

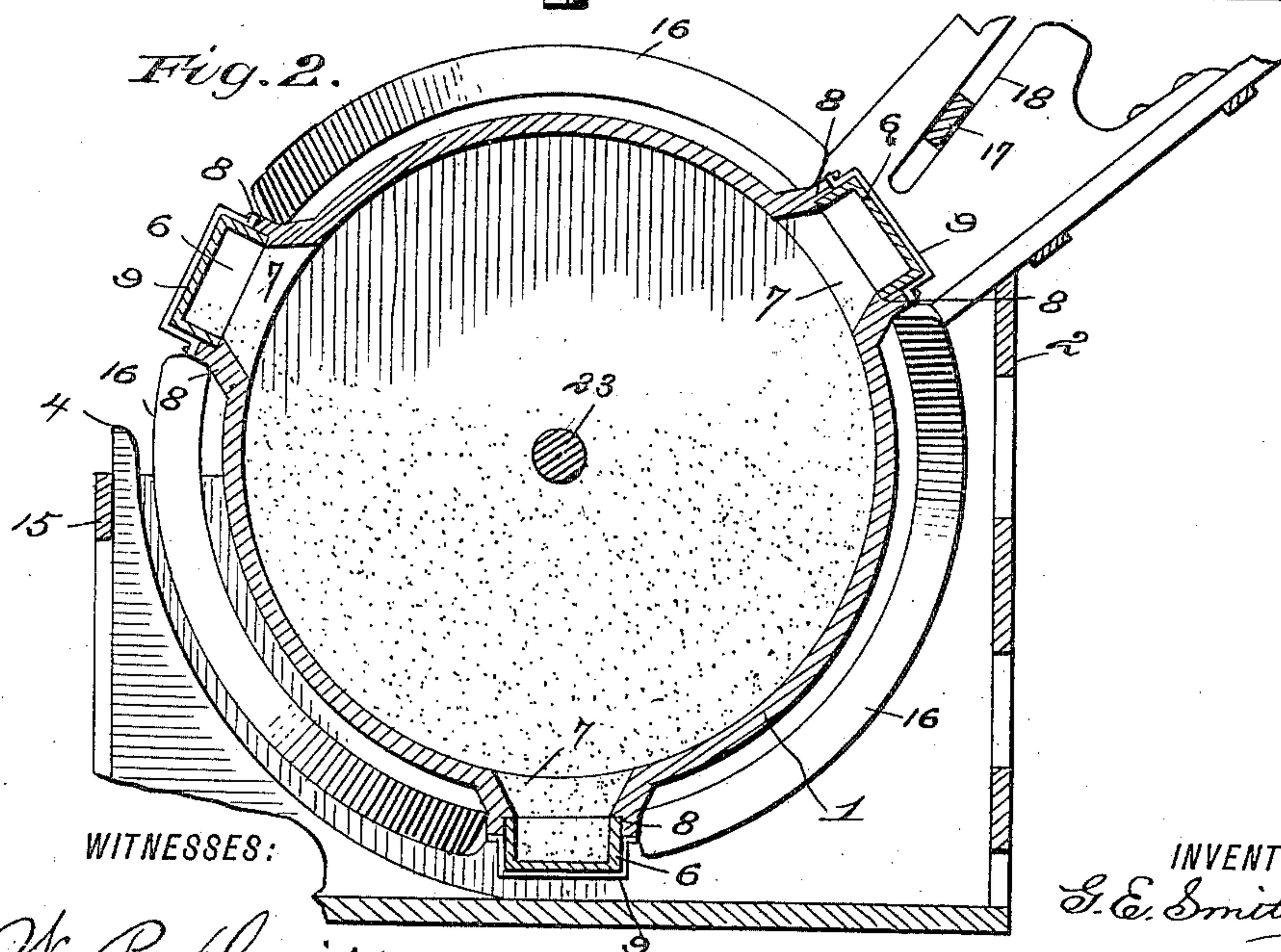
