No. 702,283. Patented June 10, 1902.

I. CLAPPER.

EMBOSSING MACHINE.

(Application filed Mar. 14, 1902.)

(No Model.) 2 Sheets—Sheet 1.

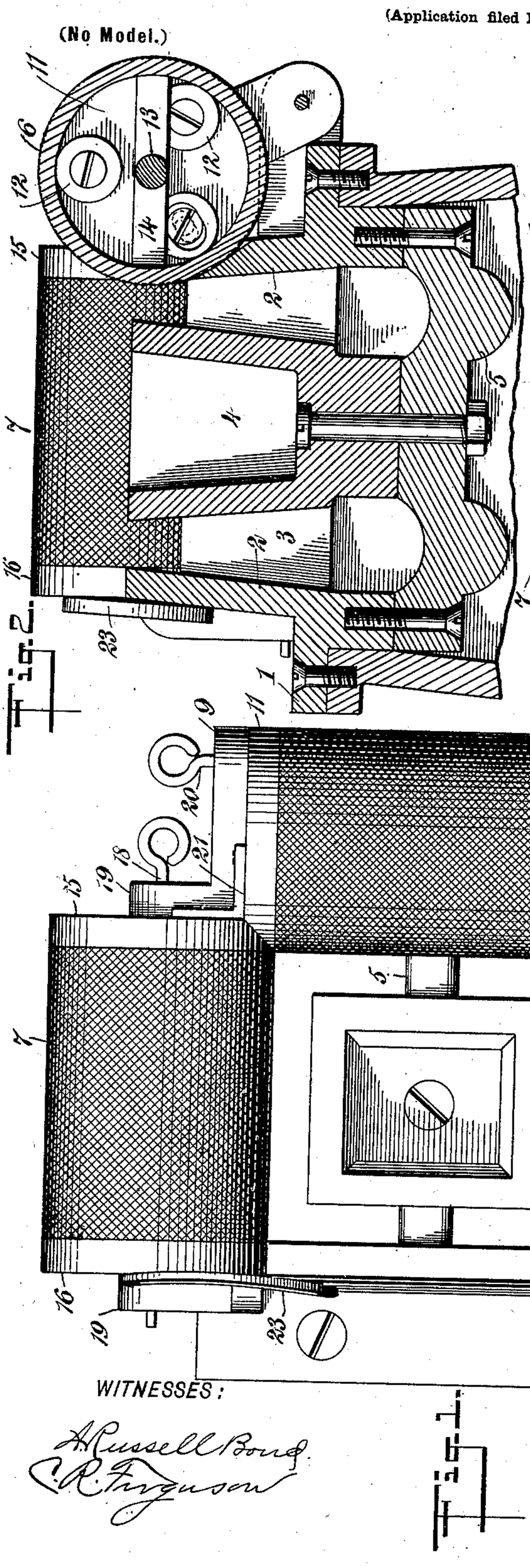

Fig. 2.

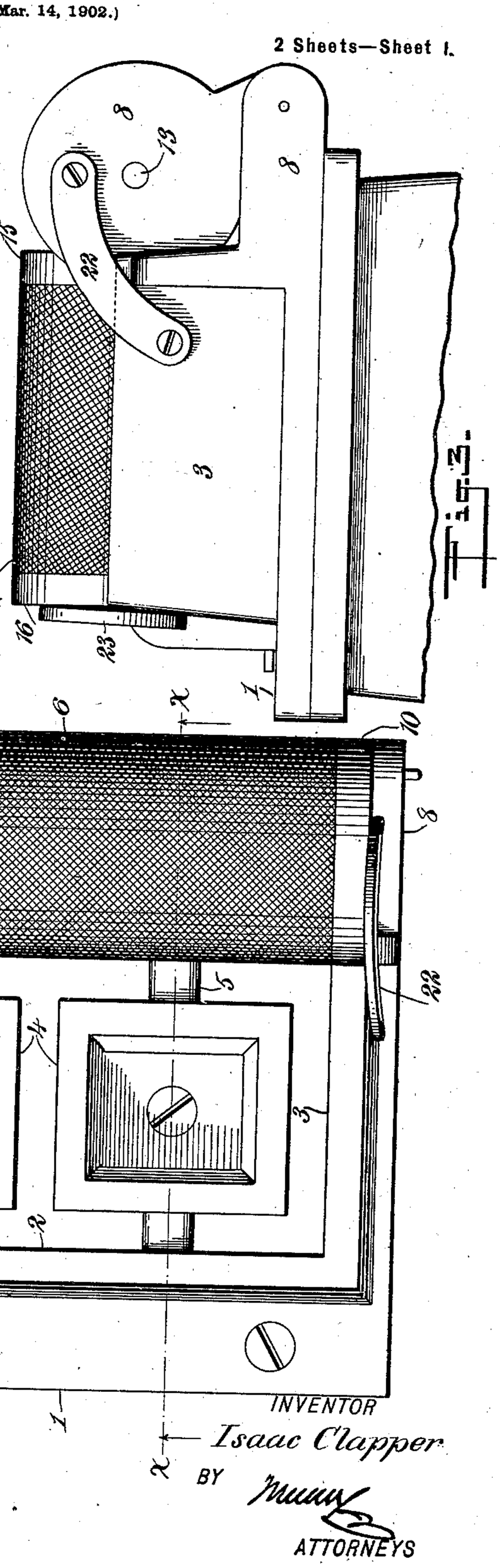

Fig. 3.

