

(No Model.)

2 Sheets—Sheet 1.

R. T. BARTON.
FOLDING BED.

No. 598,841.

Patented Feb. 8, 1898.

Fig. 1.

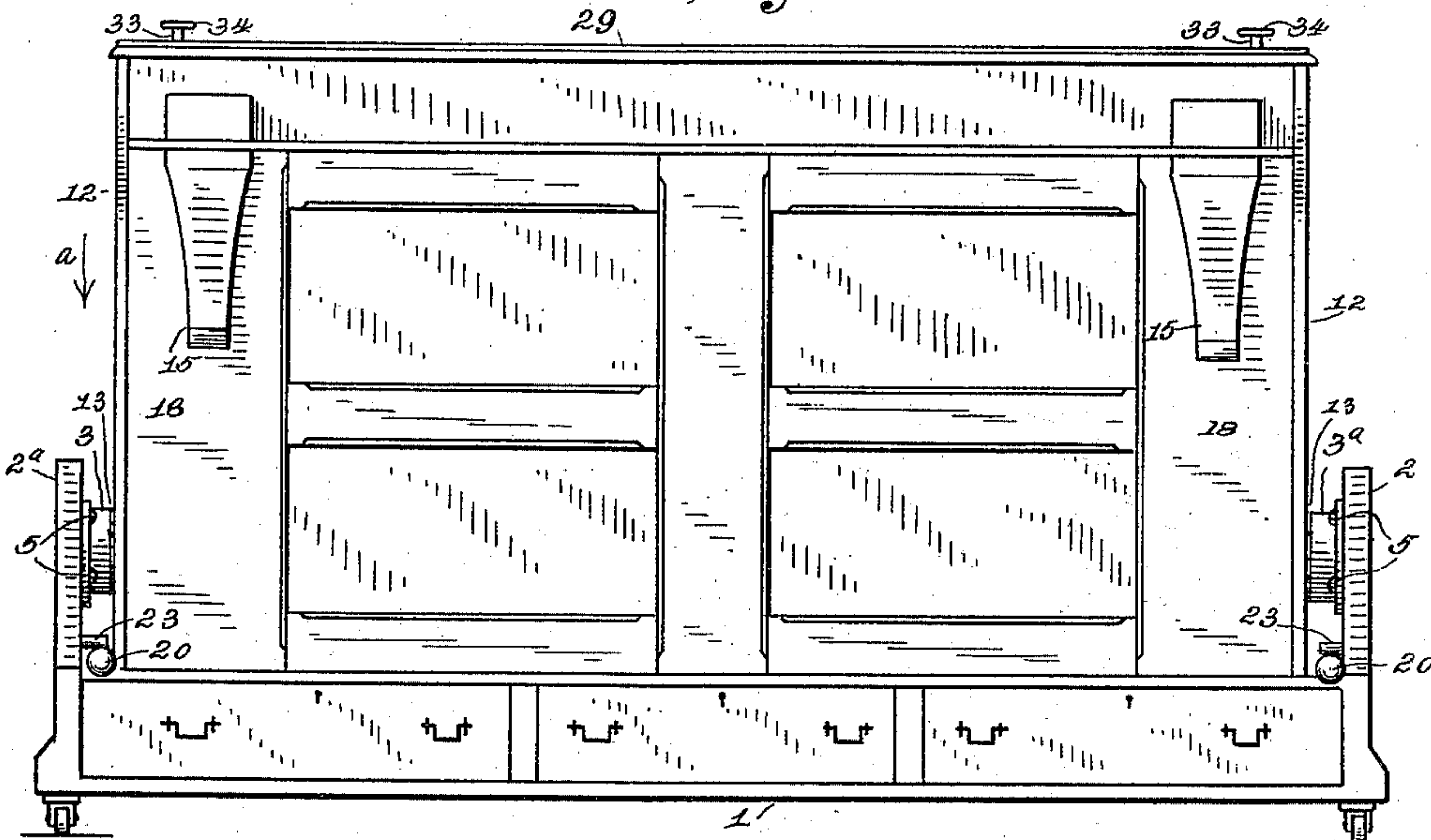


Fig. 2.

