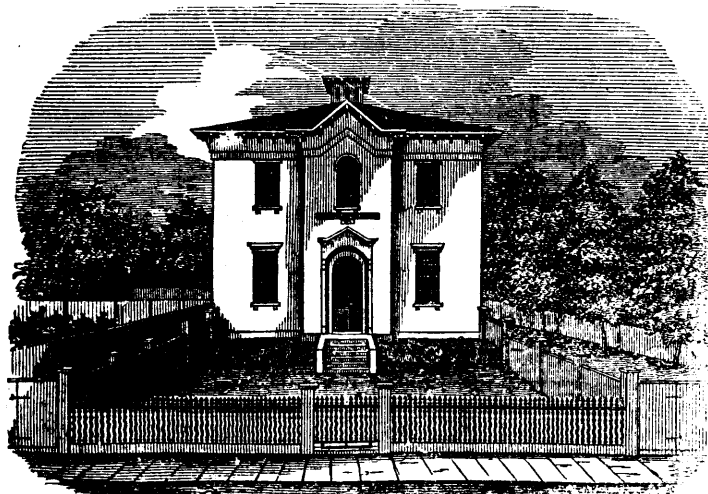
The size is twenty-three by thirty-four feet, and pitch of roof eleven feet; story twelve in height in the clear, with a side porch; the walls of undressed stone or brick.

The cellar will be excavated under the building, with entrance, &c., and foundation trenches, for the porch two feet below the surface of the ground. In regard to the details of the mason and carpenter's work, they can be determined upon by the Trustees, and inserted in the specifications.

The specifications in the preceding plan will be a guide in this respect. The details of seating and warming will be given elsewhere, pp. 22, 23.

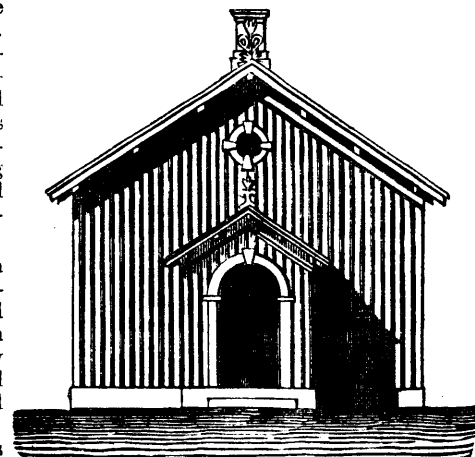
The ninth plan is that of a Primary Ward School in a town or ordinary school in a small compact school section. See Fig. 12.

The size of this building is twenty-three by thirty-



PERSPECTIVE VIEW OF SCHOOL HOUSE, WITH GROUNDS, &c.—FIG. 9.

\* For fuller information on all subjects relating to the construction of School houses, see "The School-house, its Architecture, Arrangements and Discipline, with additional papers on kindred subjects, &c.," by J. George Hodgins, LL.B., Deputy Superintendent of Education. It can be sent free by post on receipt of 70 cents.



END ELEVATION OF A BATTENED PRIMARY SCHOOL HOUSE, REDUCED.—FIG. 10.



FRONT PROSPECTIVE, WITH GROUNDS, ETC.—FIG. 11.

four feet, but may be increased or reduced one story high, thirteen feet in the clear, and pitch of roof nine feet. The interior arrangements resemble many of the others, but in this an outside lobby is made at the entrance, which gives an additional room appropriated for library and recitation.

## II.—INTERIOR FITTINGS AND ARRANGEMENTS.

We have already inserted several plans (see *Figs. 2, 3, 5*), describing the interior arrangements and seating adapted to some of the designs of School-houses already given. We will now insert a few additional ones, designed more to aid Trustees to compare plans and to select and adapt them to their own tastes and local circumstances.

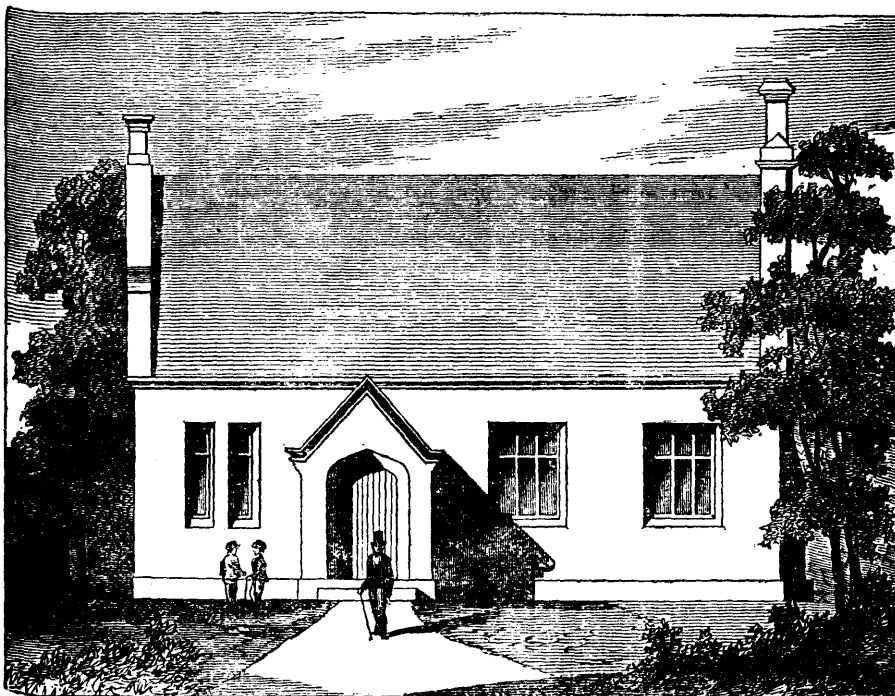
The first plan inserted is one of a Union Grammar and Common or High School, showing the entrances at the side, with stairways leading to the upper school rooms. It also shows two modes of seating, that by double school chair and desk, and plain bench seat with desk for two pupils. The former is the preferable mode of seating.

In this Plan (*Fig. 14*) there are three entrances to the building; the front A. and the two side doors, B for boys, and G for girls, leading into the entries F, C, C. The front is a large double door. At all the outside doors are two to three stone steps, furnished with four or six scrapers at each door. Pupils belonging to the Schools in the lower story, pass from the side entries into the middle one, and ascending two steps at *a*, enter their respective rooms T, S, which are rather larger than those in the primary and intermediate School houses, being 36 feet by 32 feet inside, and 11 feet high in the clear. In each of the entrances C, C, there is a provision *t, t, t, t*, for setting up umbrellas.

The seats and desks in the rooms T and S, are of the same dimensions and arranged in the same manner as those shown in the other *Figs.* The small iron posts *e, e, e, e*, about 2½ inches in diameter, supporting the floor above, are

placed against the ends of the seats, so as not to obstruct the passages at all. Besides the platforms P, P, 20 feet by 6 feet—the tables, 3 feet by 4 feet, for the Teachers, and the closets *l, l*, for brushes, &c.—there are blackboards, painted upon the walls, extending from the doors D, D, to the windows, 14 feet long by 14 feet wide, with the lines of a stave painted on one end, to aid in giving instruction in vocal music.

These rooms are well warmed by heated air, admitted through registers *r, r*, 18 inches in diameter, from the furnace below, F, from which the tin pipes *p, p*, (*Fig. 14*), 14 inches in diameter, convey the air to the School-room in the second story. Each room is provided



SIDE PERSPECTIVE OF A VILLAGE, OR RURAL SCHOOL HOUSE.—FIG. 12.

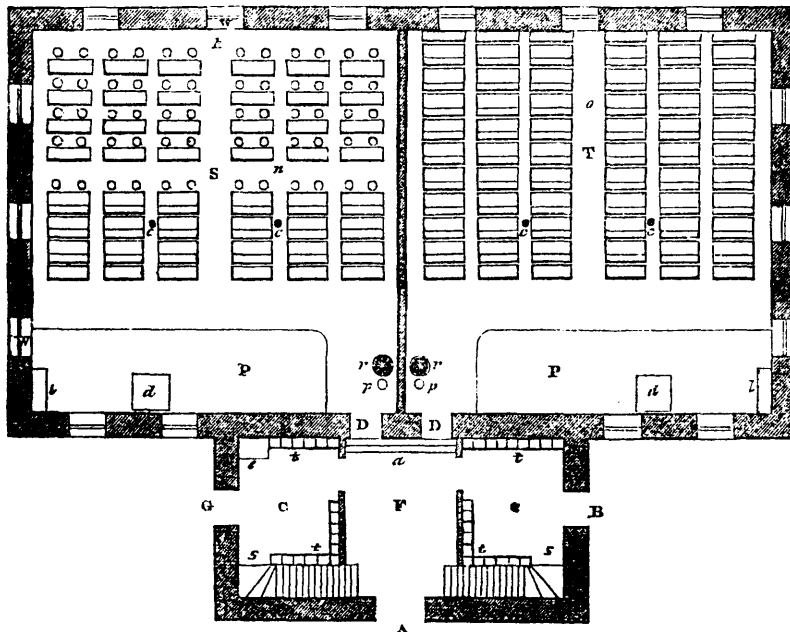
In framing this building, it will be done so that the weather-boarding can be put on vertically. The rafters will be twenty inches between centres, with a collar beam of one and a half inch plank, well spiked across each, and the heel of the rafter notched out to rest upon the plate; the front part projecting and forming the support to the eave, and that portion of the rafter will be planed, as will also the projecting pieces supporting the roof at the gables. The weather-boarding will be planed, and beveled, and strips three inches wide firmly nailed over the joints.

The carpenter work, including blackboard, will be the same as others, excepting where the change in the plan makes it necessary;



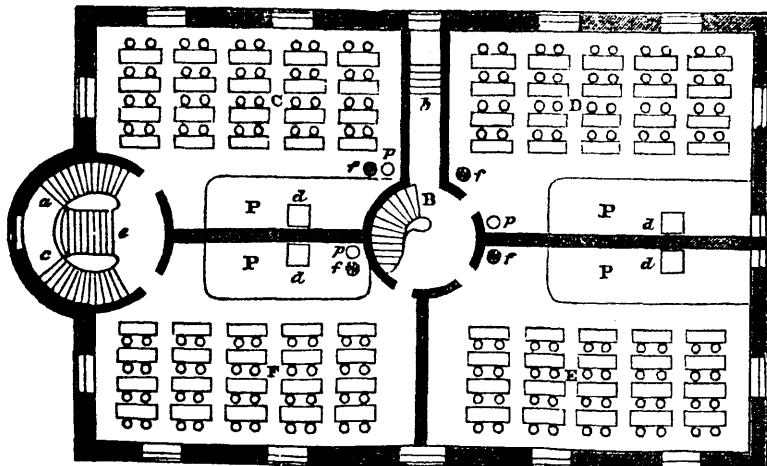
END AND SIDE PERSPECTIVE OF BATTENED SCHOOL HOUSE, WITH GROUND, ETC.—FIG. 13.

with two ventilators, each 3 feet long by 15 inches wide, opening into flues of the same dimensions, which open on a level with the floor, and leading into the attic, from which the impure air escapes at circular windows in the gables. These flues



PLAN NO. 1 OF THE FIRST FLOOR OF A GRAMMAR OR UNION SCHOOL HOUSE.—FIG. 14.

thus remove the foul air from the lower parts of the room, and cause fresh, warm air to slowly settle down upon the scholars—a very pleasant and healthful mode of ventilation.

