

No. 750,599.

PATENTED JAN. 26, 1904.

H. A. CHRISTENSEN.

BAR CUTTER.

APPLICATION FILED SEPT. 1, 1903.

2 SHEETS—SHEET 1.

NO MODEL.

Fig. 1.

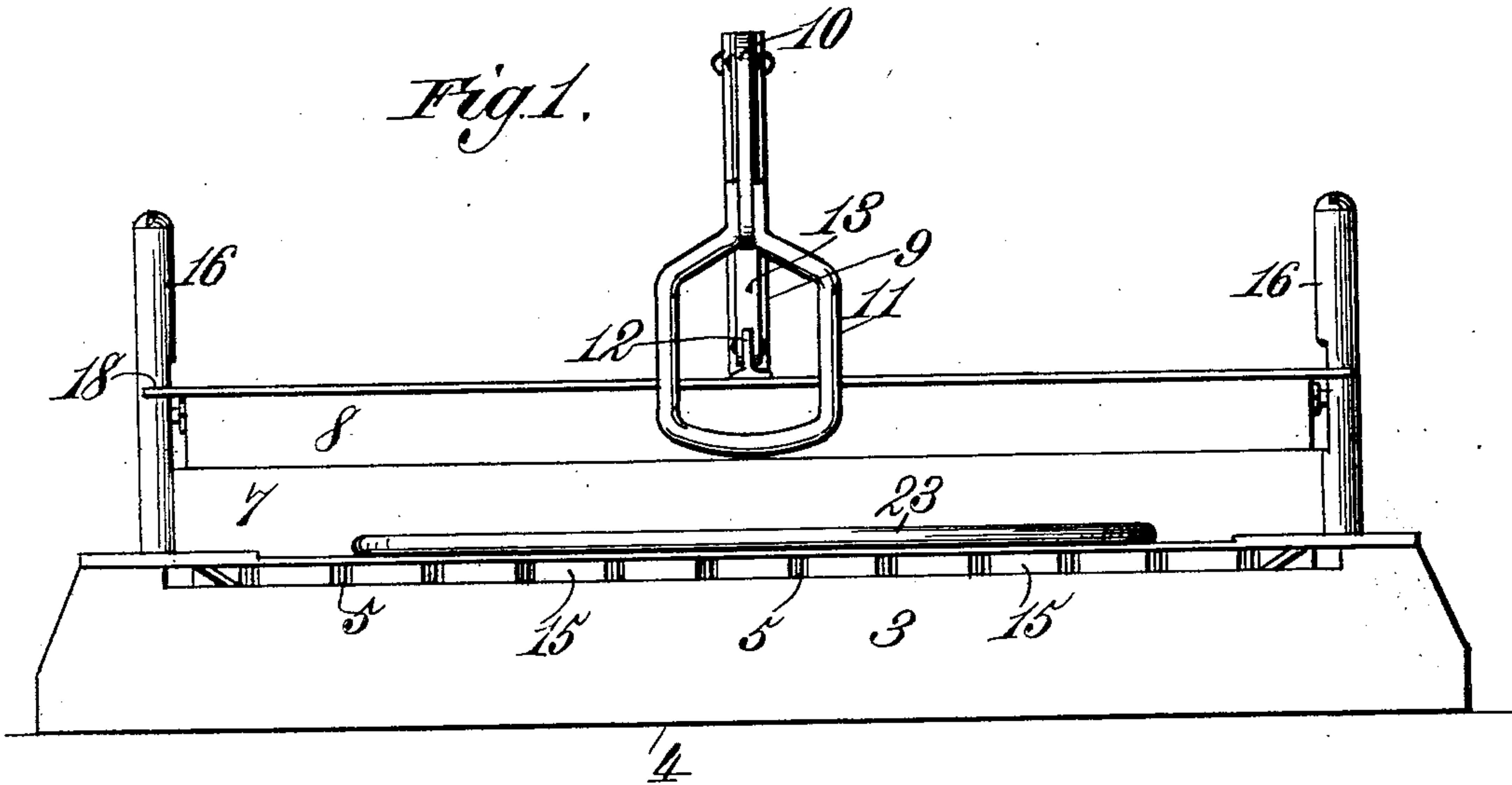


Fig. 2.