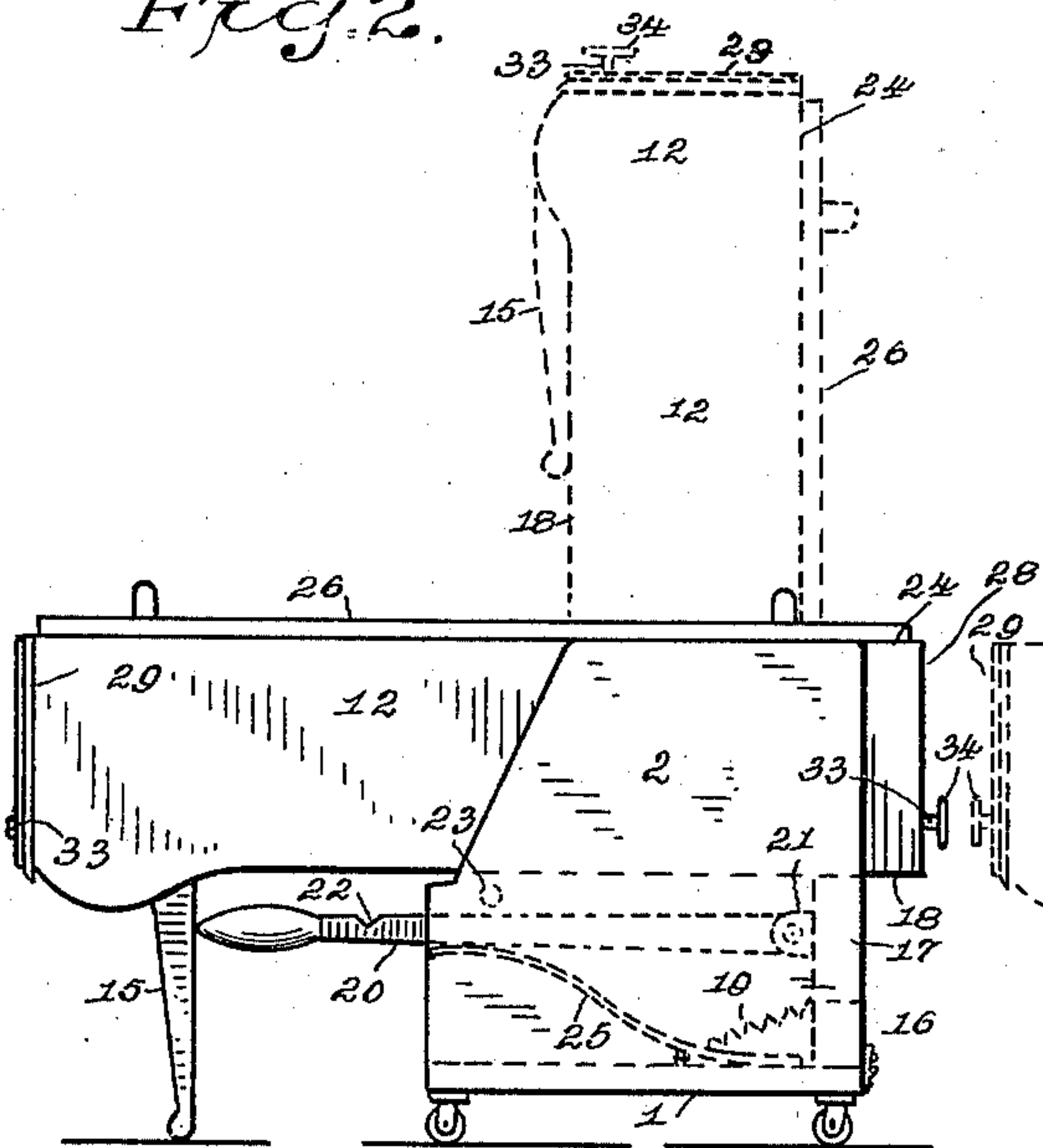
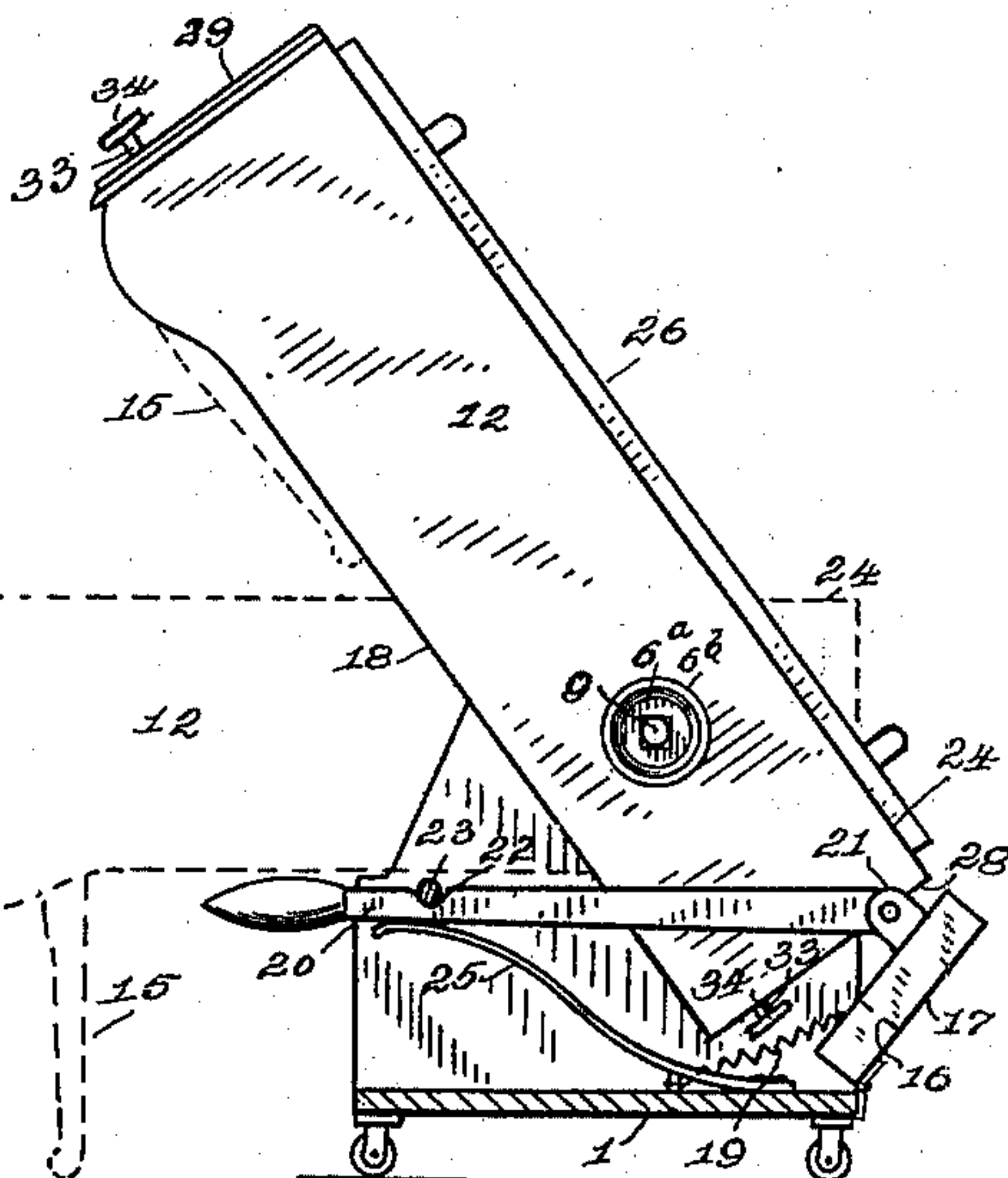


