

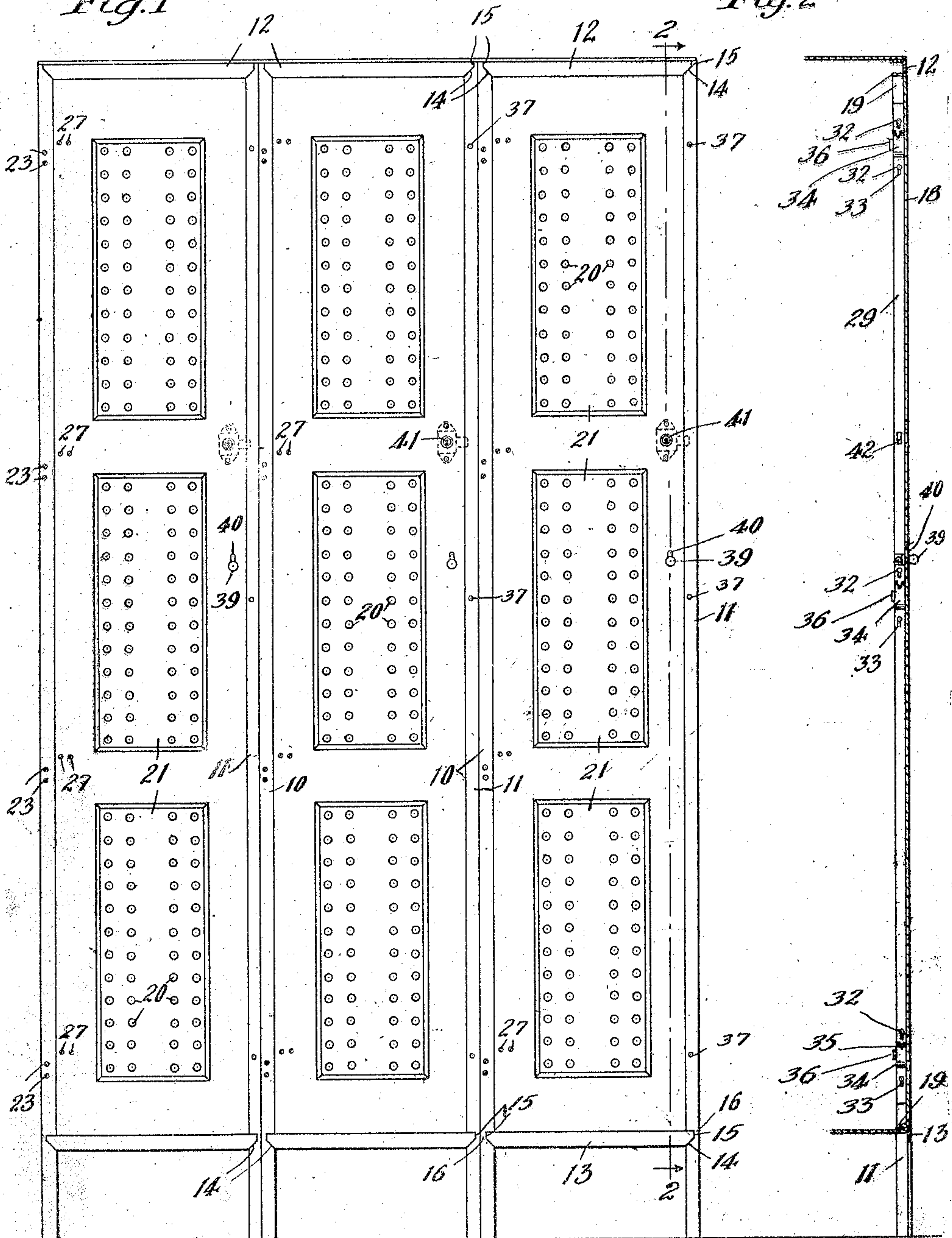
978,963.

Patented Dec. 20, 1910.

2 SHEETS-SHEET 1.

Fig. 1

Fig. 2



Witnesses:

Wm. Geiger  
 Paul Abrams.