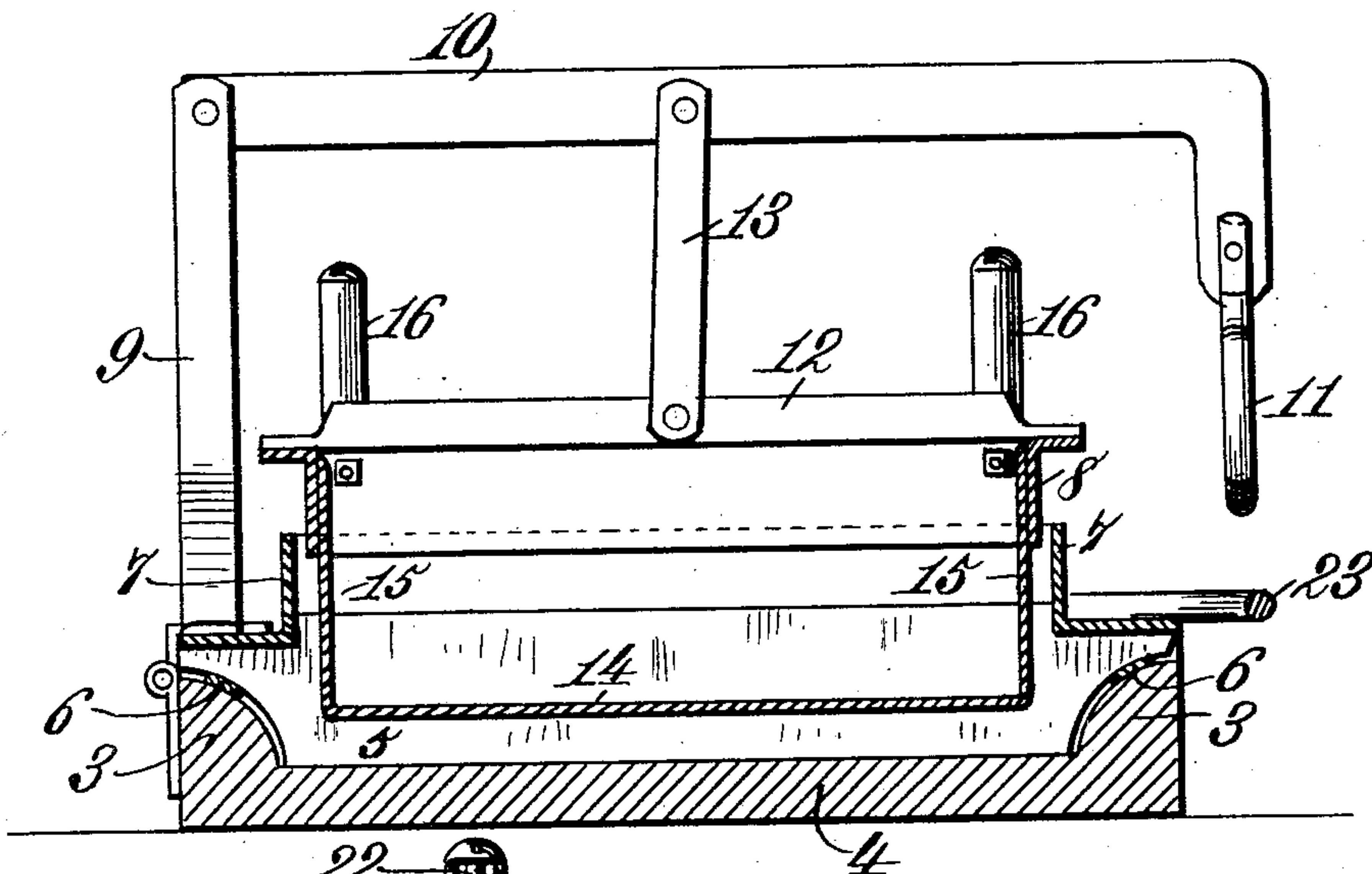
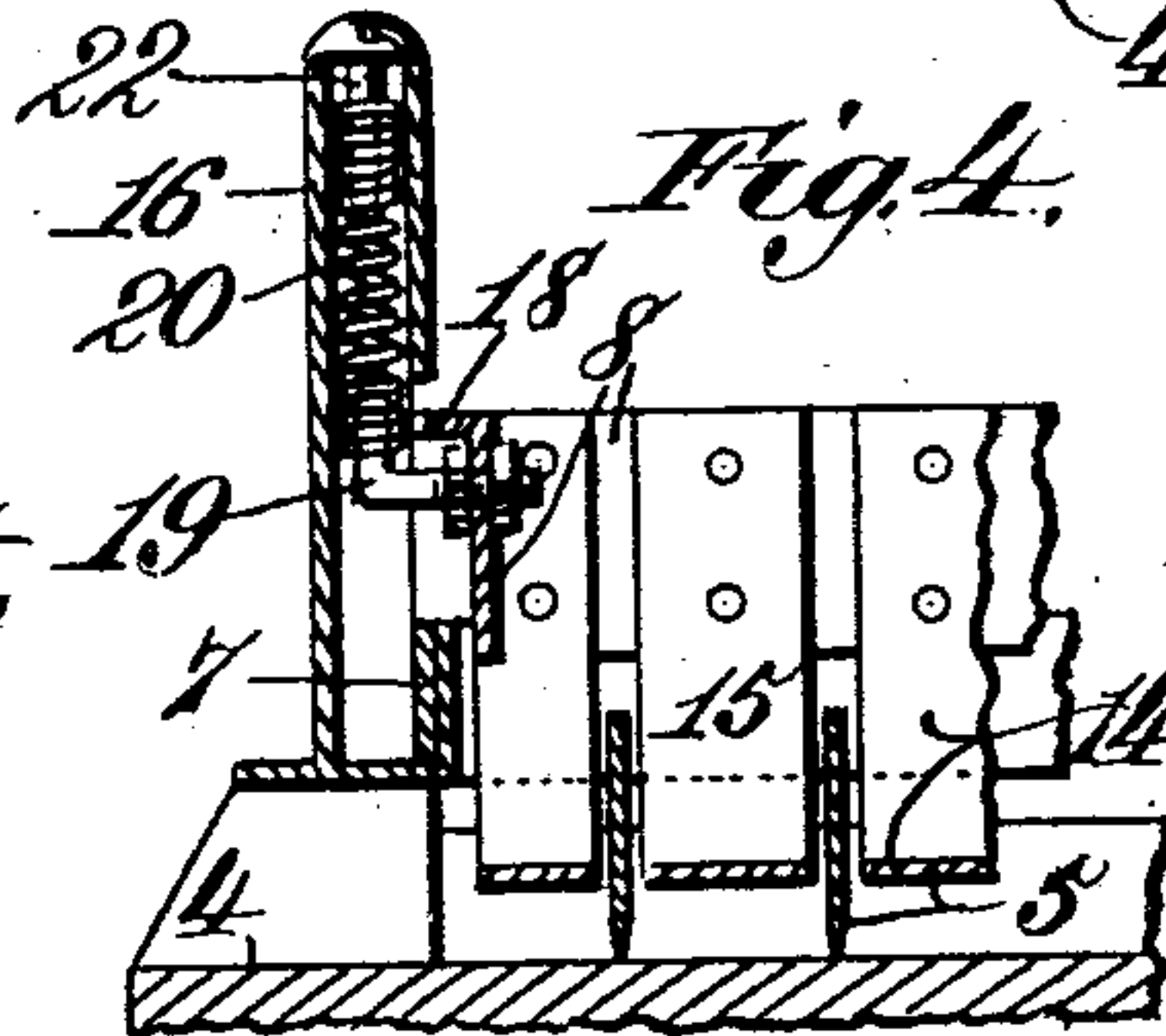


