

(No Model.)

G. D. HERROLD.

DIE FOR BRICK OR TILE MACHINES.

No. 449,854.

Patented Apr. 7, 1891.

Fig. 1.

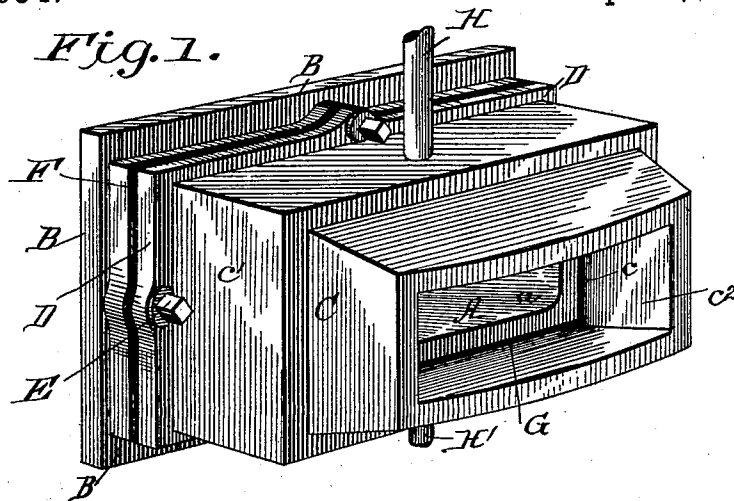


Fig. 2.

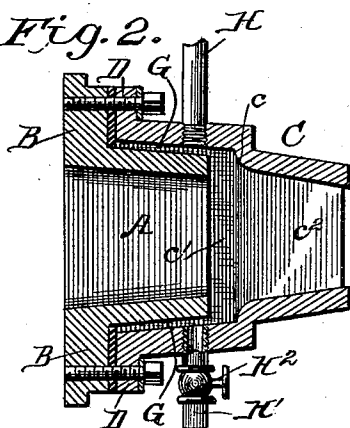


Fig. 3.

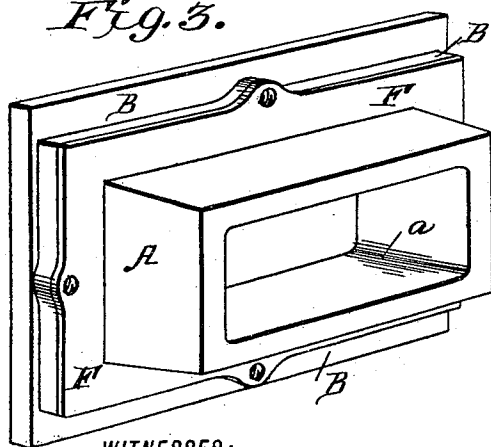
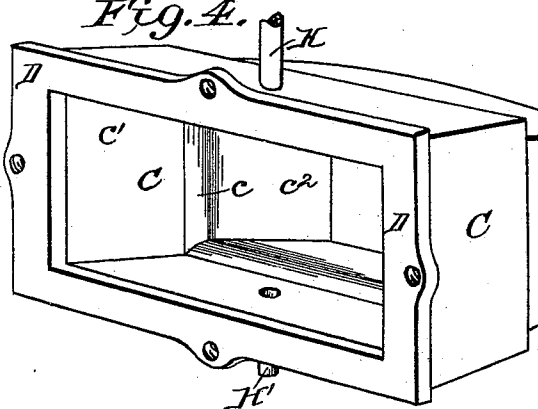


Fig. 4.



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DIE FOR BRICK OR TILE MACHINES.

SPECIFICATION forming part of Letters Patent No. 449,854, dated April 7, 1891.

Application filed September 11, 1890. Serial No. 364,657. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. HERROLD, a citizen of the United States, residing at Milton, in the county of Northumberland and State of Pennsylvania, have invented an Improved Brick-Die, of which the following is a specification.

