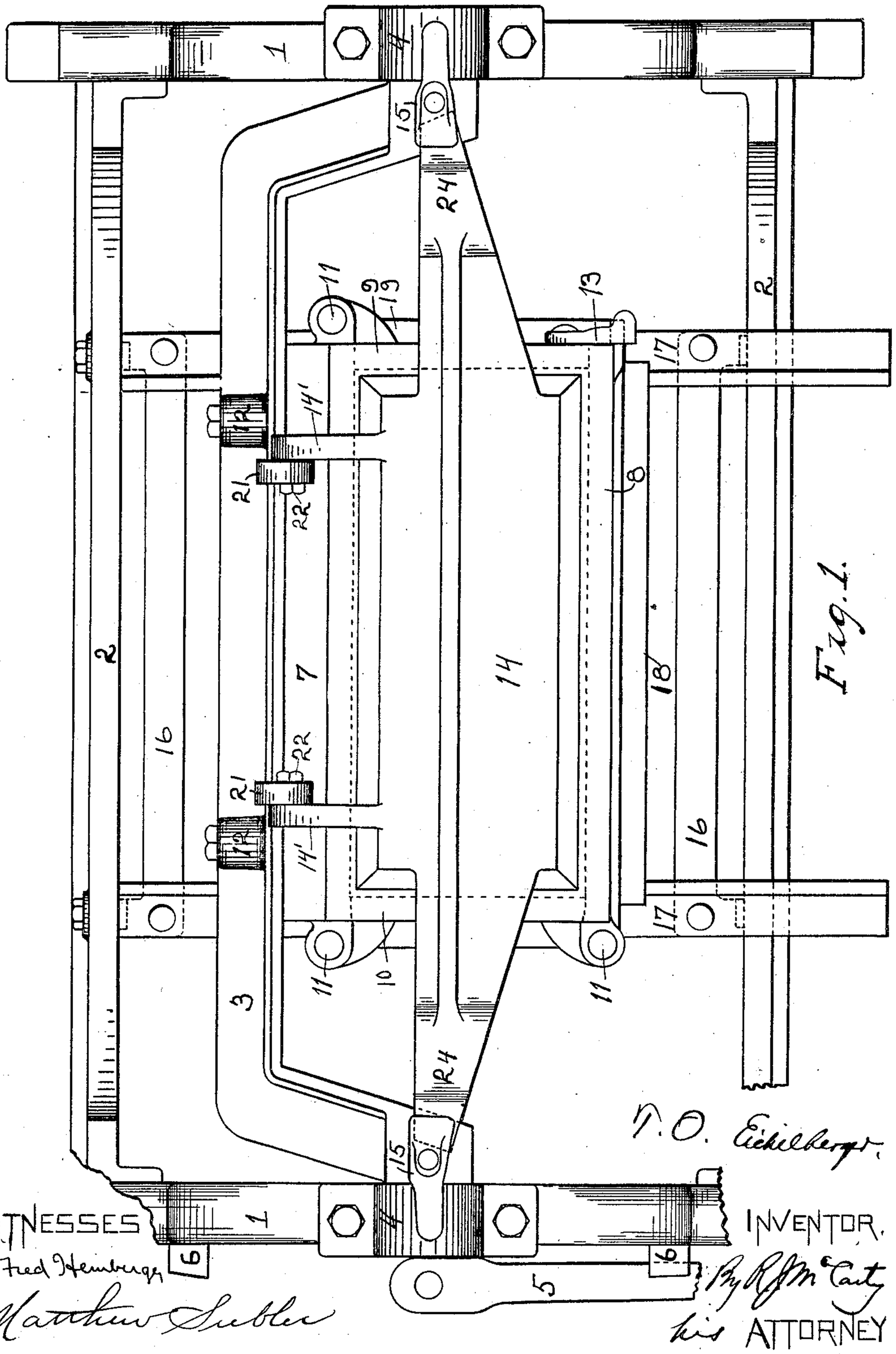
No. 791,088. PATENTED MAY 30, 1905.