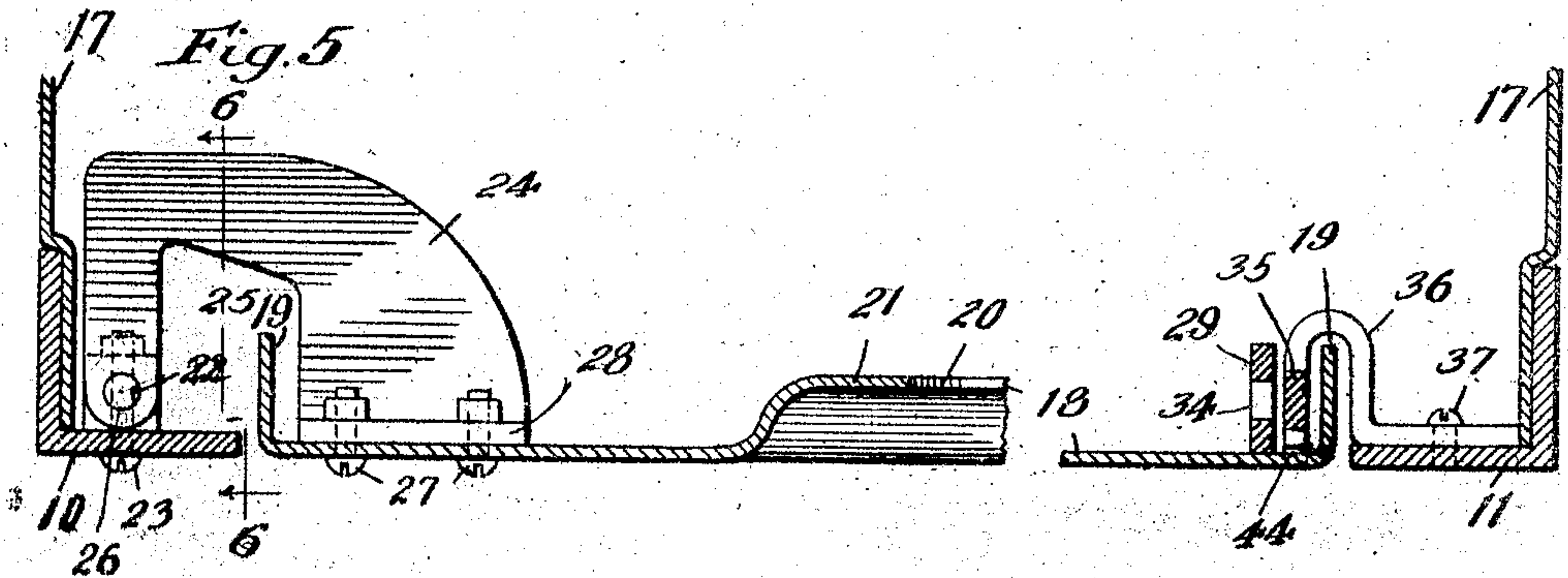
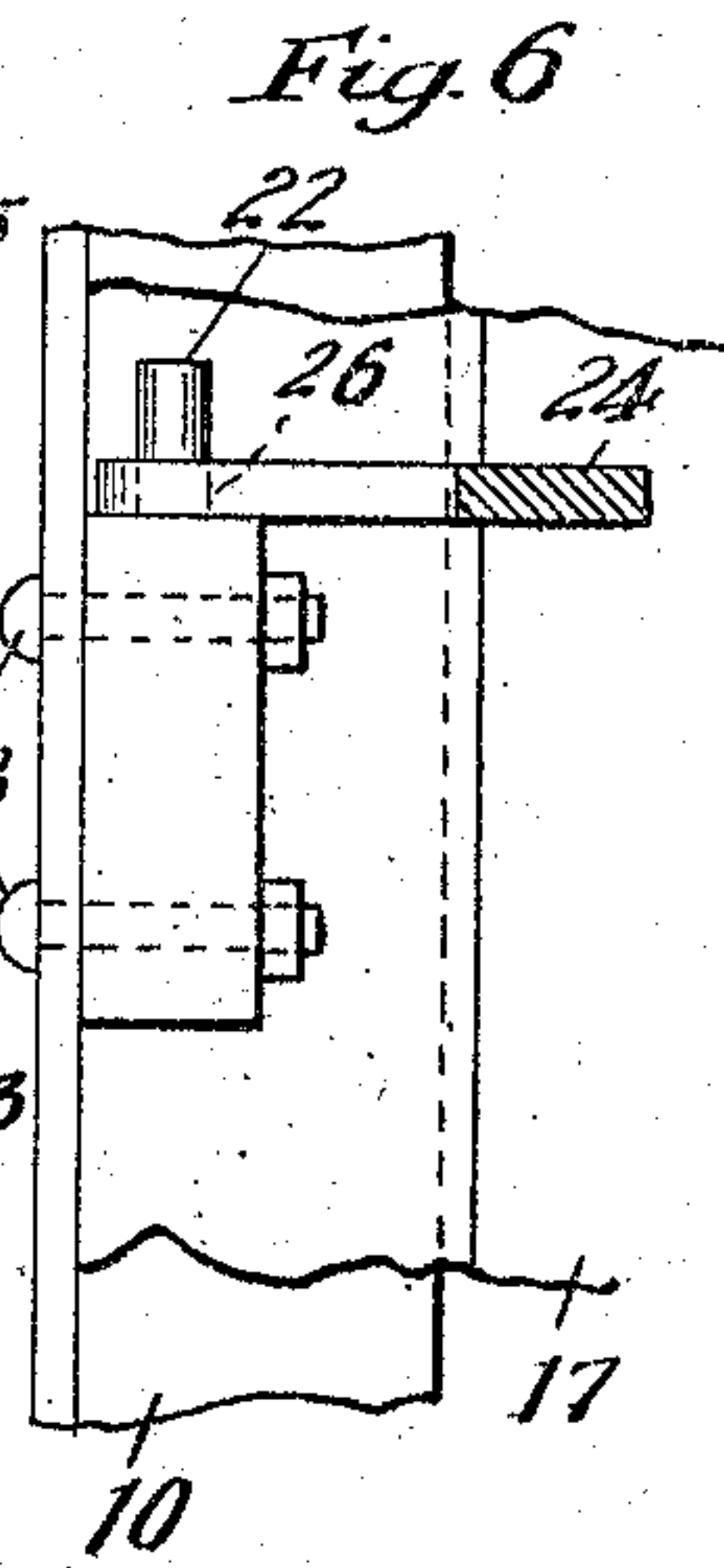