Fig. 3.



WITNESSES

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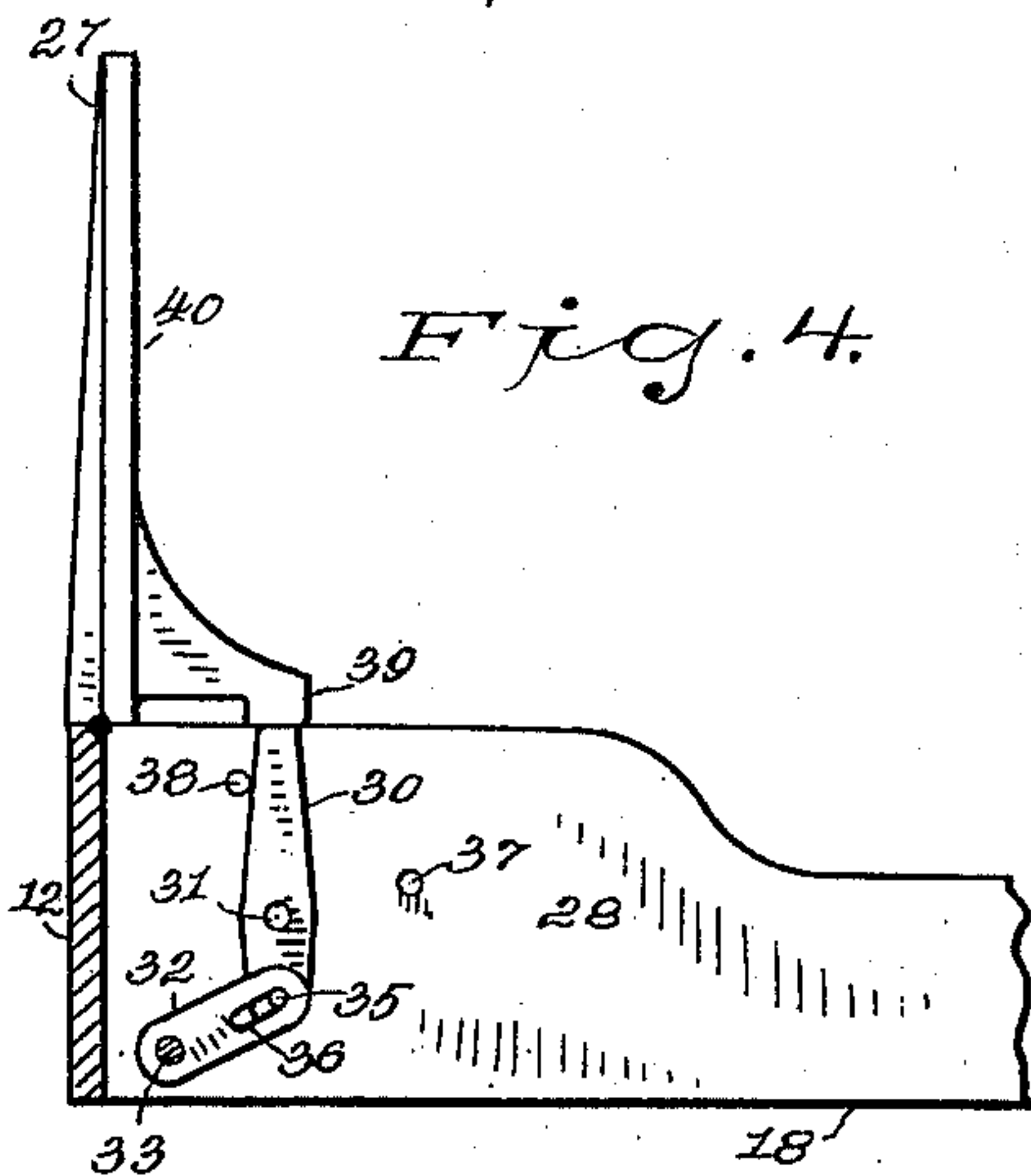