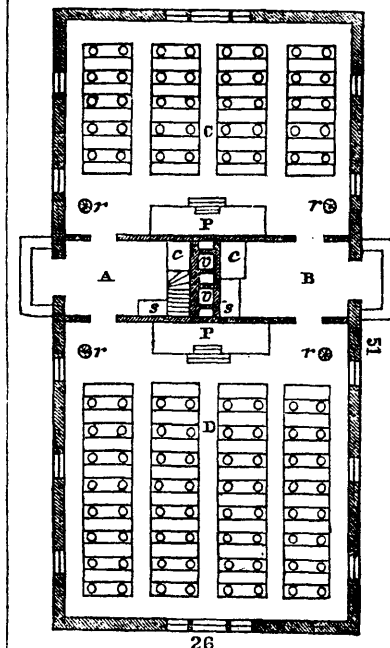


PLAN NO. 2.—THE FIRST FLOOR OF A GRAMMAR, OR HIGH SCHOOL.—FIG. 15.

The second plan (Fig. 15) is one adapted to a Central or High School-house, with a half-circular porch, in which the main entrance is at the end. The other entrance is at the side. In this plan, the pupils entering the circular porch, pass directly under the upper stair, enter the school room at *e*, or, passing up stairs, at *a* and *c*, reach the upper school room by both flights of stairs. The boys, girls, or smaller pupils (as may be most convenient) enter the building by a short flight of stairs in the passage at the upper side of *b*. On the raised platforms, *P, P, P, P*, are the Teachers' tables, *d, d, d, d*, covered with green baize and furnished with four drawers each. The registers, *f, f, f, f*, admit the warm air from the furnace, and the pipes, *p, p, p*, conduct it into the rooms in the upper story.

One of the smaller rooms in the second story is appropriated to the middle class, and the other to the senior class of pupils. The arrangement of the seats and desks are the same as in the other rooms, except that they are *movable*—being screwed to a frame not fastened to the floor. The cross partition, is composed of four very large doors, about 14 feet square, hung with weights in such a manner that they may be raised into the attic, thus throwing the whole upper story into one large hall—an arrangement by which one room can be changed into three and three into one, as occasion may require. On all public occasions, such as Quarterly Examinations and Annual Exhibitions, the rooms are thus thrown together, and the seats and desks turned so as to face the large platform in the principal School room.

In erecting a building, such as we have described, in which the School rooms are necessarily placed one over the other, care should be taken to deaden the noise overhead. This may be done by filling up (with proper precautions) the spaces between the joists of the floors with tan bark, cork shavings, or some other compact light substance.

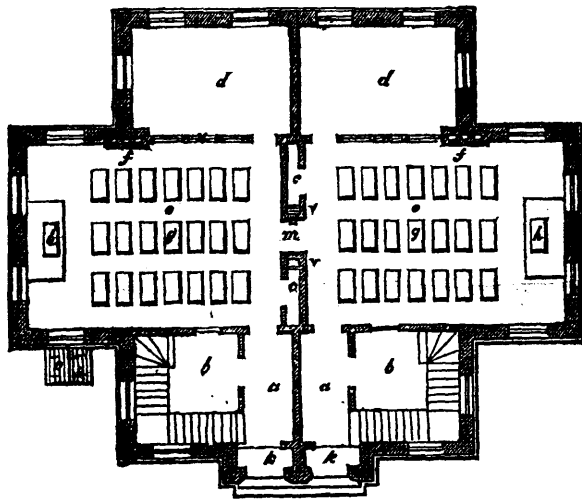


PLAN NO. 3, OF A PRIMARY AND SECONDARY SCHOOL HOUSE.—FIG. 16.

The third plan (Fig. 16) shows the entrances at both sides of the building. It is designed to afford accommodation for a Primary and Secondary department in the building. *C* is the Primary, and *D* the Secondary or Grammar School department. The room *C* is 25 feet wide by 25 long, with desks and seats attached for 60 pupils. The room *D* is 26 feet wide by 30 feet long, with desks and seats attached for 70 pupils. *A* is the boys' entry, and is 6 feet wide by 10 feet long. *B* is the girls' entry, and is of the same dimensions as that for the boys. *P*, in either room, is the Teacher's Desk and Platform. The seats for the younger pupils are placed immediately in front of the Teacher's desks, and are slightly lower, in their elevation above the floor, than those in the rear of the School-room—as seen in the Section on seats and desks in our next number. *r, r, r, r*, are Registers for the hot air, for heating the School-rooms, which issues from the furnace in the basement of the building; *v, v*, are flues for ventilation, and will be described in the article on the subject at the close. *c, c*, are the closets for the dinner baskets of the pupils who have come from a distance. *s, s*, are the water-sinks connected with the boys and girls' department of the

School. The smoke pipe is carried up between the ventilating flues *v*, *v*, and is made to branch off into two separate chimneys as it issues from the roof, so as to accommodate the bell—a very neat and convenient arrangement. The stairs seen in the Ground Plan lead up into the attic.

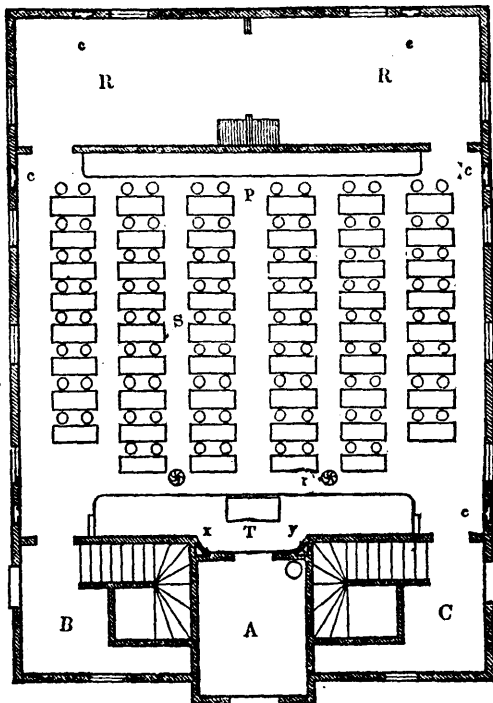
The fourth plan (Fig. 17) may be adapted to an ordinary town,



PLAN NO. 4, OF THE FIRST FLOOR OF A VILLAGE SCHOOL HOUSE.—FIG. 17.

- aa.* Entrances.
- bb.* Cap and cloak rooms.
- cc.* Closets for books, &c.
- dd.* Class rooms.
- ee.* Passages 2 and 3 feet wide.
- ff.* Flues for warm air, &c.
- gg.* Seats for two pupils each.
- hh.* Teachers' desks.
- iv.* Ventilating flues.
- kk.* Outside porches.
- mm.* Passage for Teachers.
- nn.* Glass partition.
- o.* Cellar door.

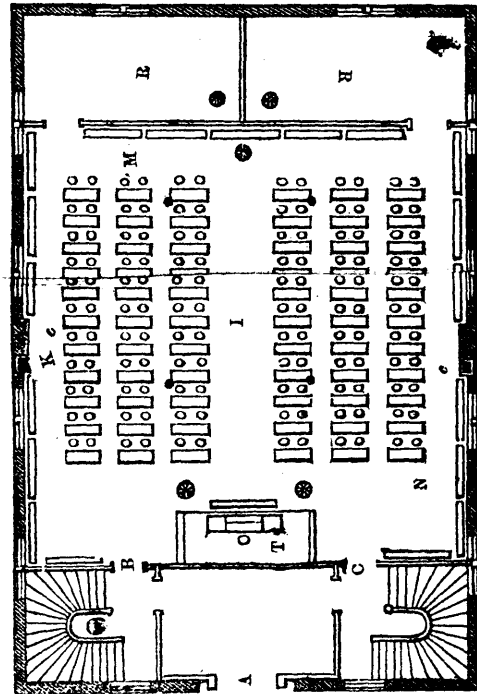
village or large rural section School-house, with two stories. The entrances here are at the side, which may be placed in front and made ornamental if desired. Though the plan only shows seats for forty-two pupils in each room, it will easily seat fifty with single, and sixty with double desks. The whole building will thus comfortably accommodate from two hundred to two hundred and forty. This number will fully employ five Teachers—one master and four assistants, in the whole building; or, one master and two assistants for each floor. The communicating doors between the main rooms,



PLAN 5, OF A TOWN, VILLAGE, OR SECTION SCHOOL-HOUSE.—FIG. 18.

- A—Front entrance for Masters, &c.
- B—Girls' entrance, with maps, scrapers, hooks for clothes, a sink, pump, basin, &c.
- C—Boys' entrance, with do. do.
- R—Recitation rooms, connected by sliding doors.
- P—Platform for recitation, with a black-board in the rear.
- T—Teacher's platform.
- Q—Library and apparatus.
- w—Windows, with inside Venetian blinds.
- c—Flues for ventilation in the outer wall.
- x—Flue for ventilation, lined with smooth, well seasoned boards.
- y—Bell-rope, accessible to the teacher by an opening in the wall.
- r—Hot air registers.

and the glass partitions between the main and class rooms, admirably favour this arrangement. While two of the teachers on each floor are conducting recitations in the class rooms, the third can preserve order and promote the studies in the two main rooms, which will be, at the same time, fully in view of the Teachers in the class rooms.



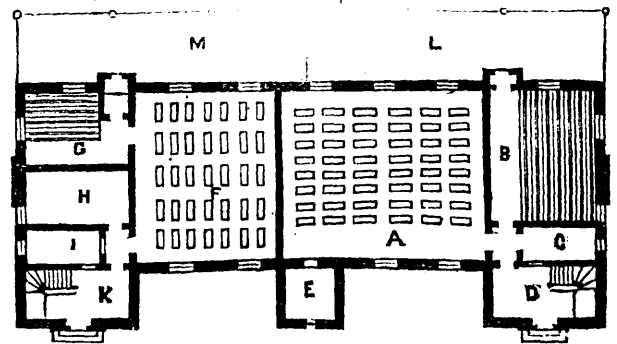
PLAN NO. 6, OF A FIRST FLOOR OF VILLAGE OR RURAL SCHOOL HOUSE.—FIG. 19.

- A—Front entrance.
- B—Girls' entrance.
- C—Boys' entrance.
- I—Centre aisle, eight feet.
- L—Aisle between each range of seats and desks, two feet four inches.
- K—Side aisle, four feet four inches.
- M—Space five feet wide.
- T—Teacher's platform and desk.
- R—Gallery rooms, or library, each twenty-three feet by twelve, furnished with twenty chairs, seven inches from the wall and thirteen inches apart.
- N—Kimball's desk and two chairs.
- O—Piano.
- e—Ventilating flue or foul air duct.

