No. 645,616. Patented Mar. 20, 1900.

C. J. ANDERSON.

BRICK MACHINE.

(Application filed Feb. 28, 1899.)

(No Model.) 2 Sheets—Sheet 1.

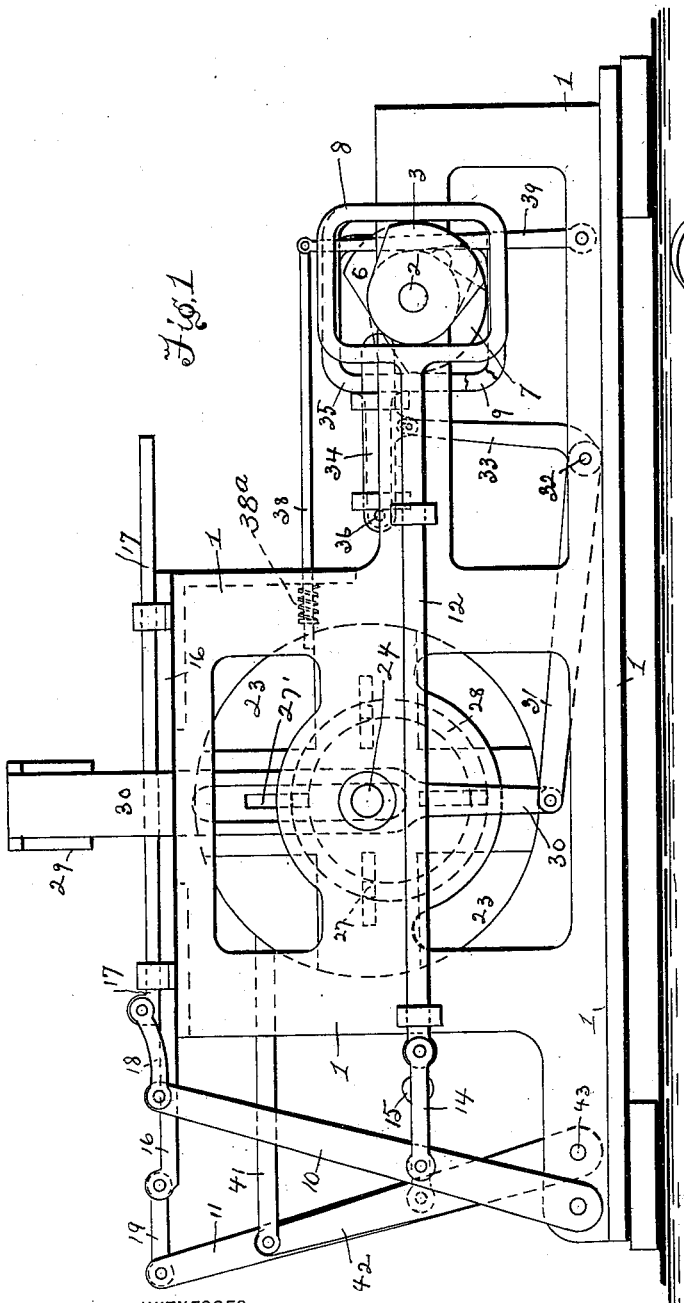

Fig. 1.

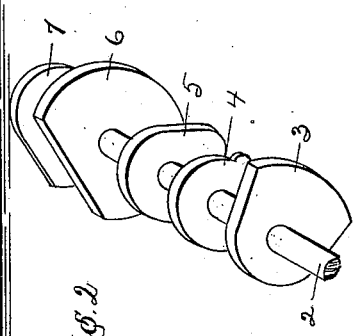

Fig. 2.

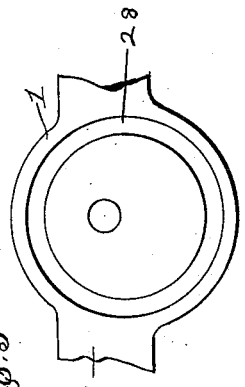

Fig. 3.

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(No Model.) 2 Sheets—Sheet 2

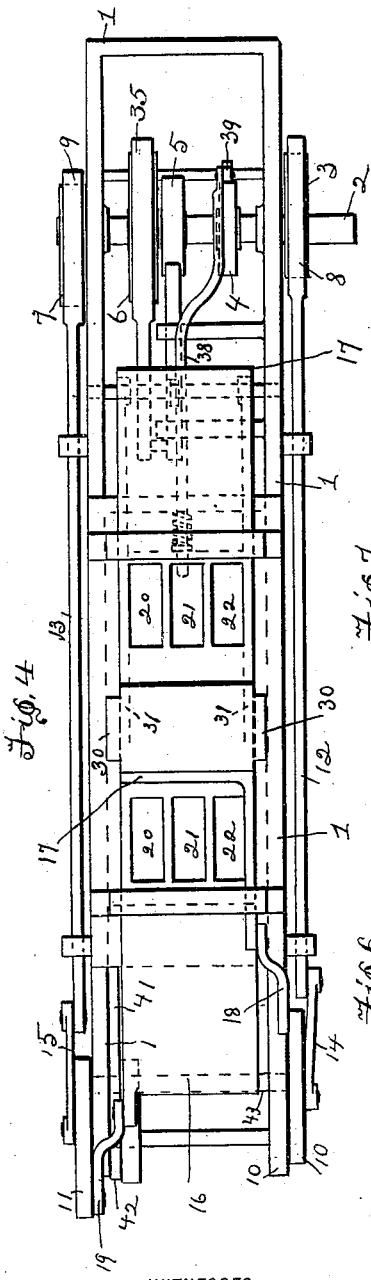

Fig. 4.