Fig. 4.

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2 SHEETS—SHEET 2.

NO MODEL

Fig. 3.

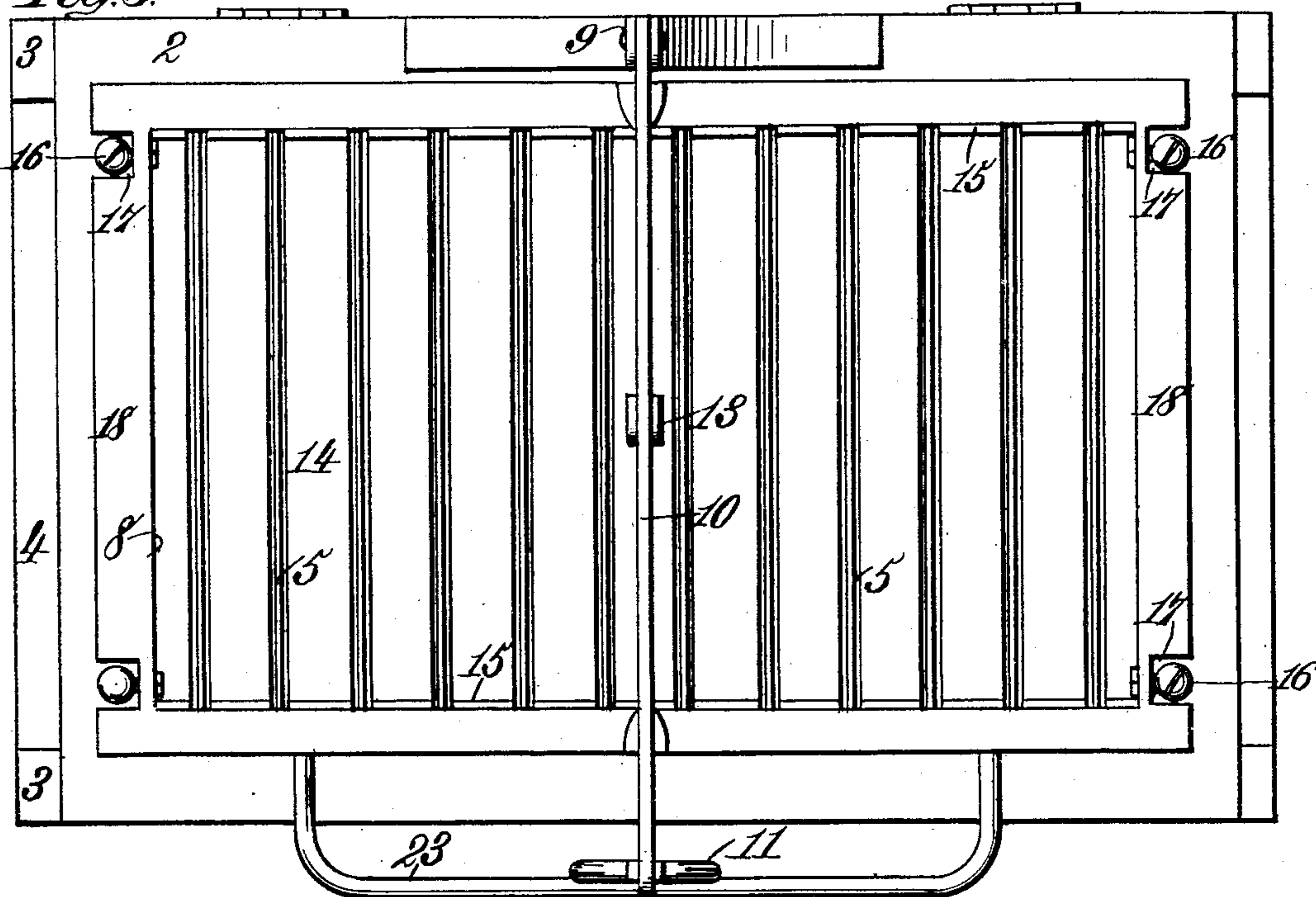
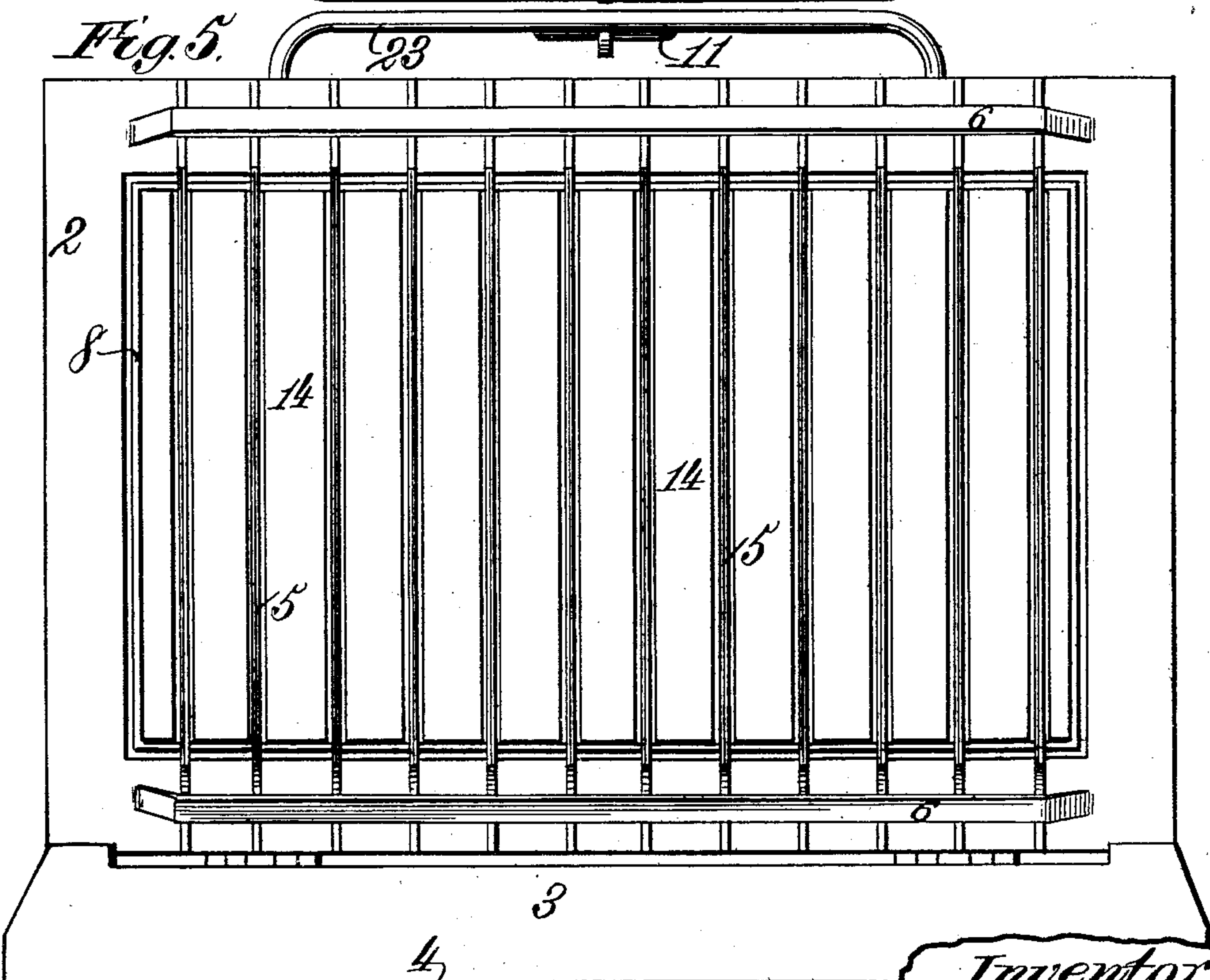