In Schools of this rank the largest provision of black-board should be made. Five feet in height, of the partition between all the class-rooms, commencing two feet from the floor, and the whole length of the partitions should be devoted to this purpose. The wall or partition at the back of the book closets, and that opposite the stairs, in each main room, as shown on the ground plans of both stories, should also have the same height of black-board surface.

In Schools of this kind there is little use or need for a Teacher's platform and desk, except at time of opening and closing the exercises. One Teacher will necessarily be in charge of two of the main rooms, if there be a Teacher with a class in each recitation room at the same time, and while thus engaged will have no time to sit. A small platform, near the communicating door between the main rooms, will thus probably be found sufficient, and most suitably placed. This slight change will not only save space, but turn the eyes of the pupils from the light.

The fifth plan (Fig. 18) has three entrances—one at the end, A, and one at either side, B and C. It differs so little in internal ar-



PLAN NO. 7.—FIRST FLOOR.—FIG. 20.

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



angement from the others, that we will merely give the references to the plan and seating, &c.

The sixth plan which we insert (Fig. 19) has only one entrance at the end, with side entrances to the main school room, and stairways to the upper school rooms. It also differs so slightly from the other plans that we simply give the references to the internal arrangements.

The seventh and last plan which we insert is of the interior of the Simcoe School-house (Fig. 20). To the provision for a gallery room we desire to call attention. (See also figure 5.)

We will defer the remainder of this article (including remarks on heating, ventilation, seats, desks, plan of grounds, gymnastics, &c.), till next number.

## I. Papers on Practical Teaching.

### 1. EVILS OF CRAMMING.

We "upon whom the ends of the world are come" are certainly living in a crowded as well as a fast age. It may be feared that its accelerated velocity is owing to the fact that its progress is downward, morally and intellectually. The passion for cramming seems, indeed, universal in our academies, and even in our town schools. It is wonderful, indeed lamentable, to observe how much knowledge is crammed into the heads of our boys, and even our girls, for young ladies' seminaries have caught the infection. Some printed outlines of instruction in what are termed Young Ladies' Collegiate Institutes, where they graduate at public commencements, and proceed Mistresses of Arts, exhibit an extended course of the arts and sciences usually included in a college curriculum, with the higher mathematics. What a shame it is that any young girl in the heyday of her life and spirits should be tortured with such stuff.

I noticed, the other day, a little urchin "creeping, snail-like, unwillingly to school," and counted eight books strapped between two boards carried on his back. I conjectured that he might possibly that morning have to recite to eight different teachers or professors. I must confess that I cannot help looking at the present generation of growing boys, who are subjected to this infliction, with great compassion. It is not surprising that they become men before they have ceased to be boys—have so careworn an appearance, and look so prematurely old. The effects of an overworked brain on the physical constitution are slow and treacherous. The work of undermining is going on while the superstructure seems all safe and sound. The effect on the mind of learning a great many things at first, in a hurried and confused manner, is not only to generate intellectual habits of the worst possible sort, but to make the steps of the progress not easier, as they ought to be, and naturally would be, if every step was firmly fixed before the foot was raised to take a second, but more and more difficult. They come to do everything by rote, without understanding or appreciating. This is not the way to create a love for study. In the race to accomplish great things, we seem to have forgotten the good old motto—"Festina lente"—the unquestionable axiom that accurate knowledge of the first elements, well engrafted in the mind by frequent repetition, goes much farther in making a thorough scholar than lessons, recitations and lectures, intended to put the pupil in possession of everything that ever was or is known.—Hon. Geo. Sharswood.

### 2. HOW TO QUESTION.

As an illustration of an opposite kind, let me quote from one of Plato's Dialogues the sequel to a passage with which many are familiar, in "The Art of Questioning." A short conversation on geometry is there recorded, in which Socrates and a little slave boy are the principal speakers. The philosopher draws a square on the ground with a stick, and asks the lad how long would be the side of a square twice as big as the one drawn. The boy thinks it ought to be twice as long. Socrates soon demonstrates the error, and shows that a side twice as long makes a square four times as great. The boy at length confesses that he does not know. Allow me to quote the succeeding portion of the conversation, in which the lad is trained by a master mind to discover the desired truth. Attention is called to the diagram again, and Socrates asks,—

"If in this new square, which is made up of four of the old squares, we draw four diagonals, so as to cut off the four outside corners, each of these diagonals will cut each of these squares—how? Boy.—Into halves.

"And you already know that these four diagonals will be equal, and will form another square? Yes; I know.

"And of what part of the four squares is the inside square made up? Of the four inside halves.

"And four halves are equal to what? To two wholes.

"Then we have got a square that is equal to how many of the original squares? To two of them.

"And it is a square upon what line? Upon the line that divides the original square into two halves.

"That is, upon its diagonal? Yes."

Does any one suppose that, after such a lesson as this, the learner would ever fall into the same error, or fail to remember the truth thus developed by questioning?—Teacher teaching.

### 3. THE LITTLE HAND—A STORY ON SCHOOL DISCIPLINE.

DEDICATED TO YOUNG TEACHERS.

I read in the *Bulletin*, a few days since, an item copied from an Eastern paper, giving an account of a case of discipline by a female teacher—perhaps I should say lady. The subject was a small boy, and the method of punishment fatally injured the head. What the grave offence was that called for so grave treatment, we are not informed. The almost immediate consequences were fever, insanity and death. "Troubles do not come singly;" an aggravating circumstance added torture to anguish. The father had already been called by telegraph to the bedside of another dying boy, when this last bolt struck, and the tree that had been shocked was now peeled and blasted. We said we do not know how the teacher had been troubled; whether or not she had been annoyed, tried or insulted till patience was wearied, reason abandoned and passion had been allowed to usurp the throne; so we have no judgment to enter—no blame to measure. Retributive justice came speedily; all through the delirium the poor boy kept begging, piteously, "Don't strike me—don't strike me." The memory of this scene will be judgment enough.

We wish to use this bit of school history as a text upon which to say a few words. It brings to mind another case that happened not long ago nearer home, and which, therefore, speaks more directly to us. In this case the teacher was a female, also, and the pupil was a little girl—a dear, sweet child, tender, sensitive, affectionate and altogether loveable; and the point we wish to press is, that such natures are not to be dealt with as may be, possibly, those that are naturally rude, low in mental and spiritual organization and development—never at home, knowing anything of love, kindness, sensibility, beauty, whose whole treatment is of an animal character. Though we do not wish to infer that such may be abused. It would seem that at school our teachers would all appreciate this difference in character, and discriminate and act accordingly; even the very young teachers—of which there are a large number, and the one referred to was one of them.

The case to which we refer in the following little story was not one of discipline, properly, only of harsh treatment—and which when seen under the clear strong light of that revealing lens, truth, with all attending circumstances contributing their item—it was cruel, and—to her little heart—it was torture.

The teacher was not naturally a cruel teacher, by any means; on the contrary, I believe her to be a gentle, amiable lady, as much so as any of us—and that that event may happen any day in almost any school-room. But want of consideration—lack of judgment—carelessness—thoughtlessness in speaking, hasty action, giving no chance for reason to dictate, measuring all minds, all spirits, by a machine of fixed calibre—crushing some and stretching others—is what works mischief perpetually, and is a course to be condemned and protested against as a hardening process, not to be known out of a heathen community. There are traits of character in the American Indian, the Spartan and the Hindoo—that, upon the page of history, may seem admirable; but they are not a Christian growth. Such are stolid indifference to bodily pain—and an equal indifference to the sufferings and sorrows of others. By persistent training, the cords of sympathy may be shriveled, and the fountains of feeling be dried up. Certain routines of habit, of thought and action, may turn a human nature into a metallic one, that shall—ever under the conditions—be deaf and dead to all appeal from the gentle, tender, blooming side of our being. It blights childhood, as frost blights those modest flowers that cling to sunny banks only. The "crimson sweat" of Jesus, it has been thought, was the result of suffering in a nature immaculate, sensitive and sublimated beyond human conception—a grosser nature would never have manifested it. Too often we seem ashamed of tenderness; we steel our hearts against it; and so, every day sees a thousand times repeated—the sweet violets of human life torn—crushed, trampled—and laid out of our sight. 'Tis a bald mystery, ruthless, inscrutable as fate—an endowment of pain without compensation—that no heart can bear that is not fossilized or heathenized, or that has not a martyr's faith in the beatitudes of the life to come. \* \* \* \* \*

"Little Lizzie was six years old. She was too young to be put into the crowd of a public school, we thought—and we hesitated a

long time before agreeing to do it. But her cousin, several years older, was going, and we finally concluded to allow her to go—though she had just risen from the measles. She was earnest to go, and, when permitted, was delighted, and enjoyed it highly to the end. She felt proud and dignified with her book and little tasks, and we all enjoyed witnessing her enthusiasm, and felt satisfied we had not erred in gratifying her. So she continued. She had been in school just one month. One day she came home, under escort of her faithful cousin, in sad humiliation and disgrace, her little heart seemingly crushed, and she sobbing pitiably—‘Oh! mamma, mamma!’ By degrees she was able to speak—she told her story in fragments and fitfully—‘I—felt sick—inamma—I—hold—up—my—hand—and the teacher—would not—let—me—go out. I—hold—up—my—hand—again—and she called me—up—before all—the children—and scolded me—and sent—me—home—Oh! mamma.’ That was all. Stifled with sobs, she could say no more. It was enough. Too sick to sit in her seat, she had been rudely scolded before the pupils and dismissed—and that, too, when she had done all she could do, under the law, and in the politest manner, viz.: hold up her little hand as a token of petition—pleading. This one thought had burned into her very soul. She dwelt on it till dark. We tried in vain to soothe or comfort her. She had been hurt—disgraced beyond help. We laid her in her little crib, tortured with a terrible headache, and in a high fever. We had hope in sleep, rest and the elastic spring of childhood. We trusted that in the freshness of the morning air—the bright sun-light—the love of all her friends, and the caresses and petting of the dearest, that she would forget the agony of this first crushing mortification, and would be herself again. Alas! it never came. We had to stifle that hope. Before midnight, the flame color on her cheeks, suffusing all her neck and chest, told the fearful story—scarlet-fever. All that night, and the forty-eight hours of life that followed, the little white hand could not be kept below the sheet. It was held up constantly, and that touching moan—‘Oh! mamma, I held up my hand’—was continued as long as strength would permit. At last she lay still. The celestial aurora was dawning on her young spirit—and presently there came the messenger with inverted taper—and she went up to where the shining ones will answer all her pleadings. Lizzie sleeps under the California violets—but her little story I shall hear uttered every hour, forever, through life—and the spiritual photograph of that little hand is set unalterably upon memory’s immortal tablet. \* \* \* \* \*

Shall we blame any one? The devoted mother of that dear child—cultivated, refined, thoughtful, gracious—had no reproach to cast—no blame to lay upon any; not even in that last hour of exquisite pain, when a formal note from the school was sent into that chamber—shrouded in the fearful eclipse—‘Lizzie has been absent from school three days—please attend to it.’ No—not even when ‘sitting in sorrow’ in bereavement, nor when the dark curtain was drawn that shut the sweet star—forever—from sight;—and we must have none. Only let the costly lesson stand in letters of fire before us to-day, to-morrow, forever.—*California Teacher.*

## II. Papers on Practical Education.

### 1. EDUCATION OF FARMERS—ITS NECESSITY.

No man is so high as to be independent of the great interest of agriculture; no man is so low as not to be affected by its success, progress, or decline. Agriculture supplies us with food, and to a great degree clothes us; without it we could not have manufactures, and we should not have commerce. These all stand together like pillars in a temple, the largest in the centre, and that largest is agriculture.

