

LATEST IMPROVEMENTS IN BRICK MAKING MACHINERY.

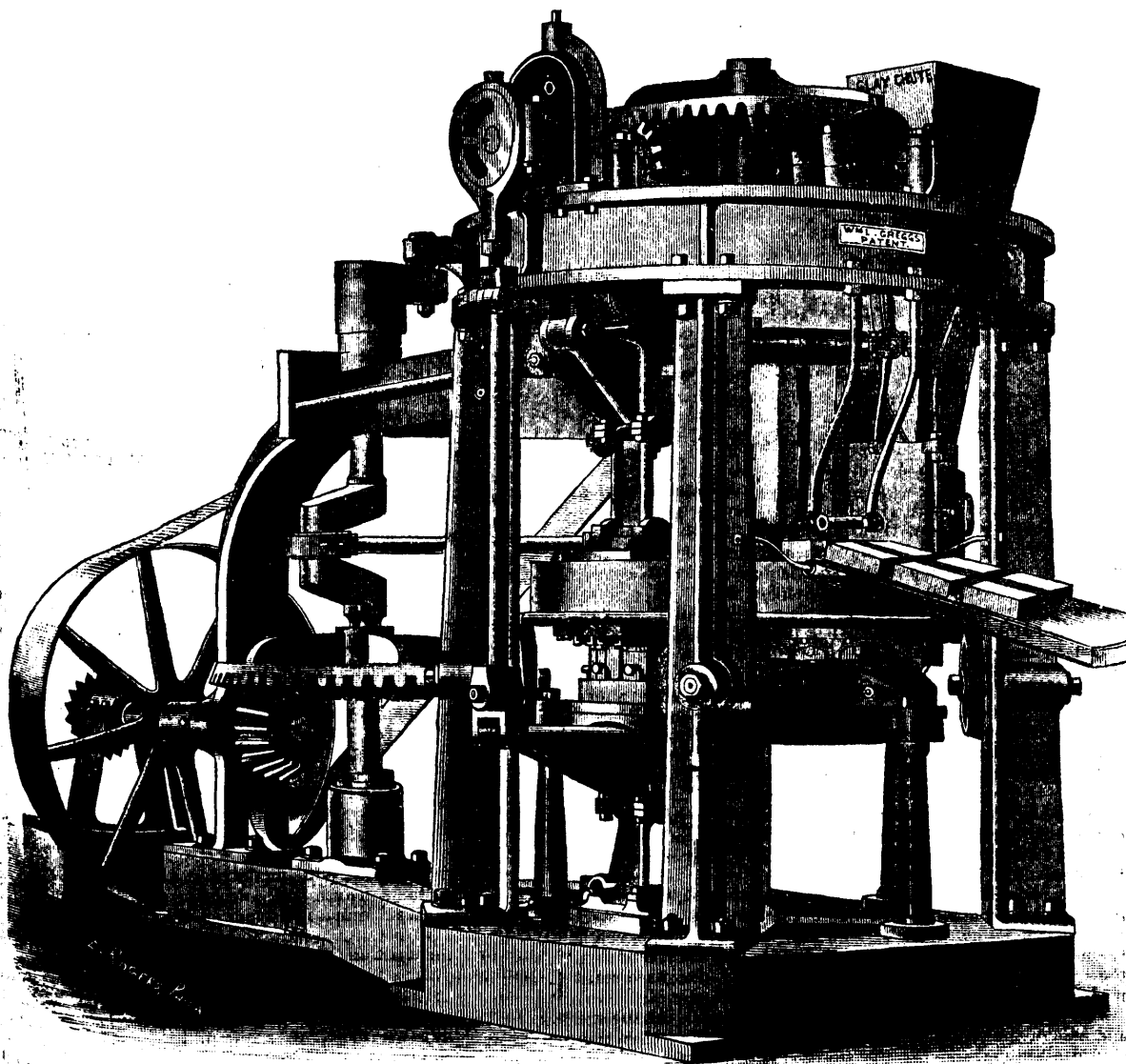
Considering the hard and disagreeable labor required to make bricks by hand, and the monotonous motions the brick-maker has continually to go through, it is not surprising that for some years past the minds of inventors have been exerted to contrive machinery by which this could be accomplished by steam-power. The efforts of various inventors have been crowned with more or less success, and several brick machines are now in the market. They, however, labor under the defect that the bricks made by them, after being burned, are not of equal dimensions. The cause of this is to be found in their different densities when the clay leaves the mold, a result of the fact that it was found practically impossible to furnish an equal amount of clay to each of the mold boxes, hence a different amount of compression, of density, and of shrinkage during the baking process. Another defect is coincident, namely, the bricks which have undergone less pressure, and are less dense, are weaker and fragile, lose their edges and corners, become unsuitable for face or front bricks, and therefore greatly reduced in value.

It was the purpose of Mr. Gregg to overcome these difficulties, and the result was the machine which we represent on this page; it molds bricks of uniform size, density, and strength. In order to understand its nature we will speak first of brick machines in general; they may be divided into three classes—dry clay machines, slush machines, and crude or moist clay machines. From the peculiar construction of dry clay machines where "filler

boxes" or graduating measures are used to fill the mold boxes, the clay must be dried and granulated to be capable of being filled with any degree of regularity into the "filler boxes," and thence into the molds; and when molds are grouped together it becomes a physical impossibility by the dry clay system to fill them alike, hence those deficient in clay will but partially develop the bricks; this added to the fact of the cohesive quality of the clay being destroyed by extracting the moisture before molding, complete vitrification cannot take place in the burning, and the result is that bricks made from dry clay disintegrate with the action of the elements.

In the manufacture of slush brick the other extreme is met. To facilitate molding in the "hand way" a large proportion of water is added, and the bricks being so soft must be spread upon floors to dry. The slow out-door process of drying, or evaporation, is one of the most favorable processes for the hand brick maker, but it requires the continuous insurance of favorable atmospheric influences and a continuity of fair weather, which practically can never be relied upon. Clay, to be made into bricks by hand molding, must of necessity be so wet that at least 25 per cent of water has to be evaporated before it is safe to burn, so that in fact in works producing 30,000 bricks per day, upward of 23 tons of water have to be evaporated therefrom every 24 hours. The labor attending this is an expensive item, and the bricks are rendered porous by the operation.

Gregg's triple pressure and combination machines occupy a medium position between dry clay and slush machines, and a



IMPROVED BRICK MAKING MACHINE.