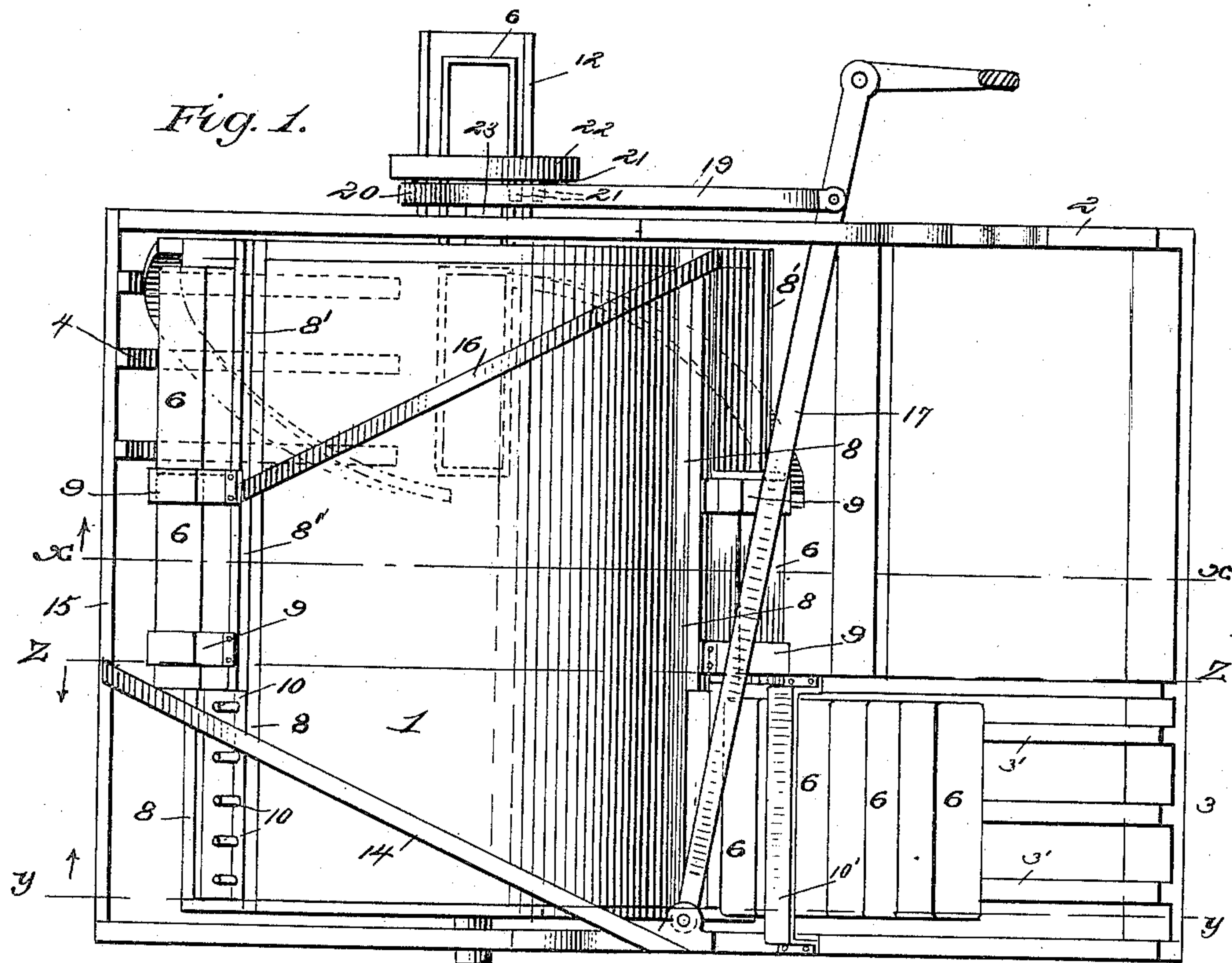
(No Model.)