Agriculture is not only indispensable to national prosperity, but is eminently conducive to the welfare of those who are engaged in it; it gives health to the body, energy to the mind, is favourable to virtuous and temperate habits, and to knowledge and purity of moral character; which are the pillars of good government, and the true support of national independence. How necessary, then, does it become farmers as a class to strive earnestly for a higher attainment in regard to farm education. Not a fraction of the attention is given to the training of farmers for the farm that the age demands.

If ever agriculture becomes a true science, it must be by the thorough education of farmers, in the practical experiments and views of farmers themselves. Almost every question and practice of agriculture, such as draining, drilling, manuring, and so through every labour of the farm, is still in doubt and uncertainty. These things should not be.

And it becomes the business of farmers to observe and think, and

read, and learn more of their calling, and thus be able to clear up doubt and error, and render more certain every process of farming.

The man who is no wiser in relation to his profession, in the waning hours of the year than he was at the commencement, is either very stupid or unpardonably negligent.

With the multitude of agricultural publications, teeming with practical and useful information, no farmer can justify himself in remaining in ignorance of ‘the art and mystery of his profession.’

### 2. THE EDUCATION OF THE HAND.

The *Scientific American* discourses thus pleasantly and sensibly about the hands: People, with a few unfortunate exceptions, have each two hands. We should not mention this fact, were it not that in the education of youth, only one seems to be generally considered. Children are told to hold their knives in their right hand when cutting their food, and when this necessary operation is completed, to lay it down and use their forks while eating, still employing the right hand. The only further instruction they receive in regard to the left hand, is to keep it clean in common with the right hand, and not to get in the habit of thrusting it into their pockets. They are taught that whenever one hand only is required, the preference is to be given to the right. Thus the left hand is, with the large majority of people, a comparatively useless member, employed only to supplement the other in all manual operations. Without pausing to enquire into the origin of this senseless custom, it is sufficient for our purpose to say that it has no foundation in the anatomy of the hand, or in any natural peculiarity of the human mind. As well might we teach children to hop about on the right foot, to keep the left eye closed, and to stop the left ear with cotton, as to magnify the value of the right hand at the expense of the left. Nor, in renouncing this absurdity, would it be necessary to the late existing social conventionalities. The fork may be held in the right hand while eating, and the knife may take its place in cutting food. These are small matters, observed only for conventional reasons. What excuse can there be for neglecting the early and careful instruction of both hands? We are not speaking of an impracticable thing when we say it is impossible to rear children so that whatever one hand can do the other may do equally well. We know this has been accomplished in many notable instances, where the disability of the left hand has been rectified, in spite of all obstacles arising from bad habits acquired in childhood. We have seen surgeons transfer an instrument from one hand to the other during an operation whenever convenience required it, without the least awkwardness. We have seen draughtsmen using both hands in colouring drawings, an immense advantage both to rapidity of work and evenness of shading. We have seen woodmen chop timber ‘right or left handed,’ and one carpenter who used to hammer or saw with either hand with nearly equal facility. In all these cases the use of the left hand in common with the right, gave very much greater efficiency.

## III. Papers on Boys and Young Men.

### 1. ABOUT BOYS

Mr. A. Hope, author of ‘A book about Dominies,’ has published in Edinburgh a companion volume, called ‘A book about Boys.’ He tells us at the beginning what kind of boys he likes; ‘I don’t think much about your gentlemanly neat boys, and I abominate your pretty effeminate boys, and I have not such faith as some people in even your good, clever boys, who are always at the head of their classes, and never do anything naughty, except when it is not found out.—But I like the happy, healthy, unsophisticated boy, and not a young gentleman; active, restless, generous, brave and truthful, simple and pure minded; who thinks it half a pleasure to bear pain without crying; climbs trees, tears his trowsers, has frequent tumbles, bumps and bruises, and comes home now and then splashed with mud.

There are four classes of boys whom this ‘dominie’ excludes from ‘honours and privileges of boyhood’—yet his heart yearns towards them, ‘for, after all, are they not in some respects boys and brothers?’ The classification is as follows:

1. ‘YOUNG GENTLEMEN.’—I shudder as I pen the disgusting name. You know what I mean? The beardless beings who wish to be thought men and dandies, and to that end, smoke, swear and swagger with more or less impunity. If you go out into the street on Saturday afternoon you will see hundreds of them, whom you would like to take between your finger and thumb and drop quietly into the gutter.

2. ‘MAMMA’S DARLINGS.’—A large and increasing class, I grieve to say, though I would speak tenderly of them since their degrada-

tions is often caused by circumstances over which, neither they, nor the wisest of writers and teachers have control, viz., fond and foolish mothers, who will make them wear comforters and galoshes, and keep them in the house when it is cold, and encourage them to cry when they are hurt.

3. 'CLEVER BOYS.'—I mean preternaturally clever boys, who read Sir Walter Scott at the tender age of five, but having thereafter been introduced to Greek, look with scorn and contempt on all subjects of lighter interest, and never condescend to open another story book, but to spend boyhood and youth in steadily and perseveringly drying themselves up into Latin and Greek mummies, if happily they escape premature death, and by becoming sound and venerable, and not too brilliant bishops, or stupid and useless schoolmasters, or writers of soul appalling commentaries.

4. 'GOOD BOYS.'—I mean very good boys, who always try to please their masters, and never are noisy or idle, and would sink into the ground with shame if it were necessary to punish them, and whose conversation, in story books, is of the most moral and grammatical description. Of course there are such boys, because the story book says so, but it has never been my good fortune to meet with them.

## 2. HOW POOR BOYS REACH THE TOP ROUND.

There are 17,919 names who pay an income tax in this city. Sixty-seven persons pay a tax on incomes of \$100,000 or over. Most of these solid gentlemen are self-made men, who have come up from the lowest round of the ladder. The man who leads the list, A. T. Stewart, everybody knows is an Irish emigrant, who commenced life with a capital of less than twenty-five cents; indeed, with few exceptions, most of the parties in the list were scarce as well off as Mr. Stewart. Take Henry Keep; he boasts that he graduated from the poor-house of Jefferson county. Jay Gould drove a herd of cattle from Delhi, Delaware county, when a lad, for fifty cents a day, in order to get money enough to reach the Hudson river. David Groesbeck, over thirty years ago, used to mend old shoes for his brother, who was a respectable shoemaker in Albany. We all know the history of James Gordon Bennett, Robert Bonner, poor boys full of talent and industry. Rufus Hatch, when a youngster, had an ambition to hold the reins of peddler's waggon. E. D. Morgan commenced life with a quart measure of molasses. It is scarcely a dozen years since Henry Clews was an errand boy in one of the banking-houses down town. The brothers Seligman started out in life with a peddler's pack. David Dows, in his younger days, retailed pork by the half-pound and molasses by the gill. H. T. Helmbold was first cabin boy on the sloop Mary Jane, that navigated the Delaware river. We might go on through the list, and show that nearly every one of these solid men were the architects of their own fortunes. Young men, who are struggling for place and position, should remember that the individuals in the list named had to battle for life just as hard as they are doing. Let them take heart and never say die.

"Honour and shame from no condition rise,  
Act well your part—there all the honour lies."

## 3. HOW SOME AMERICAN MERCHANTS HAVE RISEN.

A few years ago, a large drug firm in this city advertised for a boy. Next day the store was thronged with applicants, among them a queer looking little fellow, accompanied by a woman, who proved to be his aunt, in lieu of faithful parents, by whom he had been abandoned. Looking at this little waif, the merchant in the store promptly said: "Can't take him; places all full; besides, he is too small." "I know he is small," said the woman, "but he is willing and faithful." There was a twinkle in the boy's eyes which made the merchant think again. A partner in the firm volunteered to remark that he "did not see what they wanted of such a boy—he wasn't bigger than a pint of cider." But after consultation the boy was set to work. A few days later a call was made on the boys in the store for some one to stay all night. The prompt response of the little fellow contrasted well with the reluctance of others. In the middle of the night the merchant looked in to see if all was right in the store, and presently discovered his *protege* busy scissoring labels. "What are you doing?" said he; "I did not tell you to work nights." "I know you did not tell me so, but I thought I might as well be doing something." In the morning the cashier got orders to "double that boy's wages, for he is *willing*." Only a few weeks elapsed before a show of wild beasts passed through the streets, and very naturally all hands in the store rushed to witness the spectacle. A thief saw his opportunity, and entered at the rear door to seize something, but in a twinkling found himself firmly clutched by the diminutive clerk aforesaid, and, after a struggle, was captured. Not only was a robbery prevented, but valuable

articles taken from other stores were recovered. When asked by the merchant why he staid behind to watch when all others quit their work, the reply was, "You told me never to leave the store when others were absent, and I thought I'd stay." Orders were immediately given once more: "Double that boy's wages; he is *willing and faithful*." To-day that boy is getting a salary of \$2,500, and next January will become a member of the firm.—*Republic*.

## 4. INDECISION IN YOUNG MEN.

An exchange truly says; "Thousands of young men are to-day drifting helplessly about on the ocean of life, vainly hoping that ere long some favorable breeze will spring up and drive their vessels into some safe harbor. Where that safe harbor they have no idea, because they have no definite object in view. They have never decided upon any course of life, but permit their actions to be shaped and moulded by the circumstances of the hour. Is it any wonder that disasters follow each other in quick succession? More men are ruined through indecision than from a wrong decision. Few men will deliberately lay out and pursue a plan of life that will ultimately work their ruin. Most young men of the present day enter the great battle of life without any well defined system of warfare, and consequently spend their best days in aimless pursuits. Indecision is the bane of our existence. Could we look into the world of spirits we would find but few souls in the dark regions of woe that had resolved to reach that goal; nearly all who are there, and those who are hastening there, are in their present condition simply because they would go and their indecision has been their ruin."

## 5. OBEY PROMPTLY AND FULLY.

It is the great thing of life to learn, always, without hesitation, to obey the word of command, whether from friends, from conscience, or the Bible, whatever may be the consequences.—Sometimes our life depends upon obedience.

