

(No Model.)

J. KINZER.
MOLDING MACHINE.

No. 422,081.

Patented Feb. 25, 1890.

FIG. 1.

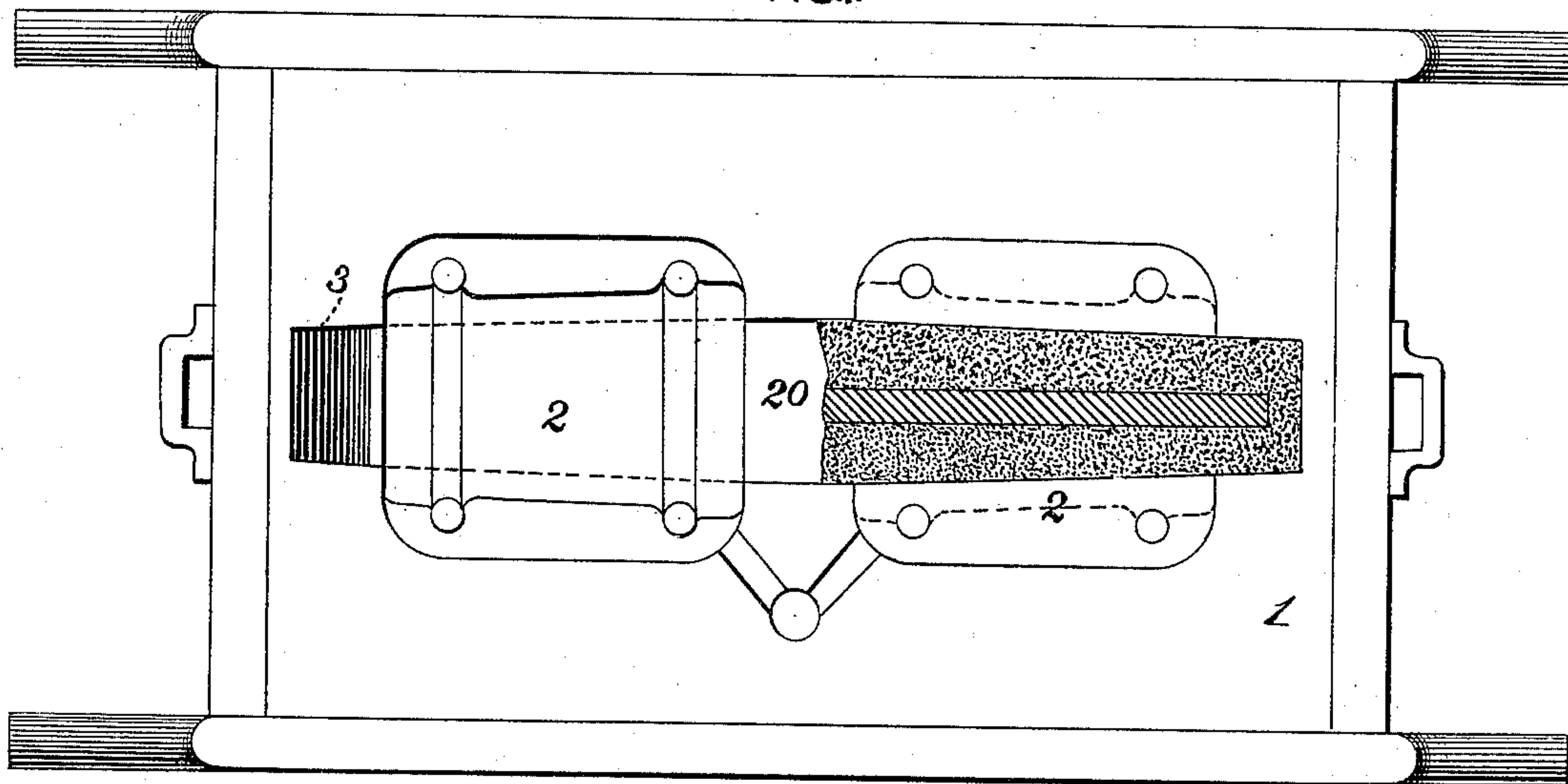


FIG. 2.

