

No. 858,638.

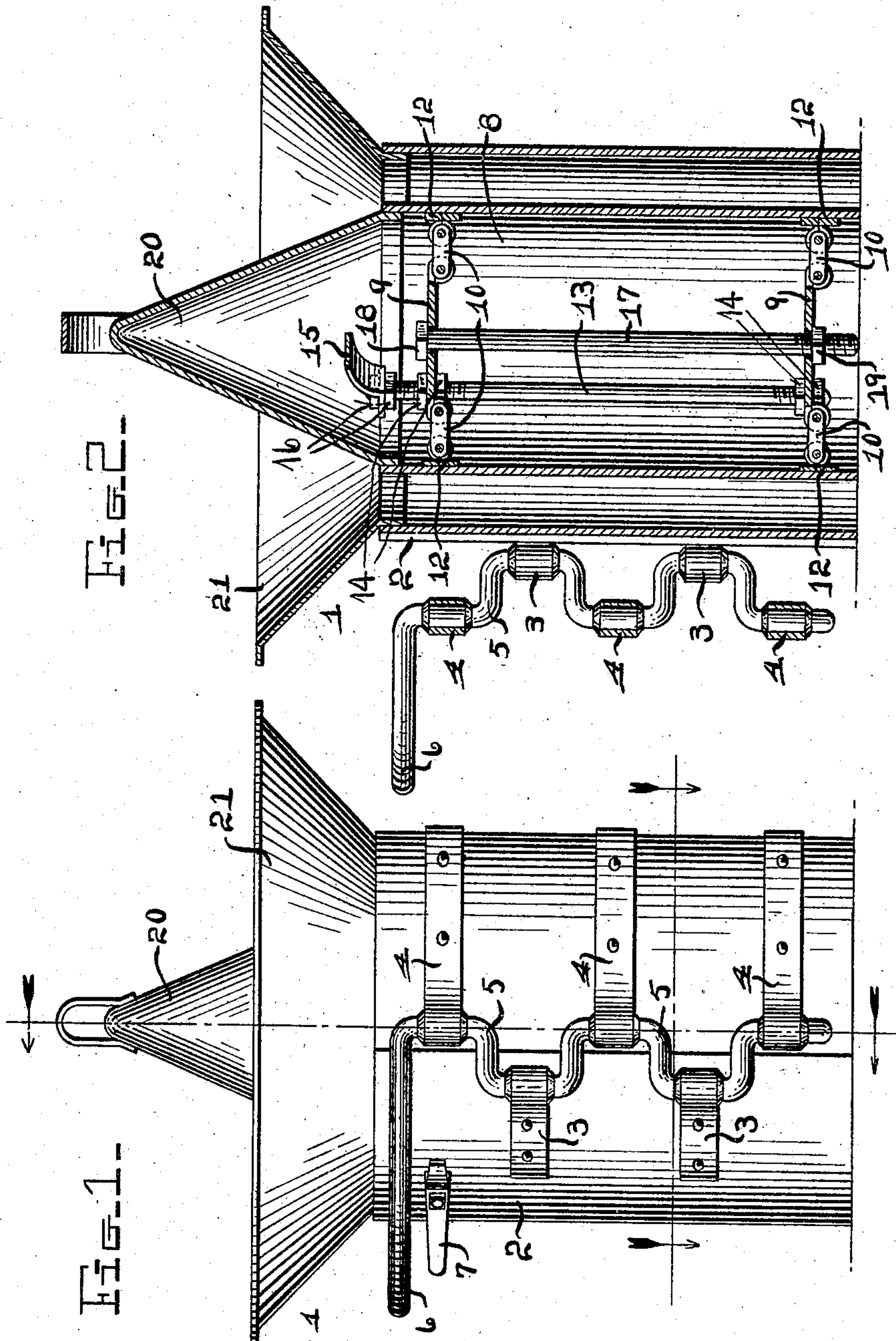
PATENTED JULY 2, 1907.

J. J. SWENSON.

TILE MOLD.

APPLICATION FILED SEPT. 17, 1906.