A brakeman whose business it was to attend to the turn-outs near the station, on an important railroad line, once heard the shriek of an express train as it came thundering along. He hurried to the brakes, when whom should he see upon the track, running towards him? It was his little boy, about four years of age, exactly between the rails over which the terrible train was coming. He had only a moment for consideration. The train could not be stopped soon enough by the engineer, even if he saw the child. If he rushed to save the child his whole train would run off the track, and God only knew how many lives might be lost. It was his duty to alter the brakes.—There was but one thing to be done.

"Lay right down, my son!" he shouted at the top of his voice. He unlocked his bar; he changed the track for the train, and fell upon the earth almost unconscious, as with an awful roar the immense engine with its long train swept by.

What if that little boy had hesitated to obey! What if he had continued to run toward his father! What if he had first asked the question, why he should do so?

But it was not so. Down went the little fellow at the word of command, flat upon his face. Down upon his face remained the little boy, till, when the train was passed, the father hurried to him as rapidly as his fainting limbs would permit, and raised him up unharmed.

How beautiful and noble is obedience to duty in the hour of danger! We never weary of reading Mrs. Heman's touching poem upon "Cassabianca," or of admiring the noble boy, standing at his post upon the burning ship, where his father had stationed him, waiting for the order to retire, from the lips that were then cold in death, although he knew it not.

There was a cry of fire near a large school house in the city. The children in the school were very much affrighted; and in spite of the efforts of their teachers, began to rush to the doors and stairs, thus periling their limbs and lives.

But there was one little girl who remained quietly in her seat. She looked very pale, and trembled, and the tears stood in her eyes. Very much struck by her appearance, and by her remaining at her desk, her teacher asked her why she did not do as the other girls did. "My father is a fireman," she said, "and he told me whenever there was cry of fire while I was in school, to remain quiet in my seat, for that was the safest way. I was dreadfully frightened, but I knew that father had told me what was best, so I sat still, when they ran to the doors."

Certainly it is always best to obey those that are older and wiser than ourselves; and especially to obey promptly, cheerfully, and fully every command that God has written in his Word.—"This word is a lamp unto my feet, and a light unto my path."—*B. K. P. in Zion's Herald.*

IV. Monthly Report on Meteorology of the Province of Ontario.

I. ABSTRACT OF MONTHLY METEOROLOGICAL RESULTS, compiled from the Returns of the daily observations at ten Grammar School Stations, for DECEMBER, 1869.

OBSERVERS:—Barrie—H. B. Spotton, Esq., M.A.; Belleville—A. Burdon, Esq.; Cornwall—J. L. Bradbury, Esq., M.A.; Goderich—James Preston, Esq., B.A.; Hamilton—A. Macallum, Esq., M.A.; Pembroke—J. W. Connor, Esq., B.A.; Peterborough—Ivan O'Beirne, Esq.; Simcoe—James J. Wadsworth, Esq., M.A.; Stratford—C. J. Macgregor, Esq., M.A.; Windsor—J. Johnston, Esq., B.A.

Table with columns: STATION, ELEVATION, BAROMETER AT TEMPERATURE OF 29° FAHRENHEIT, TEMPERATURE OF THE AIR, TENSION OF VAPOUR, and MONTHLY MEANS. Rows include Barrie, Belleville, Cornwall, Goderich, Hamilton, Pembroke, Peterborough, Simcoe, Stratford, and Windsor.

Table with columns: STATION, HUMIDITY OF AIR, WINDS, NUMBER OF OBSERVATIONS, AMOUNT OF CLOUDINESS, ESTIMATED VELOCITY OF WIND, RAIN, SNOW, and AURORAS. Rows include Barrie, Belleville, Cornwall, Goderich, Hamilton, Pembroke, Peterborough, Simcoe, Stratford, and Windsor.

Where the clouds have contrary motions, the higher current is entered here. Velocity is estimated, 0 denoting calm or light air; 10 denoting very heavy hurricane. REMARKS:—Kempfenfeldt Bay frozen over for the first time on the night of 6th—7th. 22nd, terrific storm of wind and snow began at 4.30 P.M., and lasted two hours, wind from W. Snow, 1st, 2nd, 4th, 7th, 12th, 13th, 16th, 17th, 18th, 21st, 22nd, 23rd. Rain, 11th, 15th, 22nd. CORNWALL.—On 17th, wind storm. Rain in small quantities on 16th, 7th, 18th, 21st, 29th, 30th. Rain, 4th, 10th, 11th, 12th, 15th, 16th, 22nd, 27th.

HAMILTON.—On 9th, halo round moon. 31st, at 8 P. M., meteor in zenith fell SW with long trail. Wind storms, 16th, 20th, 22nd, 23rd, 30th. Fog, 11th. Snow, 1st, 2nd, 4th, 7th, 21st, 28th, 29th. Rain, 4th, 10th, 11th, 15th, 16th, 21st, 27th, 29th.

PEMBROKE.—On 5th, shooting star near NE horizon at 7 P. M. Wind storms, 1st, 4th, 22nd, 30th. Fogs, 27th, 28th. Snow, 1st, 2nd, 4th, 11th, 12th, 18th, 19th, 22nd, 23rd, 29th. Rain, 1st, 15th, 16th, 22nd, 27th. Early part of month cold, but the weather much milder in latter part. The lake—previously frozen over—again partly open 1st Dec., but again frozen on 2nd; ice not safe till end of month.

PETERBOROUGH.—On 8th, slight hail for a short time. 9th, wide and distinct halo round moon at 8 P. M. 21st, barometer fell from 29.722 at 1 P. M. to 28.648 at 1 P. M., 22nd. Snow, 2nd, 4th, 7th, 16th, 19th, 21st, 22nd, 30th. Rain, 11th, 12th, 5th, 16th, 22nd, 27th, 28th. Month dark and cloudy, and fluctuations of barometer also unusual, but the mercury in the barometer was rather higher than usual. The observer notes a complete change of climate within the last few years. The whole year 1869 unusually cold and cloudy. There was frost every month in the year (though not observed in July in the town it occurred in the country). Scarcely any phenomena or atmospheric disturbances indicating excess of electricity. "From 20 to 30 years ago we used ordinarily in summer and winter to have long spells of uninterrupted cloudless weather, especially in winter, and we always had three to five weeks of Indian summer in the autumn. Of later years, we rarely have clear weather of any continuance, and it may be said, no Indian summer."

SIMCOE.—Wind storms, 1st, 21st. Snow, 3rd, 4th, 21st. Rain, 1st, 4th, 11th, 12th, 15th, 16th, 21st, 22nd, 27th, 28th.

STRATFORD.—Wind storms, 21st, 22nd, 23rd. Fogs, 10th, 11th, 12th, 14th, 27th. Snow, 1st, 2nd, 4th, 7th, 10th, 16th—21st, 24th, 26th, 29th, 30th. Rain, 11th, 12th, 15th, 16th, 22nd, 27th.

WINDSOR.—On 8th, 3 meteors in S towards H; 2 in S towards W; 1 in N towards H. Lunar halo on 8th, 9th, 13th, 14th, 17th, 22nd. On 30th, meteor in SE towards H. Wind storms, 22nd, 24th. Snow, 2nd, 4th, 7th, 12th, 16th, 17th, 19th, 20th, 21st. Rain, 4th, 10th, 11th, 12th, 15th, 16th, 21st, 22nd. The navigation of the Detroit river closed on the 4th, with the exception of an occasional short trip.

## V. Biographical Sketches.

### 1. JOHN TORRANCE, ESQ.

One of our oldest citizens, John Torrance, Esq., died January 20th, at his residence St. Antoine Hall, at the ripe age of 84. We had heard the day before that his medical attendant despaired of his recovery, he having been ailing for some months past, and having fallen into a comatose state on Tuesday morning. He was one of our wealthiest citizens, and his death will be generally regretted. With him goes to the grave yet another of those old inhabitants, now very few remaining, who connected the present with a past generation of men. Mr. Torrance's name is intimately associated with the ancient commerce of Montreal. Our evening contemporary, the *Witness*, states: "The deceased, who was a native of Galloway, Scotland, came to Canada at an early age, and engaging in the grocery business, rose to be one of the first merchants in this city. The firm of which he was the head, did more than any other except the Messrs. Molson to establish the lines of steamboats on the St. Lawrence, and in various ways manifested much enterprise. Mr. Torrance had a great taste for gardening, and when he retired from business a good many years ago, he tranquilly passed his time among the beautiful grounds and conservatories of his residence, St. Antoine Hall.—*Montreal Gazette*."

### 2. COMMODORE ZEALAND.

The death of "Commodore" Zealand is announced from Hamilton. His face was a familiar one there, and will be much missed. He was, says the *Spectator*, one of the few comrades of Lord Nelson, who had served the Admiral for more than sixty-four years. He had served at many of the naval engagements of the old French war, and was present at the fight of Copenhagen, which ended in the surrender of the whole Danish navy. He also served on board a vessel of the squadron which took off Sir John Moore's retreating forces from the Corunna, and thus will be seen to have gained in a sharp school that practical knowledge of seamanship of which he made so good a use hereafter. Coming out to Canada in the year 1812, he, with other man-of-war-men, was sent to help to man our Lake flotilla, and shared in many of the engagements of our last American war, being present both at Sackett's Harbor and at the taking of Oswego. Again in 1837, he was called upon to serve his country, and was one of the party who succeeded in cutting out the Caroline, being the last man to leave her before she was sent over the Falls. He was the first master who ever brought a vessel through the canal into the Bay, and was the first also to volunteer when a Naval Brigade was called for. His record of service comes as far down as three years ago, when, during the Fenian raid and in his 74th year he took his turn in mounting guard.

## VI. Miscellaneous.

### 1. "I HATE TO GO ABOVE YOU."

Still the school-house by the road,  
A ragged beggar sunning;  
Around it still the sumachs grow,  
And blackberry vines are running.

Within, the master's desk is seen,  
Deep scarred by raps official;  
The warping floor, the battered seats,  
The Jack-knife's carved initial;

The charcoal frescoes on its wall;  
Its door's worn still, betraying  
The feet that, creeping slow to school,  
Went stomping out to playing.

Long years ago a winter's sun  
Shone over it at setting;  
Lit up its western window panes,  
And low eaves' icy fretting.

It touched the tangled golden curls,  
And brown eyes full of grieving,  
Of one who still her steps delayed,  
When all the school were leaving.

For near her stood the little boy,  
Her childish favour singled;  
His cap pulled low upon a face  
Where pride and shame were mingled.

Pushing with restless feet the snow  
To right and left, he lingered;—  
As restlessly her tiny hands  
The blue-checked apron fingered.

He saw her lift her eyes; he felt  
The soft hand's light carressing,  
And heard the tremble of her voice,  
As if a fault confessing.

"I am sorry that I spelt the word,  
I hate to go above you,  
Because—the brown eyes lower fell—  
"Because, you see, I love you!"