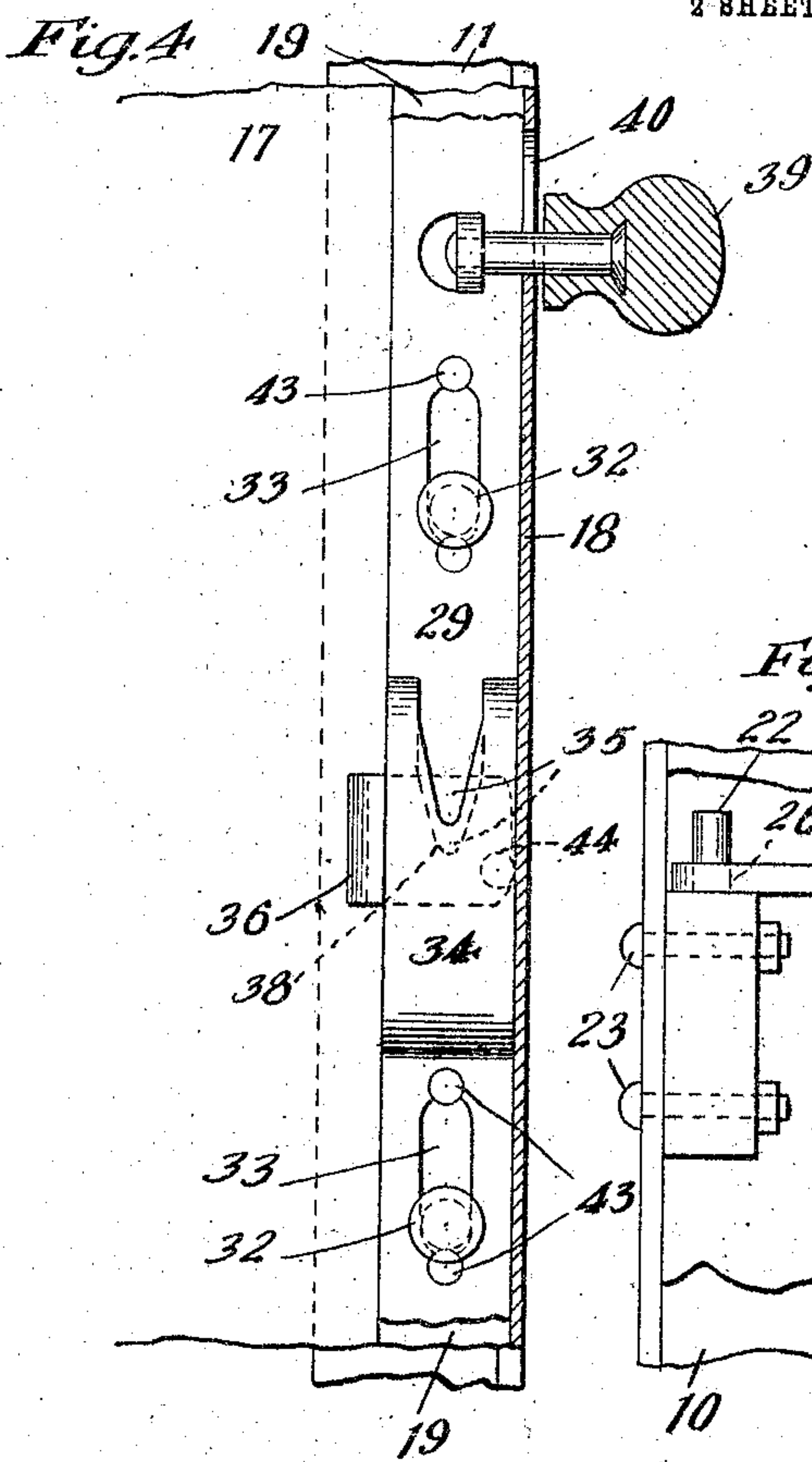