3 Sheets—Sheet 1.

G. E. SMITH.
BRICK MOLD SANDING MACHINE.

No. 411,228.

Patented Sept. 17, 1889.



WITNESSES:

W. R. Davis.
C. Sedgwick

INVENTOR:

G. E. Smith

BY

Munn & Co

ATTORNEYS.

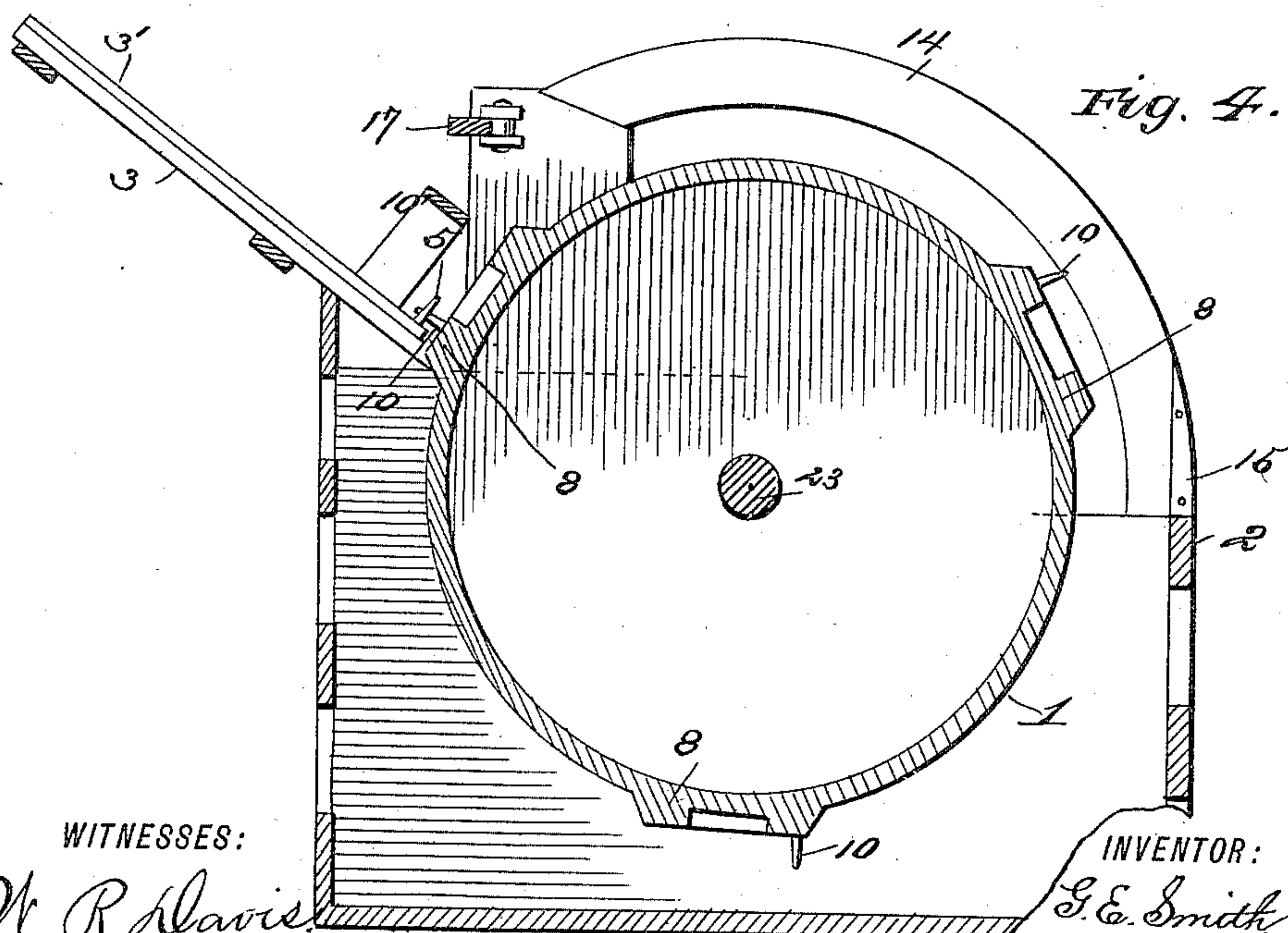