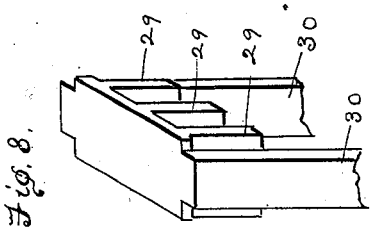

Fig. 8.

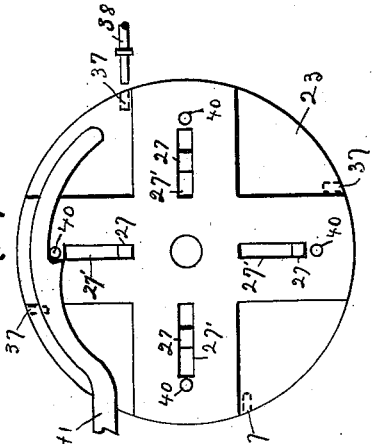

Fig. 7.

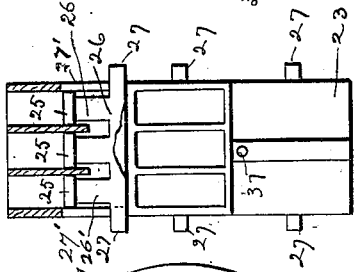

Fig. 6.

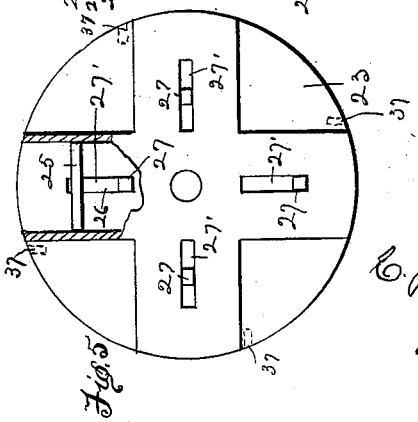

Fig. 5.

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CHARLES J. ANDERSON, OF PITTSBURG, PENNSYLVANIA.

BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 645,616, dated March 20, 1900.

Application filed February 28, 1899. Serial No. 707,236. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. ANDERSON, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Brick-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in a brick-machine.

The invention has for its object the provision of a machine for making fuel-briquets in the form of bricks, being simple in construction, strong, durable, and comparatively inexpensive to manufacture.

With the above object in view the invention finally consists in the novel construction, combination, and arrangements of parts, as will be hereinafter more specifically described in detail.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference designate like parts in the several views, in which—

Figure 1 is a side view of the complete machine. Fig. 2 is a perspective view of the main shaft and its cams removed from the machine. Fig. 3 is a front elevation of a portion of the frame, showing one of the cam-grooves for operating the molds. Fig. 4 is a top plan view of the complete machine. Fig. 5 is a side view of the rotary mold, partly in section. Fig. 6 is a front view of the same, partly in section. Fig. 7 is a side view of the same, showing the lever for rotating the same. Fig. 8 is a perspective view of the compressing-plungers.

Referring to the drawings, the numeral 1 designates the frame of the machine, said frame having arranged at its rear the rotatable shaft 2, upon which are secured the cams 3, 4, 5, 6, and 7, which operate the machine. The outer cams 3 and 7 have arranged thereon the straps 8 and 9, which are connected to the levers 10 and 11 by means of the rods 12 and 13 and links 14 and 15. The upper end of the said levers 10 and 11 are connected to the sliding plates 16 and 17 by means of the links 18 and 19. These sliding plates have each formed therein the three openings 20, 21, and 22 for the reception of the material as it passes therethrough into the molds. The frame 1 has suitably journaled therein a shaft 24, upon which is mounted a rotatable wheel 23. This wheel has arranged therein a series of molds in sets of threes. The molds are each provided with the movable bottoms 25, which are or may be formed integral with fingers 26′ of the discharging-bar 26. This bar 26 extends outwardly on each side of the wheel 23 through the slot 27′, as shown. These extending ends are shown at 27 and engage in an eccentric groove arranged on the inner face of the frame 1, as shown in dotted lines in Fig. 1.

