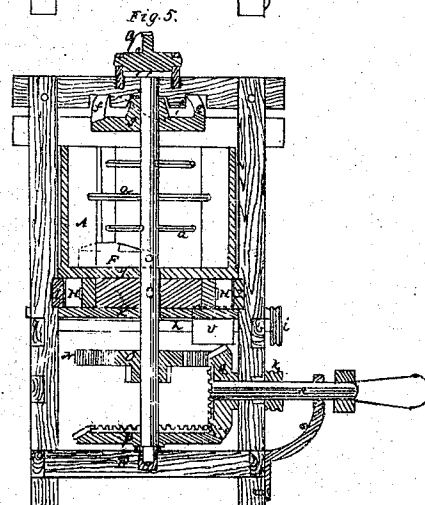
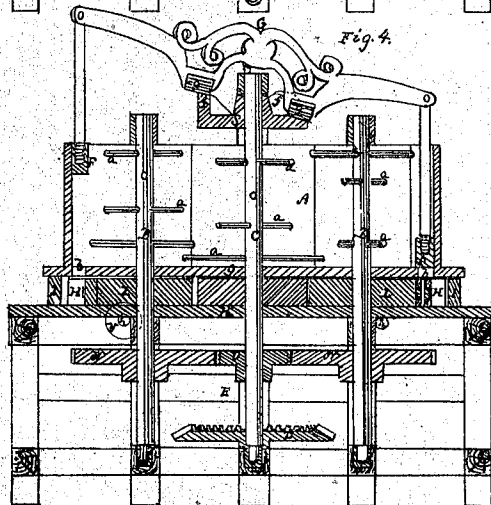
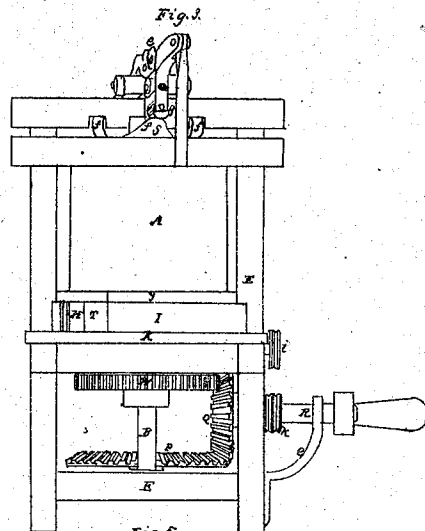
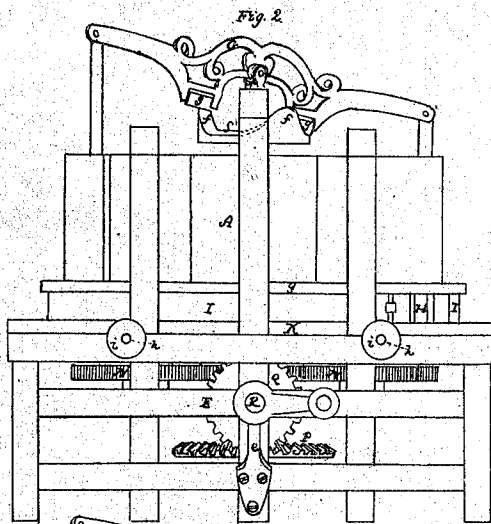
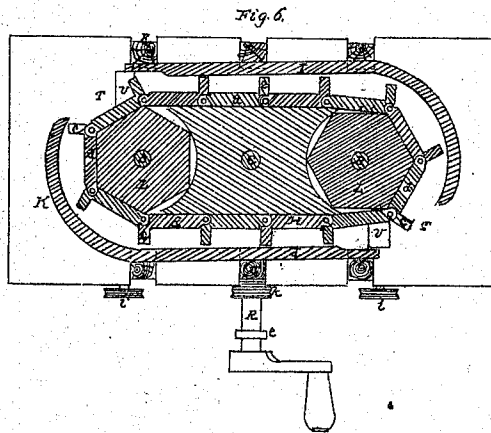
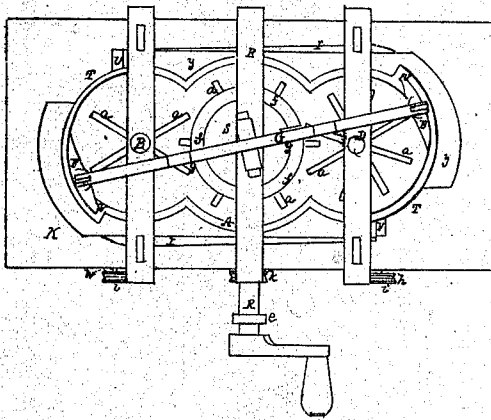


J. Taggart. Brick-Machine.

N^o 75596
Fig. 1.

Patented Mar 17, 1868.



Witnesses
J. H. Piper
J. P. Snow

J. Taggart
By his attorney
R. W. Colby.

United States Patent Office.

JOHN TAGGART, OF ROXBURY, MASSACHUSETTS, ASSIGNOR TO HIMSELF, ISAAC AMES, AND ALFRED G. TAGGART, AND ALFRED G. TAGGART ASSIGNOR TO SARAH P. TAGGART.

Letters Patent No. 75,596, dated March 17, 1868.

IMPROVED BRICK-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS MAY COME:

Be it known that I, JOHN TAGGART, now or late of Roxbury, in the county of Norfolk, and State of Massachusetts, have invented a new and useful Machine for Mixing and Moulding Clay for the Manufacture of Bricks therefrom; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view,

Figure 2 a side elevation,

Figure 3 an end view,

Figure 4 a vertical and longitudinal section, and

Figure 5 a transverse section of it.

