

H. G. ROUNDS.
 DEVICE FOR PACKING CONCRETE IN MOLDS.
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1,047,301.

Patented Dec. 17, 1912.

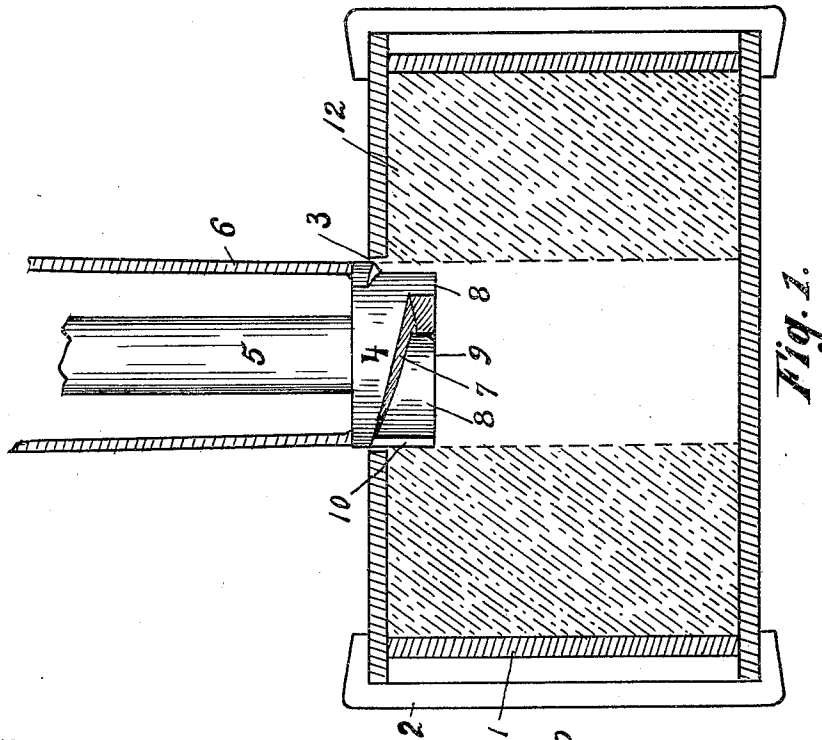


Fig. 1.

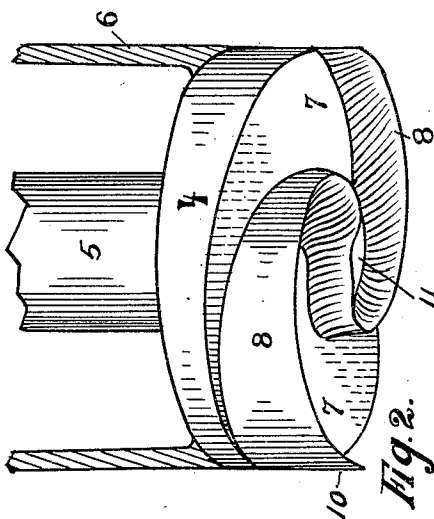


Fig. 2.

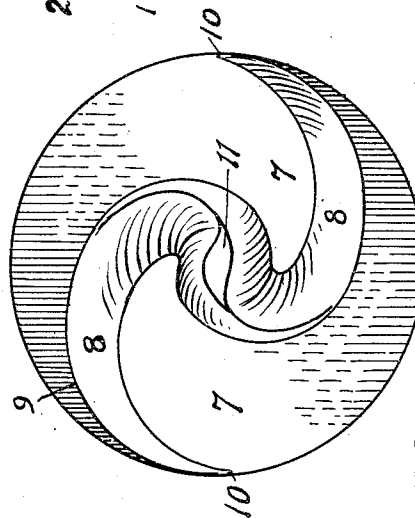


Fig. 3.

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DEVICE FOR PACKING CONCRETE IN MOLDS.

1,047,301.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERBERT G. ROUNDS, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Devices for Packing Concrete in Molds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to apparatus for manufacturing cement blocks and the like, in which a hole or cavity is to be left in the completed block.

The objects of my invention are to provide a pressing piece or head in combination with a mold, the head being adapted to rotate, and while rotating to be forced through an opening in the top of the mold and down into the material, displacing the material and forcing it outward and upward so as to pack it in all directions and completely fill the corners of the mold.

