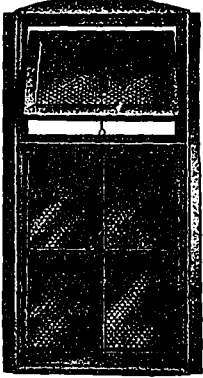


Fireproof Windows a Factor of Safety



MORE loss of property can be ascribed to the communication of fire through unprotected openings in buildings than to any other cause. Within recent years the widespread devastation of business districts in cities throughout the country only serves to emphasize this assertion. Whole sections of apparently substantial structures have been wiped out, due to the fact that the flames found ready egress and ingress through window openings in spreading from building to building, and in this respect particular attention may be

called to the heavy losses sustained in the conflagrations which visited Toronto, Baltimore and San Francisco. In each of these cities, the rapidity with which the flames were communicated to adjoining structures only substantiated the statistics previously compiled that the most vulnerable points in a building were the unprotected openings. It was after these fires that the underwriters began to insist on fireproof construction, especially as to window, doors and skylights, and the result was that a fresh impetus was given to an industry which is an important factor in modern building construction, the manufacture of metal frame and sash, glazed with wire glass for door and window openings.

In order to produce the highest standard of material and workmanship in equipment of this kind, the underwriters imposed certain requirements so as to eliminate the possibility of poorly built sashes and frames of cheap material entering into the construction of a building, and in this manner offered an incentive to manufacturers of integrity in the sheet metal line. One of the best known and successful firms in this field is the A. Ormsby, Limited, with factories at Toronto and Winnipeg and representatives in Montreal, Regina, Calgary, Edmonton and Vancouver. This firm makes a window that strictly meet the underwriters' requirements in every respect, and which has stood the test of fire successfully. Its frame and sash are of twenty-four gauge galvanized iron of a quality that does not break or flake in bending. The bottom of the frame is filled with concrete which makes it strong and substantial and enables it to withstand almost any attack to which it may be subjected. The joints, which are essential points in a frame or sash, are interlocking, giving them ample fire resisting qualities. And in this connection it may be mentioned that if solder is used as a fastener for joints, it melts under the heat of fire and the window collapses, leaving the openings unprotected.

Another feature of this firm's window is that the rabbets are $\frac{7}{8}$ in. deep so that the wired glass has an actual bearing of $\frac{3}{4}$ in. at all joints. This is necessary to resist the effect of the heat of a fire, and the force of the stream of an ordinary fire hose. If the glass depended on putty or brads to keep it in, it would fall out under fire. One of these windows recently underwent a very severe fire test at North Bay, Ontario, where a frame building just one foot away from a large hardware warehouse, caused a very hot fire, but the window in the warehouse withstood the flames and the property was uninjured.

The most popular construction in fireproof windows is the automatic heat closing window, a cut of which is reproduced herewith. The lower sash is stationary or bolted, the upper sash is pivoted. This pivoted sash is held open by a chain on which is attached a fusible link, which, when attacked by fire fuses and closes the sash, which is held shut by a gravity catch. Other styles of sash are sliding, stationary, double pivoted and hinged, and they can be made to suit any need.

The A. B. Ormsby, Limited, name plate appears on every window they turn out. Their windows are in use in most every important town and city in Canada. Both of their factories are said to be most complete in their line in the Dominion, being equipped with the latest and best machinery and employing a large number of skilled mechanics. Architects, builders and owners are especially invited to visit their works and inspect the windows in course of construction. The A. B. Ormsby, Limited, windows are of the highest standard type and their prices are as close as is consistent with first quality work. Windows of fireproof character are not only a protection against the ravages of flame, but they greatly reduce the rate of insurance and prove to be very economical in this respect.

Sand-Lime Brick

A BUILDING product which has been manufactured in America for the past six or seven years and has attracted widespread interest by the quick manner in which it has won favor with the architect, contractor and owner, is sand-lime brick. These brick are produced by the chemical action of high-grade lime and pure sand under a high steam pressure and have a crushing strength of 2,500 to 9,000 pounds per square inch. In appearance, they resemble Indiana sandstone and can be made in any color by the addition of pigments. They are different from natural stone, however, in that the chemical action is uniform throughout, consequently there are no seams or laminations. Sand-lime bricks are not, as generally supposed, mortar bricks, as mortar depends upon the carbonating of calcium for its strength, whereas sand-lime brick is strictly silicate. A silicate is not subject to deterioration, whereas the carbonate is, and yet mortar bricks one hundred years old have been found to be harder than sandstone. Handsome, strong and durable structures can be built from sand-lime bricks, that is, providing the bricks are manufactured in the right way. It is now generally acknowledged by those who have had experience in the manufacture of bricks of this character that too much care cannot be taken in preparing and mixing the materials in order to get the best results. Dr. Lazelle, an authority on sand-lime brick, says there should be no more guess work in their manufacture than there is in the compounding of a prescription by a pharmacist. In the procuring of a definite and accurate mixture too much care cannot be exercised, and it is essential that the mixture should be uniform at all times. In order to get the proper results mechanical means of proportioning should be employed, thus eliminating any possibility of guess work or chance. However, it is most important that the machine used should be so constructed as to meet every requirement to which it may be subjected and do the work in a thorough manner. In this connection, the Scientific System Brick Co., 79 Adelaide St. E., claims that by their system the best possible bricks can be made, as by the use of their preparing machine, Reliance, the mater-