Fig. 1.

WITNESSES:

H. Russell Bond.
C. R. Ferguson

INVENTOR

Isaac Clapper.

BY Munn & Co.

ATTORNEYS

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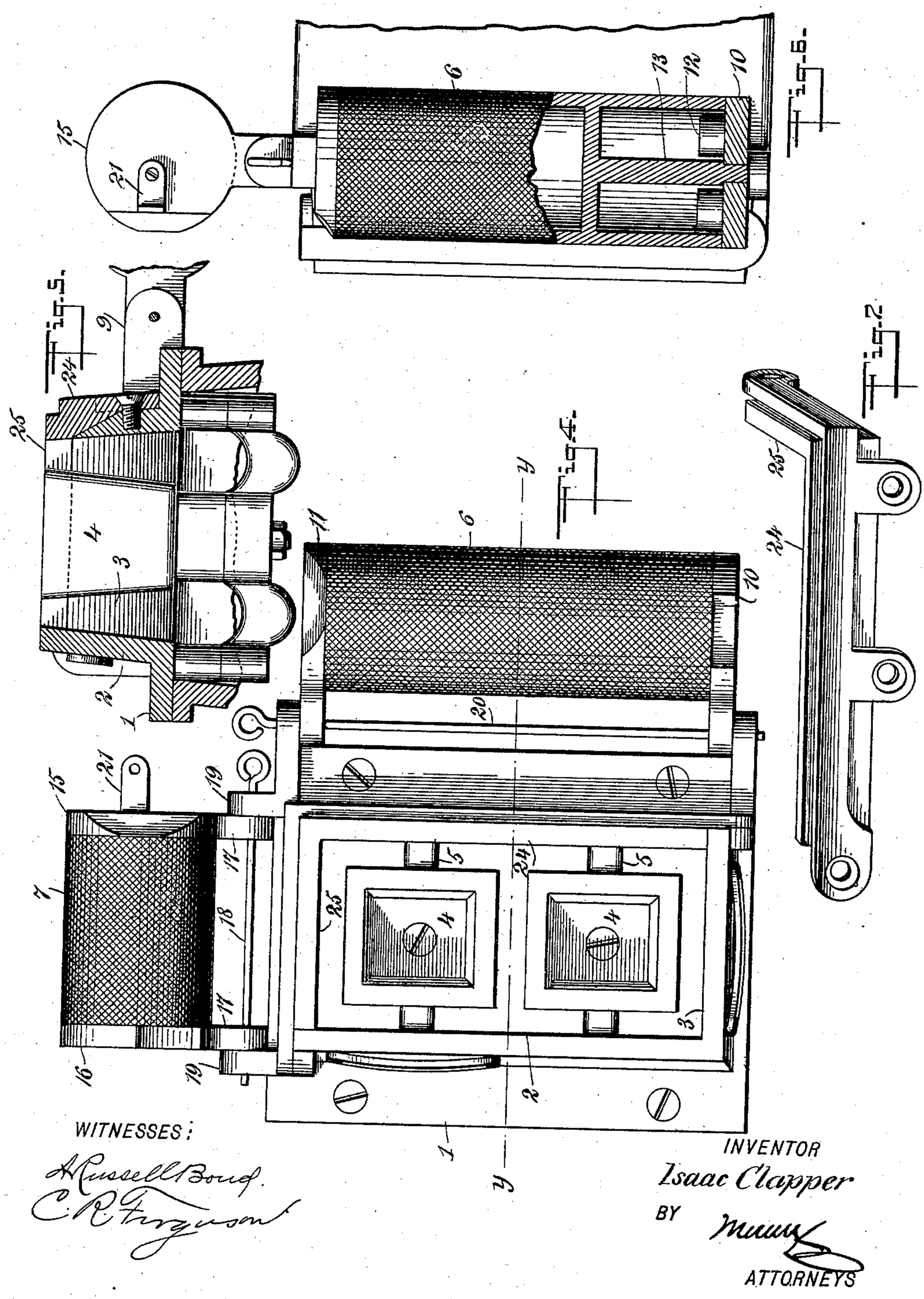

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UNITED STATES PATENT OFFICE.

ISAAC CLAPPER, OF OSNABURG, OHIO.

EMBOSSING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 702,283, dated June 10, 1902.

Application filed March 14, 1902. Serial No. 98,187. (No model.)