Fig. 4.

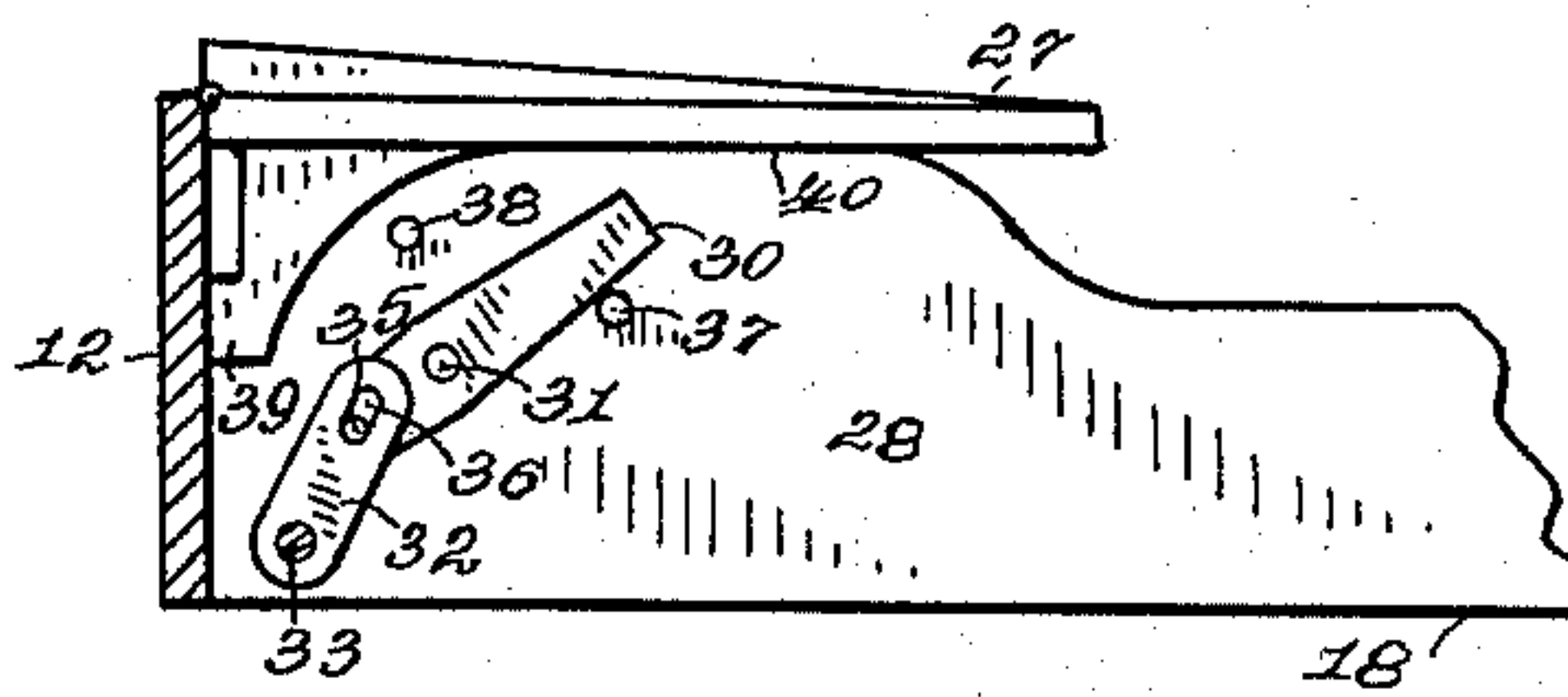


Fig. 5.

Fig. 6.

Fig. 7.

