

stations, warehouses, etc., such roof being durable, needing little or no repair, and thoroughly fire-retarding.

The red clay roofing tiles have probably never received from our architects the attention they so richly deserve. Scan the entire list of the ordinary roofing materials and you will find none equal to them in durability, fire-retarding character and almost utter absence of necessity for repairs.

Is it economy merely to weigh the first cost and lose sight of the incessant and repeated repairs which are entailed through using so many of the other ordinary roofing materials?

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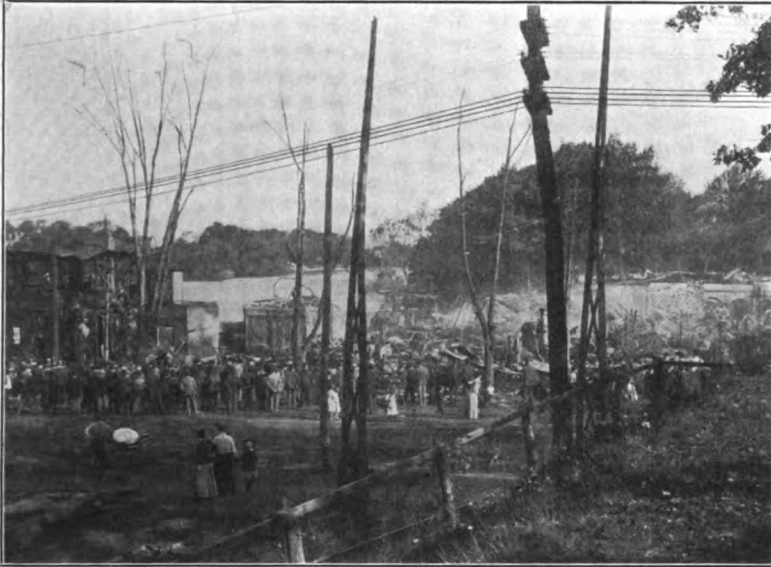
## Ferracute Works Fire.

### ANOTHER EXAMPLE OF POOR CONSTRUCTION.

[The experience of Bridgeton, N. J., shows how easy it is for a town or city to lose several of its chief industries by fire in a short time. Because a certain mill has escaped destruction by fire for a long period is no guarantee that it will always be so fortunate. Yet the argument of "immunity from fire" is heard frequently by insurance inspectors when recommending improvements to lessen the probability of a fire loss. It is foolhardy to refuse to heed the lessons of fires. A serious loss may be averted by a little forethought. A manufacturing company doing a prosperous business often pays little or no attention to the subject of fire until after it has lost its plant—then it is ready for the advice of the fire insurance expert! The time required to rebuild usually means considerable loss to a manufacturer, and in certain cases may cost a town its prestige as a manufacturing place, if not its very existence.—EDITORS INSURANCE ENGINEERING.]

**T**HREE manufacturing plants destroyed by fire in less than three weeks is the record made recently by Bridgeton, N. J., with a population of approximately 15,000 inhabitants. Thus three of the chief industries of the place were wiped out of existence, making hundreds idle; and what such an experience as this means to a town or a city can best be understood by those who are directly affected—the inhabitants themselves.

The last of Bridgeton's industries which recently suffered total



*Courtesy of Nicholas Scull.*

RUINS OF FERRACUTE MACHINE WORKS.

destruction by fire was the Ferracute Machine Works, a plant that had been in successful operation for thirty years and was valued at \$200,000.

Shortly before 6 o'clock Sunday evening, September 27, fire broke out in the Ferracute shops, and an alarm was sounded at the water works office, directly opposite. A second alarm was rung on the arrival of the first companies.

So far as can be ascertained, no one was on the premises when the fire started, although there are contradictory reports to the effect that a man was seen to jump from one of the windows. All the fires are said to have been drawn on the Saturday afternoon previous, and that everything was all right when the man who acted as night watchman went home Sunday morning. He was to return at 6 p. m. As the risk was exposed on one side by a railroad, it is entirely possible that sparks from a locomotive started the fire, or, what is more likely, spontaneous combustion of oily cotton waste. The product of the Ferracute Works was special machinery and dies.



