

## ON THE VENTILATING AND WARMING OF SCHOOL-HOUSES.—No. III.

To the Editor of the Journal of Education.

SIR—The next improvement in open fire-places, and which preceded the use of the close stove, was recommended by Dr. FRANKLIN, who invented what is now called the "Franklin Stove," which consists of a grate closed at the top, and placed at some distance from the chimney, with which it is connected by a pipe to carry off the smoke: a great amount of heating power was obtained by this means; but this is the only advantage that has been derived from its use.

As fuel became scarce, and consequently more expensive, any method by which economy in its consumption could be attained, would of course be eagerly adopted—the open fire-place became gradually reduced in size. Then came the Dutch, English, Russian, and American stoves, ending in Dr. ARNOTT's stove, which is admitted to be the most economical of all; but in all these instances, no arrangement has been made for supplying fresh air to the apartments heated; economy in fuel has been the sole object, and this has been attained at the expense of ventilation. The following remarks from WYMAN's work on Ventilation, are sufficiently illustrative of the foregoing observations:—"The various changes which the fire-place has undergone in one old house in Cambridge, Mass., known as the Danforth House, and said to have been built by one of the early Presidents of Harvard College, will illustrate the progress in house warming. The fire-place in the parlour was originally 8 feet wide by 3 deep, and 4 feet high. The first alteration was in the diminution of the fire-place (*Rumfordizing it*), by lowering the mantel to 3 ft. and reducing its length to less than 5 ft., by which a good closet was secured on each side within the jambs. Within this structure was afterwards placed an iron fire frame, for the combustion of wood; and this, again, received a grate for burning anthracite coal, the front of which is now bricked up and receives the funnel of a cooking stove. The improved heating and diminished ventilation are easily traced." The difference of heating by means of stoves, and open fire-places, is, that by the former the air is heated rather by conduction than radiation; whilst the reverse is the case by the latter method. The advantages gained by the use of stoves, in preference to open fire-places, are, economy in the consumption of fuel, a more equal temperature, and a greater freedom from smoke and dust. These advantages, it will be perceived on a moment's reflection, are merely comparative; the evils complained of are only lessened, not removed. The increased inconvenience arising from the use of stoves, are, a sensation of extreme dryness, and a burnt and sulphurous odour, produced by the heated air of the stove, which decomposes some of the impurities with which the air of ventilated rooms become loaded: the effects on the system are, giddiness, severe headache, and dryness of the throat; and this is the invariable result in every instance, though some persons feel it more than others. The inconveniences of ventilating a stove-heated room by the ordinary method, have been already shewn. These inconveniences have been to a certain extent removed by what is termed the "Boston School Stove:" this stove has been constructed on what is termed the hot-air principle, and is merely an ordinary stove, surrounded by a metal casing, through which the external air is drawn into the room, which in its passage becomes heated, by coming in contact with the interior casing of the stove: thus a supply of pure warm air is obtained, and the vitiated air passes off through two openings in the side of the room, opposite to that where the stove is placed; one of the openings which is to be placed at the top of the room, should be only half as large as the other, which is placed at the bottom. The amount of pure air obtained in this manner must of necessity be limited. It is, however, a great improvement in the common stove, though the evils connected with this mode of heating are not altogether removed.

I have thus far endeavoured to trace the gradual improvements which have been made in ventilation, and warming; I have not, however, as yet, touched on the comparative expense of these improvements, a decided advantage in this respect will also be proved before the discussion of these subjects is concluded.

I have the honor to be, SIR,

Your obedient Servant,

KIVAS TULLY,

Architect & Civil Engineer.

Toronto, April 30th, 1849.