My invention relates to an improved brick-die for stiff-clay brick-machines, the object of this invention being to provide a die that shall be cheap, simple, and durable, one that will operate upon all kinds of clay and produce sharp square corners.

The invention consists of a die made in two parts, one within the other, and a steam-space between said parts, the inner or roughing die being located entirely within the outer and finishing die part.

The invention consists, further, in certain details of construction and novel combination of parts, such as shown in the accompanying drawings, and more fully explained hereinafter.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of my improved die. Fig. 2 is a vertical transverse section. Fig. 3 is a perspective view of the rear die part, and Fig. 4 is a perspective view of the interior of the outer die part.

In carrying my invention into effect I employ the inner or roughing die part A, the interior corners of which are slightly rounded, as at *a*. The rear end of the inner die part is formed with a flange B, extending entirely around said die part, said flange projecting outwardly at approximately right angles to sides of the die. The inner die part is connected to the discharge-orifice by means of the flange B, and the outer or finishing die part is also connected with the roughing part by being attached to the flange B, as will be more fully explained hereinafter. The outer or finishing die part C is of different cross-sectional areas at its inner and outer ends, and about midway its length is provided on its interior surface with the beveled shoulder or ledge *c*, extending around all the sides and connecting the larger or rear portion *c'* of the die part and the contracted or finishing portion *c''* of the same. The rear end of the part C is also provided with a flange D, said flange rest-

ing on the flange B and is secured thereto by the screws E. A steam-packing F is interposed between the flanges D and B for the purpose of making a tight joint between said parts. The rear portion *c'* is sufficiently large to fit over the roughing-die part A and leave a space or chamber G surrounding said roughing part. The steam-packing F between the flanges assists in sealing this chamber at the rear. The shoulder or ledge *c* is forward of the forward end of the roughing-die, and the interior area of the rear end of the portion *c''* is slightly larger than the interior area of the forward end of part A; but the interior area of the forward or outer end of the part C is slightly contracted and smaller than any other part of the die. A steam-pipe H is tapped into the upper side of the portion *c'*, and an exhaust-pipe H' is tapped into the under side of the same at a point approximately opposite the steam-supply pipe. A cock or plug H² is arranged in the exhaust-pipe, by means of which the exhaust is regulated.

The die constructed as described is connected with a screw brick-machine, and the steam-pipe H is connected with the steam-boiler employed to drive the engine. When the column of clay is fed to the die, the steam is admitted to the steam-chamber and the exhaust regulated. The clay in passing through the roughing part is heated by the steam surrounding said part, and the tendency of said heating is to draw a great deal of water to the exterior of the brick, which makes it slide very easily through the rear die part, and as the steam is in constant circulation it is deflected by the beveled ledge toward the clay as it passes from said part, and as the rear end portion *c''* is larger than the forward end of the part A the column of clay is enveloped by the steam before it is subjected to the pressure of the contracted end, and as it is condensed it prevents the clay sticking and enables the die to make sharp square corners.

Having thus described my invention, what I claim is—

1. In an improved brick-die, the combination, with a rear and inner part, of a forward and outer part entirely inclosing said inner part and forming a steam-chamber surrounding said inner part, the beveled ledge or shoulder forward of the inner part, and the steam-

supply pipes and packing, substantially as shown and described.

2. In a brick-die, the combination, with the rear and inner die part having the flange attached to the rear of the same, of the forward and outer die part, the rear portion of which incloses the rear die part and forms a steam-chamber around said part, the forward portion forming the finishing-die part, the beveled flange forward of the rear die part and connecting the front and rear portions of the outer die part, substantially as shown and described.

3. In a brick-die, the combination, with the die part A, having the flange B, of the die part C, consisting of the portion c' and c^2 , and the ledge c and flange D, the steam-packing F, screws E, steam-supply pipe H, exhaust-pipe H', and cock H², all arranged and adapted to operate substantially as shown and described.

GEORGE D. HERROLD.

Witnesses:

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