2 SHEETS—SHEET 1.



Witnesses

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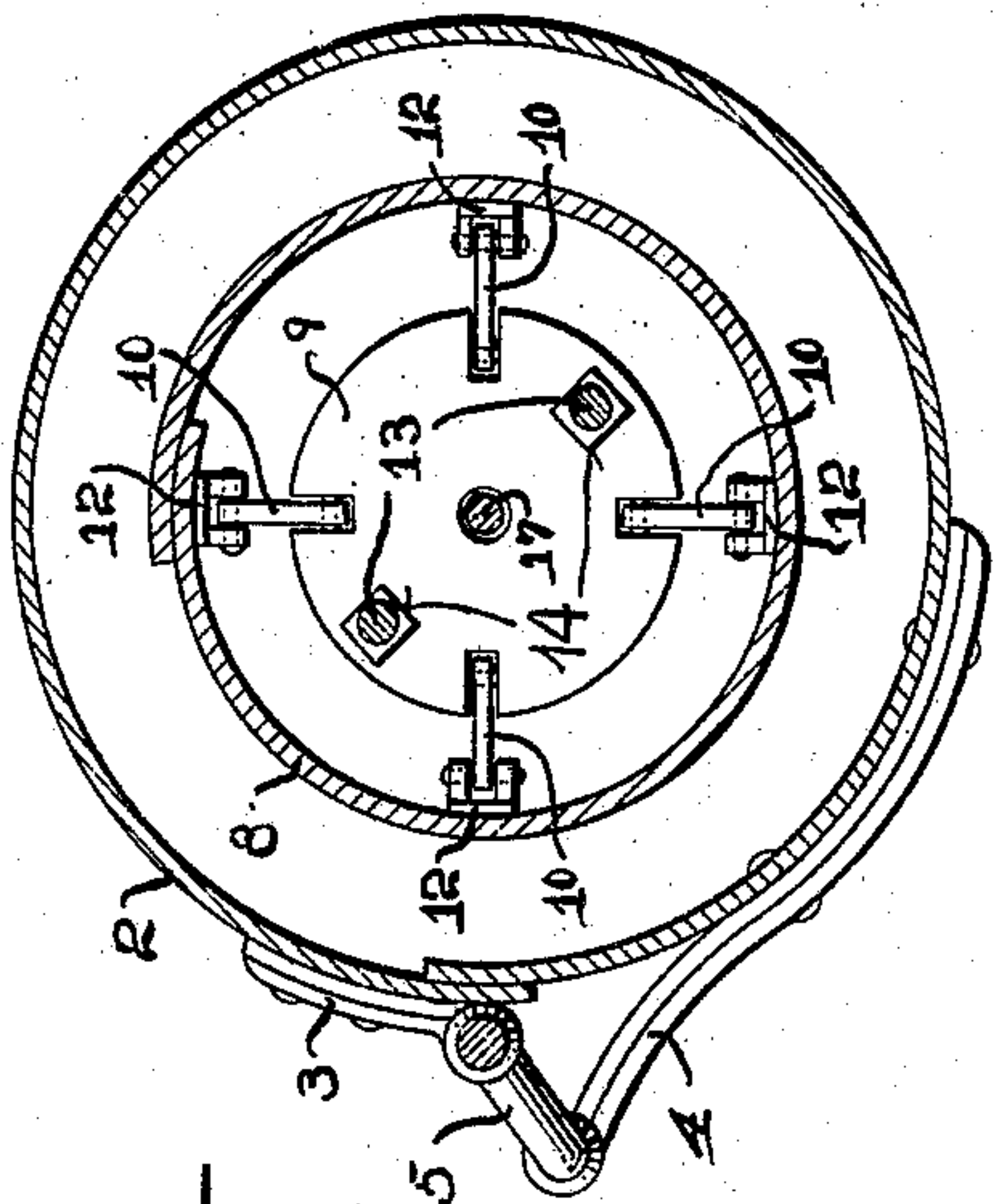