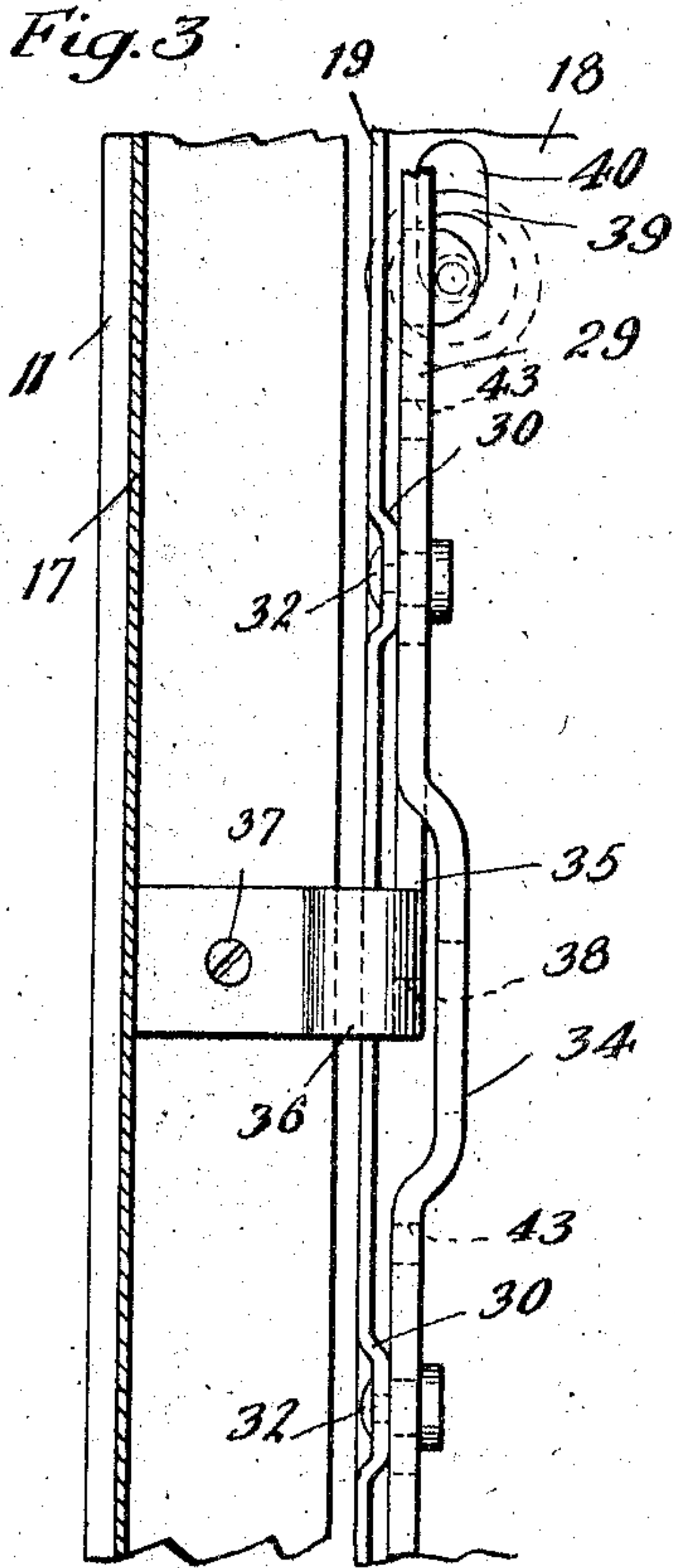
Inventor:  
 Walter N. Vance