Still memory to a gray-haired man  
That sweet child-face is shewing;  
Dear girl! the grasses on her grave  
Have forty years been growing!

He lives to learn in life's hard school,  
How few who pass above him  
Lament their triumph and his loss,  
Like her—because they love him.

J. G. WHITING.

### 2. "IF WE KNEW!"

BY MRS. HENRY WARD BEECHER.

In a recent number we copied a scrap of poetry with this significant title. It struck us very forcibly as containing a profitable lesson, and has haunted us daily ever since. \*

We have been sitting this rich, golden afternoon on our veranda, all alone. Before us stand the grand old hills; on our right lies the beautiful Hudson. The husband—"house-bond"—the most sweetly significant word in the English language, is toiling in the hot and dusty city; the children are all scattered: the grandchildren, mischievous, merry little rogues, are not as they should be, near grandma's chair; and the servants, in the kitchen or laundry to-day, move as quietly as the wind in the tree tops. *It is so still!* We could hardly be more alone if we were on the highest peak of Castle Hill, and, as we sit in this wonderful quiet, those words, "*If we knew,*" are stirring our heart with a strange and solemn power.

Ah! if in early youth "*we knew!*" If we could look along the map of life clear to the end, and see all the breakers and quicksands which, by practice and self-control we could have avoided, how different would be the view we now take of the "*backward-track!*" No doubt, it is well, in many ways, that we cannot read

\*This beautiful piece of poetry will be found on pages 91 and 92 of the *Journal of Education* for last June.

the future; trials and sorrows that no foresight could have turned aside, would have been doubled by anticipation and fore-knowledge, and yet—we doubt if there are many, who, looking back from the "half-way house," would willingly endure the double pain and sorrow, if they might have had the power to foresee the inevitable result of certain courses, and, profiting by this foreknowledge, have avoided the danger or the sin.

*Brother! Sister!* Would you be patient or cross to your little playmate "if you knew" those little "baby fingers" would "never trouble you again?"

Two little boys were at play—one of three years, the other but eighteen months. Both wanted the rocking-chair. Full of health and animal spirits, the dispute ran high, and, at last, the elder struck the little one. Only a few days and the baby hands were folded in "snowy grace" upon the cold and quiet heart, and laid in the grave. A short time after, hearing bitter sobs in the garden, the mother found the lonely brother—himself but just past babyhood—lying under the peach trees, watching with eager eyes some birds flying over his head, and calling between his sobs, "Oh, birdies! little birdies! Fly up! fly higher! and tell Jesus Christ if he will only let Georgie come back to me he may have the rocking-chair all the time, and I never, never will strike him again—never! never!"

*Oh! Father!* Don't be harsh with your son. He disobeyed your commands, and of course he has done wrong; but he is only a little child. It was the overflux of exuberant life, not wilful disobedience. If you could look forward to what soon may be, may be, how leniently would you judge—how gently would you chide; and, by your gentleness secure the obedience much more effectually.

*Ah! Poor tired mother!* You are very weary, and half sick. Your eyes are heavy for want of sleep, and your head throbbing with the noise and shouts, and wild frolics of your little ones. But it is health, and strength, and life. Be patient! If soon, with hot and tearless eyes, you watch by the little crib were fever may conquer that life, but late so joyous and full of activity, can you endure what *may be*, if you have scattered "thorns, not roses, for your reaping by and by?"

"I have asked you twenty times to mend this coat, and it is not done yet. 'No time!' How long would it have taken? But, well—I can go ragged, I suppose. You take little heed to my wishes or advice. You must take your own way, or you'll not be satisfied."

*Husband!* you love your wife; you would be indignant if a looker-on should hint that you misjudged, or were over-exacting. Why do you say such ugly, biting things? Your heart, or that silent monitor, your conscience, tells you that she did not mean to disregard your wishes or advice. She was tired, or over-taxed with care and frequent interruptions; or perhaps sickness is creeping upon her. Whatever the reason, the offence was but a little thing. Even if she was self-willed, or irritable, be patient with her. You know a certain tone of your voice, or a love-look from your eye, would have brought her to your side in an instant—sorry, self-upbraiding—loving and honoring you with her whole heart. *Ah!* "If you knew!" These first morose, fault-finding words, perhaps, are "leaving on her heart a shadow—leaving on your heart a stain" which may be the beginning of coldness, mistrust and defiance—or possibly a deeper sin, where, but for them, you could have secured joy and gladness, growing sweeter and purer day by day! Deal gently. You, her husband, can make her happy, loving and good; or you can make her irritable, unloving and evil.

*John!* Why do you always wait and wait, and hinder me so? You can come when I call you, just as well as to keep me waiting, if you only choose to do so. But you are always so obstinately bent on taking your own time, regardless of other people's comfort."

*Wife!* It is just such little impatient, waspish words that tempt your husband to seek quiet, comfort and appreciation away from your side. No matter if he speaks "just as impatiently" to you "fifty times a day," show him a better way. Why retort, or shrink from the "little shadows" which you can, by gentleness, dispel? You have even more power in your gentleness, than your husband has in his strength. Yield a little. *It is not hard*, and you will reap a glorious reward. Is not your husband's love and confidence worth keeping by a little patience and forbearance? But if not for present joy, to ward off misery at least, "set a guard over the doors of your mouth, that you sin not with your lips," and so tread life's pathway with him to whom you have vowed a wife's fealty, that if called to sit in the desolation of widowhood, there shall not be added to that sorrow the anguish of self-upbraiding, for little services impatiently rendered or love requited by coldness or irritability.

When we have passed through all the labors and trials of earlier life, and in full maturity, or just on the decline, recall the friends of your youth, and the sweeter family ties, how the heart aches with the memory of

"The hasty words or actions,  
Strewn along our backward track."

and vainly yearns for one more opportunity for the better performance of our whole duty in all love, fidelity and patience. But

"God pity us all,  
For of all sad words of tongue or pen,  
Who vainly the faults of youth recall;  
The saddest are these: "It might have been."

—The Mother at Home.

### 3. TWO CURIOUS NEEDLES.

The King of Prussia recently visited a needle manufactory in his kingdom, in order to see what machinery, combined with the human hand could produce. He was shown a number of superfine needles, thousands of which together did not weigh half an ounce, and marvelled how such minute objects could be pierced with an eye. But he was to see in this respect even something still finer and more perfect could be created. The borer—that is, the workman whose business it is to bore the eyes in those needles—asked for a hair from the monarch's head. It was readily given and with a smile. He placed it at once under the boring machine, made a hole in it with the greatest care, furnished with a thread, and then handed the singular needle to the astonished King. The second curious needle is in possession of Queen Victoria. It was made at the celebrated needle manufactory of Reddish, and represents the column of Trajan in miniature. This well known Roman column is adorned with numerous scenes in sculpture which immortalize Trajan's heroic actions in war. On this diminutive needle, scenes in the life of Queen Victoria are represented in relief, but so finely cut and so small that it requires a magnifying glass to see them. The Victoria needle can, moreover, be opened; it contains a number of needles of smaller size, which are equally adorned with scenes in relief.

### 4. THE NEW EDUCATION LAW IN TURKEY.

A new education law has just been promulgated in Constantinople. Primary instruction is compulsory for every inhabitant of the Turkish empire. The period of instruction for girls is fixed from six to ten years of age, and for boys from six to eleven. The magistrates of the districts and villages are to keep a register of the names of the boys and girls whose age qualifies them for instruction, together with those of their parents or guardians. If any of these do not go to school, the magistrate is to warn the parent or guardian of his obligation, and after such a notice, if the child is not sent to school within a month, and no valid reason is given for its absence, a fine of from five to one hundred piastres is to be imposed, according to the means of the parent, and the child is to be taken to school by the authorities. These fines are to be paid into the education fund.

The cases in which exception is allowed are, first, when the child is shown to have some constitutional defect; second, when the parent is poor, and would suffer loss from his child being sent to school; third, when the child is employed in agricultural labor at harvest time; fourth, when the distance from the residence of the child to the school is more than half an hour's walk; fifth, when there is no school in the district, or when the school is not sufficiently large to accommodate all the pupils; sixth, when proof is furnished that the child is being educated either at home or in a private school.

The primary schools are to be either Mussulman or Christian, according to the religion which is most prevalent in the district. The higher schools, however, are to receive Mussulmans and Christians indiscriminately. An "Imperial Council for Public Instruction" has been established to see to the due execution of the law.

## VII. Educational Intelligence.

—CONGREGATIONAL COLLEGE.—In consequence of the vacancy in the office of Principal and Professor of Church History in the Congregational College at Montreal, caused by the decease of the late Rev. Dr. Lillie, the subscribers to the funds, forming the legal corporation of the College, were called together by the Board of Directors, and met at Toronto. The meeting was called to order by Rev. Professor Cornish, the Secretary of the College. Rev. James Porter, of Toronto, was appointed Chairman, and Rev. W. W. Smith minute Secretary, to the meeting. Rev. John G. Manly offered prayer. Professor Cornish read the report of the Board of Directors. The report was received, and its paragraphs considered *seriatim*. The paragraphs first and second, testifying to the labours and work of the late Dr. Lillie, and offering condolence and sympathy to the bereaved widow and family of the late

Principal of the College, were passed unanimously without discussion. Paragraph third, stating that the Board had, as a matter of justice to the memory and long services of Dr. Lillie, granted to Mrs. Lillie the amount of salary of Dr. Lillie up to May next, was likewise adopted. Paragraph fourth, recommending the formation of a fund of \$5,000, the revenue of which shall be guaranteed to Mrs. Lillie for life; and afterward the principal to form a partial endowment for professorship of Church History in the College; and which endowment shall bear the name of "The Lillie Professorship of Church History," was adopted. Paragraph five stated that the Board had made temporary arrangements for the present session, availing themselves of the offers of Dr. Wilkes and Prof. Cornish to meet the classes for the current session, was adopted. Paragraph six recommended that no unnecessary delay be made in filling the vacancy; and stated that correspondence had been had with the Colonial Missionary Society with respect to the matter. The concluding paragraph stated that the Board were not prepared to present a nomination to the meeting. Upon these two paragraphs a lengthy discussion arose. The result of the discussion, after various amendments had been offered and withdrawn as the discussion went on, was embodied in the following resolution, which was passed:—Moved by Rev. J. A. Dickson, seconded by George Hague, Esq., "That we postpone the appointment of a Professor until the general annual meeting of the corporation in June next; and that in the meantime the consideration of the whole question be left to the College Board, who shall be assisted by a committee of fifteen gentlemen to be appointed by this meeting, who shall come prepared with a report and nomination at said annual meeting." In accordance with this resolution, a committee of fifteen, with the Rev. J. G. Manly as Convener, was appointed. The Board were also authorized to employ a collector for the Lillie Memorial Fund. After prayer by Rev. T. Baker, the meeting, which was numerously attended from all portions of Ontario and Quebec, terminated.