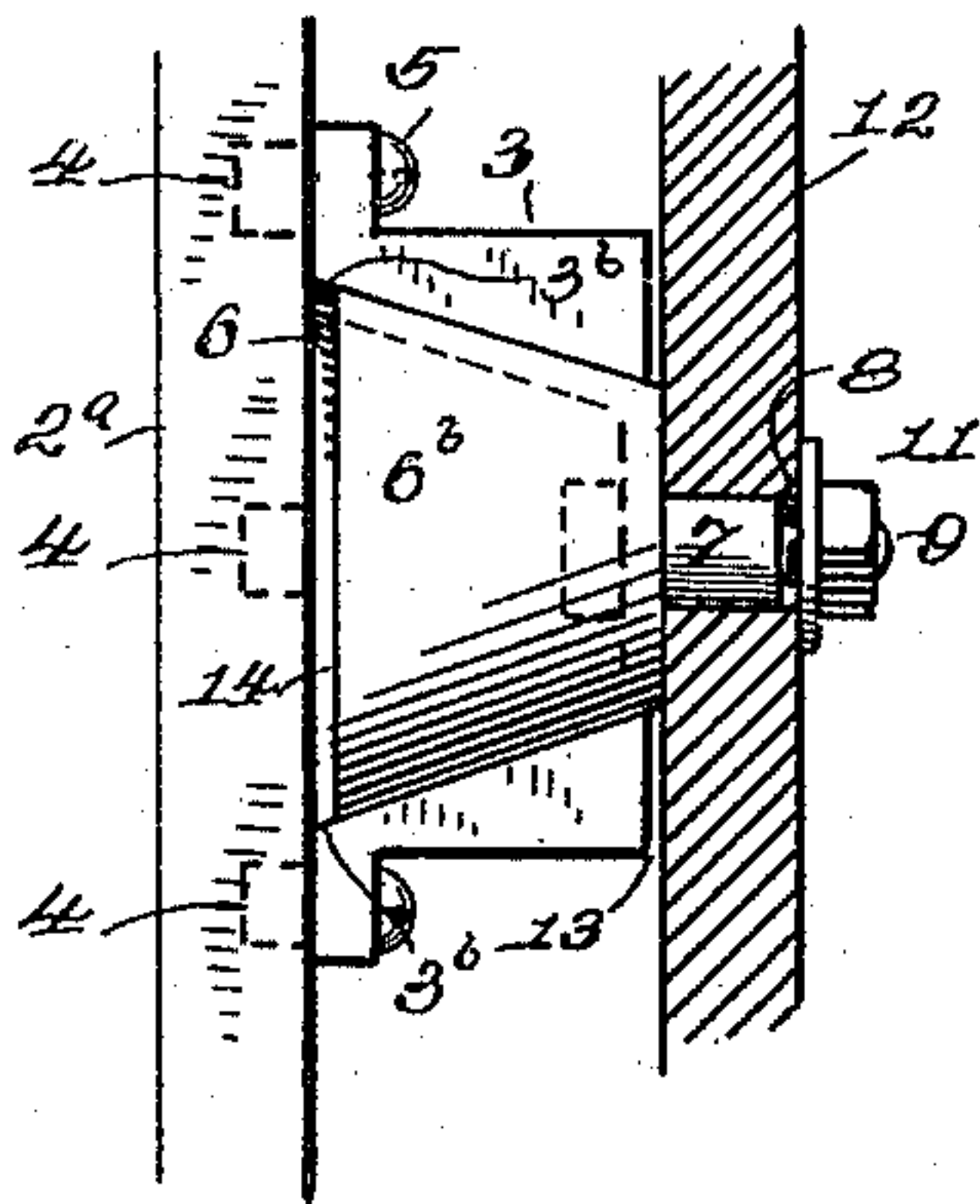


Fig. 8.

