No. 688,352. Patented Dec. 10, 1901.

F. SMALLEY.

SHINGLE MOLD.

(Application filed Apr. 8, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

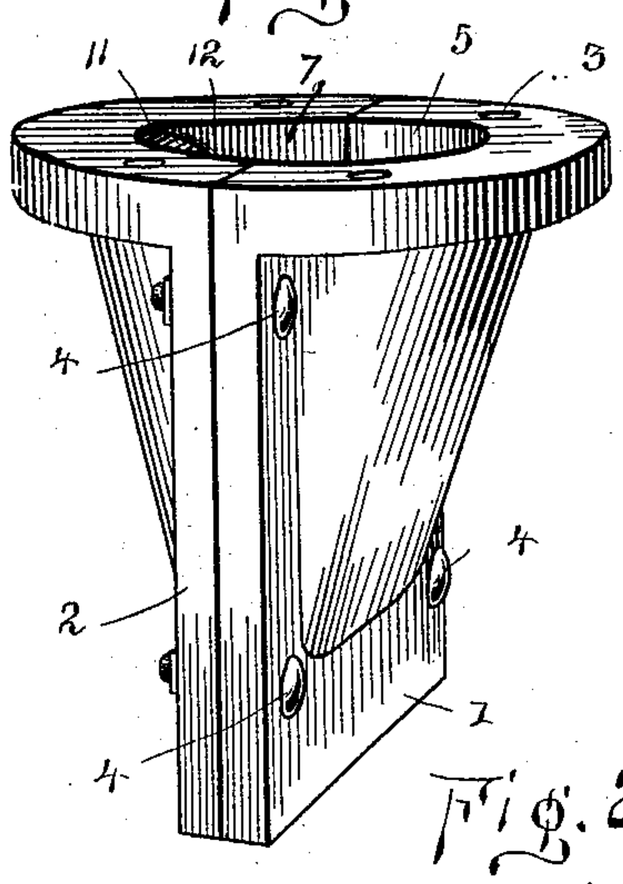

Fig. 2.

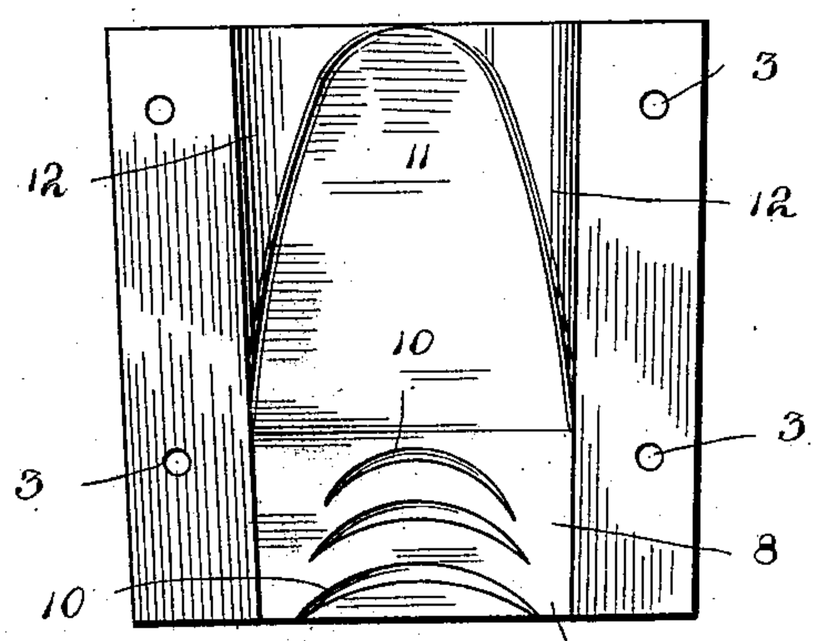

Fig. 3.

