there is little doubt that the best precautions are those that are part and parcel of the building. There must be ample exits. The staircases cannot be too easy-going nor too accessible; they should be arranged so as to be cut off as much as possible from access to fire or smoke, and the chance of communication of these from one floor to another should be minimized. In buildings containing many people, two stairs at opposite ends are a necessity. When every internal provision is made, external escapes are still essential. What form they should take may be open to some little variety of opinion. As in the case of the Hochelaga School, however, it most frequently happens that the victims of a fire are overcome by smoke rather than by actual heat. One of the most useful provisions is, therefore, ready access to ample fireproof galleries, from which even the most helpless people could be rescued by fire ladders. This safeguard is particularly applicable in the case of schools and hospitals. For hospitals they may be made extensive enough to accommodate all the beds of the wards to which they are attached, and may be made useful adjuncts for airing purposes. In factories where many hands are at work on upper floors, outside galleries should preferably surround the whole building, and should have communication with the staircases of the building in addition to having escape stairs of their own.

Technical Education.

The subject of the establishment of technical schools seems to be in the air at the present time. The Hon. Dr. Pyne has been broaching it in Ontario, the Hon. W. A. Weir in the Province of Quebec, and Premier Murray in Nova Scotia. There seems to be inclination on the part of the various Governments to see something of the kind definitely established. The question is also receiving a good deal of attention in the United States, where several trade schools are already in operation. It would be well that all whom such projects concern—employers and employed alike—should take a close interest in any initial step that may be taken in this matter, for it is important that the kind of scheme entered upon should be such as shall meet the local demands and appeal strongly to the classes which it is intended to benefit.

In the United States the growing scarcity of skilled hands in the building trades is largely the cause of the demand for trade schools, and what is there being asked is, whether such schools cannot be made recruiting grounds of skilled workers, who would thus receive at these schools a complete training, each in his own branch, and issue from the school equipped to take his place in the ranks of trained workers. It would seem too sanguine to hope for this result altogether, for a farther period of practical experience would be required to fit even the most distinguished graduates of such a school to be useful workers. Yet no doubt men with such a preliminary training would rapidly become workmen of a high degree of usefulness.

This is a very different idea of a technical school from that in operation in England. There the apprenticeship system is still in force. The technical schools for the most part assume that their students are at work during the day earning their living, or at least, by apprenticeship to a trade, preparing themselves to earn their living thereby. Their classes are therefore mostly open in the evening, and are not for instruction in the ordinary handicrafts of the trades, but for supplementing the student's daily experience, necessarily of a limited and partial nature, by the systematic study of his subject as a whole and to help him to realize the full scope and possibilities of his art and his materials. The subjects taught are thus mathematics, drawing, chemistry, physics, nature and properties of materials, statics and dynamics, and a number of other subjects which vary according to the industries distinguishing each locality.

These are two radically different ideas of a technical school; each has its own special merits, and the real question is, which is the one most suited to the economic conditions of Canada? Which will appeal to the Canadian worker and the Canadian employer? The English method has the advantage of being to some extent a tried system. That of the United States does not exist as a system, but only as scattered and local experiments. It seems to imply that its students can afford to spend a certain time and a certain amount of money in learning a trade. It involves the execution of qualities of work merely for the sake of learning how to operate. It aims at enabling a young man to become proficient in a trade without spending an unduly long time on uninstructive routine work, and it seeks to give him a knowledge of the work by which he is to earn his living, which will enable him to find in that work a field broad enough to give ample scope to his mind, and which he has received instruction enough to be able to till independently and with profit. Both systems have the same ultimate end, to make the workman a more intelligent, more efficient man, by giving him the opportuinty to exercise more of his intelligence on his everyday employment. The Englishman has got the men; his object is to supply them with the means of self-improvement. The American is in want of men, and seeks to attract them by providing a bill of fare for them by putting at their service the keys of the gates of knowledge.

The subject of technical education has a very wide application and goes far beyond the building trades. The school established by Sir Wm. Macdonald at St. Anne, on the Island of Montreal, deals with agricultural interests, and as agriculture is the mainstay of the country, this subject is of the first importance, but it is only part of a scheme which must extend over every subject in which Canada wishes to excel. Such a scheme must eventually include collections of examples in all industries and laboratories for the study of processes and of the properties of materials. It is by such complete system that Germany has made such rapid advancement in her industries and trades. In addition to the benefit that systematic education brings to all individuals, one must look at the advantages to be attained by the community at large from the establishment of centres where an extended system of observation, experiment, comparison, analysis, and selection, can put our present somewhat vague knowlege of principles and materials on a scientific, reliable and thoroughly economic basis.