By Munday, Everts, Block & Clarke  
 his Attorneys

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2 SHEETS-SHEET 2.



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Wm. Geiger  
Carl Abrams

Inventor:

Walter N. Vance

By Munday, Evans, Adcock & Clarke  
his Attorneys



# UNITED STATES PATENT OFFICE.

WALTER N. VANCE, OF WAUKEGAN, ILLINOIS.

## LOCKER.

978,963.

Specification of Letters Patent. Patented Dec. 20, 1910.

Application filed November 4, 1908. Serial No. 461,104.

*To all whom it may concern:*

Be it known that I, WALTER N. VANCE, a citizen of the United States, residing at Waukegan, in the county of Lake and State of Illinois, have invented a new and useful Improvement in Lockers, of which the following is a specification.

This invention relates to improvements in the construction of metallic lockers such as are used for containing the garments and effects of scholars, members, and employees, in schools, gymnasiums, clubs, and factories, and the invention consists in certain new and useful devices and combinations of parts and devices hereinafter more fully and particularly described and claimed.

In the drawing which accompanies and forms a part of this specification, and in which like characters of reference indicate like parts,—Figure 1 is a front elevation of a stand of lockers constructed to embody my improvements; Fig. 2 is a vertical section of the same on the line 2—2; Fig. 3 (on a larger scale, as are all of the subsequent figures) is a fragmentary view, from the inside of the locker, of the door, its locking bar and the adjacent door jamb; Fig. 4 is a fragmentary vertical section through the door; Fig. 5 is a horizontal section taken across the front of the locker, the figure extending from side to side of the sheet and being broken away in the middle; and Fig. 6 is a vertical section on the line 6—6 of Fig. 5.

In the said drawings 10 represents the left hand one of the upright angle-iron frame pieces of which there are two to each locker, 11 representing the other one of said pieces. These frame pieces in their front part constitute the door jambs as well as the frame pieces for the side walls etc. of the structure. The upper horizontal cross piece of the angle-iron framing is shown at 12, and the lower one at 13. The upright and horizontal pieces are mitered together by a miter joint 14, 15, the part 14 of the joint being formed at a diagonal from and the part 15 parallel to the vertical edge of the upright 10 or 11. This form of mitered joint makes it possible to leave a space 16 between the outer ends of the cross pieces to receive the side wall sheet 17 of the locker. These side wall sheets are applied only one to each locker, a single one thus forming the side to two adjacent lockers, except the end locker at one end