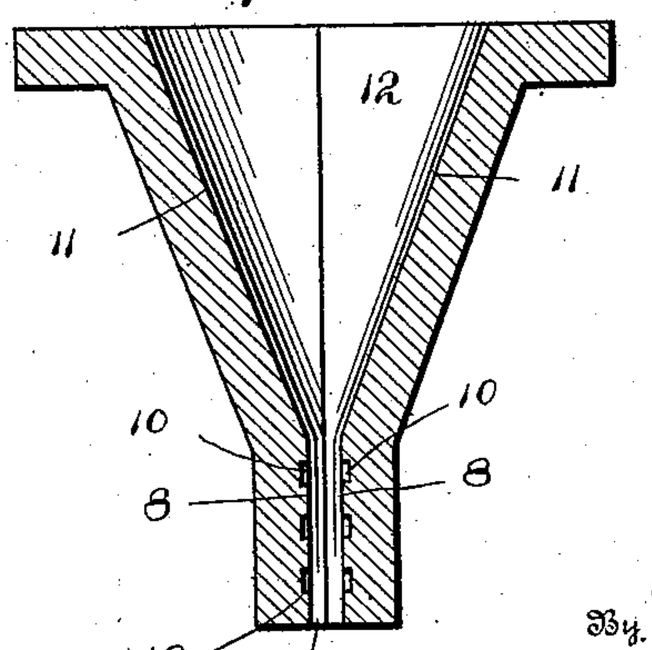

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Fig. 4.

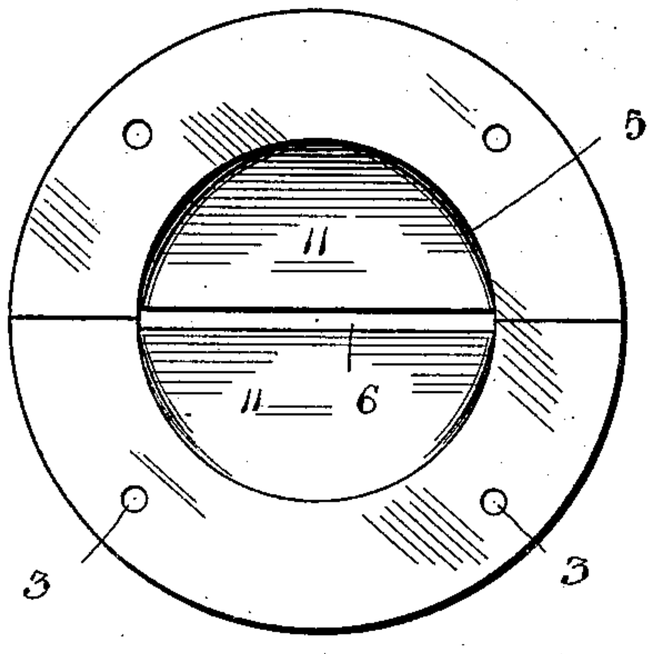


Fig. 5.

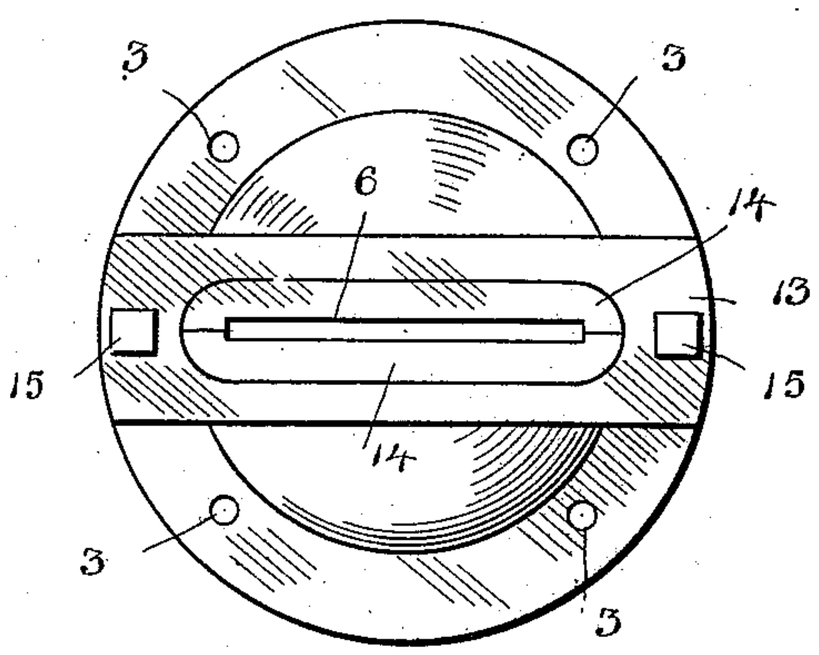


Fig. 6.