—SCHOOLS IN BARTON.—The report of the Local Superintendent of Schools for the township of Barton, the Rev. Geo. A. Bull, M.A., gives some interesting facts in relation to the educational work of the township. There are seven schools in the township, and one in Glanford, included in Mr. Bull's district. There are four male and four female teachers employed. There were attending these schools 706 pupils, 374 boys and 332 girls; a very fair average out of a school population in the township of 776. The average salary paid to male teachers was \$375 25, and to female teachers \$280. The highest salary paid to any male teacher was \$440 and to female \$300. The total amount received by the trustees for school purposes during the year was \$3,774 15, of which \$2,224 59 was from municipal taxes. And the total amount expended was \$3,450 20. The local superintendent made twenty-seven official visits to the schools during the year.—*Hamilton Spectator*.

—Fourth Annual Township Examination, Tossoronto, was held on the 24th inst., in Section No. 3, a prosperous locality, where there is a deep interest in the education of the young, and a comfortable school-room, which is a credit to themselves and a benefit to their neighbours. There were about 70 earnest competitors, and a respectable number of parents and others present. The examination embraced all the subjects and classes, taught during the year, in the different competing schools. The principal examiners were three clergymen, who did their work faithfully and well. At the close they expressed themselves highly pleased, with the indications of educational progress within the bounds of the municipality, and especially commended its councilors for their liberality and untiring co-operation, with one exception, which is not at all likely to occur again; the day's work was both agreeable to all and profitable to many. Every one from a distance was very grateful towards John Fisher, Esq., the worthy Reeve, who is always ready to advance the noble cause of education, not only in his own section, but also beyond its bounds, and to Messrs. John Reid, Samuel and William Graham and Thomas Gordon, for their hearty hospitality; and thanks for the same are worthy of being recorded in the *Journal of Education*.—*Communicated*.

—ACADIA COLLEGE.—The Rev. Dr. Sawyer succeeds the Rev. Dr. Cramp in the Presidency of this College, the latter as a Professor of *Emeritus*, taking the Chair of Ecclesiastical History, or Christian Ethics. Professor William Elder, who has been completing his studies under Professor Agassiz for the last year, enters on the duties of the Natural History. The Baptists are making highly creditable efforts in connection with the endowment and equipment of this College.—*Halifax Reporter*.

—A UNIVERSITY FOR WALES.—The *Daily News* says, that the scheme for establishing a national University for Wales promises to be successful. The committee who have had the matter in hand have fixed upon Aberystwith, where they have purchased the Castle House. The intention of its founders is to make it, if possible, a college of the same status and privileges as the Queen's Colleges in Ireland and University and King's Colleges in London. In constitution it is to be entirely undenominational, offering all its privileges and all its opportunities on equal terms to persons of all creeds. In fact, the college aims to be for Wales what the London University has been for England, with the exception that all regular students are to be resident, and that before proceeding to their B. A. degree students will be required to produce certificates of residence in the college, or an affiliated college, three years, or nine terms after matriculation. The one thing the scheme now wants, however, is money. Its promoters have purchased the

building at a cost of £10,000, less than half of which has been subscribed as yet. Of course they speak of an appeal to the Government for help, such as the Queen's University and London University receive.

—THE RUSSIAN ELEMENTARY SCHOOLS are supported at an annual expense of \$7,920,000; of this amount the State supplies \$275,431. The salaries of the teachers require the sum of \$5,760,000, made up as follows: \$1,800,000 or 312 per cent. from tuition fees, \$3,600,000 or 65.1 per cent. from the districts, and \$212,835 from the Government.

—WISCONSIN.—The Superintendent's report for 1868 is quite encouraging. In every particular there appears to have been a slight gain on the record of the preceding year; though in no instance is the increase greater than would naturally result from the general growth and progress of the State. The legal school population (all over four and under twenty years of age), was about 387,000. The number of actual "school age" was, of course, considerably less, probably not more than 275,000. For these the State provided 4,646 school-houses, with accommodation for 271,000 pupils. The number of school age reported as attended public school some part of the year was 246,000, of all ages 249,000; nearly 15,000 more attended private schools. The attendance at academies, colleges, benevolent institutions, etc., make the entire school-going population over 268,000. The average duration of the schools was 141½ days, and the average attendance of pupils 75 days. Eight thousand five hundred and sixty-six different teachers were employed during the year, five thousand two hundred and sixty-seven being required constantly. How many of these teachers were men and how many women, is not stated. The average monthly wages of male teachers was \$42.92; of female teachers \$27.18. Of the 4,646 school-houses, but 984 are on sites "well enclosed." The sites of 3,615 contain less than one acre each; and 1,255 are without outhouses in good condition. The total valuation of the school-houses and sites is nearly \$3,000,000. The aggregate expenditure for school purposes, during the year, was \$1,791,940—or \$4.64 for each person reported between 4 and 20 years of age, and \$7.19 for each pupil registered. The amount expended for tuition, for each pupil registered, was \$4.18.

—NEW JERSEY.—We have been favored with the financial statistics of the schools of New Jersey for the past year, in advance of the publication of the Superintendent's Annual Report. If the schools have advanced in merit, in proportion to the increase of expenditures for them, the State has good reason to be satisfied with the year's work. The strictly educational statistics we shall give as soon as we can get them. The State appropriation for 1868 amounted to \$1,313,358,—an increase over 1867 of \$417,423, the gain being mainly in district tax. The voluntary school tax for 1868 was \$1,140,142,—more than double the amount ever before raised in any year previous to 1867. There has been a very rapid increase in this voluntary tax since 1866, giving evidence of a rapidly increasing interest in education among the people. During the ten years, from 1857 to 1866, the gain was \$317,185; from 1866 to 1867, it was \$278,068; from 1867 to 1868, it was \$355,412. If there is a like increase next year in those localities which most need it, it is believed that all the schools in the State can be made entirely free. The increase in the amount of money raised for building and repairing school-houses is still more remarkable; the sum raised for these purposes being \$805,581—over seven thousand dollars more than was raised for these purposes during the preceding fourteen years, and eight times as much as was ever before raised in any one year. The State Normal School and its dependencies, the Model and the Preparatory School, are steadily increasing in popularity. The first had an attendance last year of 259; the second 555; the third, 302—altogether 1116. The property of this institution is valued at \$250,000, on which there is an encumbrance of \$23,000. Connected with the Normal School is a boarding-hall, which accommodates 130 lady boarders. The cost of board is only \$3.50 a week, including fuel and light. The boarding arrangements are said to be completely successful.

—RHODE ISLAND.—From the Report of the Superintendent of Schools of the City of Providence we learn that the number of scholars registered is 8,324, 350 of whom have been received into the high school, 2,034 into the grammar schools, 2,084 into the intermediate, and 3,845 into the primary schools.

—EDUCATIONAL ITEMS.—Mr. Charles Reed, M.P., at a recent distribution of prizes to the pupils of the North London School of Art, spoke on the question of educating girls. He held that they were quite equal in intellect to boys, and that in some things they surpassed them. This was especially true in matters of imitation. Hence the importance of giving them instruction in art matters. Mr. Reed thought that the benefit to the community arising from the art education of girls would be important.—At the opening of a new industrial school at Leith, Dr. Guthrie said that there doubtless were no less than 1,200,000 children between the ages of five and a half and thirteen in England and Wales who are now growing up like wild beasts, without any education whatever. And he strongly advocated the necessity of compulsory education, on the ground that no one has a right to bring up dangerous members in a community, and that the most dangerous of all animals is man with an uneducated brain.—An advertisement in an English weekly informs us that two scholarships, each of the annual value of £50, tenable for three years in one of the universities, open to women, and to be awarded by competitive examination in June, 1870, are offered to women who desire to enter the medical profession. These scholarships will aid the two ladies fortunate enough to win them to pursue their studies under very favourable circumstances.—The *Academy* announces that Miss Garrett has founded two scholarships for women who desire to study medicine. They will be given to the two women who will pass the best examination in certain prescribed studies next

June, in London. Each scholarship is to be £50 sterling per annum (a sum sufficient to support a student at a London medical school), and to last three years.—It is stated that the Queen has appropriated £2,500 of the profits arising from the sale of the "Leaves from a Journal of our Life in the Highlands," to establishing school and college bursaries for the benefit of well-deserving scholars in the district round Balmoral.—A meeting of resident graduates has been held at Oxford to consider the question of the abolition of university tests. Eighty gentlemen were present. The Dean of Christ Church was in the chair, and the speakers included the Principal of Brasenose, Professor Jovett, Sir Benjamin Brodie, the President of Trinity, and others. The feeling of the meeting seems to have been precisely the same as that shown at Cambridge, that the time for permissive legislation has gone by. The two resolutions adopted expressed thanks to Sir John Coleridge for his exertions in the cause, adding that, in the opinion of the meeting, it was now necessary to make the abolition of tests compulsory; and it was resolved to seek an interview with the Prime Minister, and urge him to lend the support of the Government to a Bill which shall prohibit the imposition of tests, not only upon graduates of the universities, but also upon fellows of the colleges. The opponents of the abolition of tests at Cambridge are getting up a counter memorial to the one adopted at the meeting held last week.—The extent to which the new catalogue of the Bodleian Library at Oxford will run may be estimated from the fact that the letters B, C and G fill sixty, sixty-five and thirty-five volumes respectively. The number of printed volumes at present in the Bodleian Library may be estimated at 350,000, and the manuscript volumes at 25,000.

—SCIENTIFIC ITEMS.—A marble cenotaph to the memory of the distinguished astronomer, the Earl of Rosse, has just been erected in the church at Parsonstown, Ireland. The inscription says: "He was renowned in the loftiest range of science, and he revealed to mankind by the unrivaled creation of his genius a wider vision of the glory of God."—A committee consisting of Sir R. Murchison, Sir John Herschel, Sir Henry James, and other gentlemen, has been formed for the purpose of carrying out a survey of the peninsular of Mount Sinai, with a view to determine the line of march of the Israelites and the true mountain of the Law.—The Norwegian zoologist Esmark, who explored Brazil twenty years ago, is fitting out a new exploring expedition, the funds for which are supplied by the University of Christiania.—Miss Burdett Coutts suggests a systematic education for the humane treatment of animals.—Rev. Messrs. Laverdiere and Casgrain, of the Quebec Seminary, who have been engaged for some time past in historical researches upon the old residence of Sillery, have just discovered the remains of Father Edmond Masse, a Jesuit, who was one of the first missionaries of New France. After having defined the exact position of the old chapel, and clearing away the rubbish from the foundations, which still remain in a perfect state of preservation, they continued their investigations into the choir, where they found the body of this venerable missionary, which has lain there for two centuries and a quarter.

## VIII. Departmental Notices.

### LIST OF AUTHORIZED TEXT BOOKS.

(Sanctioned by the Council of Public Instruction for use in the Grammar Schools of Ontario.)