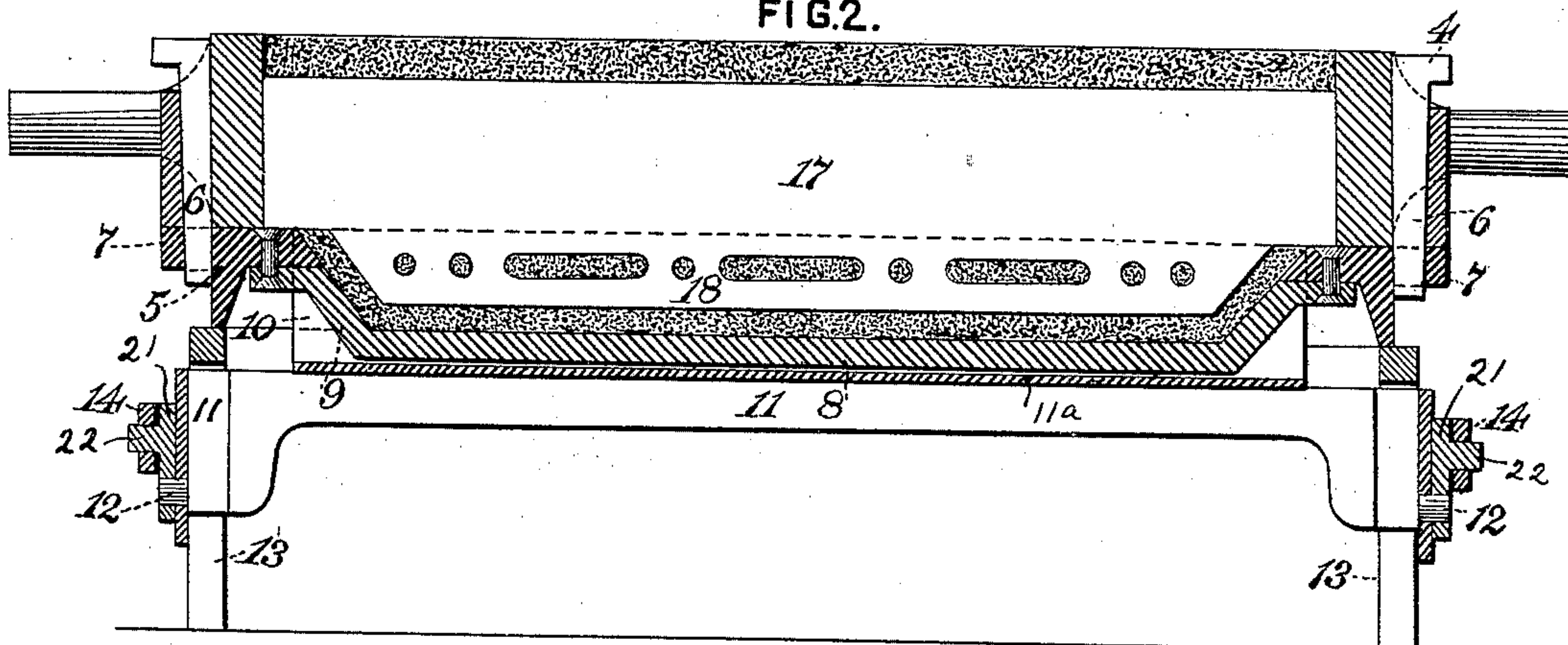