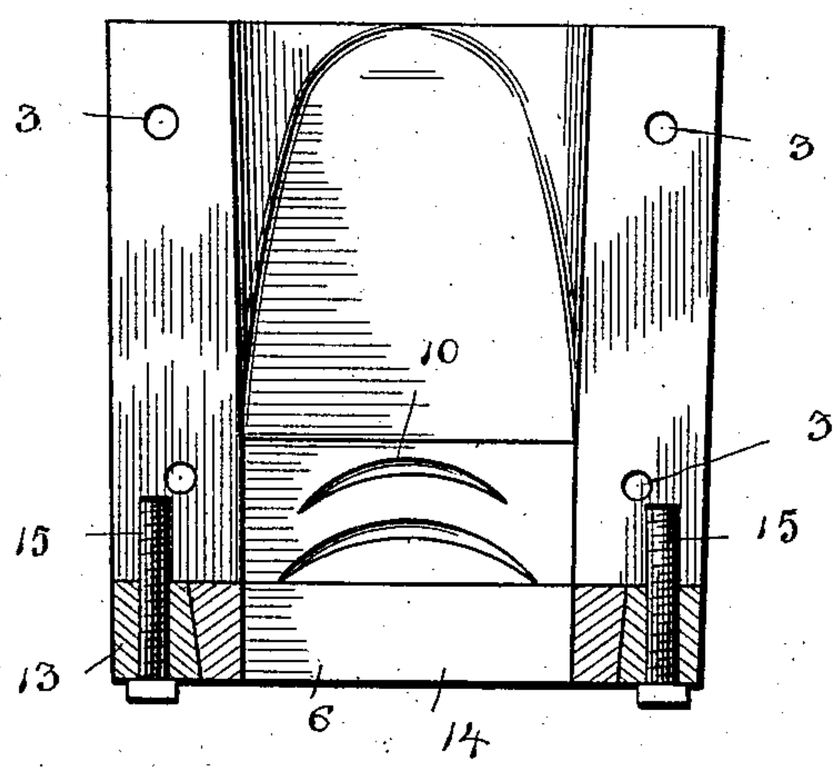
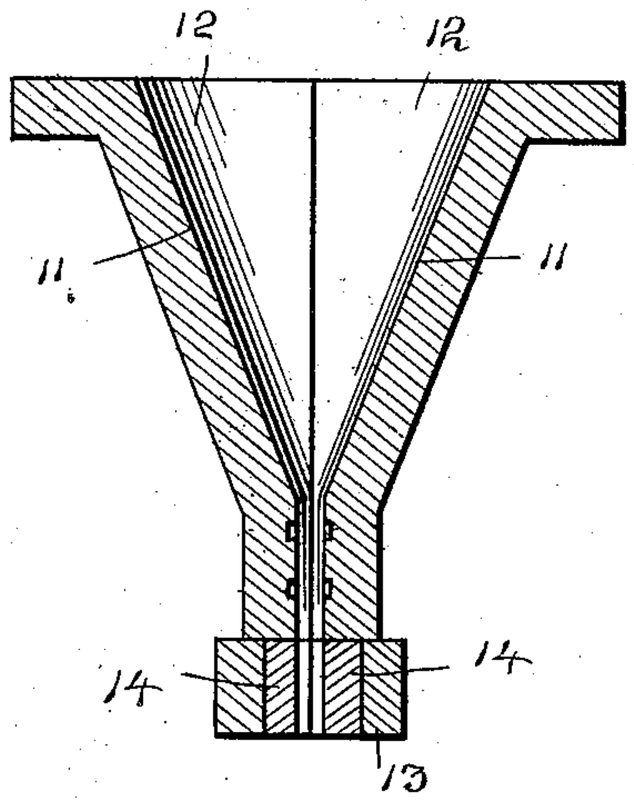


Fig. 7.



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UNITED STATES PATENT OFFICE.

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SHINGLE-MOLD.

SPECIFICATION forming part of Letters Patent No. 688,352, dated December 10, 1901.

Application filed April 8, 1901. Serial No. 54,831. (No model.)