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY A. CHRISTENSEN, OF CHATTANOOGA, TENNESSEE.

BAR-CUTTER.

SPECIFICATION forming part of Letters Patent No. 750,599, dated January 26, 1904.

Application filed September 1, 1903. Serial No. 171,547. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. CHRISTENSEN, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented new and useful Improvements in Bar-Cutters, of which the following is a specification.

This invention relates to what I shall for convenience term a "bar-cutter," as primarily it is intended for cutting strips of fig cakes into bars. The device, which is simple in construction and effective in operation, may be employed with equal facility in other connections, it not being my intention to limit the same to any particular use. The device, however, has been found of particular advantage in the cutting of fig bars, as will appear fully in the following description. Ordinarily strips of fig cake are cut into bars by rotating hand-operable knives, which are difficult to roll along perfectly-straight lines. The result when the course of these knives deviates is that the bars are imperfectly cut. Another disadvantage attending the ordinary method is that the bars or cakes stick to the knives. By my device these disadvantages are wholly overcome. Said device in one simple adaptation thereof is clearly illustrated in the accompanying drawings, forming a part of this specification, and its structure will be fully set forth in the following description, while the novelty of the invention will constitute the basis of the claims succeeding such description.

The invention, however, is not limited to the exact disclosure made by said drawings and description, for different variations as to several points may be adopted within the scope of the claims.

Referring to said drawings, Figure 1 is a front elevation of a bar-cutter involving my invention. Fig. 2 is a transverse sectional elevation, and Fig. 3 a top plan view, of the same. Fig. 4 is a longitudinal sectional elevation of a portion of the cutter. Fig. 5 is a front elevation with the frame up.

Like characters refer to like parts throughout the several figures.

