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Improvement in Machines for Molding and Pressing Brick.

The proprietors of this patent state that it was the aim of the inventor to produce a machine with as few parts as possible, which could be run night and day, in summer and winter, and could be constructed so as to preclude the necessity of frequent repairs. That this has been successfully accomplished is satisfactorily proved by the practical operations of the press.

This improved brick press, constructed to mold and press bricks, has a horizontal revolving wheel, A, in which are placed permanent molds, B, extending from the upper to the lower surface. In these molds are placed movable plungers, C, which are used for pressing the bricks. The wheel A, is made to revolve and pause, so that the molds, B, pass continually under the mixing cylinder D, from the bottom of which the clay is forced into the molds, B, and then over the toggle bar E, which, being straightened, presses the plungers C, up into the molds, the clay being retained by the fixed cover F, under which each mold passes and stops as the wheel A, revolves and pauses. When the bricks are pressed, the wheel A, moves round, and they are forced gradually out of the molds, and are swept off by an adjustment, G, on to a board H, or an endless belt, as may be desired. The clay is first ground by rollers, I, placed on the ground, and thence carried by buckets on an endless belt, J, into cylinder D, in which it is mixed by revolving arms which also force it into the molds.

Pressure by the toggle bar, considered in all respects, is the best known in mechanics. In this machine, it can be regulated with ease to suit the material used. This invention can be quickly adjusted to mold bricks of wet clay without pressure; or the pressure can be increased to hundreds of tons for dry clay.

The bricks manufactured by this press, being of great density and tenacity, with sharp corners and angles, are superior to those made by hand, and equal in every respect to those produced by other machines. As they come from the press they can be handled without injury, and may be hacked under sheds, thus preventing the large loss that is incident to exposure in the open air.

This machine attracts especial attention by its simplicity; its cost and weight are only about one third of those of other machines claiming to do the same amount and quality of work; and the motive power required to work it is comparatively small. The press can be made "single" or "double," the capacity of the former, the proprietors state, being 25,000 bricks per day of ten hours, and that of the latter 50,000 bricks.

The following advantages are further claimed for this new brick press: It is the cheapest machine which has been offered to the public, that does the work of molding and pressing bricks; it accomplishes this work without change in the action of the machinery; the motion is continuous, no cessation of power being necessary after the machine is set in operation until the work is finished; it grinds and mixes the clay so that the bricks are uniform in density, and less liable to break in burning, thus obviating one of the most serious objections to pressed bricks; it is a self-delivering machine, requiring very little manual labor to run it; it is very durable and not liable to get out of order; the degree of pressure can be varied to suit the material used; the pressure exerted and the number of bricks molded are greater than that of other machines using the same amount of motive power; the machine is simple in its construction—any ordinary mechanic, or workman, can set it up, adjust and work it; it is of a compact form, and of much less weight than other ma-

chines claiming the same capacity, and can be readily adapted to make pressed fuel of fine coal or of peat.

This press was patented through the Scientific American Patent Agency January 8, 1867, and is owned by the "Combination Brick Press Company," of which George W. Quintard, Esq., is President. For further particulars address or call on J. M. Moorhead, Superintendent, at the Morgan Iron Works, foot of Ninth street, East River, New York City.

Improved Pavement.

Patented by H. G. McGonegal, of New York city. This invention relates to a new wooden street pavement, which is so

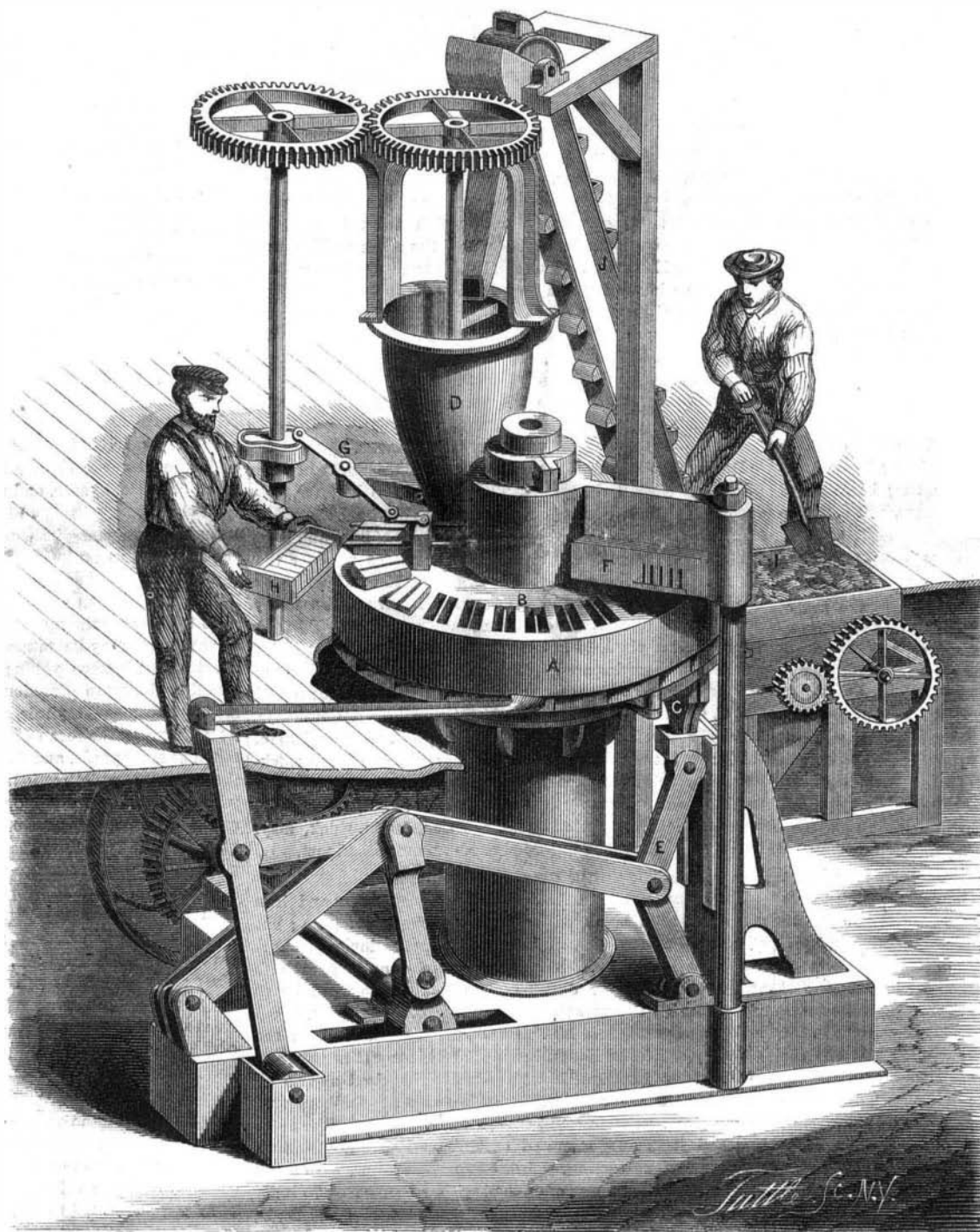
with a reservoir or tank to contain oil, which, in its turn, is supplied with mechanical appendages for the proper bestowal and distribution of the oil, the whole combination being placed upon a suitable frame or platform supported on wheels, in order that the machine may be easily portable or transportable in its operations against the creatures it is intended to destroy.