T. O. EICHELBERGER.

CONCRETE BLOCK MACHINE.

APPLICATION FILED FEB. 6, 1905.

3 SHEETS—SHEET 1.



WITNESSES

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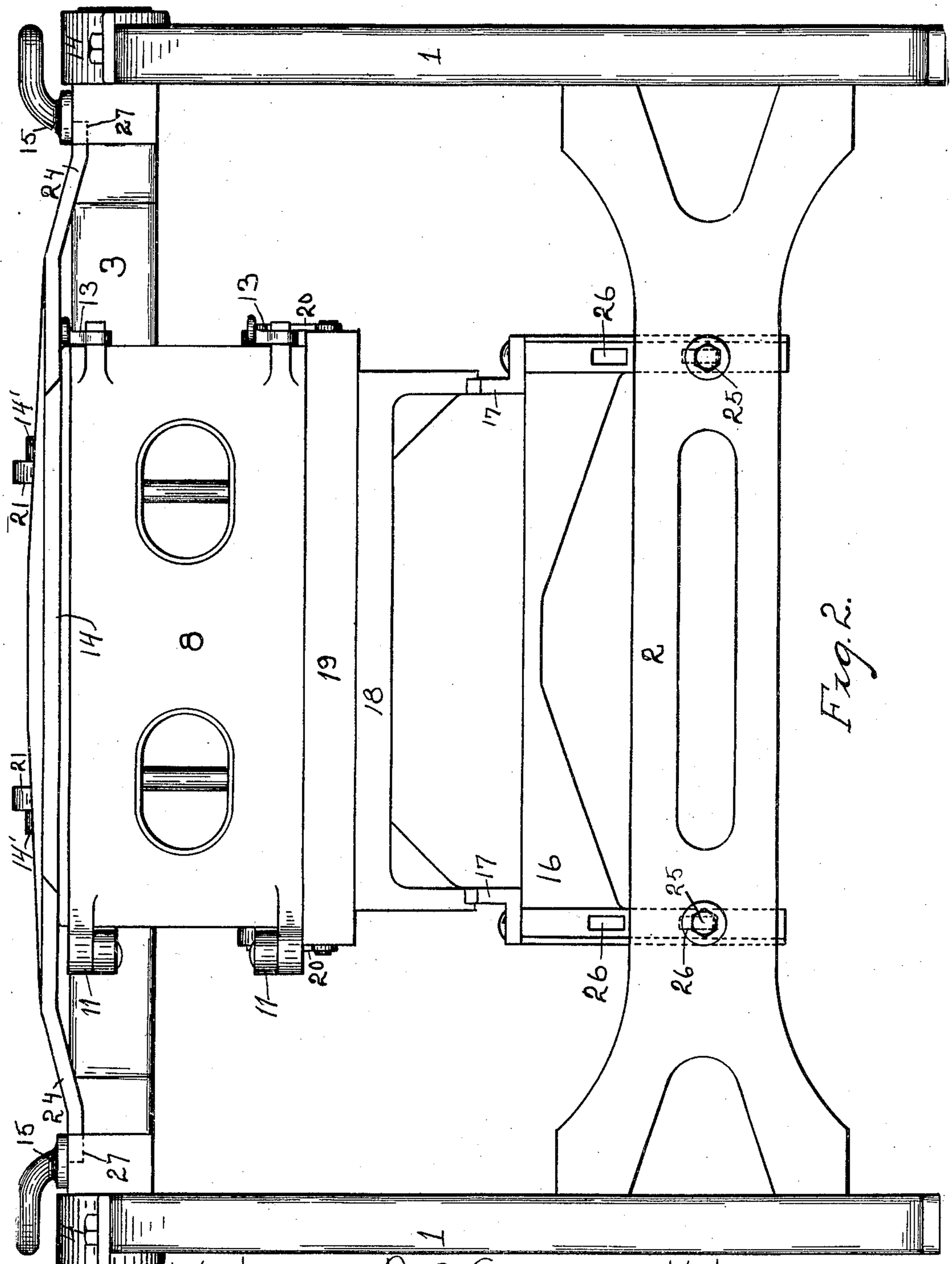

Fig. 2.