To all whom it may concern:

Be it known that I, FRANK SMALLEY, a citizen of the United States, residing at and whose post-office address is Huntington, in the county of Cabell and State of West Virginia, have invented new and useful Improvements in Shingle-Molds, of which the following is a specification.

My invention is an improved die or mold for making clay shingles and other articles of similar character. The die is adapted to be attached to any of the well-known clay-working machines in which the clay is worked into a plastic state and then forced from a compression-chamber by a piston through a die or mold to give the strip or blank of clay the desired shape, said strip or blank being subsequently cut into the desired length.

Heretofore attempts have been made to form a blank or strip for clay shingles; but inasmuch as this strip must be very thin it has been found to be impossible to form a perfect blank with perfect sides and edges suitable for shingles, owing to the central portion of the clay strip or bar moving faster than the sides.

Now the object of my invention is to remedy these defects and provide a die or mold which can be attached to any machine and produce a thin even shingle-blank the edges and sides of which shall be perfect and free from splits.

With this object in view my invention consists, broadly, of a die or mold having a circular opening at the rear, the desired-shaped opening at the front, flat surfaces provided with retarding-serrations arranged adjacent to the front of said die or mold, and the central curved portions, which serve to guide the clay evenly and steadily to the sides and retarding portions of the mold.

My invention consists also in making a mold of two sections, each section having a semicircular opening at the rear, a retarding-surface at the front, a central flat portion, and concaved surfaces adjacent to said central portion.

My invention consists also in certain details and novelties of construction more fully described hereinafter and designated in the appended claims.

Referring to the drawings, Figure 1 is a perspective view of my improved die or mold. Fig. 2 is a plan view of one of the sections of the two-part mold. Fig. 3 is a vertical longitudinal sectional view of the mold complete. Fig. 4 is a top plan view of my mold. Fig. 5 is a bottom plan view showing a slight modification. Figs. 6 and 7 show slight modifications.

In carrying out my invention I prefer to construct my mold of two sections 1 1, which are provided with suitable flanges 2, having openings 3, by means of which they are connected together and to the compressing-chamber. In securing the two blocks together I employ bolts, designated as 4. At the rear end the mold has a circular opening 5, and at its forward end the mold has an opening 6, which is shaped according to the article desired, but is usually an oblong.

Each section of the mold is formed of a solid block and at its rear end is cut out, as at 7, in the form of a semicircle, so that when the two parts are placed together they produce the circular opening 5. At the forward end is formed a recess or depression 8, so shaped that when the two sections are in position they will produce the oblong opening 6. The depressions 8 are each formed with transversely-disposed grooves 10, which catch the central portion of the clay bar and prevent it from moving faster than the outer edges of the bar. These grooves are preferably crescent-shaped. The surface between the retarding-surface and the rear end of the block is flat between the corners of the surface and the center of the rear end, as shown at 11, and that portion on each side of the flat surface 11 is concaved, as shown at 12 12. This construction produces a central flat portion and guiding curved walls upon each side to feed the clay evenly and steadily to the forming-chamber.

In Figs. 5, 6, and 7 I have shown a slight modification wholly within the scope of my invention, from which it will be seen that I am enabled to reduce the thickness of the

molded bar to a greater degree than permitted by the mold *per se*. In accomplishing this object I secure to the front end of the mold an oblong ring 13, having its inner edges inclined from the top inwardly to register with blocks 14 14, which are inclined on their inner edges. Thus when the blocks 14 14 are secured in place they produce an oblong opening. It will thus be seen that it is impossible for the blocks 14 14 to be accidentally displaced. Adjacent to the ends of the ring 13 are openings 5^a for the reception of bolts 15 15, by means of which the ring is secured in place.

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

1. An improved die or mold made in two sections having a circular opening at its rear end, an oblong opening at its front end, a retarding-surface within said oblong opening, grooves in the retarding-surface, and a feed in the rear of said surface.

2. An improved die or mold made in two sections each part having a concave groove at its rear end to form an opening, an oblong retarding-surface in its front end, grooves in said retarding-surface, a flat inclined surface level with the retarding-surface between the corners thereof and the center of the rear end, concave walls at each side of said flat surface, and means for securing the two sections together.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK SMALLEY.

Witnesses:
GEO. I. NEAL,
T. A. NULL.