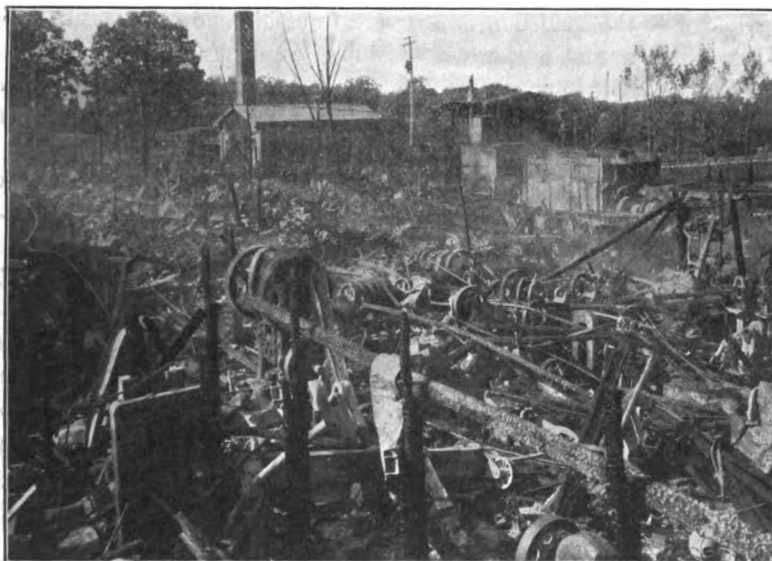
*Courtesy of Nicholas Scull.*

#### RUINS OF FERRACUTE MACHINE WORKS.

A heavy rain fell soon after the fire was discovered, but apparently this aided little in checking the flames. The plant was mainly of wooden construction, compactly grouped, and covered a fairly large area. The light character of the construction of the buildings favored a quick fire, and that is exactly what happened. When the woodwork of the buildings was consumed the costly machinery was exposed to heavy damage by fire and water. A tall stack on the lake side of the risk tottered for a few minutes and then fell into the lake.

The pattern storage building, slightly separated from the main group, and containing thousands of dollars' worth of patterns, burned the longest, but was completely destroyed. Valuable drawings kept in a brick vault were saved.

Besides the loss to Bridgeton in having one of its chief industries swept away by fire, several other lessons may be learned, which should be heeded by everyone concerned in such losses. The lessons emphasized in this case are not new, but nevertheless must be re-



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#### RUINS OF FERRACUTE MACHINE WORKS.

iterated in the interest of the insuring public until the conditions responsible for this waste of property no longer obtain.

The Ferracute plant was of inferior construction, compactly grouped, and all subject to one fire. The chances were against saving any part of the works if they took fire. The combustible material in the walls and partitions was of small dimensions, and simply added so much fuel to the flames. A "slow-burning" building with heavy timbers will not suffer destruction in anything like the short space of time in which the loss on the Ferracute plant was wrought. Heavily constructed floors and roofs, supported by heavy beams and posts, and free from all concealed spaces, would have gone a long way toward saving this loss.

But the materials entering into the construction of a plant and the general arrangement do not constitute the whole of this important subject. There must be ample facilities for putting fire out when it occurs. A complete equipment of automatic sprinklers and such other apparatus for protecting the interior of a risk as may be

adapted to the conditions, a system of outside hydrants amply supplied with water and hose, a watchman whenever a plant is not in operation, and a private fire brigade, are among the requisites of a properly protected plant to supplement modern construction of buildings.

Here was a prosperous plant, valued at \$200,000, operated under conditions that favor complete destruction by fire, escaped the inevitable for thirty years, but today is in ruins. Probably for twelve hours on the day on which it was destroyed the risk was left to itself. With a constant Sunday watchman and suitable private fire appliances for quickly putting out a fire as soon as it appeared the result would have been very different. The indemnity guaranteed by the insurance system cannot replace fully what is lost by a fire, especially that portion of a firm's business which is quite likely to go to some competitor while the plant is being rebuilt.