

THE SHINGLE ROOF HAZARD.

(Frank Lock, U. S. Manager, Atlas Assurance Co.)

The great conflagration of Chicago was in its inception influenced by shingle roofs, supplementing frame construction. The conflagration of Boston in 1871 was mainly influenced by so-called Mansard roofs, which method of construction gave a ready entrance to fire from contiguous buildings. The Baltimore conflagration of 1904 was spread largely by unprotected sky-lights puncturing roofs which were otherwise fireproof.

Taking conflagrations which have spread largely in dwelling districts, it may be accepted almost without qualification that the great occasion of their destructiveness has been the one feature of shingle roofs. This must be held to be true of conflagrations such as those of Jacksonville, Chelsea, Salem, Paris, Nashville and Atlanta, while Augusta was undoubtedly largely affected by this feature. What has happened in so many cases can and probably will happen in many more from the same cause.

DIAGNOSIS.

Unlike many fire hazards, the shingle roof is a menace, both to the individual risk in the country out of protection and to the group as found in the city. The menace is never absent, except when the roof is under snow or rain is falling. In no class of hazard does the danger persist so constantly, whether in the individual or the aggregate, as with the shingle roof. The very nature of the roof renders the reason for this easy to understand. The cracks and crevices form lodgments where the spark or the burning brand finds a hospitable welcome, which is irresistible. The chimney flue works day and night, the locomotive, the fire cracker, the sparks and embers from fires in adjacent buildings all give occasions for fire which materialize with sufficient frequency to cause that the monthly fire loss in the United States from shingle roofs alone assumes the magnitude and importance of a conflagration if all bunched in one fire. It is easy to see the nature of the disease. The questions are: What defense is there for the shingle roof? and, if any defense, what remedy is there for the loss occasioned by it?

DEFENSE.

As to defense for the shingle roof, it may be said that apart from alleged "cheapness" there is none. In fact, it is waste of time to seriously argue a defense for this incendiary feature other than that named. As to the one only defense of "cheapness" this must be dismissed as untenable if it be abstractly considered in its effect upon the community at large. Viewed from this standpoint, it is the most frightfully extravagant element of building construction there is in existence. Frame walls to a building are of minor importance compared to the shingle roof; sparks and embers do not cling to the walls. The constant menace lies in the roof. It is true the roof may be "cheap" in the estimate of the builder or the individual property owner, but the bill which is rendered against the community is nothing short of appalling.

The ultimate cost of the shingle roof is liquidated primarily by the insurance company and ultimately by the property owners at large, who cover their property with non-combustible roofs. The proof of this statement lies in the fact that, speaking broadly, rates of insurance which are charged for

shingle roofs are hopelessly inadequate and it seems almost impossible to devise any way in which revenue can be obtained sufficient to indemnify the companies for the loss through this one channel. Since, however, insurance business as a whole is transacted with a narrow margin of profit it necessarily follows that if there be one class, running in the aggregate into immense values, which produces to the companies a persistently unprofitable result year in and year out over long series of years then the exorbitant loss cost for this unprofitable business is saddled upon the rates of the profitable classes, and hence it is demonstrated that the slate, metal and composition roof pays by its protection against the fire hazard for the incendiary shingle, by which companies certainly lose over \$130 for each \$100 of premiums received.

ITS PERPETUATION NOT NECESSARY.

While it is easy to understand the origin and popularity of the shingle roof, it is in no wise necessary that it should be perpetuated. In the early days of the country when timber was the only quickly available building material, there was little alternative but to turn to the shingle. Added to its cheapness was the lack of transportation, which did not permit of easy access to other materials. Those days are gone, and the shingle largely persists because of thoughtlessness, but still more because of the power of the lumber organizations of the country. The small property owner who uses the shingle roof and who incurs the original outlay is very numerous. He has many votes in the municipalities and is enabled, too often, to vote down any attempt to prohibit the use of the shingle by ordinance in the municipalities. That it should be forbidden where the exposure hazard exists as a costly menace to the community at large, cannot, in my opinion, be gainsaid. Milk from tuberculous cows, meat from diseased animals, might be pleaded for on the score of "cheapness." Fire and police departments could be attenuated on the score of economy, but all such arguments should be brushed aside as perils to the community. As before said, there is no necessity for the perpetuation of the shingle roof, as there are on the market any number of other roofing materials at very moderate cost, some actually fireproof and the worst of which are better than the shingle.

REMEDIES.

The question comes up as to remedies for the enormous loss which occurs to the community taxed to a grievous degree for this item in the insurance rate and yet not taxed heavily enough, altogether apart from the destruction of property which is not insured. The hope of remedy, perhaps not very promising, would seem to lie along the following lines:

(a) A persistent educational work against the shingle roof per se, whether in the city because of its conflagration feature or in the country because of the spark hazard to the individual risk. This should be carried on through the newspapers, magazines and insurance agents to enlighten public sentiment against the shingle.

(b) Anti-shingle ordinances in the municipalities forbidding the shingle under any circumstance within the fire areas of cities, which areas should be extended to the point where there is no possibility

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