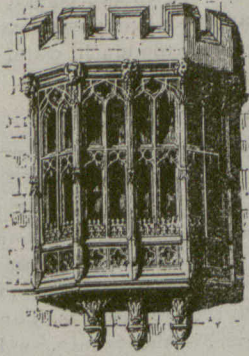


semi-hexagonal, semi-octagonal, or rectangular, etc., and is supported on brackets, corbels or corbeling. When such a projecting feature rests upon the ground, or directly upon the foundation of the building it is called a bay-window, or a bow-window." This definition is the one generally accepted, and is no doubt the surest one. Hence, it may be considered that any window, regardless



ORIEL WINDOW, BALIOL COLLEGE, OXFORD.

of plan, that projects from a wall beyond its own foundation is an oriel, while a window having its base on the foundation wall in the ground may be termed a bay-window or a bow-window according to its horizontal section. Usually the base of an oriel is formed with brackets, corbels, or continuous rings of masonry of a more or less ornate character. The French for this window is fenetre en saillie d'oriel, and the German, eckenfenster, which means literally a corner window, the oriel being often placed at the corner or the meeting edge of the two walls. The derivation of the term oriel still, after all the discussions about it, remains shrouded in obscurity.

THE TORONTO TECHNICAL (?) SCHOOL.

To the Editor of THE CANADIAN ARCHITECT AND BUILDER:

SIR,—Now that the Toronto municipal elections are over and the various boards have been formed at the City Hall, perhaps it will be permitted to criticize that of the Technical (?) School.

Looking at the personnel of the newly appointed board of management we find:

- An arbitrator on agricultural disputes.
- A collector of debts on sewing machines.
- A journeyman painter.
- A foreman in a book binding establishment.
- A couple of architects.
- A man in charge of a stationary engine.
- The head of an engineering company.
- A boiler and engine builder.
- Two professional men.
- Two tailors.
- A clerk and two seekers after fortune apparently without a trade or profession.

Out of the whole board the only ones of use to the right kind of a school would be the foreman, the architects and the boiler and engine builder, and possibly the head of the engineering company—that is to say, five out of fifteen. The other ten are shoved in to fill up, and as rewards for lodge work, jobs for aldermen, sop to defeated candidates and to pander to labor.

Did this aggregation have the faintest knowledge of the class of schools required it might be fair to give them a chance, but while they label the school "technical" they have decided that it is to be "technological."

Pupils will be taught everything by theory but nothing by practice. That is what labor wants. The use of the chisel, hammer or square; the method of tanning or dyeing; the use of a turning lathe; carding, spinning or weaving; paper making or any known use for manual work, would be distinctly opposed to labor principles, and why? Because labor is opposed to their field of work being encroached upon. To-day an apprentice in a shop has to learn what he can, the best way he can, because those above him wish to hold their knowledge, thinking they will not give freely to others what took them so many years to learn themselves.

There are certain interests which should be represented on a

board of a school having for its object the technical education required by those who intend following a manufacturing career.

Primarily there are but two interests—capital and labor.

Capital is, necessarily, continually moving for improvements in methods, and were it not for this where to-day would be all the wonderful accomplishments of the last half of this nineteenth century?

But history points out that labor is ever opposing capital. Labor eyes askance any new machine that reduces cost and it is labor's business to prevent improvements being adopted.

Labor says, "Public opinion is so strong that technical schools are bound to be adopted. So we must also adopt them, but we will get control of them and run them as we deem in the interests of labor as it strikes us."

And so capital, which could very materially contribute to make the schools of infinite value to the country, is boycotted, and any person who has any idea of recognizing capital is boycotted; with the result that terror is instilled into the hearts of would be independent aldermen, most of the newspapers, and such other influences as are supposed to be for the best government of the people.

Labor has an individual vote as well as capital, but capital may employ enough labor votes to ruin its own business. (It is wonderful how quickly an employee changes his views about capital and labor when he becomes an employer.)

The great movement for a series of properly equipped technical schools, inaugurated by the Board of Trade,—at which meeting other boards of trade had their presidents, the premier of Ontario and other would be enthusiasts—is all dwindled away, as the brilliancy of the rocket darkens into oblivion when the stick falls to the ground useless.

Why is this? Well, labor in Toronto says no, and some people having a sort of ambition to be shapers of the destinies of this country are afraid to come under the ban of labor, so the end of it all is a continuation of the useless institution for which the whole city is taxed to supply situations for nominees of labor.

The recent meeting of the architects of Ontario would have been an occasion when an expression as to the kind of schools needed could have been given, and it is to be regretted that a matter of so much importance to them should not have received their consideration.

Had the government a spark of independence over the labor people, it would use the old Upper Canada College buildings for a combined school and museum of the right kind.

They sent Mr. McEvoy to learn the class of school needed. His report is in and is on the right lines.

The country now waits to see how far the Hon. Mr. Ross will back up the statements he made at the Board of Trade meeting that was called to consider this question.

Yours truly,

AN EMPLOYER OF LABOR.

FACTORY CHIMNEYS.

To the Editor of THE CANADIAN ARCHITECT AND BUILDER.

SIR,—I would like to ask through your Journal if anyone could tell me the cause of cracks appearing in a large chimney that is between 60 and 70 feet high. It is situated between the boilers and the engines, and there is other powerful machinery also close to its base. I was asked by the foreman of the works what I thought was the cause, but gave a doubtful reply, for the cracks appear the same on all four sides. The foreman thought iron bands placed around it would help to remedy the defect. I told him I thought vibration was the cause, but since then I had occasion to cut a hole into the flue, and found there was no air chamber built in the walls of the chimney, so thought the heat had something to do with it. Then again a wall, which is part of the boiler-house, runs up to the chimney on two sides, the chimney forming part of the wall below. Being thus tied in by the roof and braced by those two walls, the oscillation would be kept from going clear to the base, and I thought that was the cause of the checks appearing just above the roof and walls. I send a little sketch showing the character of the cracks as they appear for about 14 feet up from the roof. The cracks do not exceed $\frac{1}{4}$ of an inch in the worst places. From the roof to the base of chimney or foundation I suppose would be 30 feet or more—I did not measure it.

I would like to hear from some one what they consider to be the cause of the cracks, and also to be told something about building good chimneys of various heights for factories, etc., with an explanation of air space.

YOUNG BRICKLAYER.

[As our correspondent does not give us the thickness of walls of the chimney, or its sectional area, it is impossible for us to give

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