To all whom it may concern:

Be it known that I, ISAAC CLAPPER, a citizen of the United States, and a resident of Osnaburg, in the county of Stark and State of Ohio, have invented a new and Improved Embossing-Machine, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for forming and ornamenting or embossing hollow clay building-tile; and the object is to provide a machine of this character that may be quickly and easily adjusted to emboss one or more surfaces of a tile as it passes through a forming-die or arranged to permit the formation of the tile without embossing.

I will describe an embossing-machine embodying my invention and then point out the novel features in the appended claims.

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

Figure 1 is a front elevation of an embossing-machine embodying my invention. Fig. 2 is a section on the line $x\,x$ of Fig. 1. Fig. 3 is an end view of the machine. Fig. 4 is a front elevation showing the embossing-rollers turned out of operative position. Fig. 5 is a section on the line $y\,y$ of Fig. 4. Fig. 6 is a sectional detail showing the interior construction of one of the rollers, and Fig. 7 is a perspective view of a wall-continuation piece employed.

Referring to the drawings, 1 designates a face-frame designed to be secured to the outlet of an ordinary clay-press by means of bolts or otherwise. Forwardly-extended vertical walls 2 and forwardly-extended end or horizontal walls 3 form the outer walls of the forming-die for the tile, while the inner walls of the die are formed by a core or cores 4. In case of large tile two cores 4 are preferably employed, as indicated in the drawings; but with small tile a single core will answer. These cores are supported on bridge-pieces 5, secured to the back of the frame 1.

The vertical embossing-roller is indicated at 6, and the end embossing-roller is indicated at 7. The surfaces of these rollers obviously are to be provided with the configuration designed to be impressed in the tile. Mounted to swing on outward projections 8 9 of the frame 1 are disks or plates 10 11, on the inner sides of which are mounted rollers 12, which form the bearings for the roller 6, this roller being made tubular, and to prevent friction between the roller 6 and the bottom disk or plate 10 I provide the lower end of said roller 6 with a shaft 13, which has a step-bearing in said disk or plate 10. At its inner end this shaft is connected to a cross-piece 14. On one end (here shown as the upper end) the other embossing-roller has bearings in rollers similar to the rollers 12, mounted on the disks or plates 15 and 16, which have outwardly-extended lugs 17, through which a bearing-pin 18 extends, the said pin also extending through openings in lugs 19, extended from the frame 1. A similar pin 20 forms a bearing for the disks or plates 10 and 11, this pin or rod passing through openings in the portions 8 and 9 and through lugs on the disks or plates.

When the parts are swung inward to operative position, as indicated in Fig. 1, the disks or plates 11 and 15 are secured together by an angle-plate 21. The disk 10 is secured to an end wall 3 by means of a link 22, while a similar link 23 secures the disk 16 to a side or vertical wall 2 of the mold. When the parts are in the position indicated in Fig. 1, the clay forced through the mold will be embossed on one side and on one end, the movement of the clay causing a rotary movement of the rollers. Should it be desired to emboss but one face of a tile—for instance, the long or side face—the top roller 7 may be swung back, and if it is desired to form a plain tile both embossing-rollers may be swung out of position as indicated in Fig. 4. Of course to do this the angle-piece 21 must be released from one of the disks and the links 22 and 23 also released at one end.

To accommodate the projection of the embossing-rollers sufficiently into the tile to form the impression, it will be noted that the outer walls 2 and 3 adjacent to said rollers are somewhat narrower than their respective opposite walls. Therefore when the rollers are thrown backward in order to form a plain tile I employ an extension or continuation

piece for said walls. This continuation-piece is clearly shown in Fig. 7, and it consists of a side piece 24 and an end piece 25, the inner lower sides of which are beveled to fit the corresponding bevel of the walls 2 and 3, as indicated in Fig. 5. This continuation-piece is provided with perforated lugs through which fastening-screws may pass. It will be noted that the meeting portions of the disks or plates 11 and 15 are beveled, so as to form substantially a miter-joint.

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

1. An embossing-machine comprising a mold, an embossing-roller mounted to swing on one side of the mold, and an embossing-roller mounted to swing on one end of the mold, substantially as specified.

2. An embossing-machine comprising a mold, lugs extended from the upper and lower ends of the mold, disks or plates mounted to swing on said lugs, rollers on the inner surfaces of said disks or plates, an embossing-roller supported on said rollers, and an embossing-roller mounted to swing on one end of the mold, substantially as specified.

3. An embossing-machine comprising a die, a side embossing-roller, plates mounted to swing on the die and supporting said roller, an end embossing-roller, plates mounted to swing on the die and supporting said end embossing-roller, means for securing adjacent disks or plates together, and link connections between the other disks or plates and the mold, substantially as specified.

4. An embossing-machine comprising a die, one side wall and one end wall being narrower than the respective opposite walls, an angular continuation-piece for said narrower walls, and embossing-rollers mounted to swing on the mold, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC CLAPPER.

Witnesses:
J. W. CRAINE,
LULU REMILLET.