The cutter involves in its construction a main frame 2, which, as will hereinafter appear, carries a plurality of knives. This main

frame may be mounted in any suitable way. In the present case it is shown hinged to what might be considered the rear of the vertical parallel strips 3, rising from the front and rear, respectively, of the base-piece 4. From this it will be evident that the main frame can be raised and lowered. When down, it rests upon the upper sides of the strips or cleats 3. This main frame may be made from any suitable material and of any desired shape or size. Generally it is made from sheet metal of approximately rectangular form and carries on its under side a plurality of knives or blades 5, arranged in parallelism and equidistantly separated from each other. The length of these knives and the distance separating the same, as well as their number, are points that may be arranged to suit the taste of the individual users or of the work to which the cutter is put. These knives extend transversely across the opening of the main frame 2, and their ends are reduced and secured suitably—say by soldering—to what might properly be considered the under side of the front and rear bars of the main frame. I do not rely wholly upon the solder connection between the knives and frame to hold the former in place. Passing under and in contact with the reduced ends of the knives are elongated strips 6, the ends of which strips are soldered or otherwise connected to the under side of the frame and are similarly connected to the knives 5, by reason of which the latter are held securely in place.

An upright flange 7 extends completely around the wall of the opening in the main frame to receive the auxiliary frame 8, also shown as of rectangular form. The auxiliary frame 8, however, does not engage the said flange 7. Said auxiliary frame 8, which, as will hereinafter appear, carries clearers for the knives or blades 5, is carried by the main frame 2. For this purpose the main frame has centrally at its rear, or substantially, so a standard or post 9, to the upper end of which is pivoted the elongated horizontally-disposed branch of an angular lever 10, the lever extending forward across the two frames 2 and 8 and the depending short branch thereof having a loop or eye 11 pivotally connected

therewith, which loop or eye is adapted to receive the fingers or thumb for effecting the movement of the auxiliary or upper frame with respect to the main or lower one.

5 A cross-bar 12 extends across the upper or auxiliary frame 8 substantially midway between its ends, and to the same at a suitable point is pivoted the lower end of a link 13, the upper end of the link being likewise united to
10 the long arm or branch of the angular lever 10. On depressing the lever 10 the auxiliary frame 8, through the intermediate link 13, will be given a corresponding movement and a movement relatively to the main frame 2.

15 The clearers for the knives or blades 5 are denoted by 14 and are disposed between said knives and also at the outsides of the end knives, although the clearers upon the outer ends of the knives are quite narrow. These clearers
20 consist of elongated strips the lengths of which equal the effective lengths of the knives. The ends of the clearers or strips 5 have upwardly-disposed flanges, as 15, suitably secured, as by riveting, to the inner side of the
25 auxiliary frame 8.

A series of pillars, as 16, is mounted upon the upper side of the main frame 2 in the vicinity of the corners thereof, such pillars being longitudinally bored and fitting between
30 their ends in notches or recesses 17, formed in the horizontal outwardly-disposed marginal flange 18, extending along the top of the auxiliary frame 8, the pillars serving as effective guides for the auxiliary frame when the latter
35 is reciprocated with respect to the main frame.

At the corners of the auxiliary frame 8 and extending outward therefrom are pins 19, which are shown as consisting of bolts the outer ends of which extend into the hollow pil-
40 lars 16 through longitudinal slots in the latter.

The pillars 16 incase the coiled pull-springs 20, the lower ends of which are connected to the pins 19, while the upper ends of said coiled springs are connected to headed pins 22, the
45 shanks of which fit in the upper portions of the pillars, while the heads thereof rest upon the tops of said pillars. The several springs yieldingly hold the auxiliary frame 8 in an elevated position with respect to the main
50 frame, so as normally to maintain the clearers 14 in ineffective positions. When, however, the auxiliary frame 8 is thrust downward for a purpose that will hereinafter appear, the springs 20 are elongated, and when the thrust
55 is withdrawn said springs will automatically return the auxiliary frame 8 to its initial position and the several clearers to their primary and ineffective positions.

To facilitate the raising and lowering of the
60 main frame 2 and also the auxiliary frame 8, which is carried thereby, said frame has suitably attached to it the handle 23, which is shown as being of bail or yoke form.

Normally the clearers 14 are situated above
65 the cutting edges of the knives 5.