The boiler being supplied with a proper quantity of water, and the heater filled with water, and the oil reservoir with oil, the operation is as follows, to wit: Steam is raised and the machine placed in position to begin work between two rows of cotton, which we may suppose to be the two rows

next one end or side of the field. The stop cocks are now opened, and as soon as the oil begins to flow from the jet pipes the machine is started. The steam, as it rushes out of its own series of jet pipes or nipples, passes through the dripping oil and expands and transforms the same into vapor, which, intermingling and spreading out with the steam and changing its character, envelops the proximate rows of cotton plants, and kills every caterpillar or other insect upon them. It does more; its effect is so deadly that it destroys the eggs of the worm, and leaves an invisible influence upon every part of the plants that have been bathed with it, which keeps off those worms that, coming into the field from other quarters afterward, might otherwise prove as destructive as those that have been killed would have been if they had been permitted to live. This I have verified by prolonged and careful watching, and hence it will be seen that my invention not only will destroy the unhatched and living insects upon any given field, but that it will shield that field from all danger of depredation from such as may come into it from outside localities, and hence, further, that upon its general use, it will finally exterminate every tribe of insect, and relieve the country of the anxiety and heavy loss they have heretofore every year inflicted. But to return to the operation of the machine; after two rows have been covered with the vapor, the machine is carried across the field between the next two rows of plants, and so on until it has been made to traverse the whole field, and velope every plant in it with its oleaginous vapor, and then its work for the season is accomplished, and the crop saved on every foot of ground over which it has passed.

My invention may be of any prescribed dimensions, to be drawn by one or more mules or horses, and there is no need to make it of costly construction. Any cheap oil may be employed, such as petroleum, lard, or cotton-seed oil, or the like, care being taken that no acid is contained in it. Those oils that give out the strongest and most disagreeable odors are, perhaps, the most effective.

HARMLESS "PHARAOH'S SERPENTS."—A new method of making the curious chemical toys called Pharaoh's Serpents has been suggested by Vorbringer. The black liquor which results as a useless product when coal oil is purified with sulphuric acid, is to be treated with fuming nitric acid. The dark-colored resinous matter which swims on the surface is then collected, washed and dried, when it forms a yellowish-brown mass having about the consistency of sulphur which has been melted and poured into water. When this mass is ignited it undergoes such a wonderful increase in bulk that a cylinder one inch long will give a snake about four feet in length. The briefness of the popularity enjoyed by the "original" serpents was due to the unhealthy vapors given off in the process of burning.



SHEPARD'S IMPROVED BRICK PRESS.

arranged that the blocks in each row are connected with each other, so that not one can be forced down without the others also sinking; thereby the holes, now generally occurring in wooden pavements by the sinking of single blocks, will be avoided, and a whole, coherent wooden pavement will thus be provided.

The invention also consists in boring vertical holes into the blocks for the purpose of receiving sand, cement, or tar. The same will wear quicker than the wood, and the surfaces of the filling will, therefore, be lower than the face of the wooden blocks; thereby a sufficiently uneven surface is provided for the purpose of giving a secure foothold to the horses.

Machine for Exterminating the Cotton Worm, Etc.

Recently patented by Charles Steinmann, of Napoleonville, La. This invention consists, to state its nature in comprehensive general terms, of an ordinary steam boiler, that is provided with a novel arrangement of tubes or pipes for the distribution of the steam generated by it, in combination