

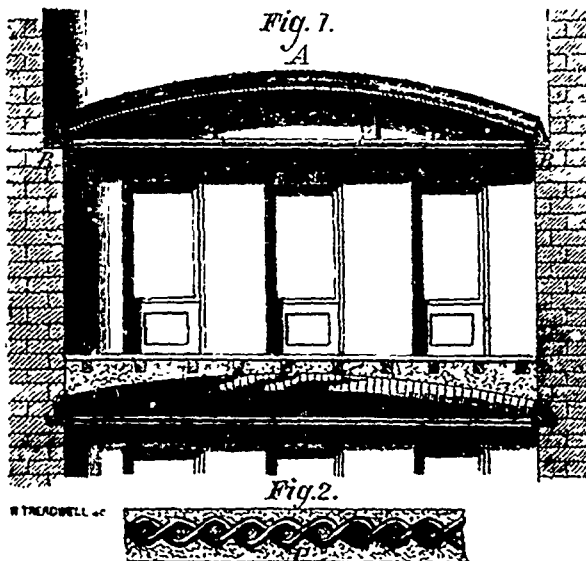
WEST'S TYRE-SETTING MACHINE.

for the re-setting of a loose tyre, it is very advantageous, as the wheel can be removed from the vehicle, set by the compression of the machine, and again fixed on its axle, within a very brief period. As regards the quality of the work, it is clear that the increased density and toughness of tyres so set by powerful compression constitutes an important advantage in point of wear and durability.

This tyre-setting machine is, therefore, one of those simple effective, and economical appliances that no carriage builder's or wheelwright's shop should be without. It is made in various suitable sizes, for wheels of different dimensions, and adapted for operation by hand or power, as shown. The smallest size (No. 1) is fitted for wheels varying from 3 feet to 4 feet 2 inches in diameter, with iron tyres $\frac{3}{4}$ of an inch thick by $1\frac{1}{2}$ inch wide, steel tyres 1 inch by $\frac{3}{4}$ inch. The larger sizes are adapted for diameters of wheels from 3 feet 6 inches to 4 feet 7 inches, iron tyres up to $2\frac{1}{2}$ by $3\frac{1}{2}$ inches, and steel tyres up to $2\frac{1}{2}$ by 1 inch. Each machine is capable of operating on wheels that do not vary more than 14 inches in diameter, and they may be constructed and adapted for wheels of any dimensions.

In addition to a saving of over one-third on setting new, and considerably more on old, tyres the following advantages are obtained for the work effected by this machine: durability and diminished wear and tear, because the evils of the old method are avoided, namely, the blackening and staining of the felloe; the steaming, swelling, and subsequent shrinking of the wood; and the early loosening of the tyre, consequent thereon, aided by the wearing away, under concussion, of the particles of wood which have lost their nature and coherence by charring; also the weakness resulting from taking out old bolts and making new holes is avoided, because, in upsetting an old tyre thereby, the bolts are not taken out nor the tyre removed from the wheel.

TEMPER OF TOOLS.—A correspondent of the *Detroit Tribune* says:—If an edge tool is so hard as to crumble, grind it on a dry stone until the edge turns blue; it will then cease to break, and the temper will generally prove to be about right. Scythes and axes are sometimes too hard at the edge, but if treated in this way will give no further trouble.



FIREPROOF FLOOR.

In this invention, Mr. Nathaniel Cheney, of the Architectural Iron Works, New York city, the inventor, proposes to do away with lath and other combustible building material, and apply the plaster, for ceiling rooms, directly to iron wire, which is interwoven with the tie rods of floor or roof arches.

In our engraving the arch A, is formed of metal plates bolted together at the edges by angle bars, and resting at the ends on metal skew back beams B, which are tied together by