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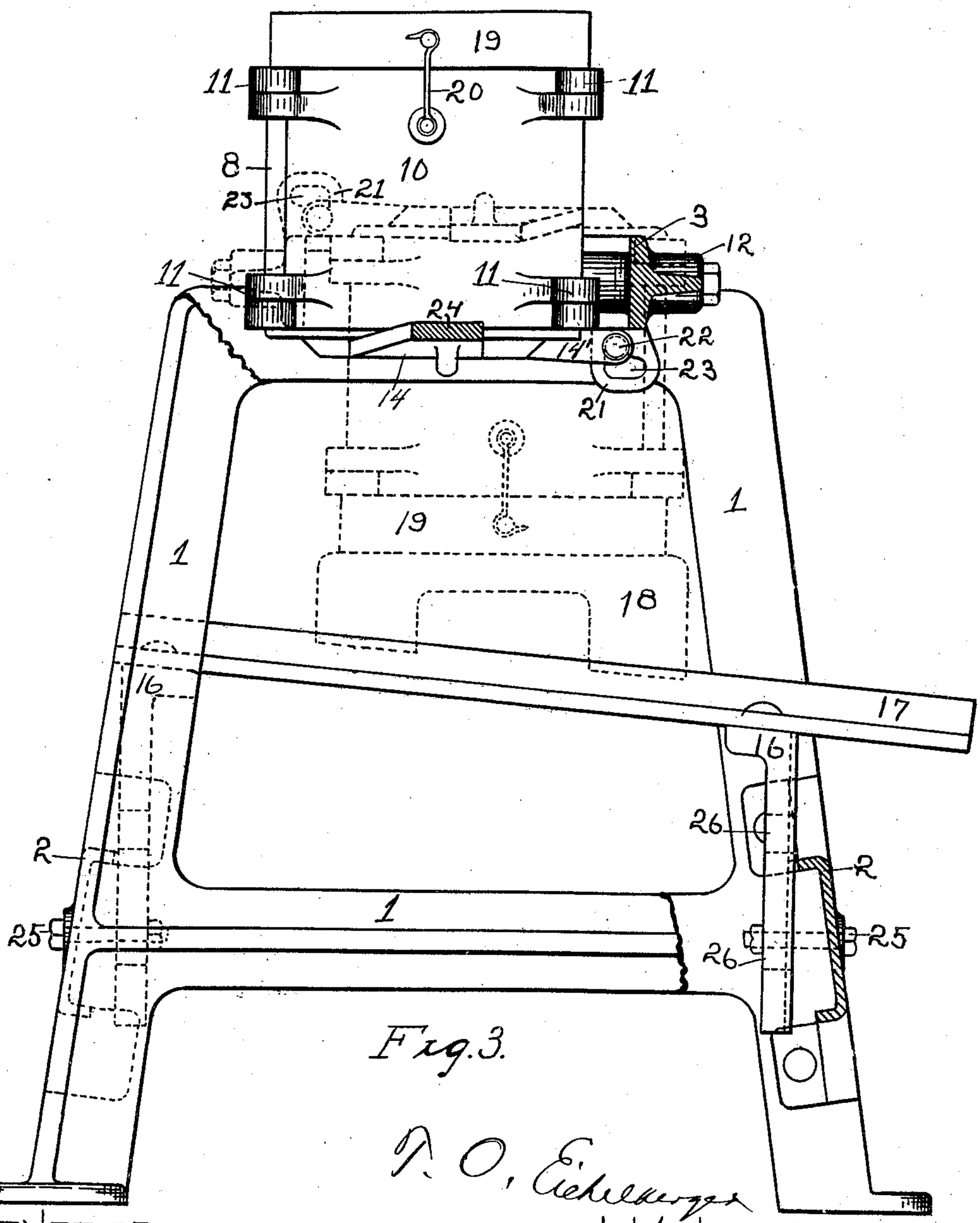

Fig. 3.

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UNITED STATES PATENT OFFICE.