FIG-4-

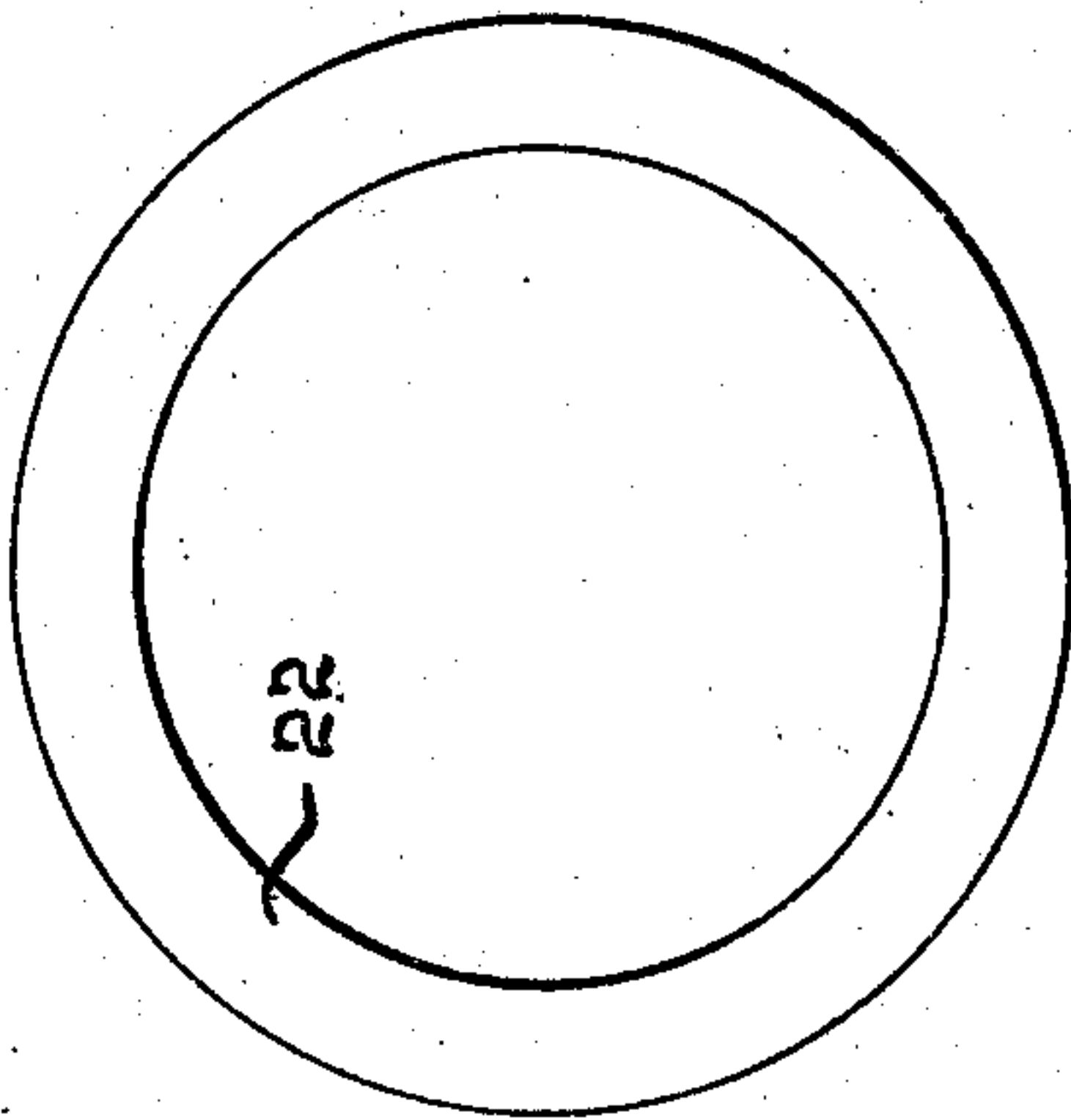


FIG-5-

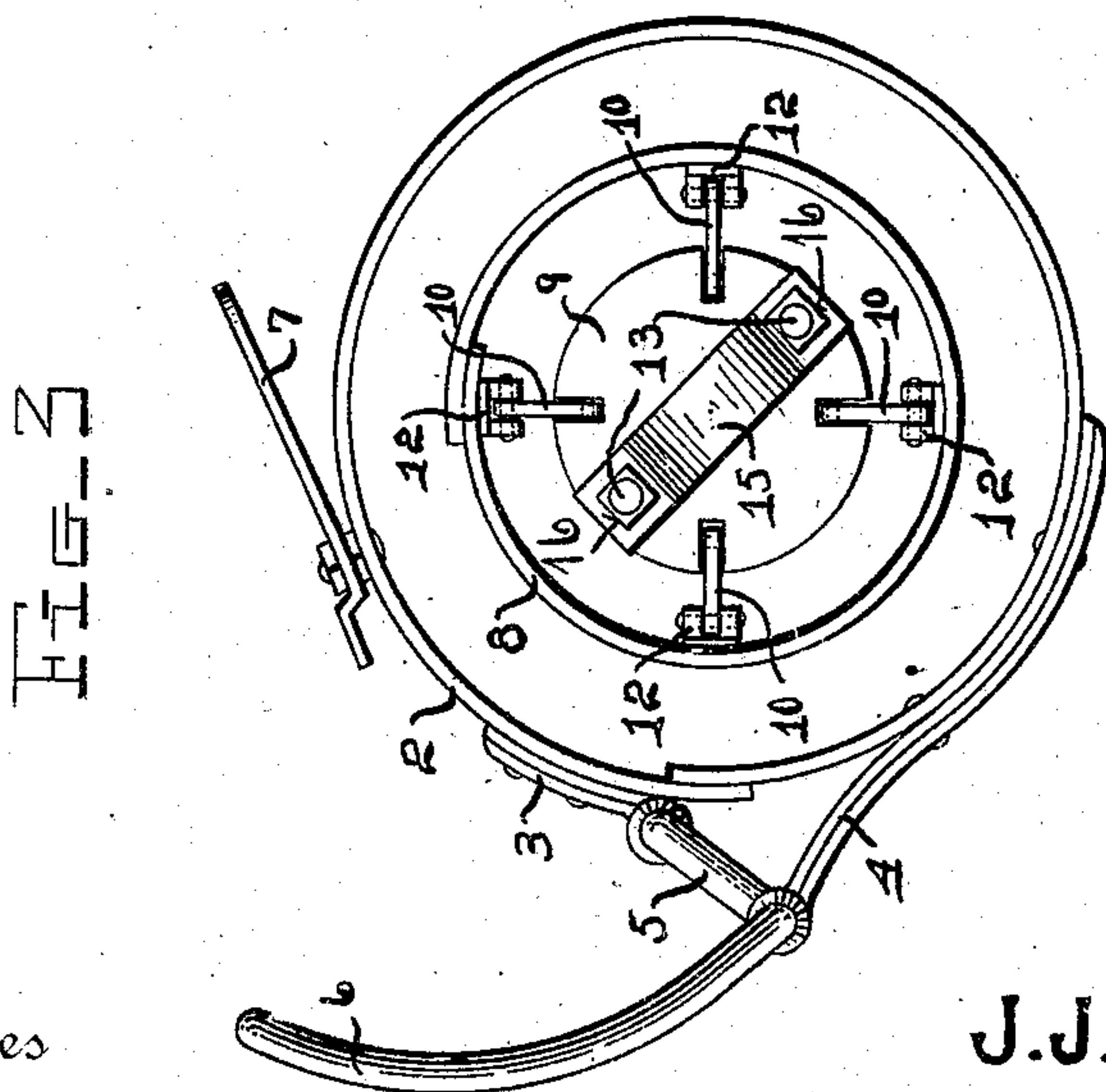


FIG-3-

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# UNITED STATES PATENT OFFICE.

JOHN J. SWENSON, OF ROSWELL, TERRITORY OF NEW MEXICO.

## TILE-MOLD.

No. 858,638.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed September 17, 1906. Serial No. 334,909.

*To all whom it may concern:*

Be it known that I, JOHN J. SWENSON, a citizen of the United States, residing at Roswell, in the county of Chaves, Territory of New Mexico, have invented certain new and useful Improvements in Tile-Molds; and I do 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.

10 This invention relates to improvements in tile molds.

The object of the invention is to provide a mold of this character having a novel form of expansible shell and a contractible core.

15 A further object is to provide novel means whereby the shell of the mold may be locked in an operative position while the tile is being formed, and means whereby shell may be quickly expanded to permit the removal of the same from the finished tile, novel means being also provided whereby the core may be quickly 20 contracted to permit the removal of the same from the finished tile.

With the above and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described and claimed.

25 In the accompanying drawings:—Figure 1 is a side view of the mold complete; Fig. 2 is a longitudinal vertical sectional view of the same; Fig. 3 is a top plan view with the filling attachments removed; Fig. 4 is a horizontal sectional view of the mold; and Fig. 5 is a detail view 30 of the ring for finishing or smoothing the top of the tile.

Referring more particularly to the drawings, 1 denotes the mold which consists of an outer shell 2 formed of a single sheet of spring metal bent into substantially cylindrical form with its ends overlapping, 35 as shown. Secured to the outer side of one of the overlapping ends of the shell 2 are bearing brackets or loops 3 while on the like side of the other end of the shell 2 is secured bearing brackets or loops 4, said brackets or 40 loops 4 being disposed at points above and below and between the bearing brackets 3 and being adapted to project outwardly and beyond or past the brackets 3, when the shell 2 is in a closed position.