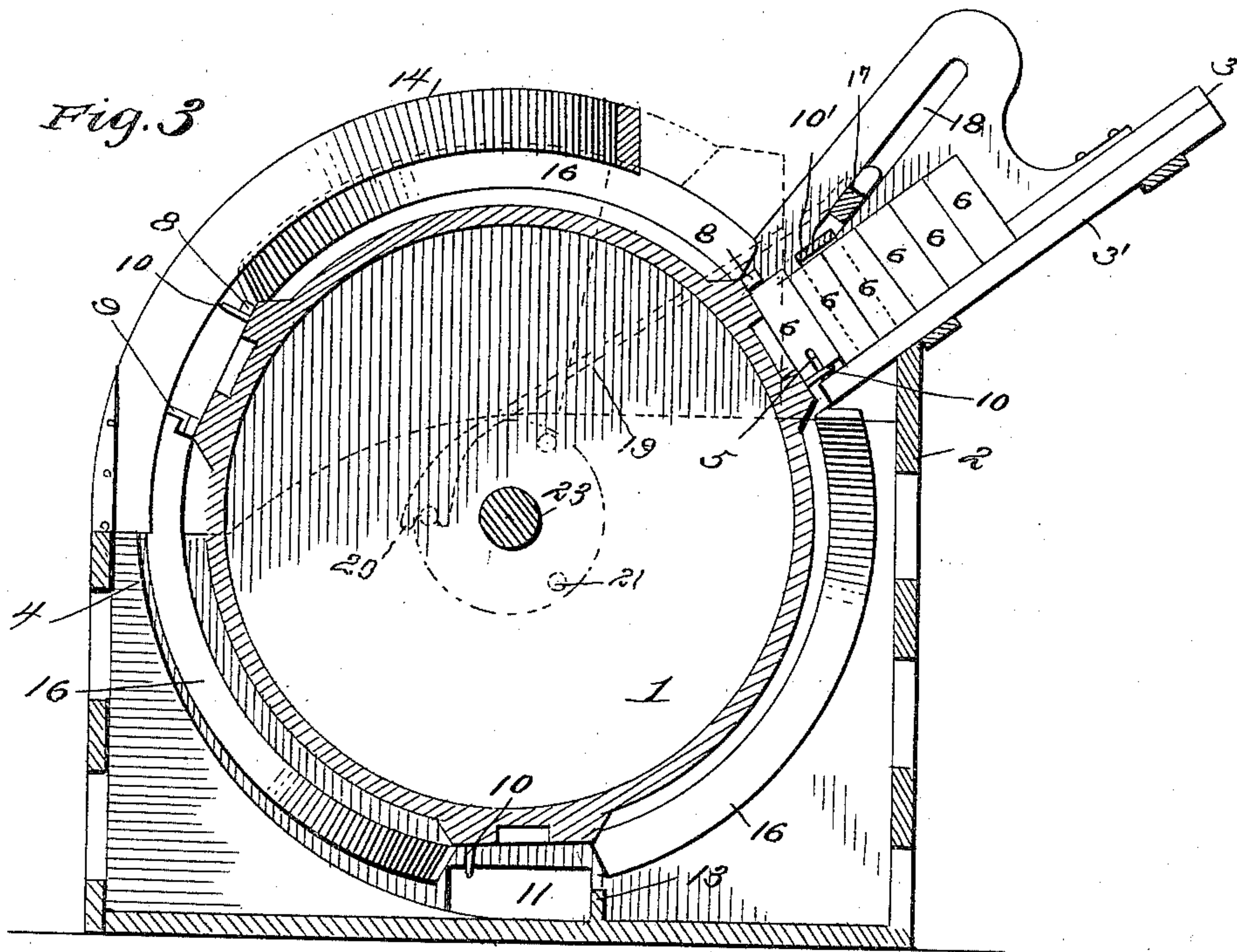
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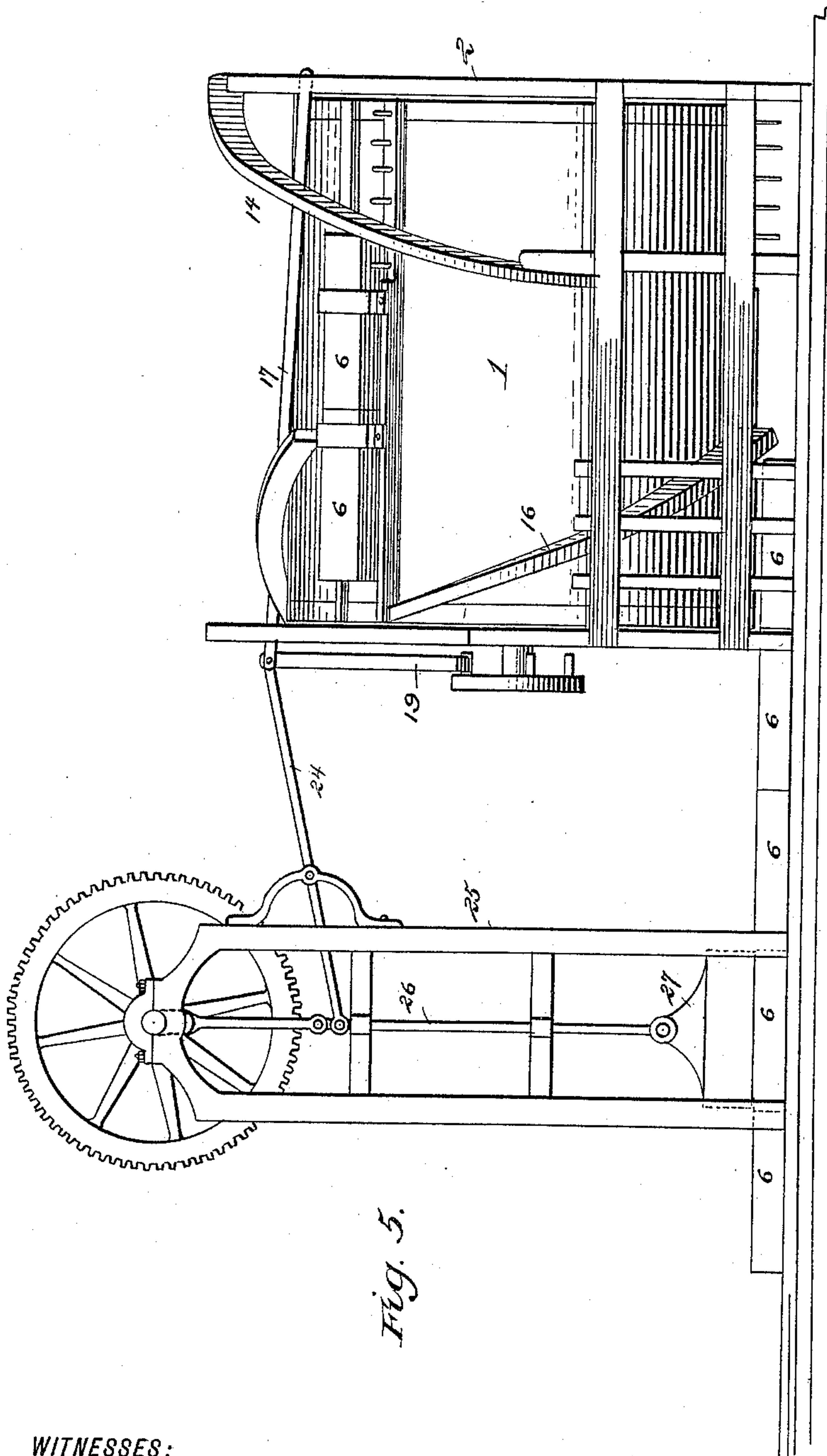


