A. Carbonel,

Brick Machine.

No. 2,619. Fig. 1. Patented May 12, 1842.

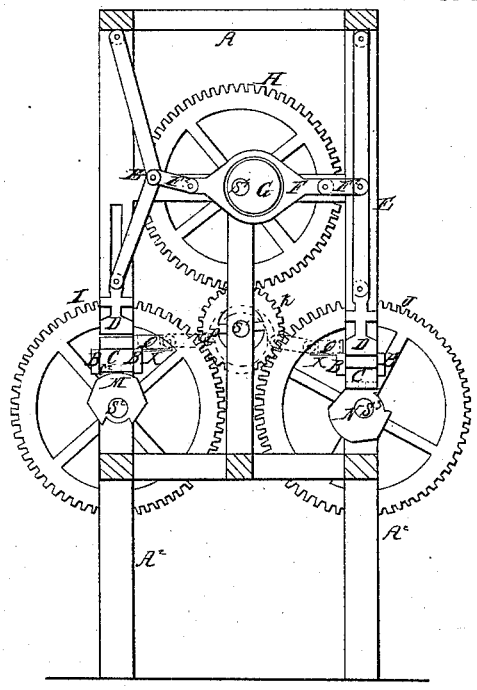

Fig. 2.

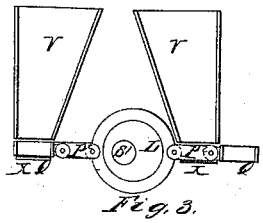

Fig. 5.

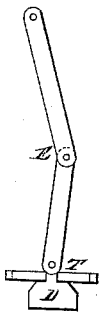

Fig. 3.

Fig. 4

Fig. 6.

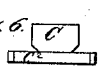

Fig. 7

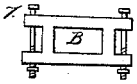

Fig. 8.

UNITED STATES PATENT OFFICE.

ANTOINE CARBONEL, OF PHILADELPHIA, PENNSYLVANIA.

BRICK-PRESS.

Specification of Letters Patent No. 2,619, dated May 12, 1842.

To all whom it may concern:

Be it known that I, ANTOINE CARBONEL, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Machine for Making Bricks, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a vertical section. Fig. 2 is a section of the filler and discharger and the eccentric for operating it. Fig. 3 is a section of the eccentric for raising the piston. Fig. 4 the common eccentric. Fig. 5 upper piston and toggle joint. Fig. 6 lower piston. Fig. 7 plan or bird's eye view of a mold. Fig. 8 perspective view of the lower piston.

Similar letters refer to corresponding parts.

This machine is made entirely of metal, fills the mold, presses the bricks from the upper and under sides simultaneously toward the center, raises the bricks from the molds by the lower eccentric, pushes them horizontally away by the middle eccentric, the four eccentrics being on the shafts of four cog-wheels working into each other and moving simultaneously.

The frame A A^2 is made of sufficient size and strength to contain and support the several parts. The molds B in which the bricks are molded and pressed are made by bolting plates of metal to the posts A^2 or in the usual manner by casting them of metal as in Fig. 7, and screwed to the posts A^2 by bolts, screws, or otherwise or in any convenient manner, or the molds may be movable. The lower pistons C for pressing the bricks or the underside and lifting them from the molds rest upon the lower eccentrics M N and form the bottoms of the molds. Each of said pistons is made of cast metal, being on the upper part the size of the inside of the mold in which it rises and falls, its base C^2 being longer having on the ends of said base tongues which move up and down in grooves on the inner sides of the posts, or grooved to move up and down on tongues on the posts A^2. Figs. 6 and 8 show the base made with tongues. The upper pistons D for pressing the bricks on the upper side are attached by joints T, Fig. 5, to the lower ends of the lower limbs of the toggle joints. The pistons fit the inside of the molds and move up and down therein. They are made like the lower pistons, except that the piece termed the base on which the tongues are formed is placed on the upper instead of on the lower side of the piston. The toggle joints E for raising and lowering the upper pistons and the connecting rod F and eccentric G for operating the toggle joints are made and used in the usual manner. The upper ends of the toggle joints work on joints against the undersides of the caps of the frame in the usual manner. The connecting rod is connected with the toggle joints by two short connecting rods F^2 and pins on which they work. The aperture in the center of the rod F is of the same size and shape as the eccentric G placed therein which operates the rod F. The eccentric G is made in the usual manner and fixed to the shaft S^4 and turns with it. The gearing or cog wheels for turning the aforesaid eccentric simultaneously consists of three cog wheels H, I, J fixed on the shafts of the eccentrics, being connected together by a center cog wheel K, which is engaged with the three cog wheels just mentioned, causing them to revolve together, the motive power, which may be steam, animal, or other power, being applied to the shaft S′ of the center cog wheel K. An eccentric L, Fig. 2, operating the pusher and filler is fixed on the axle S′ of the center cog wheel K. It is made and arranged in the usual manner. The eccentrics M N for operating the lower pistons are fixed to and turn with the axles S^2 S^3 of the two lower cog wheels I, J, one half of each of said eccentrics is semicircular and the other half polygonal, the piston C rests upon one of the straight or polygonal sides nearest the center of the shaft S^3 when filling the mold; the middle part of the segment or curve gives the upward pressure and the end of said segment which is farthest from the center of shaft S^3 pushes the brick up from the mold. The upper eccentric G for operating the toggle joints is fixed to and turns with the axle S^4 of the upper cog wheel H. The arm P attached to the fillers Q for filling the molds is perforated in the middle with an aperture corresponding with the eccentric L placed therein, the said fillers being attached to the extremities of said arm P by short connecting rods P^2 and joints and serving the double purpose of filling the molds and removing the bricks being drawn back from over the molds to receive the clay to be conveyed to the molds from hopper V placed

over the fillers, the said fillers resting on horizontal tables X level with the upper edges of the mold to prevent the clay escaping from the fillers and for guiding them to the molds, said fillers first coming in contact with the bricks raised from the molds to deposit the clay into them.

The aforesaid apparatus for filling the molds and pushing the bricks from the molds being made in the usual manner need not therefore be particularly described, the construction and arrangement of the same being sufficiently clear in the drawings.

The correct movement of the several pistons, fillers and dischargers being regulated exactly for producing the intended effect by means of the eccentrics, cog wheels, &c., before described.

By lengthening the shafts and frame and increasing the number of molds, eccentrics, cog wheels, toggle joints, &c., and augmenting the motive power the machine may be adapted to the molding of many bricks at a single operation.

What I claim as my invention, and which I desire to secure by Letters Patent, is—

The combination of the eccentrics M N and pistons C with the toggle joints E and pistons D for pressing the brick simultaneously from the top and bottom toward the center and then discharging the bricks from the molds in the manner described by the continued motion of the eccentric as herein set forth.

ANTOINE CARBONEL.

Witnesses:
WM. P. ELLIOT,
E. MAHER.