The operation of the device is as follows: Fig cakes of any desirable number are taken from an oven after having been baked, and while hot and still in their pan are placed under the two frames 2 and 8, the latter prior to
70 the placing of the pan having been elevated by the manipulation of the handle 23. The two frames are then lowered and pressure is applied to the lower frame to force the knives thereon through the cakes, cutting the same
75 into bars of the proper size. The cakes are cut into bars while hot, so as to prevent them from crumbling when cut. The machine cuts the cakes into bars accurately, effectively, and with rapidity. In fact, the operation of the
80 machine can be carried on as fast as the material is supplied thereto. After the cakes or strips are cut into bars the main frame 2 is lifted, and simultaneously the auxiliary frame is depressed relatively thereto, so as to force
85 the clearers 14 down to a line below the cutting edges of the knives, by virtue of which the bars or the stock cannot possibly adhere to said knives. The instant that the auxiliary frame 8 is released by the operator the coiled
90 springs return said auxiliary frame, and hence the clearers, to their ineffective positions.

Having described the invention, what I claim is—

1. In a device of the class described, a base-
95 piece having parallel elongated strips rising from its front and rear respectively, a main frame hinged to the rear strip, of open form, provided with a plurality of parallel knives connecting two bars thereof, an auxiliary
100 frame supported within the main frame, a plurality of parallel clearers for said knives consisting of flat strips having upturned angular ends fastened to the auxiliary frame, yieldable means acting against the auxiliary frame to
105 hold the clearers thereof in their ineffective positions, and means operative in opposition to the said yieldable means for acting against the auxiliary frame to move the clearers into their effective positions. 110

2. In a device of the class described, a base-
piece having parallel elongated strips rising from its front and rear respectively, a main frame hinged to the rear strip, of open form, provided with a plurality of parallel knives
115 connecting two bars thereof, an auxiliary frame supported within the main frame, a plurality of parallel clearers for said knives consisting of flat strips having upturned angular ends fastened to the auxiliary frame, yieldable
120 means acting against the auxiliary frame to hold the clearers thereof in their ineffective positions, a cross-piece on the auxiliary frame, a standard on the main frame, a lever supported by the standard, and a link connecting the
125 cross-piece and lever respectively.

3. In a device of the class described, a base-
piece having parallel elongated strips rising from its front and rear respectively, a main frame hinged to the upper portion of the rear
130

strip, of approximately rectangular form, an auxiliary frame also of approximately rectangular form, freely fitted within the main frame, parallel knives connected with the front and rear bars of the main frame, parallel clearers between the knives, each consisting of a flat strip having upturned angular extensions suitably fastened to the front and rear bars of the auxiliary frame, a standard rising from the rear bar of the main frame, a lever pivotally supported by said standard, having a bail at its free end, a cross-piece connecting the front and rear bars of the auxiliary frame on the upper sides thereof, a link pivotally connected with the cross-piece and lever respectively, and yieldable means acting against the auxiliary frame to hold the same in an elevated position with respect to the main frame.

4. In a device of the class described, a main frame having a plurality of knives, provided with reduced ends, an auxiliary frame freely fitted within the main frame and provided with clearers for said knives, strips fastened to the main frame and extending across the reduced ends of said knives, yieldable means for holding the auxiliary frame in an elevated position with respect to the main frame, and mechanism for operating the auxiliary frame in opposition to said yieldable means.

5. In a device of the class described, a main frame having a plurality of knives, an auxiliary frame having a plurality of clearers for said knives, between the same, the auxiliary frame being fitted and freely movable within the main frame, hollow pillars supported by the main frame, constituting guides for the auxiliary frame, springs inclosed by the pillars and connected respectively thereto and to

the auxiliary frame, and means for actuating the auxiliary frame in a downward direction independently of the main frame.

6. In a device of the class described, a main frame having a plurality of knives, an auxiliary frame having a plurality of clearers for said knives, between the same, the auxiliary frame being fitted and freely movable within the main frame, hollow pillars supported by the main frame, constituting guides for the auxiliary frame, springs inclosed by the pillars and connected respectively thereto and to the auxiliary frame, and a hand-lever carried by the main frame and operatively connected with the auxiliary frame.

7. In a device of the class described, a base for supporting a receptacle, a main frame hinged at one side to the base and provided with a plurality of parallel knives connected with its side bars, an auxiliary frame inclosed by and freely movable within the main frame and provided with clearers for said knives, hollow pillars supported by the main frame and constituting guides for the auxiliary frame, springs inclosed by the pillars and connected respectively thereto and to the auxiliary frame, a bar extending across said auxiliary frame, a bearing upon the main frame, a lever fulcrumed upon the bearing, and a link pivotally connecting the lever and cross-bar between the ends thereof.

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

HENRY A. CHRISTENSEN.

Witnesses:

R. C. WEIR,

R. B. WATTS.