

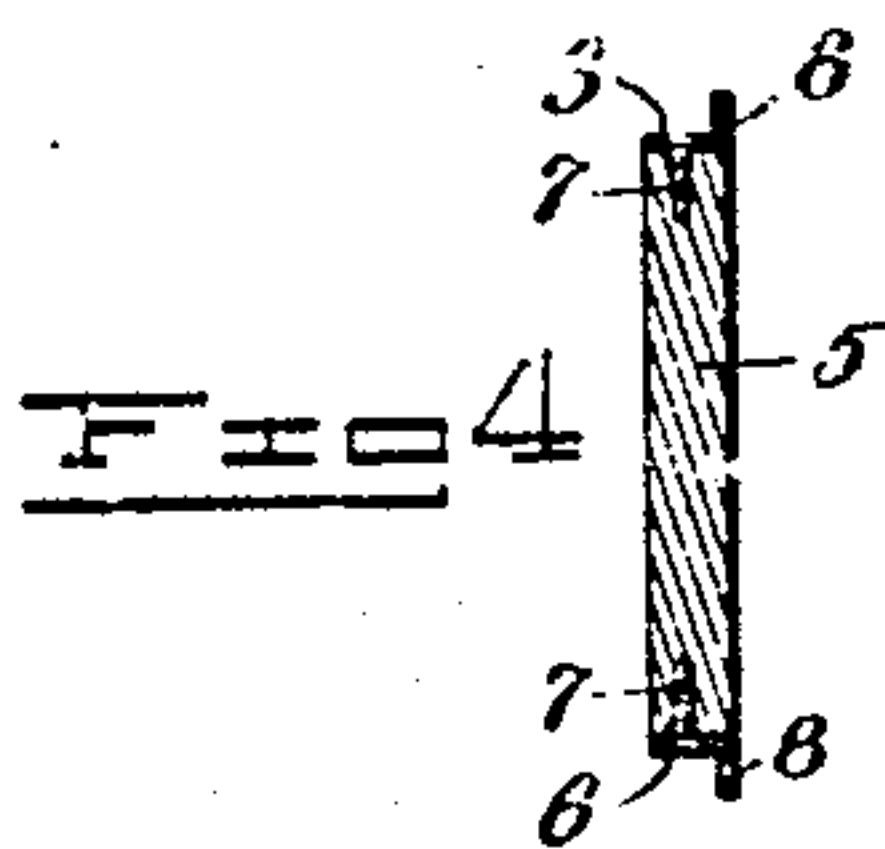
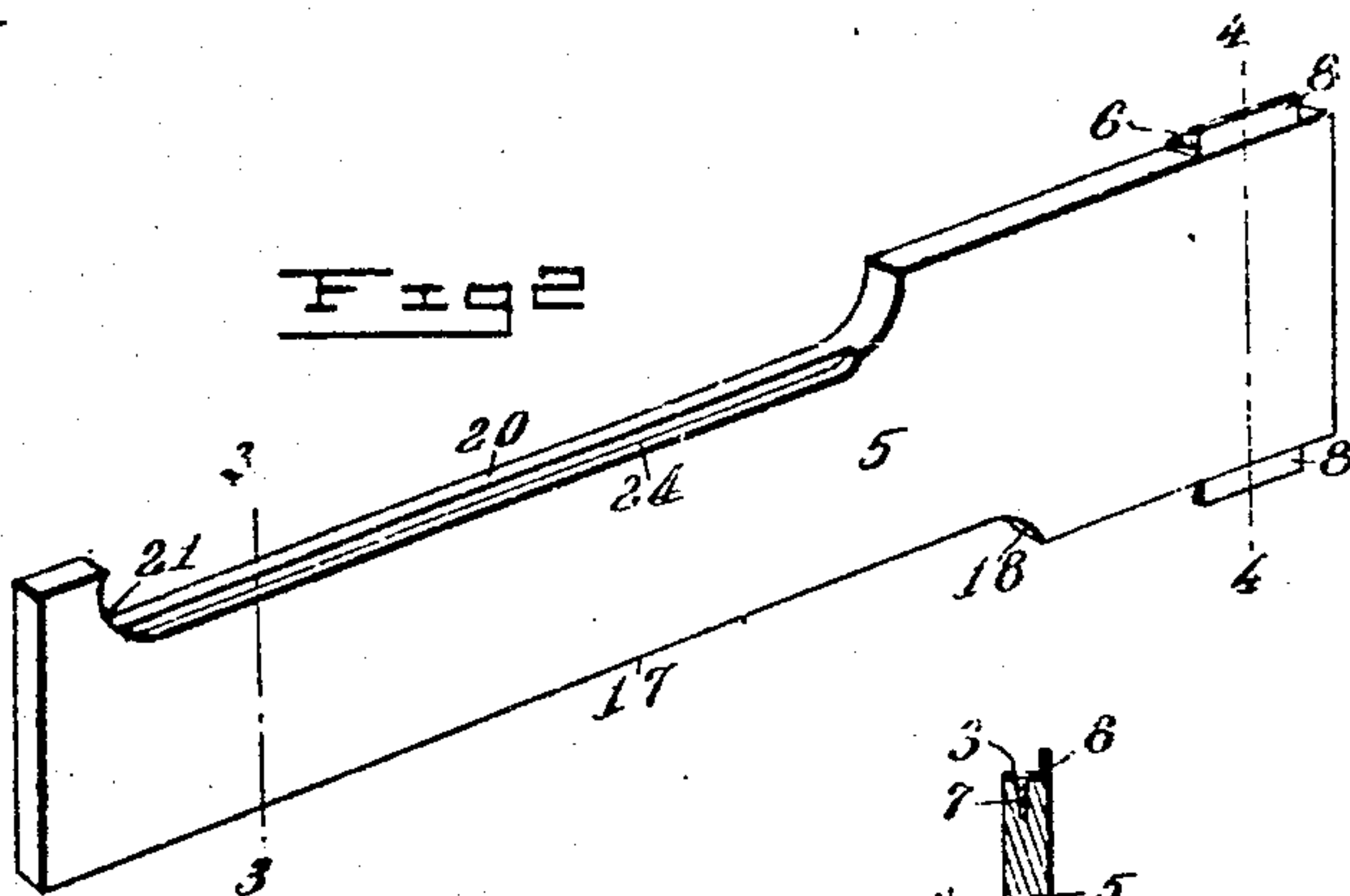
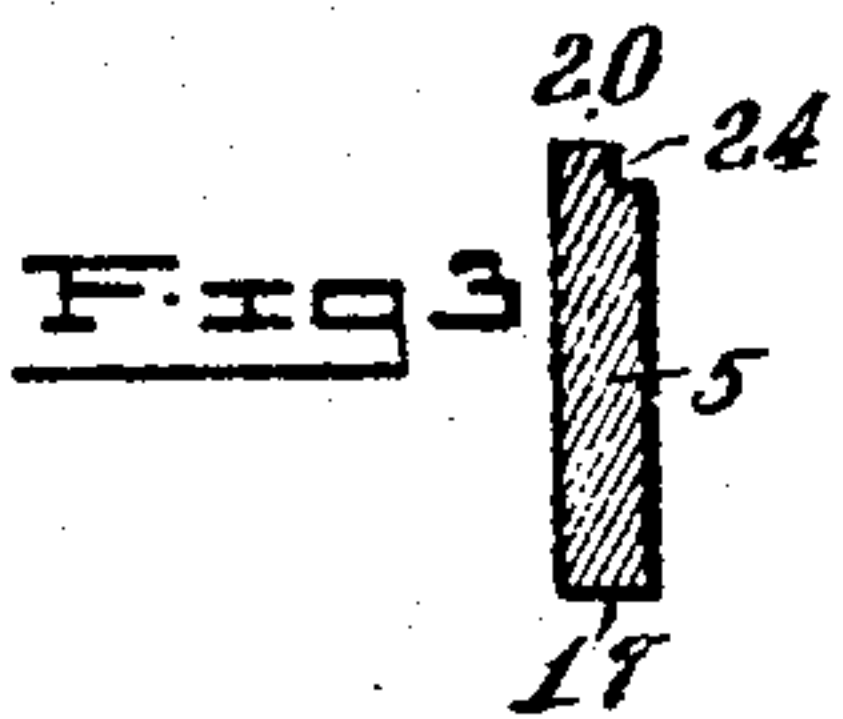