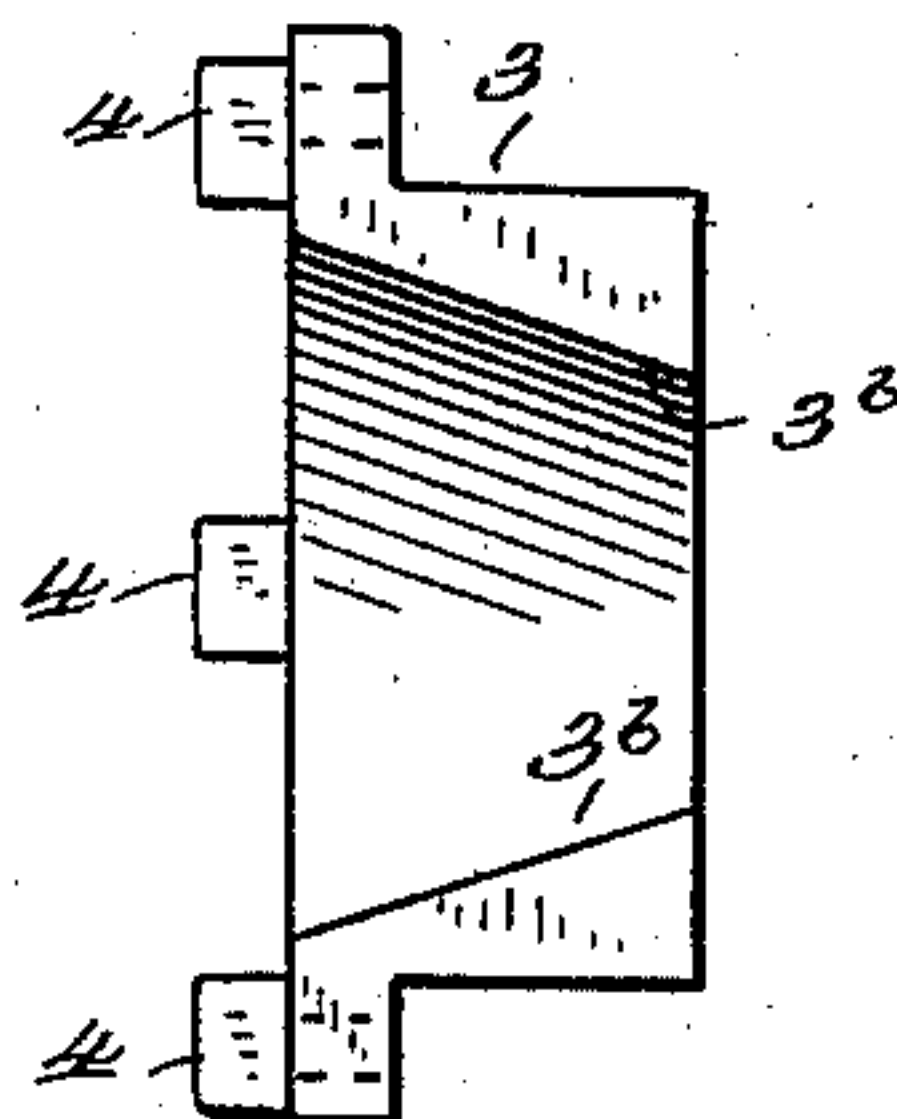


Fig. 9.

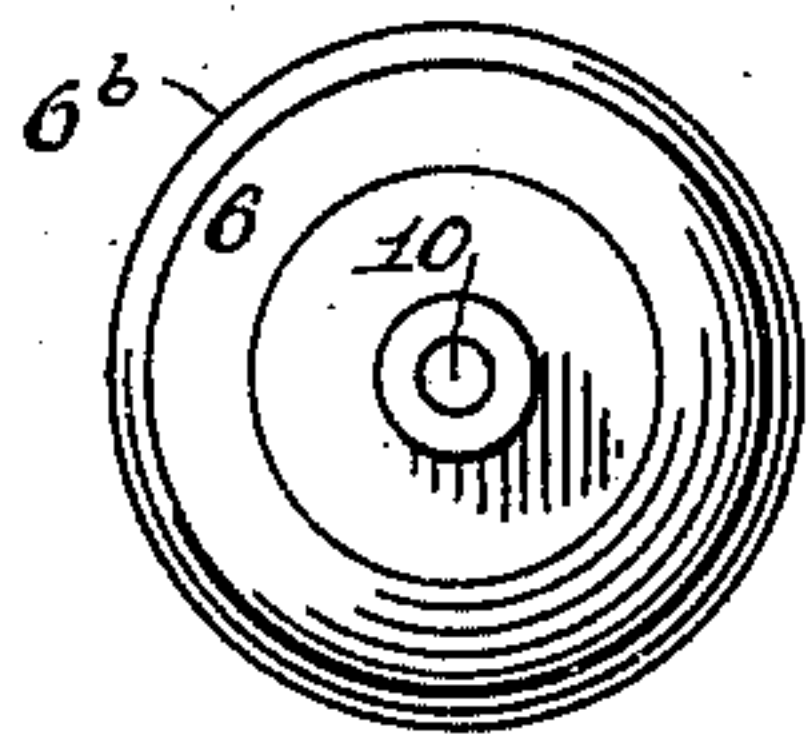


Fig. 10.

