FIVE-ALARM FIRE IN "THREE-DECKER" SECTION OF DORCHESTER (BOSTON, MASS.), JULY 4, 1913

The Menace of the Wooden Shingle*

IN nearly every American city of any consequence the mercantile center is surrounded by residence districts constructed almost wholly of wood. In the smaller cities, towns and villages the wooden buildings invade the mercantile center, either composing it entirely or in a greater or lesser degree.

A conflagration seldom gets under way in a brick, stone and concrete section; it gets started in a wooden section, and if the wind is right and the buildings are dry it gains sufficiently in magnitude to burn the brick, stone and concrete section also.

Every wooden building is a fire hazard in itself, and, if burning, endangers every adjacent building of whatever construction. But most wooden buildings possess a special and particular menace, not only to *adjacent* buildings, but to other wooden buildings (also possessing this menace), even when separated by wide open spaces, or fire barriers in the shape of intervening fireproof structures.

This menace is the wooden shingle.

Burning shingles can be carried great distances by the wind or draught of a conflagration, and when they alight in their turn upon other dry shingles they make fearful havoc. The modern shingle is thin, and the machinery which now makes it leaves a fuzzy surface which, after a period of drought, becomes like tinder. Without shingle roofs flying brands would not be carried over the brick center of a city by the wind. The wooden shingle furnishes the fire brand and also the tinder which it ignites.

One fire of any magnitude is all an ordinary fire department can cope with at one

* Copies of this Bulletin may be had of the National Fire Protection Association in any quantity at $10 per thousand. It contains examples of city ordinances limiting use of wooden shingles.

time. Even in wooden sections a fire can be stopped from communicating to contiguous buildings where the wooden shingle is not a factor. Fires in wooden sections on windy days quickly get beyond control where there are wooden shingles to carry the fire to other wooden shingles. A dozen fires may thus be started over a radius of a mile or more while the department is fighting the original fire.

The argument that shingle roofs are safe enough "outside of conflagration areas" is continually refuted by facts to the contrary. *Safety Engineering* recently refers to two separate groups of summer cottages, each cottage well detached from the other, burned at Narragansett Pier, R. I. The cottages were two and one-half stories high, with walls and roofs covered with shingles. The fire started in a dwelling at the extreme end of one of the groups. It was caused by a defective chimney. For want of hose and water-pressure the local fire department was unable to cope with the fire. For six hours the fire burned, the flying brands skipping some cottages and igniting others. All that saved the buildings that escaped was that the wind was light.

But the flying brands of a conflagration do not constitute the only reason for the objection to shingle roofs. There is never a day in the United States or Canada that some one's home is not destroyed or the roof burned off it by the ignition of its wooden shingles from sparks *from its own chimney*. Any kind of a roof is a safer roof than one of wooden shingles. Other roofs may burn, but they will not ignite from sparks, and will not furnish flying brands.

VIEW OF DAMAGED BUILDING, TAKEN FROM DIRECTION OF EXPOSURE

Composition roof of dwelling in foreground resisted burning brands, while shingles on lower portion which ignited were easily extinguished

To lock up his commercial paper in fireproof safes, and to house his wife and children in wooden boxes with tinder roofs, will not always be typical of the American.

It is no hardship upon any class of citizens to compel them to co-operate in public safety. It will not be necessary for any municipality to demand the removal of all shingle roofs immediately. An effective city ordinance may require all roofs constructed in the future to be of incombustible material, and that all roofs which shall hereafter require repair to the extent of one-third of their area shall be replaced with incombustible roofs. Thus the transition from present evil conditions to those of reasonable safety may be made gradually and without injustice to anyone.