A further object is to provide a head of the class described which shall be adapted to pass clear through the material to the bottom of the mold and to scrape the material from the bottom so as to form a smooth, clean hole extending clear through the finished block.

With these and certain other objects in view which will appear later in the specification, my invention consists in the devices described and claimed, and in the equivalents thereof.

In the drawings, Figure 1 is a sectional view of a mold showing the head in its operating position; Fig. 2 is a perspective view partly in section of the underside of the head; and Fig. 3 is a bottom plan view of the head.

1 represents the mold, the top and bottom of which are preferably held by clamps 2. An opening 3 in the top of the mold is provided through which the head 4 passes.

5 is the spindle by which the head is rotated and forced into the mold. A cylindrical shell 6 is carried by the head and is preferably formed integral with it, the shell being slightly tapered upwardly and outwardly. The lower surfaces 7 of the head, which I term the pressing surfaces, are inclined upwardly and outwardly.

8, 8 are downwardly projecting curved

wings carried by the pressing surfaces and preferably formed integral with the head 4. The outer walls of the curved wings are vertical, the inner walls being beveled so as to make the wings thicker at their conjunction with the head 4 than at their lower edges. The lower edges 9 of the wings are all in the same plane at right angles to the axis of the head 4. The outer edges 10 are longer than the inner edges, due to the upward inclination of the pressing surfaces 7. At the center of the head the curved wings join and merge to form a wedge-shaped member or hub 11, the lower edge of which is reverse-curved, as shown in Fig. 3.

The operation of the device is as follows: The material to be molded is placed in the mold, nearly but not quite filling it, the quantity in each case depending upon the size of the block and core and upon the nature of the material being used. The head is then forced through the opening 3 and rotated, the lower edges 9 of the curved wings cutting down through the material, and the working faces of the curved wings forcing the material radially outward, while the upwardly and outwardly inclined pressing surfaces 7 allow the material to pass easily from the center to the outside of the pressing surface.

The shell 6 prevents loose material from falling in upon the top of the head, and also enables the head to be withdrawn after the packing operation is completed, without displacing the material. The lower edges 9 of the wings being in the same plane and at right angles to the spindle 5, all of the material is cleaned out down to the bottom of the mold and is forced into the compacted mass 12 of the molded block.

By the means above described I have produced a device for making concrete blocks that forms a smooth, even hole through the block, packs the material uniformly clear to the corners of the mold, and forces it upward against the top of the mold, thereby rendering it unnecessary to tamp the top of the block as has heretofore been common.

I have found in practice that the operation of this device produces sufficient pressure outwardly and upwardly to properly pack the concrete mixture, the top of the block being as thoroughly compacted as the lower part.

Having described my invention, what I

claim and desire to secure by Letters Patent, is:—

1. In combination with a mold having a cover tightly secured thereto, said cover
5 formed with a hole, a revoluble longitudinally movable packing device adapted to be inserted into the mold through the hole, said device comprising a cylindrical head, a pair of curved radially disposed wings secured to the lower face of said head, the
10 lower edges of said wings lying in a plane at right angles to the axis of the head, and a pressing surface formed on the lower face of said head, said pressing surface being inclined from the base of said wings upwardly and outwardly.

2. In combination with a mold having a cover tightly secured thereto, said cover
20 formed with a hole, a revoluble longitudinally movable packing device adapted to be inserted into the mold through the hole, said device comprising a cylindrical head, an outwardly and upwardly tapered cylindrical shell carried thereby, a pair of curved

radially disposed wings secured to the lower
face of said head, the lower edges of said
wings lying in a plane at right angles to the
axis of the head, and a pressing surface
formed on the lower face of said head, said
pressing surface being inclined from the
base of said wings upwardly and outwardly.

3. In combination with a mold having a cover tightly secured thereto, said cover
formed with a hole, a revoluble longitudinally movable packing device adapted to
35 be inserted into the mold through the hole, said device comprising a cylindrical head, and means carried by said head to deflect material radially outward when said head is revolved, and a cylindrical shell carried by
40 said head and extending upwardly therefrom.

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

HERBERT G. ROUNDS.

Witnesses:

JOHN MILLER,

LEWIS HERBISON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."