Fig. 5.

WITNESSES:

William R. Davis
C. Sedgwick

INVENTOR:

G. E. Smith
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UNITED STATES PATENT OFFICE.

GEORGE E. SMITH, OF KINGSTON, NEW YORK.

BRICK-MOLD-SANDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 411,228, dated September 17, 1889.

Application filed August 27, 1888. Serial No. 283,896. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. SMITH, of Kingston, in the county of Ulster and State of New York, have invented a new and Improved Brick-Mold-Sanding Machine, of which the following is a full, clear, and exact description.

This invention relates to a machine for sanding brick-molds, and has for its object to provide a brick-mold-sanding machine by means of which the molds may be regularly fed forward to the press and will at the same time be effectively sanded.

The invention consists in a machine for sanding brick-molds and feeding them forward to the press, constructed and arranged as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the machine. Fig. 2 is a vertical section on the line $x x$, Fig. 1. Fig. 3 is a vertical section on the line $y y$, Fig. 1. Fig. 4 is a vertical section on the line $z z$, Fig. 1, looking from the opposite end to that in Fig. 3, with molds removed; and Fig. 5 represents the sanding-machine connected to a brick-press.

In carrying out this invention a rotary cylinder or sand-box 1, for containing the sand, is mounted in a frame-work 2. The frame 2 is constructed with an incline or feeding-chute 3 at one of its upper corners for the brick-molds, formed of inclined slats 3', and a curved inclined way or chute 4 at the diagonally-opposite lower corner. The lower end of feeding-chute 3 lies adjacent to the periphery of cylinder 1 and is provided with pins 5 on the slats 3', against which pins rests the lowest mold of the molds 6 lying on the feed-chute 3. The cylinder 1 is formed with a series of openings 7 in its periphery for the discharge of the sand in sanding the molds. The mouths of the openings 7, which correspond in size with the open side of the molds, pass through ways 8, on which the edges of the molds 6 rest, which ways are provided each side of the openings 7 with guide-strips 8', which extend across the chute 4. Retaining-straps 9 are also provided, which hold the

molds 6 in place over the opening 7 when being carried about the rotating cylinder 1 and sanded. Pins 10 extend in line with one side of the openings 7, forming a continuation of one of the guide-strips 8'.

10' is a retaining strap or bar extending across chute 3 to hold the last mold at the bottom but one in place as the bottom mold is taken off by pins 10 from pins 5. In the revolution of the cylinder 1 the pins 10 are brought around beneath the lower end of feed-chute 3 and break joint with and pass between the pins 5.

At the lower end of curved chute 4 in the end wall of frame 2 is located an opening 11, provided with a discharge-chute 12, and on the opposite side of opening 11 from the foot of curved chute 4 is located a stop and guide-strip 13, at which point the space between the chute 4 and the periphery of the cylinder is sufficient to allow the guide-strips 8' to pass over molds 6, held by the strip 13. A curved strip 14 extends from the side of frame 2 at its top adjacent to the lower end of chute 3 diagonally over the cylinder 1 to the adjacent side 15 of the frame 2, adjacent to the line of travel of the openings 7 in the rotating cylinder.

The rotary cylinder 1 is provided with a series of diagonal strips 16, extending from the openings 7 of the cylinder across and of such a height as to sweep the curved chute 4.

The frame 2 is located adjacent to the well-known brick-machine, the discharge-chute 12 delivering the sanded molds to the brick-machine, (in their usual place.)

The rotary cylinder 1 may be driven by any suitable mechanism, the mechanism preferably being connected with the press, so that the sanding-machine will work in unison therewith. As here shown, a lever 17 is pivoted at one end to one side of the frame 2 and extends across the latter through a slot 18 in the opposite side.

To the projecting end of lever 17 is pivoted a lever 19, having a forked end 20, which in the backward movement of lever 17 slides over one of a series of pins 21, projecting laterally from a disk 22 on the projecting shaft 23 of cylinder 1, and has its forked end brought into engagement with said pin 21,

and in the forward movement of lever 17 is moved forward, thereby rotating the disk 22 until the lever 17 has reached the end of its forward stroke, when the lever 17 and its
 5 forked end 20 are again drawn backward by lever 17, as before, and the succeeding pin 21 engaged. By means of a succession of such movements the cylinder 1 is rotated. The
 10 outer end of lever 17 is connected in any suitable manner with the brick-press machine, so as to be operated in unison with the pressing of the bricks.