of the whole structure where two are required to finish out with. The mitered joints 14, 15 are well adapted to be secured by welding together of their parts by the autogenous welding process in which the parts of the joint are fused together by a blow-pipe action, and I use this process for the fastening together of these joints. The door made of heavy sheet metal is shown at 18, and the plate or sheet forming it is turned at all of its edges in toward the interior of the locker with the right angle flange 19, so that the whole plate is very stiff and rigid. For lightness and ventilation I pierce the door plate with a multitude of holes 20 etc. And to still further stiffen and also to ornament the said door plate I form therein sunken panels 21, preferably projecting inward toward the interior of the locker in order that the outside of the door may present a smooth surface to passers.

The hinging of the door to the frame is done as follows: To the front leg of the upright angle-iron frame piece 10, at suitable intervals apart are bolted, or riveted or otherwise secured the pintles 22. In the drawing these are shown as being secured by the bolts 23. To the flat part of the door at corresponding heights and positions are secured the arms 24, curved or offset or otherwise provided with the cavity 25 to accommodate the flange of the door and the outer leg of the angle-iron frame piece 10, when the door is either open or closed. These hinge arms each have an eye or socket, 26, to fit over the pintle thus constituting the hinge. The arms are secured to the door plate in the example shown in the drawing by means of bolts 27 through the door plate and a flange 28 on the hinge-arm. The advantage of this form of hinge in this relation is that the door of the locker may be completely opened by being swung to a full right angle position and entirely outside of the frame, so that it does not form any obstruction to the locker which it closes, and so that a larger object or parcel may be put in the locker than otherwise. And moreover the hinge not only thus permits a wide opening of the doorway but also stops the door from being swung farther than at right angles, that is to say over upon the territory of the adjoining locker, and this is a great convenience because it is quite



likely that several of the users of the lockers may be trying to get into them at the same time.

In order to easily and adequately secure doors of this character from being pried open surreptitiously it is desirable that there shall be not only hinge connection to the frame at several points in the height of the door but also bolting connection at several points to the frame in said height. And it will be noticed by reference to the bolts or rivets which secure the hinge arms to the door that in the example illustrated there are no less than four hinges in the height of the door there shown, (see Fig. 1.), and also that there are applied no less than three bolting connections at the other or swinging side of the door as will be presently explained. In order to have a conveniently operated bolting means that will throw into or out of engagement the several bolting connections simultaneously I provide the upright bolting bar 29 which is movably supported on and secured to the door flange at the swing side of the door. At intervals this flange is stamped with an offset 30, to afford bearings for the flat bolting bar 29. To these offsets 30 are secured the studs 32, the same being riveted to the offset. These studs pass through slots 33 in the flat bolting bar and by their heads hold the said bar snugly against the flange at the short bearing points, while at the same time the said bar is free to slide up and down to the extent that the slots 33 will permit. The advantage of having the bar thus supported at short bearing points which hold the larger part of said bar at a short distance away from the surface of the flange of the door, is not merely that the bar is more easily moved in operation by thus having short bearings, but also that the finished door, with the bar in place, may be readily put through the enameling tank and oven without the bar becoming stuck to the flange so fast as to be loosened with difficulty. With the construction illustrated, after the enamel has been baked, to loosen the bar it is only necessary to strike it a slight blow with a hammer. The bolting bar is preferably formed of a flat bar about as wide as the door flange and extending vertically nearly or quite the entire height of the door. It thus forms—being connected to the said door flange as above indicated—a means for greatly strengthening and stiffening the door, especially at the leaf or free side thereof where such strengthening and stiffening is most needed. At suitable intervals throughout the length of the bolting bar, offsets 34 are formed by bending the said bar away from the door flange for a short distance and then returning it again to said flange. Bolting pins 35, which may be notched out of the material of the bar

itself at the uppermost one of the bends forming the offset, are provided for engaging with a countering device on the door frame to bolt the door closed, and which countering device will presently be described.

