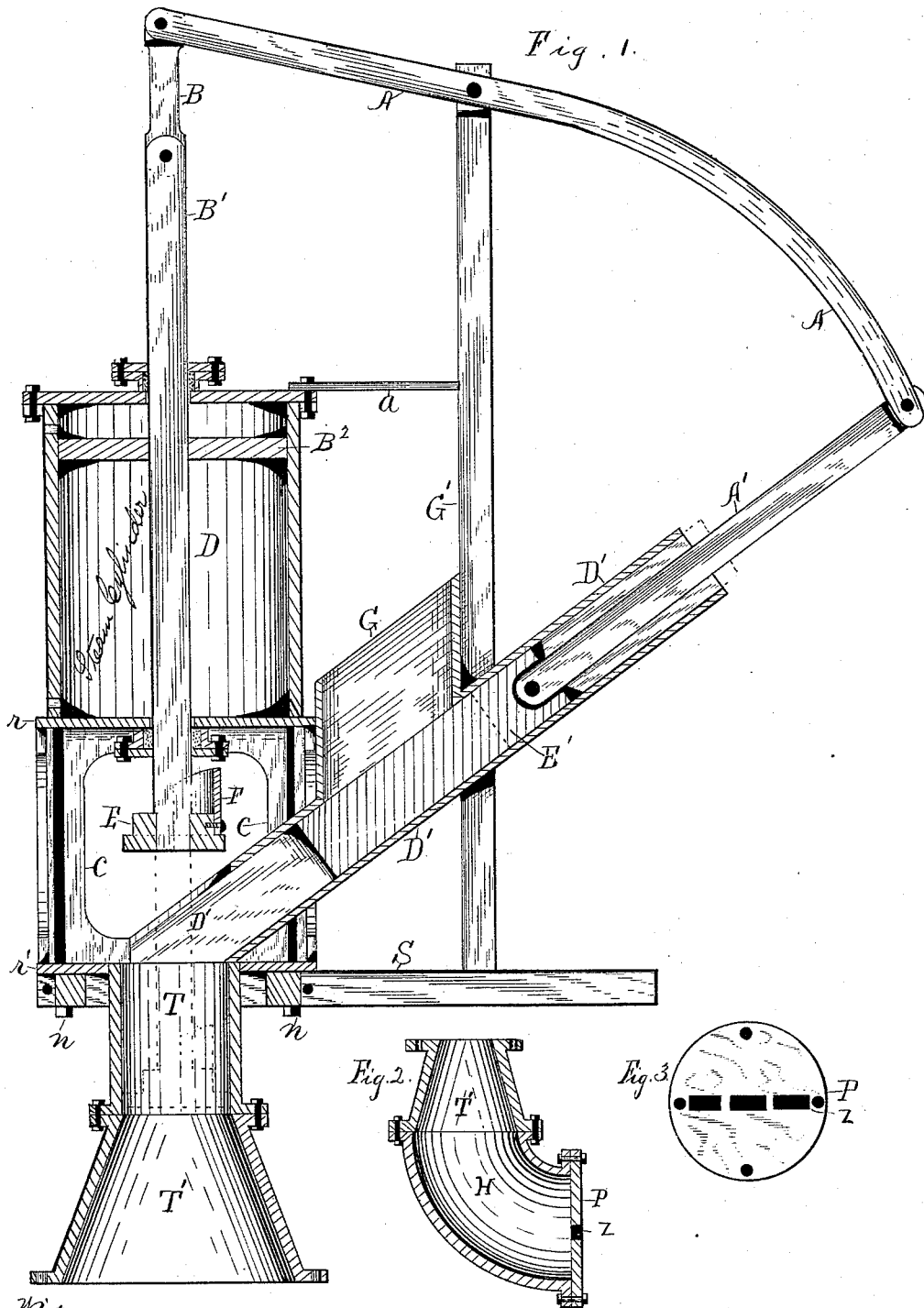


(No Model.)

A. BURRELL.
STEAM BRICK MACHINE.

No. 419,749.

Patented Jan. 21, 1890.



Witnesses
Edwin M. Gray
Daniel P. Lennon

Inventor
Archibald Barrrell By
Thos H Hutchins atty

UNITED STATES PATENT OFFICE.

ARCHIBALD BURRELL, OF MORRIS, ILLINOIS.

STEAM BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 419,749, dated January 21, 1890.