THOMAS O. EICHELBERGER, OF DAYTON, OHIO.

CONCRETE-BLOCK MACHINE.

SPECIFICATION forming part of Letters Patent No. 791,088, dated May 30, 1905.

Application filed February 6, 1905. Serial No. 244,277.

To all whom it may concern:

Be it known that I, THOMAS O. EICHELBERGER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Concrete-Block Machines; 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in machines for making cement building-blocks.

The object of the invention is to provide a machine of the above character which will form a building-block from cement or concrete with the face downward and discharge the same onto a wooden pallet with a block in a reversed position with its face upward. The many advantages of a machine of this character lie in the fact that in making a block with the face downward I am enabled to use a small quantity of fine rich facing material for forming the face of the block, while the main body of the block is formed of a much cheaper and coarser material, and, further, in discharging the block from the machine with the face upward it is possible to use an inexpensive wooden follow-board upon which to cure the block, and, further, in curing the block with its face upward it is possible to distribute the water more uniformly over the face of the block in curing said block.

In providing a machine in which the above results are obtained simplicity and efficiency are combined to a very great extent in order that a perfect building-block may be obtained at a minimum cost.

Preceding a detail description of the invention reference is made to the accompanying drawings, of which—

Figure 1 is a top plan view of the machine with portions of the frame broken away. Fig. 2 is a front vertical elevation. Fig. 3 is an end elevation with a portion of the frame broken away and the extension 24 of the face-plate and reversible yoke shown in section.

In a detail description of the invention similar reference characters indicate corresponding parts.

The framework of the machine consists of two upright end standards 1, which are connected together by a suitable number of braces 2 at the lower portions of said standards. The tops of these end standards are provided with journal-boxes 4, which furnish bearings for the ends of a reversible yoke 3, said yoke forming an upper connection between the end frames or standards 1. This yoke 3 is reversible to two horizontal positions by means of a hand-lever 5, which is fixed to one end thereof, said hand-lever being held in position to support the yoke in either of its two operative positions by means of stop-lugs 6, which project from one of the end standards.

7 and 8 designate the rear and front flask-plates, and 9 and 10 the two end flask-plates, which are hinged to the front and rear plates at 11. The rear plate 7 is bolted to the reversible yoke 3 through bosses 12. A latch 13 holds the plates or members of the flask together during the period of the formation of a block and reversing the flask. The face-plate 14 is utilized as the bottom of the flask during the process of tamping the material in the flask, and when the flask is in such position the yoke 3 and said flask are reversed from the position shown in Fig. 1. The face-plate is of special construction and has a shiftable hinge connection with the yoke 3 by means of two hinge members 14′, which are provided with pins or journals 22, that enter bearing-bosses 21, projecting from the reversible yoke. These pins may be in one continuous piece or otherwise. The journal-openings 23 in the bosses 21 extend upwardly and thence backwardly, as shown in Fig. 3, in order that the face-plate may be first lifted entirely free of the molded face of the block and then turned upon its hinges to entirely clear the face of the block. The movement of said face-plate is necessary in order to avoid any marring of the face of the block. The lower or straight portion of the slots 23 enables the

journals of said face-plate to move up in a straight line, and the upper rearwardly-extended portion of said slots permits of a rearward movement of said journals.

The extreme ends 24 of the face-plate 14 are extended in reduced form to an extent that enables them to enter mortise-slots 27 in the upper side of the ends of the yoke 3. Against these ends of said yoke the ends of the face-plate are firmly secured by means of dogs 15, which are pivoted to the ends of said yoke and are movable to positions to release the ends of said face-plate or to bind and hold said ends in rigid contact with the yoke. It will be seen that the connections between the ends of face-plate 14 and the ends of the yoke are substantially in line with the center of the flask. Therefore the flask is properly supported during the tamping operation, the positions of the ends of the yoke being substantially in line with the longitudinal center of the flask. It will thus be seen that the entire members of the flask are supportable upon this reversible yoke. As the flask is shown in Fig. 3 the material for the formation of the block has been tamped, and the wooden follow-board 19 is secured in position by means of a hook 20 at each end of the flask. The face-plate 14, it will be observed, forms the bottom of the flask while in this position. To reverse the position of the flask to that shown in dotted lines in Fig. 3 or as shown in Fig. 1, where the face-plate 14 is in the upper position, the hand-lever 5 is moved to the position shown in Fig. 1.