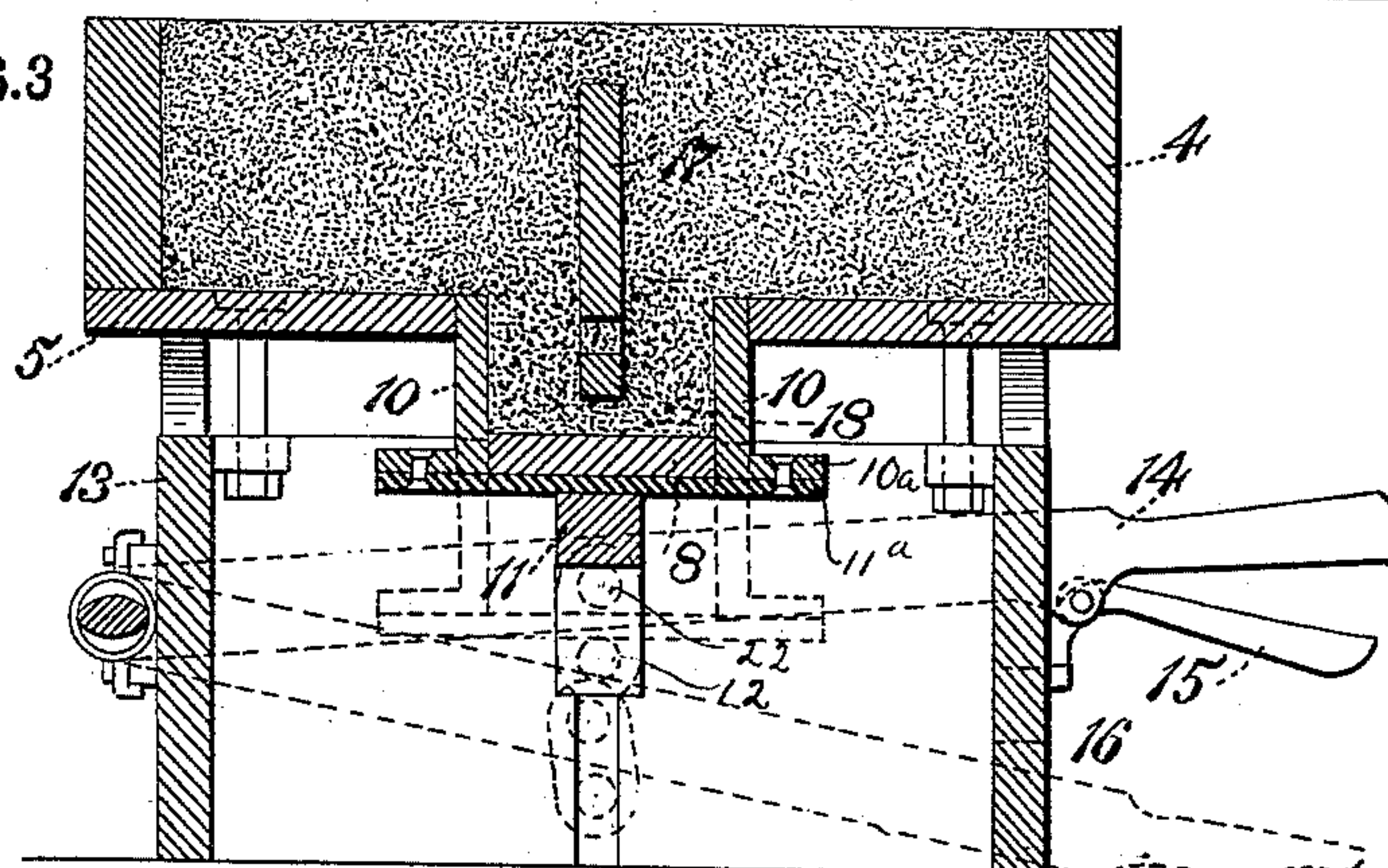