In the operation of the brick-mold-sanding machine a number of molds 6 are placed in
 15 the feed-chute 3, the lowest mold resting against the pins 5. A mold 6 may also be slid over each of the openings 7 beneath the retaining-straps 9, the open side of the mold facing the opening, with its edges resting be-
 20 tween the guide-strips 8'. Upon the rotary sand-box or cylinder 1 being rotated, the pins 10, adjacent to one of the openings 7, are brought around beneath the lower end of chute 3 and pass up between the pins 5, lift-
 25 ing off therefrom the lowest mold 6. As the bottom mold 6 is lifted off of pins 5, the succeeding mold 6 is pushed down onto the pins 5 by the weight of the molds 6 resting above it, the strap 10' preventing the suc-
 30 ceeding mold from being drawn off from the chute as the bottom mold is carried away by the rotation of the cylinder. As the mold removed from the chute 3 and resting on the pins 10 and the way 8 is carried forward by
 35 the rotating cylinder, its outer end bears against the diagonal strip 14, and the mold is gradually pressed forward thereby across the cylinder, pushing the mold held by the straps 9 off from the opening 7, and being
 40 pushed in turn by strip 14 over the opening 7. When the two molds thus described have reached, in the rotation of the cylinder 1, a point in line with the top of chute 4, the outer mold 6, resting between the guide-strips
 45 8', will be carried down the chute 4, and upon reaching the bottom of the chute will be caught by the stop and guide-strip 13 and swept through opening 11 onto chute 12 by the diagonal strip 16 bearing against the
 50 mold 6 as the cylinder continues its rotation. The inner mold 6, above referred to, resting over the opening 7, is meanwhile carried round with the cylinder and sanded by the sand dropping through the opening 7 onto
 55 the interior of the mold. As the molds 6 are fed forward in chute 3 and successively caught up by pins 10, removed from pins 5, and carried forward, the above-described feed-
 60 ing operation and sanding of the molds is continued, the mold 6 being forced forward in a continuous line between the guide-strips 8' and through the chute 12, a sanded mold being moved into the press as fast as a preceding mold is filled, pressed, and removed.

65 In Fig. 5 the brick-mold-sanding machine is shown connected with a brick-press. The lever 17 is pivotally connected by a lever 24,

pivoted to a brick-machine 25, to the ver-
 tically-reciprocating rod 26, having the press
 27 at its lower end. By means of this con- 70
 nection the sanding-machine will be oper-
 ated by the brick-machine, so that as the rod
 26 is raised a mold 6 beneath the press will
 be fed forward and another mold 6 shoved
 into place beneath the press by the action of 75
 the sanding-machine in feeding the molds 6
 forward from chute 12. In this way the brick-
 machine and sanding-machine will act to-
 gether, a mold being fed under the press dur-
 ing every upward stroke of the rod 26. In 80
 this way any number of molds will be thor-
 oughly sanded and carried forward to the
 press in an expeditious and efficient manner.

While I have set forth a specific construc-
 tion of parts, I do not desire to limit myself 85
 thereto, as they may be varied without de-
 parting from the essential features of the in-
 vention.

Having thus described my invention, what I
 claim as new, and desire to secure by Letters 90
 Patent, is—

1. In a brick-mold-sanding machine, the
 combination, with a supporting-frame, of a
 rotary sand-box, a disk mounted on the shaft
 of the said box and provided with pins, a le- 95
 ver pivoted to one side of the frame and ex-
 tending across the same, and a forked lever
 pivoted to the first-named lever and engag-
 ing the pins of the disk, substantially as here-
 in shown and described. 100

2. In a brick-mold-sanding machine, the
 combination, with a supporting-frame pro-
 vided with a feed and delivery chute and a
 guide 13, of a sand-box mounted to rotate in 105
 the frame and provided with openings in its
 periphery and with the diagonal guide-strips
 16, and the curved guide-strip 14, secured to
 the frame and extending diagonally over the
 said box, substantially as and for the pur-
 pose set forth. 110