To the inside of the angle-iron 11 are secured the door stops 36 by means of the bolts or rivets 37, or in any suitable manner. The stop has a hooked portion extending out into the path of, and receiving, the door flange and preventing the door from shutting farther than is desired. It is this stop that is also utilized as the countering part of the bolting device. In the outer ply of the hook and at its upper side is formed a notch 38 into which sets the lip 35 from the bolting bar and this when thus engaged bolts the door from opening and when disengaged leaves it free to open, the engaging and disengaging being accomplished by moving the bar up and down, by aid of the knob 39 extending from said bar through a slot 40 in the door plate. To lock the bolt from being moved I provide an ordinary Yale or other bolt lock as at 41 the bolt of which by means of its key is thrown into or out of engagement with the bolting bar through the hole 42. The bolt of this lock should pass through the bolting bar and into engagement with the door frame angle-iron to make a perfectly secure fastening. It is sometimes desirable to have a double lock on these locker doors where more than one person is to use the same locker, and so contrived that a different key or opening device will be required for the two locks. The purpose of this is that neither occupant of the locker may open it without the presence of a third person as for example an attendant, or the possession of his key and who himself cannot open the door without the presence of, or the key of, one of the occupants.

In the upper and at the lower end of each of the slots 33 is affixed a buffing or cushion piece 43 of rubber, cork or other suitable material, to render the movement of the bolting noiseless. And in the stop hooks is placed a similar piece 44. These buffers render the operation of the door entirely noiseless, which, especially in schools is a matter of some importance while scholars are coming in or going out during the session of the school.

It should be noted that the form of the miter joint is such that the backward turned legs leave no unstiffened axis of weakness while at the same time an unobstructed way is left on the side to accommodate the side plate. It should also be noted that the engagement of the bolting pins with the notches in the stops being in line with the bearing points of the bolting bar on the door flange solidity is attained



and straining avoided. Also that the locking pin being made wedge shape and the notch in the offset to receive it being tapered, that when the bolting pins are forced home this act serves to position the door.

I claim:—

1. The combination in a metallic locker, of the sheet metal flanged door, the flat iron bolting bar, the flange of the swing side of the door being embossed at intervals to form bearing points for the flat iron bolting bar, said bolting bar provided at intervals with slots to receive studs, said studs secured to the door flange and passing through the bolting bar, and a knob or means for operating said bolting bar from the outside of the door, substantially as specified.

2. The combination with the door, the door frame and the stops on the latter, of the flat-metal-bar bolt provided with offsets embracing the said stops, and with means within the bolt-offsets for engaging the frame-stops to hold the door from being opened, substantially as specified.

3. The combination with the door frame, the door and its flange, the stops on the frame and the bar, the latter being provided with offsets at the stops, and the door flange being embossed with bearing points for the bar adjacent to the stop offsets on the latter, substantially as specified.

4. The combination of the flanged door, the door stop embracing the flange of the door, and the bolt bar having an offset embracing the said door stop, substantially as set forth.

5. The combination of the bolt bar having offsets therein, bolting pins within the said offsets, and frame stops within the said offsets recessed to receive the said pins, substantially as set forth.

6. The combination of the bolt bar provided with offsets therein and bolting pins at the offsets therein, and the stops recessed to receive said pins, said pins being formed out of the material of the said bolting bar, substantially as specified.

7. The combination of the flanged door, its flange provided with embossed bearing points for the bolt-bar, and the said bolt-bar provided with offsets for the stops, and with bolting pins, said stops being recessed to receive the bolting pins, the engagement of the said pins and stops being in line with the bearing points of the bar on the flange, substantially as specified.

8. The combination with the door and its flange, said flange being embossed with bearing points, of the bolting bar placed close to the flange and cleared therefrom by the bearing points, whereby the assembled parts being enameled clearance is readily effected, substantially as specified.

9. In a sheet metal locker, the door stops within the flange of the door, passing horizontally around and embracing the door flange and provided with notches to receive the bolting pin or member, combined with the said bolting pin or member, substantially as specified.

10. In a sheet metal locker, the combination of the flanged door, the member having the bolting pin, and the door stops embracing the door flange and provided with notches to receive the bolting pin of the member, said notches being made tapering so as to position the door in bolting, substantially as specified.

WALTER N. VANCE.

Witnesses:

PEARL ABRAMS,  
WILLIAM A. GEIGER.