FIG. 3.



WITNESSES:

Daniel S. Wolcott
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INVENTOR,

Jacob Kinzer
by George W. Christy
Att'y.

UNITED STATES PATENT OFFICE.

JACOB KINZER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE KINZER & JONES MANUFACTURING COMPANY, OF SAME PLACE.

MOLDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 422,081, dated February 25, 1890.

Application filed March 6, 1889. Serial No. 302,080. (No model.)

To all whom it may concern:

Be it known that I, JACOB KINZER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Molding-Machines, of which improvements the following is a specification.

The invention described herein relates to certain improvements in apparatus for the manufacture of stake-boxes for railroad-cars, and has for its object a construction of mold-board for the cope or drag, wherein provision is made for the formation of that part of the mold designed to carry the core independent of the other portion of the mold.

In general terms, the invention consists in the construction and combination of mechanical devices or elements, all as more fully hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of the drag portion of a mold, a portion thereof showing a matrix alone and the other portion showing the matrix with the core in position detached from the cope. Fig. 2 is a sectional elevation of the apparatus employed in forming the drag and core; and Fig. 3 is a similar view, the plane of section being at right angles to the plane of section of Fig. 2.

In the practice of my invention I form in the drag 1 a matrix 2 of the box and a seat 3 for the core, as shown at the left in Fig. 1, the molding of the drag being effected in the usual manner well known in the art. In preparing the cope and core the part 4 of the flask is inverted upon a mold-board 5, as shown in Figs. 2 and 3, the guide-pins 6 fitting in pockets 7 at the ends of the mold-board, thereby holding the half 4 of the flask in proper position upon the mold-board, which is secured in any suitable manner to a frame 13. In the mold-board is formed a recess, the strip forming the bottom 8 and ends 9 of said recess being secured to the under side of the mold-board, as shown in Fig. 2; or it may be formed integral therewith. The sides of the recess are formed by movable plates 10, secured, as shown in Fig. 3, to a cross-head 11, which consists of a longitudinal bar having a horizontal

strip 11^a attached thereto, the side plates 10 being secured to the strip 11^a by rivets or bolts passing through the flanges 10^a of said plates and the strip. The ends of the longitudinal bar of the cross-head project through slots in the ends of the frame 13 and are connected to the levers 14 by links 21, each provided with a hole at one end engaging the pin 12 of the cross-head and with a pin 22 at the opposite end engaging the lever. These levers 14 are pivoted to the frame, as shown, and are provided at their free ends with latches 15, adapted to engage stops 16 on the frame for the purpose of holding the plates 10 in operative position.

In molding the cope the plates 10 are raised up, so as to close the sides of the recess in the mold-board, and the molding material is then packed in the half-flask 4 and the core-recess, as shown in Figs. 2 and 3. In order to support the molding material in the flask and core, a plate 17 is secured in the half-flask, said plate being provided with a projection 18, extending down into the core-recess, as shown, the molding material being packed around this retaining plate and projection. After the molding material has been packed in the half-flask and core-recess, as described, the side plates 10 are moved down, as indicated by dotted lines in Fig. 3, the core being supported during this stripping operation by the bottom 8 and end pieces 9. In order to prevent the core from sticking when the half-flask is raised, the end pieces 9 are inclined inwardly, as shown in Fig. 2.

In Fig. 1 I have shown a mold prepared for the formation of two stake-boxes, a matrix prepared for the reception of the core and cope being shown on the left of Fig. 1, while on the right the core is shown in position, the cope being broken away. The matrices are formed by a double pattern having at its ends suitable projections for forming core prints or seats and the main portions of the patterns being connected by a suitable block for forming a seat or print 20 for supporting the middle portion of the core, which is made sufficiently long to extend through and a little beyond both matrices, as shown.

While I have shown and described my in-

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vention as applied in the production of stake-boxes, it is evident that it may be employed for the production of other articles by changing the shape of the core-recess. The end
5 pieces 9 may also be made movable with the side plates, the core being supported by the stationary bottom 8; but when the end pieces are made movable it is preferred that they should be arranged at right angles, or ap-
10 proximately so, to the bottom plate.

It will be readily understood that by supporting the core by the bottom 8 and moving the plates, as described, the core is relieved and can be easily raised from the core-recess.

I claim herein as my invention—

In a machine for molding stake-boxes, the
combination of a mold-board having formed
therein an oblong core-recess provided with
upwardly-inclined ends and a stationary bot-
tom and movable plates forming the side 20
walls of the recess, substantially as set forth.

In testimony whereof I have hereunto set
my hand.

JACOB KINZER.

Witnesses:

W. B. CORWIN,
DARWIN S. WOLCOTT.