Figure 6 is a horizontal section, taken through the endless former or chain and the reducers with which such former operates in compressing the clay and reducing it to bricks or parallelopipeds.

In such drawings, A denotes a reservoir for the reception of the clay to be mixed or stirred. Each side of the said receptacle A is curved, so as to be concentric with three vertical shafts B C D, arranged within the receptacle, and being duly supported in and by a frame, E, by which the reservoir is sustained. Each of the shafts has a series of bars or knives, *a a*, extended through it horizontally and diametrically, as is the case with the shaft of a common pug-mill. The ends of the receptacle A are not concentric with the two outer shafts, but are eccentric therewith, and are curved and arranged with and connected to the sides in manner as exhibited in fig. 1; in other words, each of them extends from the sides so as to form a chamber, V, having a form in horizontal section like unto a crescent. Within each of the said end-chambers is a plunger, F, which depends from the adjacent end of a working-beam or lever, G, arranged in manner and supported by the frame E, as represented.

Directly underneath each of the plungers F, a hole or passage, *b*, is made through the bottom of the reservoir, so as to open into the space between the endless former H and the reducers I I. This endless former H is arranged underneath and against the bottom, *y*, of the reservoir, and on a bed-plate or platform, K. It is composed of a series of right-angular links hinged together. Each of such links consists of two rectangular plates *c d*, making a right angle with each other, in manner as represented. The chain H is supported on the perimeters of two prisms L L, fixed on the vertical shafts B D, such shafts being provided with spur-gears N N to engage with and be revolved by a pinion, O, fixed on the shaft C. A bevel-gear, P, carried by the shaft C, engages with a bevel-pinion, Q, fixed on a driving-shaft, R, which is arranged and supported by the frame E and a bracket, *e*, in manner as shown in the drawings.

On the upper part of the shaft C is a cammed wheel, S, or, in other words, a disk, provided with three cams *fff*, projecting upward from it. These cams are to act successively against each of two friction-rollers *gg*, applied to the working or walking-beam G. The cammed wheel is for effecting the reciprocating or vibratory motions of the walking-beam, so as to operate or move the plunger up and down alternately.

By inspection of fig. 6 of the drawings, it will be perceived that each of the reducers I I is not arranged parallel to the endless chain or former H, but is somewhat oblique thereto, and at or near one end nearly touches it. Also, that between such end and the next adjacent extremity of the other reducer is an opening or space, T, through which the moulded bricks are to be discharged. Such discharge of each brick is effected by means of a roller, U, arranged at and below the said end of the reducer, and being fixed on a horizontal shaft, *h*, provided with a driving-pulley, *i*. Endless belts are to go around the driving-pulleys *i i* of the two discharging-rollers, and also about a grooved pulley, *k*, fixed on the shaft R, the same being to effect such rotary motions of the discharging-rollers as will cause them to discharge the moulded bricks successively from the moulding-mechanism. An endless apron or carrier may extend about each of the rollers U, and be employed to remove the bricks from the moulding-mechanism and transfer them to any desirable locality.

The operations of the machine may be thus described: The reservoir A having been supplied with clay, and the driving-shaft R being put in revolution by any suitable motor, whether animal or mechanical, the three

shafts B C D, with their series of stirrers, will be put in revolution. The clay will be mixed or stirred up or reduced to a fluent state, and will be driven toward and into the plunger-recesses or chambers V, from which, from time to time, it will be expelled by the plungers; that is to say, the clay will be driven through the openings of the bottom of the reservoir, and in the space between the endless former and the reducers.

While each of the links of the endless former is in movement along each of the curved parts of the reducers and to the straight parts thereof, the jaws or projecting parts *c c* of the endless former will close together or be moved toward one another, and finally into parallelism, so as to compress lengthwise the clay which may be between them. Next, as they pass along the straight part of the reducer, such part, by being at an acute angle with the straight part of the endless former, will cause the clay to be gradually compressed in thickness. Finally, each of the masses of clay so compressed will be reduced to the shape of a brick, and be expelled from the pressing-mechanism by the discharging-roller or apron.

From the above it will be seen that, while the machine may be in operation, a continuous stream of bricks will be discharged from each end of it, and that bricks ready for being dried and burned will be produced by it with great rapidity.

The machine above described thus contains a continuously-operative moulder or mechanism, which readily moulds the bricks, and also compresses them in two directions, that is, lengthwise and laterally.

I claim the combination of the endless former H, constructed substantially in manner as described, the top and bottom covering-plates *y* K and one or two plates or reducers I I, arranged in manner and so as to operate with it, as explained.

I also claim a clay-reservoir, A, as made with the plunger and semi-crescential clay-receiving recesses or chambers V, arranged at its ends, and provided with discharging-openings leading therefrom, as explained.

I also claim the combination of the two plungers F F and their operative mechanism with the clay-reservoir A and its mechanism for stirring and mixing the clay.

I also claim the combination, as well as the arrangement, of the endless former H, constructed substantially as described, the platform K, one or more reducers, I, the reservoir A, and mechanism for mixing the clay therein, and mechanism for expelling it therefrom into the moulds and pressing-mechanism, substantially as described.

I also claim the combination of the discharging-roller U and its operative mechanism with the platform K, the endless former, and the reducer or reducers I I, applied thereto, substantially in manner and so as to operate as described.

JOHN TAGGART.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.,