## Educational Intelligence.

### CANADA.

*Teachers' Address to W. L. DISTIN, Esq., Mayor of the City of Hamilton*, on the occasion of the Feast given by His Worship to the Teachers, Pupils of the Common Schools, on the Queen's Birth Day. The *Hamilton Gazette* says:—"The children of the different public Schools assembled in the Court House Square, where they formed in procession and marched to the green in front of the residence of P. H. HAMILTON, Esq., to partake of "the Feast" prepared for them by our worthy and highly esteemed Mayor. Here the Teachers took the opportunity of presenting the following Address:—

To His Worship the Mayor of Hamilton:

SIR,—We, the Teachers of the Common Schools in this City, beg to present you our most grateful thanks for the kind and hospitable manner in which you have condescended to notice the children under our tuition, on this the annual return of the natal day of our beloved Sovereign, Queen VICTORIA, and, as a duty incumbent, on all loyal subjects, we give thanks to God for the protection He has afforded her during the past year, and also for the success that has attended her armies in quelling rebellion, and subduing her foes, amid the wreck of surrounding nations.

We congratulate you, Sir, as being the first gentleman to set the worthy example of sowing the good seed of loyalty in the right soil, for we presume you will admit that the stability of our Monarchical Government and glorious Constitution depends greatly upon the religious instruction, the moral training, and the mental cultivation of the rising generation. We think we are justified in saying, that no country can long continue prosperous and happy, unless its population, from the prince to the peasant, take the word of God as the basis of their morality, and its divine precepts as the foundation of their laws, therefore, as we value the loyal integrity of our inhabitants, and the stability of our institutions, let the youth of our country receive a Scriptural, as well as a literary education, by doing which we will be obeying the injunction of the Holy Spirit, as dictated to the wisest of men, "Train up a child in the way he should go, and when he is old he will not depart from it."

In conclusion, Sir, we again thank you for your kindness and liberality to our scholars and ourselves this day, and we earnestly pray, that you may be spared to witness many happy returns of the same, that our country may become prosperous and the people happy, and that it will ever continue to be an integral portion of the British Empire.

To which Address His Worship was pleased to reply as follows:—

GENTLEMEN,—I sincerely thank you for the kind expressions contained in the paper you have just read, and that this *small act of my duty* has met with your approbation. My conviction has always been, that early impressions are lasting, either in morality or loyalty, and perfectly agree with you that, when a child is taught in the way he should go, in old age he will not depart from it. Gentlemen, I am fully aware of the arduous duty you have to perform; but it is a glorious duty "to teach the young idea." Persevere in the good work, and as you sow, so shall you reap, if you faint not. Again tendering you my thanks, rest assured my humble efforts in promoting the interest of Public Schools will always be considered a duty of pleasure.

And now my dear children, let me impress upon your minds that this is the QUEEN's Birth Day,—a holyday that you will remember as long as you live; and that when you are grown up to be men and women, will have the happy effect of strengthening your loyalty. Recollect to be dutiful to your Parents and your Teachers, who are kindly instructing you for your future good. Never forget the command of God, that you are not to swear, or steal, or tell falsehoods, or kill, or commit other wicked acts, and above all things that you "Fear God and honour the Queen."

Three cheers were then given for the Queen, and right heartily did the youthful voices join in the enlivening strain.

*Simcoe Ladies' Seminary.*—A public Examination of this Institution took place on Wednesday last, the attendance of persons interested in this Establishment was numerous and respectable. The rapid advance in useful knowledge made by the pupils, is no less creditable to the Misses WEBB, than it must be gratifying to the parents and guardians of the scholars. The selections of vocal and instrumental music were extremely good, and added much to the interest of the examination; Mr. TRANSUM, superintended and led the singing classes, their proficiency and correctness reflect much credit on his abilities as a Teacher.

The exhibition of fancy work, &c., would have been creditable to any Institution in the Province.—[*Simcoe Standard.*]

*The Quarterly Examination of the School in Section No. 5, in the Township of Lanark*, took place on Wednesday, the 13th inst. The parents of the scholars and others resident in the School Section were present, and were so highly satisfied with the faithful and efficient manner in which Mr. THOMAS KEYS had discharged his duty as a Teacher, that an unanimous vote of thanks was awarded him by the persons present, linked to expression of regret at his departure from among them. And as a proof that while he enjoyed the esteem of the parents, he had also gained the affections of the children, his scholars presented him with several neat memorials, consisting of a Bible, a Pencil Case, &c., &c.—[*Perth Constitutional.*]