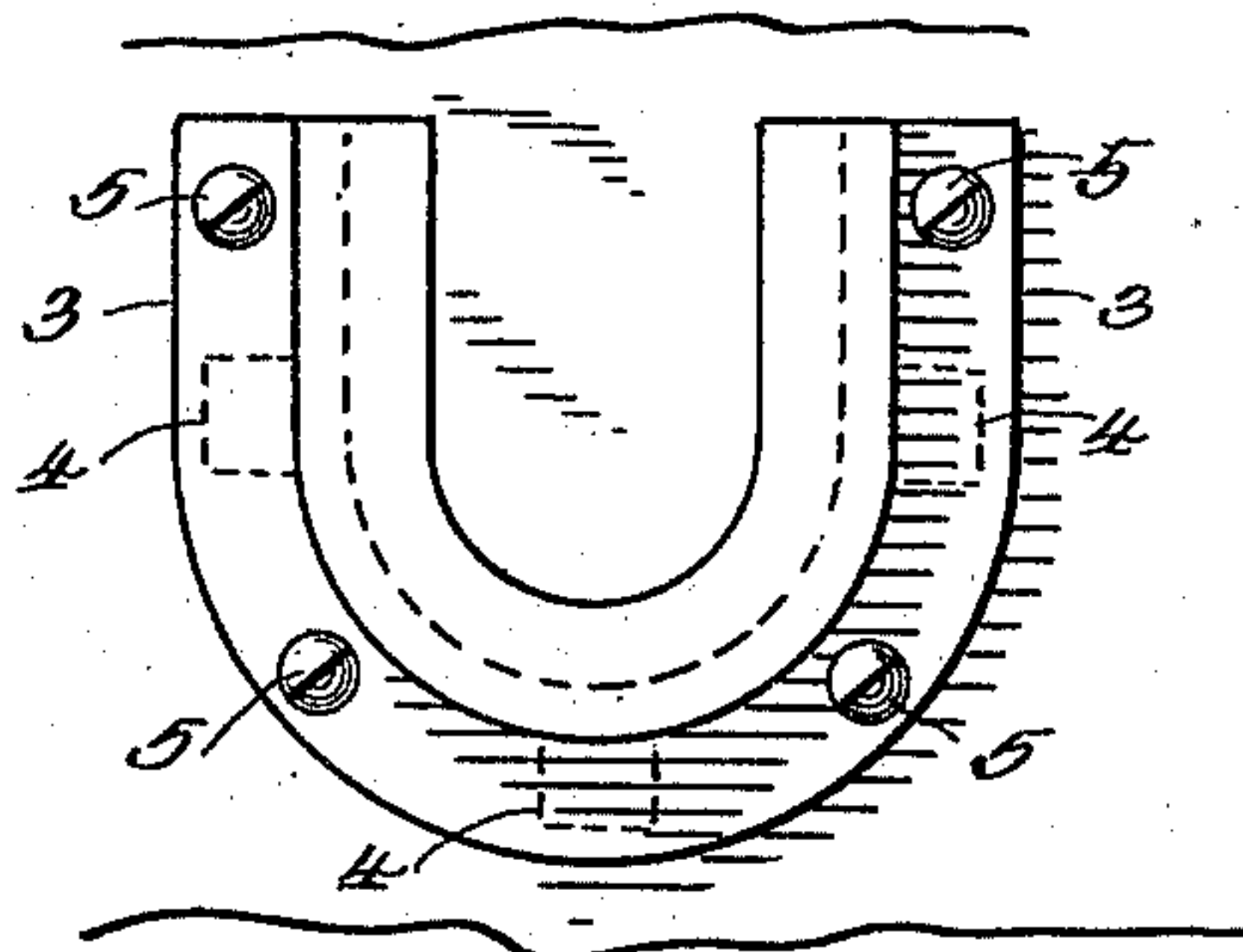


Fig. 11.

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UNITED STATES PATENT OFFICE.

RICHARD T. BARTON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF ONE-HALF TO JEROME KENNEDY AND WILLIAM W. SMITH, OF SAME PLACE.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 598,841, dated February 8, 1898.

Application filed September 27, 1897. Serial No. 653,119. (No model.)

To all whom it may concern:

Be it known that I, RICHARD T. BARTON, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Folding Beds, of which the following is a specification.

My invention relates to folding beds; and it consists in certain improvements, the details of which will be more fully set forth in the following specification.

To enable others to understand my invention, reference is had to the accompanying drawings, wherein—

Figure 1 represents a front elevation of the bed closed; Fig. 2, an end elevation of the bed opened; Fig. 3, an end elevation showing a sectional view of the frame cross-piece and the descending bed portion. Fig. 4 is a broken view of the bed, showing the foot-board raised and locked. Fig. 5 is a broken view of the bed, showing the footboard closed. Fig. 6 is a detail broken view of the bed, partly in section, broken view of one of the cheek-pieces of the frame, and upper plan view of one of the bed-journals and bearing therefor looking in the direction of arrow *a*, Fig. 1. Fig. 7 is a detail upper plan view of one of the bed-bearings or boxes for the bed-journal to rest in. Fig. 8 is a detail front or end elevation of one of the journals of the bed. Fig. 9 is a detail front elevation of one of the U-shaped bed-bearings. Fig. 10 is a detail side elevation of one of the bed-journals. Fig. 11 is a detail side elevation and reduced view of the bed-locking device and broken view of the cross-piece of the frame to which the said locking device is hinged.

Its construction and operation are as follows:

1 represents the horizontal cross-piece of the frame, and 2^a are short vertical cheek-pieces rising from the extreme ends of such cross-piece and between which cheek-pieces the bed swings.

3 3^a are (see also detail views, Figs. 6, 7, and 9) the U-shaped bearings secured to the inside of the cheek-pieces of the bed-frame. 4 are studs formed integral with these bearings and are adapted to enter holes (not

shown) in the face of these cheek-pieces to relieve the strain on the retaining-screws 5.