The plungers 29 for the molds are attached to the vertical movable standards 30, which have an oblong opening formed in them to straddle the shaft 24. The levers 31 are pivotally attached to the lower ends of these standards, and the opposite ends of these levers are secured upon a shaft 32, extending across the frame. A lever 33 is also secured to the said shaft at one end, and the upper end of this lever is pivotally attached to the under side of the sliding bar 34, said bar being in contact with the cam 4. The strap 35 upon the cam 6 is also attached to the said sliding bar by means of a rod or pin 36.

Openings 37 are formed at four points upon the periphery of the mold-wheel, and engaging with one of these openings is the spring-actuated rod 38, which is attached to the pivoted upright lever 39, said lever being operated by the cam-wheel 4 to disengage the end of the spring-actuated rod from the opening of the wheel at the proper moment. Upon one side of the mold-wheel is arranged the pins 40, which engage with a hooked bar 41, said bar being attached to the lever 42, which is secured fast upon the same shaft 43 to which the aforesaid lever 11 is secured.

In practice a hopper for holding the material is placed above or over the opening in each of the sliding plates, thereby filling said openings. When power is applied to the cam-shaft, the said cams transmit the following movements to the parts: First, the cams 3 and 7 in their rotation cause the sliding plates to move so that the openings containing the

material shall register with one another directly above one set of molds of the wheel. These plates then remain stationary, and the material drops down into the mold. The plungers then descend, compress the material in the mold, and then return to their former position. The sliding plates then return to their normal position, and at the same time in which the lever controlling the said sliding plates moves back to its normal position the lever 42 also moves backward until one of the pins 40 engages with the shoulder or hooked portion of the bar 41. The rod 38 then disengages with the opening in the face of the mold-wheel by the action of the cam-wheel 4. The said bar 41 then comes into action and causes the mold-wheel to rotate one-quarter revolution and then stops with the next mold in position. This operation is then repeated through the rotation of the cams. The projecting ends of the discharging-bar in the molds traversing the cam-groove in the frame cause the said movable bottom in the molds to discharge the bricks from the mold on the under side of the wheel. By this device the bricks are formed at a rapid rate and discharged.

Having thus fully shown and described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a brick-machine, a suitable frame provided on the inner face of each of the sides with an eccentric groove, a shaft journaled in one end of the said frame, a series of cams 3, 4, 5, 6, and 7, mounted thereon, a rotating wheel carrying a series of molds mounted in the said frame and operated by one of the said cams, plungers operating in the said molds and operated by one of said cams, a movable bottom arranged in the said molds, and a discharging-bar adapted to operate the said bottom when the ends of the said bar engage in the said groove during the rotation of the wheel, substantially as described.

2. In a brick-machine, a suitable frame provided on the inner face of each of the sides with an eccentric groove, a shaft journaled in one end of the said frame, a series of cams 3, 4, 5, 6, and 7, mounted thereon, a pair of sliding plates provided with suitable openings operating upon the top of the said frame, connections between the cams 3 and 7 and the said plates for operating the same, a rotating wheel journaled in the said frame and carrying a series of molds adapted to be brought into alinement with the openings in the said plates, operating means for the said wheel, plungers operating in said molds and operated by one of said cams, a movable bottom arranged in the said molds, and a discharging-bar adapted to operate the said bottom when the ends of the said bar engage in the eccentric groove during the rotation of the wheel, substantially as described.

3. In a brick-machine, a suitable frame provided on the inner face of each of the sides with an eccentric groove, a shaft journaled in one end of the said frame, a series of cams 3, 4, 5, 6, and 7, mounted thereon, a pair of sliding plates provided with suitable openings operating on top of said frame, connections between the cams 3 and 7, and the said plates for operating the same, a rotating wheel journaled in said frame and carrying a series of molds adapted to be brought into alinement with the openings in the plates, operating means for said wheel, plungers operating in the said molds, a pair of vertically-movable standards suitably arranged in the said frame and connected to the said plungers, connections between one of the said cams and said standards for operating the same, a movable bottom arranged in each of said molds, and a discharging-bar adapted to operate the said bottoms when the ends of the said bar engage in the said eccentric grooves during the rotation of the wheel, substantially as described.

4. In a brick-machine, a suitable frame provided on the inner face of each of the sides with an eccentric groove, a shaft journaled in one end of said frame, a series of cams 3, 4, 5, 6, and 7 mounted thereon, a pair of sliding plates provided with suitable openings and operating on top of said frame, connections between the cams 3 and 7 and the said plates for operating the same, a rotating wheel journaled in said frame and carrying a series of molds adapted to be brought into alinement with the openings in the plates, means for retaining said wheel in a fixed position and operated by one of said cams, means for rotating said wheel when the retaining means is released, plungers operating in the said molds, a pair of vertically-movable standards suitably arranged in the said frame and connected to the said plungers, connections between one of said cams and said standards for operating the same, a movable bottom arranged in each of said molds, and a discharging-bar adapted to operate the said bottoms when the ends of the said bar engage in the said eccentric grooves during the rotation of the wheel, substantially as described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

CHARLES J. ANDERSON.

Witnesses:
JAS. V. MCMASTERS,
JAS. W. DUNCAN.