NOTE.—In the following list some books are *prescribed* under the authority of the fifteenth section of the Consolidated Grammar School Act, and approved by the Lieutenant-Governor, and others are *recommended*. The use of the books *recommended* is discretionary with the Board of Trustees. The Council has decided that the books on English subjects authorized for Grammar Schools may also be used in Common Schools.

#### I. LATIN.

##### TEXT BOOKS PRESCRIBED :

- Harkness's New Series, viz. :
1. An Introductory Latin Book. By Albert Harkness, Ph. D.
  2. A Latin Reader, intended as a Companion to the Author's Latin Grammar. By Albert Harkness, Ph. D.
  3. A Latin Grammar for Schools and Colleges. By Albert Harkness, Ph. D.

If preferred, the following may be used instead of the above series :  
Arnold's First and Second Latin Book and Practical Grammar, revised and corrected. By J. A. Spencer, D. D.

A Smaller Grammar of the Latin Language. By William Smith, LL.D.

##### LATIN DICTIONARY RECOMMENDED : (See note above.)

- A Latin-English and English-Latin Dictionary. By Charles Anthon, LL.D., or,  
The Young Scholar's Latin-English and English-Latin Dictionary. By Joseph Esmond Riddle, M. A.

#### II. GREEK.

##### TEXT BOOKS PRESCRIBED :

A First Greek Book, comprising an outline of Grammar and an Introductory Reader. By Albert Harkness, Ph. D.

A smaller Grammar of the Greek Language, abridged from the larger Grammar of Dr. George Curtius.

##### GREEK LEXICON RECOMMENDED : (See note above.)

Liddell and Scott's Greek-English Lexicon.

#### III. ANCIENT HISTORY, CLASSICAL GEOGRAPHY, AND ANTIQUITIES.

##### TEXT BOOKS PRESCRIBED :

A Manual of Ancient History. By Dr. Leonhard Schmitz  
First Steps in Classical Geography. By Prof. James Pillans.

##### CLASSICAL DICTIONARIES, &C., RECOMMENDED : (See note above.)

A Classical Dictionary of Biography, Mythology and Geography. By William Smith, LL.D.

A Dictionary of Greek and Roman Antiquities. By William Smith, LL.D., or,

A Classical Dictionary. By Charles Anthon, LL. D.

A Manual of Roman Antiquities. By Charles Anthon, LL.D.

A Manual of Greek Antiquities. By Charles Anthon, LL.D.

#### IV. FRENCH.

##### TEXT BOOKS PRESCRIBED :

The Grammar of French Grammars. By Dr. V. De Fivas, M. A.

An Introduction to the French Language. By De Fivas.

History of Charles XII, of Sweden. By Voltaire.

Horace : A Tragedy. By Corneille.

A Complete Dictionary of the French and English Languages. By Gabriel Surenne. Spier's New Abridged Edition.

#### V. ENGLISH.\*

##### TEXT BOOKS PRESCRIBED :

The Canadian National Series of Reading Books. (Authorized edition.)

The Spelling Book, A Companion to the Readers. (Authorized edition.)

Miller's Analytical and Practical English Grammar. (Authorized edition.)

An English Grammar for Junior Classes. By H. W. Davies, B.D. (Authorized edition.)

A History of English Literature, in a Series of Biographical Sketches. By William Francis Collier, LL.D.

#### VI. ARITHMETIC AND MATHEMATICS.

##### TEXT BOOKS PRESCRIBED :

National Arithmetic in Theory and Practice. By J. H. Sangster, M.A., M.D. (Authorized edition.)

Elementary Arithmetic for Canadian Schools. By the Rev. Bernard Smith, M.A., and Archibald McMurchy, M.A.

Elements of Algebra. Todhunter's or Sangster's.

Euclid's Elements of Geometry. Pott's or Todhunter's.

#### VII. MODERN GEOGRAPHY AND HISTORY.

##### TEXT BOOKS PRESCRIBED :

Lovell's General Geography. (Authorized edition.) By J. George Hodgins, LL.B., F.R.G.S.

Easy Lessons in General Geography. By ditto. (Authorized edition.)

A School History of the British Empire. By William Francis Collier, LL.D.

A History of Canada, and of the other British Provinces of North America. By J. George Hodgins, LL.B., F.R.G.S.

Outlines of General History. By Wm. Francis Collier, LL.D.

##### TEXT BOOK RECOMMENDED :

The Great Events of History. By Wm. Francis Collier, LL.D.

\* The books in English branches are also sanctioned for Common Schools.



## VIII. PHYSICAL SCIENCE.

TEXT BOOKS PRESCRIBED: (See note above.)

Introductory Course of Natural Philosophy. Edited from Ganot's Popular Physics, by W. G. Peck, M.A.  
How plants grow; A Simple Introduction to Botany, with Popular Flora. By Asa Gray, M.D.  
Hooker's Smaller Treatise on Physiology.

## IX. MISCELLANEOUS.

TEXT BOOKS RECOMMENDED: (See note above.)

A Comprehensive System of Book-keeping, by Single and Double Entry. By Thomas R. Johnson.

Field Exercise and Evolutions of Infantry. Published by Authority. Pocket Edition (for Squad and Company Drill.)

The Modern Gymnast. By Charles Spencer.

A Manual of Vocal Music. By John Hullah.

Three-Part Songs. By H. F. Sefton. (Authorized edition.)  
*National Mensuration.*

*Scripture Lessons—Old and New Testaments.* (National.)

*Lessons on the Truth of Christianity.* (National.)

The following books, approved by the whole Committee of the Council of Public Instruction for Quebec, are also sanctioned for use by French pupils, in Common Schools of this Province in which are both Protestant and Roman Catholic pupils:

Cours d'Arithmétique Commerciale. (Senecal, Montreal.)

Abrégé de la Géographie Moderne. (Société d'Éducation du Québec.)

La Géographie moderne, de M. Holmes, M.A.

Grammaire pratique de la langue Anglaise. (Par P. Saddler, Paris.)

Traité de Calcul Mental. (Par F. E. Juneau.)

Traité Élémentaire d'Arithmétique. (Par F. X. Toussaint.)

Le Premier Livre de L'Enfance, (de Poitevin.)

Cours de Versions Anglaises. (Par P. Saddler, Paris.)

Grammaire Française Élémentaire. (Par F. P. B.)

For German Schools, Klotz's German Grammar is sanctioned.

#### FOUR KINDS OF LIBRARIES WHICH MAY BE ESTABLISHED UNDER THE DEPARTMENTAL REGULATIONS.

"The Public School Libraries are becoming the crown and glory of the Institution of the Province."—LORD ELGIN.  
"Had I the power I would scatter Libraries over the whole land, as the sower sows his seed."—HORACE MANN.

Under the regulations of the Department, each County Council can establish *four classes* of libraries in their Municipality, as follows. City, Town, Village, and Township Councils can establish the first three classes, and School Trustees either of the first and third classes.

1. An ordinary *Common School Library* in each school-house for the use of the children and ratepayers.

2. A *General Public Lending Library*, available to all the ratepayers of the Municipality.

3. A *Professional Library* of books on teaching, school organization, language and kindred subjects, available to teachers alone.

4. A Library in any *Public Institution*, under the control of the Municipality, for the use of the inmates, or in the *County Jail*, for the use of the prisoners.

It cannot be too strongly urged upon School Trustees, the importance and even the necessity of providing, (especially during the autumn and winter months,) suitable reading books for the pupils in their school, either as prizes or in libraries. Having given the pupils a taste for reading and general knowledge, they should provide some agreeable and practical means of gratifying it.

#### PUBLIC LIBRARY BOOKS, MAPS, APPARATUS, AND SCHOOL PRIZE BOOKS.

The Chief Superintendent will add *one hundred per cent.* to any sum or sums, *not less than five dollars*, transmitted to the Department by Municipal and School Corporations, on behalf of *Grammar and Common Schools*; and forward Public Library

Books, Prize Books, Maps, Apparatus, Charts and Diagrams, to the value of the amount thus augmented, upon receiving a list of the articles required. In all cases it will be necessary for any person acting on behalf of the Municipal or Trustee Corporation, to enclose or present a written authority to do so, verified by the corporate seal of the Corporation. A selection of Maps, Apparatus, Library and Prize Books, &c., to be sent, can always be made by the Department, when so deserved.

☞ Catalogues and forms of Application furnished to School authorities on their application.

\* \* If Library and Prize Books be ordered, in addition to Maps and Apparatus, it will be NECESSARY FOR THE TRUSTEES TO SEND NOT LESS THAN *five dollars additional* for each class of books, &c., with the proper form of application for each class.

In the catalogue are given the net prices at which the books and school requisites enumerated therein may be obtained by the Public Educational Institutions of Upper Canada, from the Depository in connection with the Department. In each case, cash must accompany the order sent.

Pack'ge No. 19. Books and Cards, 35cts. to \$5.25 each.....\$100

" No. 20. Ditto ditto 35cts. to \$5.50 each.....\$120

☞ The *one hundred per cent.* will not be allowed on any sum less than *five dollars*.

#### SUNDAY SCHOOL BOOKS AND REQUISITES.

Application having been frequently made to the Department for the supply from its Depository of Sunday School Library and Prize Books, Maps and other requisites, it is deemed advisable to insert the following information on the subject.

1. The Department has no authority to grant the one hundred per cent. upon any remittance for Library or Prize Books, Maps or Requisites, except on such as are received from Municipal or Public School Corporations in Upper Canada. Books, Maps and other Requisites suitable for Sunday Schools, or for Library or other similar Associations, can however, on receipt of the necessary amount, be supplied from the Depository at the net prices, that is about twenty-five or thirty per cent. less than the usual current retail prices.

2. The admirable books published in England by the Society for Promoting Christian Knowledge, and by the London Religious Tract Society, are furnished from the Societies' catalogues at currency for sterling prices (i. e. a shilling sterling book is furnished for twenty cents Canadian currency, and so on in proportion.) These two catalogues will, as far as possible, be furnished to parties applying for them. Books suitable for Sunday Schools are received from the other large religious societies, Presbyterian and Methodists, and from the various extensive publishers in Britain and the United States, but the list would be too extensive to publish separately.

3. On receiving the necessary instructions, a suitable selection can be made at the Department, subject to the approval of the parties sending the order. Any books, maps, &c., not desired which may be sent from the Depository, will be exchanged for others, if returned promptly and in good order.

#### PRE-PAYMENT OF POSTAGE ON BOOKS.

According to the Postage Law, the postage on all books, printed circulars, &c., sent through the post, *must be pre-paid by the sender*; at the rate of one cent per ounce. Local Superintendents and Teachers ordering books from the Educational Depository, will therefore please send such an additional sum for the payment of this postage, at the rate specified, and the Customs duty on copyright books, as may be necessary.

#### TRUSTEES' SCHOOL MANUAL.

In reply to numerous applications for the Trustees' School Manual, we desire to intimate that a new edition of the School Acts is now ready. Single copies, 35 cents, including postage. New School Sections will be supplied gratuitously.