3. In a brick-mold-sanding machine, the
 combination, with a supporting-frame pro-
 vided with a feed-chute at one corner and a
 delivery-chute at the diagonally-opposite cor- 115
 ner, of a sand-box mounted to revolve in the
 said frame and provided with a series of open-
 ings in its periphery, a guide-strip for mov-
 ing the molds over the openings in the box,
 means for retaining the molds over said open-
 ings, and guide-strips for discharging the 120
 molds into the discharge-chute, substantially
 as herein shown and described.

4. A brick-mold-sanding machine consist-
 ing of a frame having a feed-chute with a
 brick-mold support at its lower end, a rotary 125
 sand-box having sand-discharge openings in
 its periphery, brick-mold ways on the rotary
 sand-box in line with the sand-discharge
 openings, with retaining projections for hold-
 ing the brick-molds over the sand-discharge 130
 openings and catches for lifting the bottom
 mold from feed-chute onto the brick-mold
 ways, a diagonal strip adjacent to the said
 box and extending over the latter from the

feed-chute, diagonal strips at the other end of the sand-box, and a curved chute adjacent to said end diagonally opposite the feed-chute, with a lateral opening and discharge-chute, a stop and guide-strip at the lower end of curved chute, and mechanism for operating the rotary sand-box, substantially as shown and described.

5. A brick-mold-sanding machine consisting of a rotary sand-box having its periphery formed with sand-discharge openings, with brick-mold-retaining guides, brick-mold guideways extending from end to end of the sand-box in line with the openings, retaining-catches located adjacent to the sand-discharge openings and in line therewith on one end of the sand-box, diagonal strips on the sand-box extending over the same from the opposite end, a feeding-chute adjacent to the end of the sand-box, having retaining-catches, a chute on the opposite side of the sand-box adjacent to the end thereof, having a stop and guide-strip at its bottom, with an adjacent opening and chute, diagonal strips on the sand-box, and a diagonal strip extending above the sand-box from the feed-chute to the opposite side, substantially as shown and described.

6. A brick-mold-sanding machine consisting of a frame 2, having mounted therein the rotary sand-box or cylinder 1, with sand-discharge openings 7, the brick-mold retaining and guide straps 9 adjacent to openings 7, the guide-strips 8', extending past the openings 7 and to the end of the cylinder on one side of the openings and having a continuation on the other side formed by means of pins 10, a chute 3, formed of slats 3', with

pins 5 at their lower end adjacent to the end of cylinder 1, on which are located pins 10, diagonal strips 16 on the opposite end of cylinder, a diagonal strip 14, extending over cylinder 1 from the chute 3 to the side of frame 2, a chute 4, located diagonally on frame 2 to chute 3, with lateral opening 11, a chute 12 in frame 2 at the bottom of chute 4, and a stop and guide-strip 13 adjacent thereto, substantially as shown and described.

7. A brick-mold-sanding machine consisting of a frame 2, a feed-chute 3, formed with slats 3', and pins 5 at the lower ends of the slats, located at an upper corner of frame 2, a chute 4, located at a corner of frame 2 diagonally to chute 3, an opening 11, with external chute 12, an internal stop and guide-strip 13 in the side of frame 2 at the bottom of chute 4, a rotary sand-box or cylinder 1, mounted in frame 2, with sand-discharge openings 7 in its periphery between chutes 3 and 4, brick-mold guide and retaining straps 9, located adjacent to the openings, brick-mold guide-strips 8', extending past the openings 7, pins 10, located on the cylinder at one side of the openings and extending to the end of the cylinder adjacent to chute 3, diagonal strips 16 on the cylinder at the end adjacent to chute 4, a diagonal strip 14, extending from the chute 3 over the cylinder to the opposite side of frame 2, and means for rotating the cylinder 1, substantially as shown and described.

GEORGE E. SMITH.

Witnesses:

H. W. TIBBALS,
GEORGE ROACH.