45 Journaled in the bearing brackets 3 and 4 is a cranked shaft 5, the cranks of which project in opposite directions, the cranks projecting in one direction being connected to the brackets 3, while the cranks projecting in the opposite direction are connected to the brackets 4, so that when the shaft 5 is turned in one direction or the 50 other, the ends of the shell 2 are drawn together or forced apart, thereby contracting or expanding it. The upper end of the shaft 5 is provided with a right angularly projecting curved handle 6 which, when the shaft is turned to contract the shell 2, is adapted to engage 55 with the side of the shell and be engaged by a locking

bar or lever 7 pivotally mounted on the side of the wall 2, as shown. By this means, the crank shaft 5 is locked in position to hold the shell in a contracted position during the process of forming the tile.

Adapted to be arranged within the shell 2 is a core 8, 60 said core being formed of a single piece of spring metal bent into a substantially cylindrical form with its ends overlapping, as shown.

Arranged within the core 8 near the upper and lower ends of the same, are disks or plates 9, to which are pivotally connected the inner ends of radially disposed 65 toggle links 10, the outer ends of which are pivotally connected to radially projecting brackets 12 secured to the inner wall of the shell, preferably at diametrically opposite points. The disks or plates 9 are connected 70 together and held apart by means of tie-rods 13, on which are screwed clamping nuts 14 to engage the inner and outer sides of said disks, as shown. The upper ends of the tie-rods 13 project above the upper plate 9 and the top of the core and are connected by a bail- 75 shaped handle 15 secured thereto by clamping nuts 16.

Passing loosely through the disks 9 is a bolt 17, the lower end of which is adapted to engage with the floor and thereby limit the downward movement of the disks. The head 18 of the bolt is above the top disk and the 80 nut 19 engages with the lower face of the bottom disk and varies the distance between the end of the bolt therefrom, thereby regulating, or adjusting the size, or diameter of the core through the movement of the toggles 10. For instance, in Fig. 2 of the drawings, the nut 85 is shown so close to the end of the bolt that when said end rests upon the floor the toggles are horizontal, or substantially in the plane of the plates, which causes the core to be the largest, or with its greatest diameter. By moving the nut upward on the bolt it is evident that 90 the end of the bolt will strike the floor before the plate is moved down far enough to place the toggles in a horizontal position, thereby decreasing the size of the core by shortening its diameter. In this manner the normal or operative size of the core can be varied to any de- 95 sired extent within the limit of the toggles, the only requisite being that sufficient play, or movement of the toggles be reserved for decreasing the diameter of the core sufficiently to withdraw it from the finished tile. By screw threading the upper ends of the rods 13 far 100 enough and using the two sets of nuts on each of them the upper plate 9 and the handle 15 can be easily secured thereon so as to be adjusted if desired, or removed in case of an accident, or for the removal of any of the parts.

Adapted to be placed on top of the core 8 when the 105 mold is being filled is a conical-shaped deflector or cap 20 which will prevent the material of which tiles are formed, from entering the core and will also assist in guiding said material into the space between the core and the outer wall of the mold.



Arranged on the upper end of the shell 2 is a funnel 21, into which the plastic material is placed and by which the same is directed into the molding space. After sufficient material has been placed in the mold to fill the same, the funnel 21 and deflector 20 are removed and the upper ends of the tiles smoothed off, after which a finishing or smoothing ring 22 is placed on the upper end of the molded tile until the material has become set or hardened. After the tile has become sufficiently hardened, the shell of the mold is expanded and the core contracted by the mechanism hereinbefore described, thereby permitting the ready removal of these parts from the tile, after which the core is again expanded and the shell contracted and said parts are assembled to receive the material for another tile.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the ad-

vantages of this invention, as defined by the appended claims.

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

1. In a tile mold, an exterior shell, and a collapsible core, said core comprising a cylindrical sheet of metal, a bolt axially arranged therein having a nut adjustably mounted on its lower end, two disks loosely mounted on the bolt and rigidly spaced apart, toggles secured to the edges of the disks and to the interior of the core, and a handle at the upper end of the core.

2. In a tile mold, an exterior shell, and a collapsible core, said core comprising a cylindrical sheet of metal, a bolt axially arranged therein having a nut adjustably mounted on its lower end, two disks loosely mounted on the bolt, two tie rods through said disks having their ends screw threaded, three pairs of nuts on each rod, two at the top and one at the bottom, two of said pairs engaging with said disks, and a handle upon the upper ends of said rods with its ends between the top pairs of nuts.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN J. SWENSON.

Witnesses :

SYL. P. JOHNSON.

R. E. LUND.