Application filed April 22, 1889. Serial No. 308,219. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD BURRELL, a citizen of the United States of America, residing at Morris, in the county of Grundy and State of Illinois, have invented certain new and useful Improvements in Steam Clay-Presses, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a central vertical section of the clay-press and its feed. Fig. 2 is a central vertical section of the press-chamber of the machine; and Fig. 3 is face view of the die-plate, through which the clay emerges from the machine.

Referring to the drawings, S represents the bed-sills, upon which rests the floor r' , having a central circular opening in which is secured the downwardly-extending circular press-chamber T, having the flared extension-chamber T', to the lower end of which a die-plate—such as is shown at P in Figs. 2 and 3—may be secured.

D is a steam-cylinder arranged immediately above chamber T, so its lower head r will rest on frame C, and the whole secured to floor r' by means of the bolts $n n$. The piston-rod B extends entirely through the cylinder and has secured to it within the cylinder the piston-head B', and to its lower end the presser-head E, which in its reciprocation traverses the press-chamber T, as shown in the broken lines.

D' is a conductor-spout arranged at an angle with the floor r' , and supported at its outer end by beam G', and having its lower end arranged to discharge in the press-chamber T, and having its upper side cut away to permit the head E to pass through the lower part of said spout on its way to and from chamber T.

E' is a follower that reciprocates within said spout underneath the hopper G, arranged in its upper side at one side of the cylinder. The said follower is connected with the piston-rod at its upper end through the medium of the links A' and B, and the lever A, pivoted between its ends to the upper end of beam G', forming part of the frame of the machine and in such manner that said head E and follower E' move in a reverse direction from each other.

H is an elbow intended to form a continuous

tion of chamber T', so that the clay may be discharged from the machine in a horizontal direction, if desired, instead of vertically, but may be applied directly to press-chamber T.

P is a die-plate designed to be secured to the discharge end of either chamber T' or elbow H. Said plate is provided with apertures Z, from which the pressed clay is designed to emerge in streams or threads of any form in cross-section desired, but shown in this instance as rectangular in form in cross-section, so they may be cut up into proper lengths as they emerge from the machine by any of the ordinary methods to form brick.

By attaching die-plates having apertures of different forms streams or threads of clay may be formed of any other contour for any other desired purpose.

The cylinder D is designed to be a steam-cylinder, parts only being shown, the steam-chest and other parts of a steam-engine being omitted as forming no part of this invention.

The normal position of the parts of the machine is as shown in Fig. 1, and to operate the machine the chambers T and T' and the hopper G should at first all be filled with clay. Movement of the head E and follower E' from said position to that shown in the broken lines will cause pressure to be brought upon the clay in said chambers and cause it to emerge through the apertures in the die-plate P, and the clay that is in the hopper G will drop into the spout D' ahead of said follower in position to be moved forward by said follower at its next move to be delivered to the press-chamber T, and while said follower is thus moved forward the head E is up out of the way and the hopper G is to be refilled as before on the top of the follower while it is delivering its feed of clay, so that as the head E reciprocates, the chamber T is automatically filled with clay by means of the follower E', and saving the necessity of shoveling clay direct to chamber T, as has been heretofore done in machines of this class. The head E is provided on its side toward the feed-spout with a guard F, formed of a semicircular piece of sheet metal arranged to stand vertically and have its lower end secured to the side of said head by screws, as shown, which shield is for the purpose of preventing clay from falling on the top of said head while in chamber T.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. In the clay-press shown and described, 5 the combination, with the steam-cylinder D and its piston-rod B', having the presser-head E, arranged on one end, of the inclined spout D', having the hopper G, the follower E', for traversing said spout in the reverse direction 10 to the movement of said head and the chambers T T' H, and the die-plate P, having discharge-apertures Z, all arranged substantially as and for the purpose set forth.

2. In the steam clay-press shown and described, 15 the combination of the reciprocating presser-head E, reciprocating follower E', and the means, substantially as shown, for con-

necting said head and follower, the inclined spout D', having the hopper G, the press-chambers T T' H, and die-plate P, substantially as and for the purpose set forth. 20

3. In the steam clay-press shown and described, in combination with the reciprocating presser-head E, reciprocating follower E', and the means, substantially as shown, 25 for connecting said head and follower, the inclined spout D', having the hopper G, the press-chamber T T', and die-plate P, substantially as and for the purpose set forth.

ARCHIBALD BURRELL.

Witnesses:

THOS. H. HUTCHINS,
K. C. HUTCHINS.