In order to remove the block from the flask when in the lower position and without a direct handling of the blocks, I have provided the following means: 16 designates two horizontal supporting-brackets, which are rigidly connected with the two cross-braces 2 by means of a suitable number of bolts 25, which pass through oblong slots 26 in said brackets. These brackets support angle-bars 17, which form inclined tracks. The rearward bracket 16 extends upwardly beyond the height of the forward bracket, and these brackets, together with the tracks 17, are adjustable vertically by means of the oblong slots 26, before referred to. This vertical adjustment allows for the making of different thicknesses of blocks. Movable upon the inclined tracks 17 there is a sliding truck 18. (Shown in dotted lines in Fig. 3 and in full lines in Fig. 2.) This truck, as will be seen, has its upper surface level at all points of its travel along the inclined tracks in order to enable said truck to be moved in a proper manner to a position to support the follow-board 19, with a molded block thereon, after the mold has been opened to enable said truck to receive the follow-board with its contents. The necessity for the vertical adjustments of the brackets 16 and the tracks 17, it will be understood, is due to the desirability of bringing the truck 18 to a proper position below the flask at all times regardless of the thickness of the block.

Having described my invention, I claim—

1. In a concrete-block machine, a supporting-frame, a reversible yoke mounted in said frame, a flask consisting of hinged members, the rearward one of which is rigidly secured to said yoke, and a face-plate having a pivotal connection with the body of the yoke, and its ends securable to the ends of the yoke.

2. In a concrete-block machine, a frame, a reversible yoke mounted in said frame, a flask having its rearward plate rigidly secured to said yoke, a face-plate having its rearward edge pivoted to said yoke, the ends of said face-plate being extended parallel with the ends of the yoke, and means for holding said extended ends firmly against the yoke during the operation of tamping the material in the flask.

3. In a concrete-block machine, a frame, a reversible yoke journaled in said frame, a flask consisting of side and end plates and a face-plate, said flask being rigidly connected at its rearward side to the body of the yoke, and said face-plate being pivotally connected to the body of said yoke, means for detachably connecting the ends of the face-plate to the ends of the yoke at points substantially in line with the axes of the journals of said yoke, whereby the yoke is enabled to properly support the flask during the operation of tamping, and reversing the position of said flask.

4. In a concrete-block machine, the combination with a main supporting-frame, adjustable brackets mounted on said frame, tracks supported upon said brackets, and a truck having its upper surface parallel with the surface of the follow-board, said truck being movable to a position to support the follow-board with the completed block thereon.

5. In a concrete-block machine, a reversible yoke, a flask mounted upon said yoke at one side, a face-plate pivoted to said yoke at one side, means for detachably connecting the ends of said face-plate with the ends of said yoke, means for reversing the position of the yoke to bring the flask in a lower and reversed position after the formation of a block, an inclined track adjustably supported in the main frame of the machine, and a truck having its upper surface parallel with the follow-board, said truck being movable on said track to a position below the flask.

6. In a concrete-block machine, a reversible yoke, a flask rigidly secured to said yoke, and a face-plate having a hinged connection with said yoke, said hinged connection consisting of bearings having vertically and laterally extending openings which receive the journals of said face-plate.

7. In a concrete-block machine, a flask con-

sisting of hinged members, a follow-board attachable to said flask and forming the support for the block when the flask is opened, a face-plate forming the bottom of the flask when the block is being formed, a reversible yoke upon which the flask and the face-plate are supported, and a truck movable to a position to engage the follow-board to support the same with its contents, and a track supported upon the main frame of the machine and upon which the truck is moved out of the machine.

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

THOMAS O. EICHELBERGER.

Witnesses:

R. J. McCarty,

J. W. Papenol.