6 6^a are the bed-journals, (see also Fig. 10,) whose tapered faces 6^b are adapted to fit the tapered surfaces 3^b of the bearings. These angular or cone shaped journals have (see Fig. 6) a stud 7 integral with the journal and adapted to enter the hole 8 of the bed to relieve the strain on the bolt 9, which passes through hole 10, Fig. 8, at the bottom of the hollow journal 6, and through said stud, and is secured by the nut 11 on the inside of the end pieces 12 of the bed. The object of these cone-shaped end bearings and journal is to prevent an outside end thrust on the cheek-pieces when the bed is sustaining any weight, as were the journals and bearings straight the tendency would be to force the said cheek-pieces outward and cause them to rupture at their junction with the cross-piece of the frame; but with the cone-shaped bearings, as shown at Fig. 6, this cannot occur.

It will be observed that the narrow space 13 between the outer end of the bearing 3 and the end piece 12 of the bed and the space 14 between the enlarged outer end of the cone-shaped journal 6 and the inside face of the cheek-piece 2^a will represent fully all the inward spring of the cheek-pieces, so that when the bed is loaded the ends of the journals and bearings will be effectually braced against the bed and cheek-pieces, respectively, and prevent the inward thrust of such cheek-pieces.

On the bottom of the bed (see Fig. 1) are the hinged legs 15, which when the bed is let down, as in Fig. 2, will throw out and rest on the floor.

16 is the locking-strip, (see also Fig. 11,) having the end uprights 17 adapted to engage the under surface 18 of the bed, Fig. 2, and effectually prevent the accidental upward tilting of the bed when opened. This locking-strip is hinged to the cross-piece 1 of the bed-frame and is retained in an upright position by means of the retractile spring 19, attached to the said cross-piece and the locking-strip.

20 are levers on each cheek-piece, and they are pivoted to the ear 21 and are used for disengaging the uprights 17 of the locking-strip from the bed. When, therefore, it is desired

to close the bed, the lever 20 is pushed back (see also Fig. 3) until its notch 22 engages with the pin 23 of the cheek-piece, and thus holds the locking-strip in an open position until the bed is raised, whereupon the lever can be depressed until released from the pin 23, when the retractile spring 19 will bring the locking-strip and its uprights in vertical upright position against the top 24 of the bed.

25 is a spring fastened to the cross-piece 1, whose free end rests against the under side of the levers 20 to keep them always in contact with the pins 23.

The headboard 26 and footboard 27 are hinged to the head and foot of the bed and are retained in their elevated position by means of levers located just inside of the side rails 28 and 29. As there are two locking-levers for the head and foot boards and the construction and operation of all of such levers are alike, a description of one will suffice. 30 (see Figs. 4 and 5) is one of these levers pivoted to the pin 31, projecting on the inside of the side rail 28, and 32 is a shorter lever rigidly secured to the rod 33, journaled in the side rails 28 and 29 of the bed. On the outer projecting ends of this rod are the knobs 34, Figs. 1, 2, and 3, for turning said rod. 35 is a pin on the lower end of the lever 30, which engages with the elongated slot 36 of the short lever 32. When the said head and foot boards are down, as in Fig. 5, the lever 30 will be thrown against the stop-pin 37, and when said boards are elevated, as in Fig. 4, the said lever will rest against the stop-pin 38, while the upper end of the said lever will engage with the lower surface of the arm 39 of the cleat 40 of the footboard 26. This arrangement will effectually hold the head and foot boards firmly in an elevated position.

The construction as above described exhibits many useful and convenient features for a folding bed. The cheek-pieces of the frame, to which the bed is pivoted, do not extend above the top of the bed when opened, thus dispensing with the usual full cabinet in which beds have heretofore operated. The U-shaped bearings enable the bed-journals

to be readily disengaged therefrom and the bed lifted out of its frame without the necessity of removing nuts, screws, or fastening devices of like character.

The cone-shaped bearings and journals, as before mentioned, are not only capable of withstanding a greater load than if made straight, but they prevent the outward thrust of the cheek-pieces, thereby adding greatly to the strength of the bed.

The folding feature of the head and foot boards enables them when closed to be utilized as pillow-closets, in which case a pillow would be placed under each of said boards, so that a free circulation of air can reach the bedding.

The locking-strip for retaining the bed in an open position is both a cheap and novel feature, possessing the double qualification of being strong and hidden entirely from view when the bed is against the wall.

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

The combination, in a folding bed, of the character described, of the frame consisting of a cross-piece and end or cheek pieces rising vertically from the ends of such cross-piece, U-shaped cone-bearings on said cheek-pieces, a bed having cone-shaped journals to engage said cone-bearings, the open mouth of said bearings adapted to permit the journals being readily removed therefrom, a spring-controlled locking-strip pivotally supported to one edge of the cross-piece of the frame, an operating-lever for holding said locking-strip in an open position when the bed is being closed, folding head and foot boards and means, substantially as shown for locking them in an open position, all substantially as shown and for the purpose set forth.

Signed at New Haven, in the county of New Haven and State of Connecticut, this 18th day of September, A. D. 1897.

RICHARD T. BARTON.

Witnesses:

WILLIAM W. SMITH,
JEROME KENNEDY.