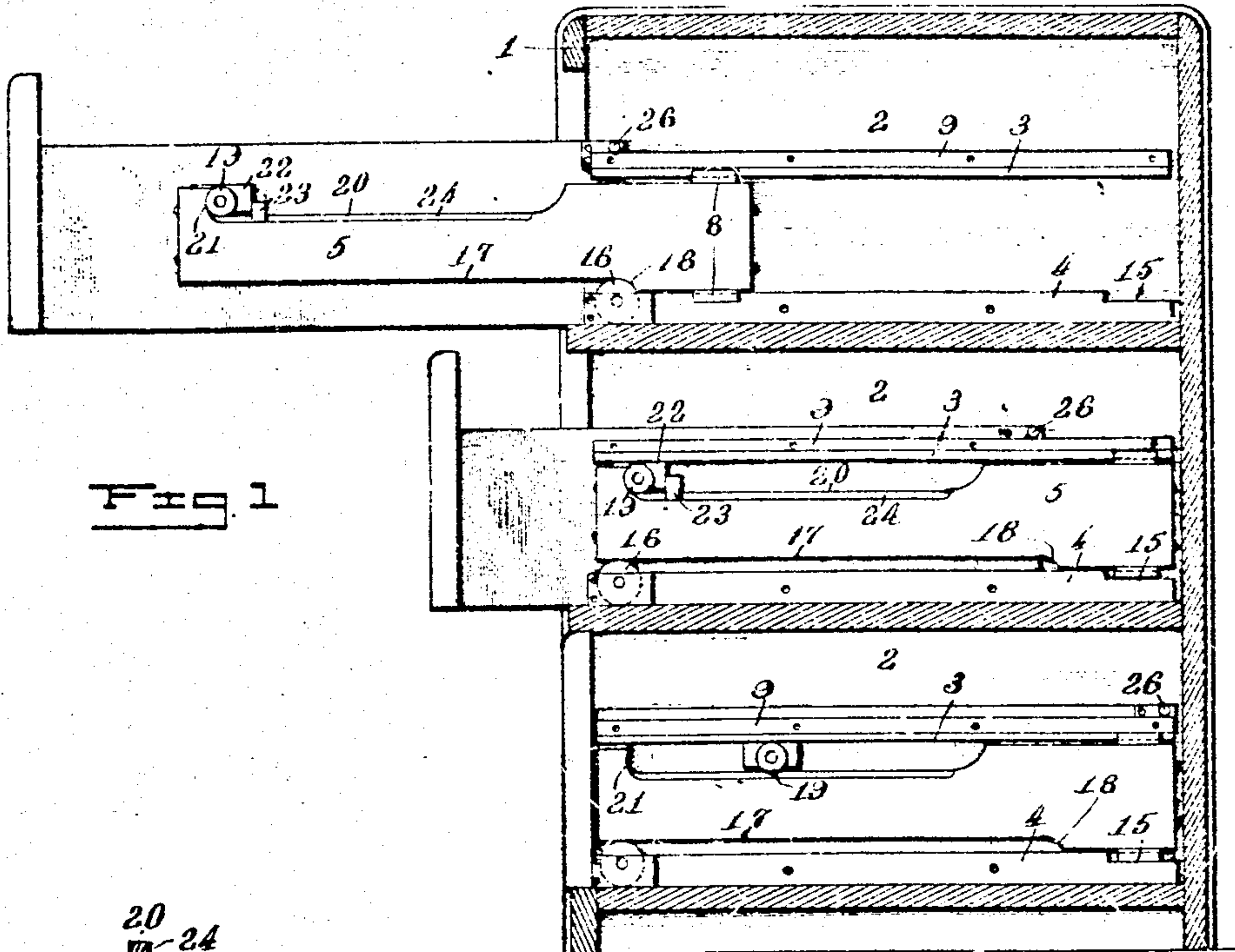
No. 879,233.

PATENTED FEB. 18, 1908.

C. ZIMMERLI.
CABINET.

APPLICATION FILED MAY 22, 1907.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

Fig 5

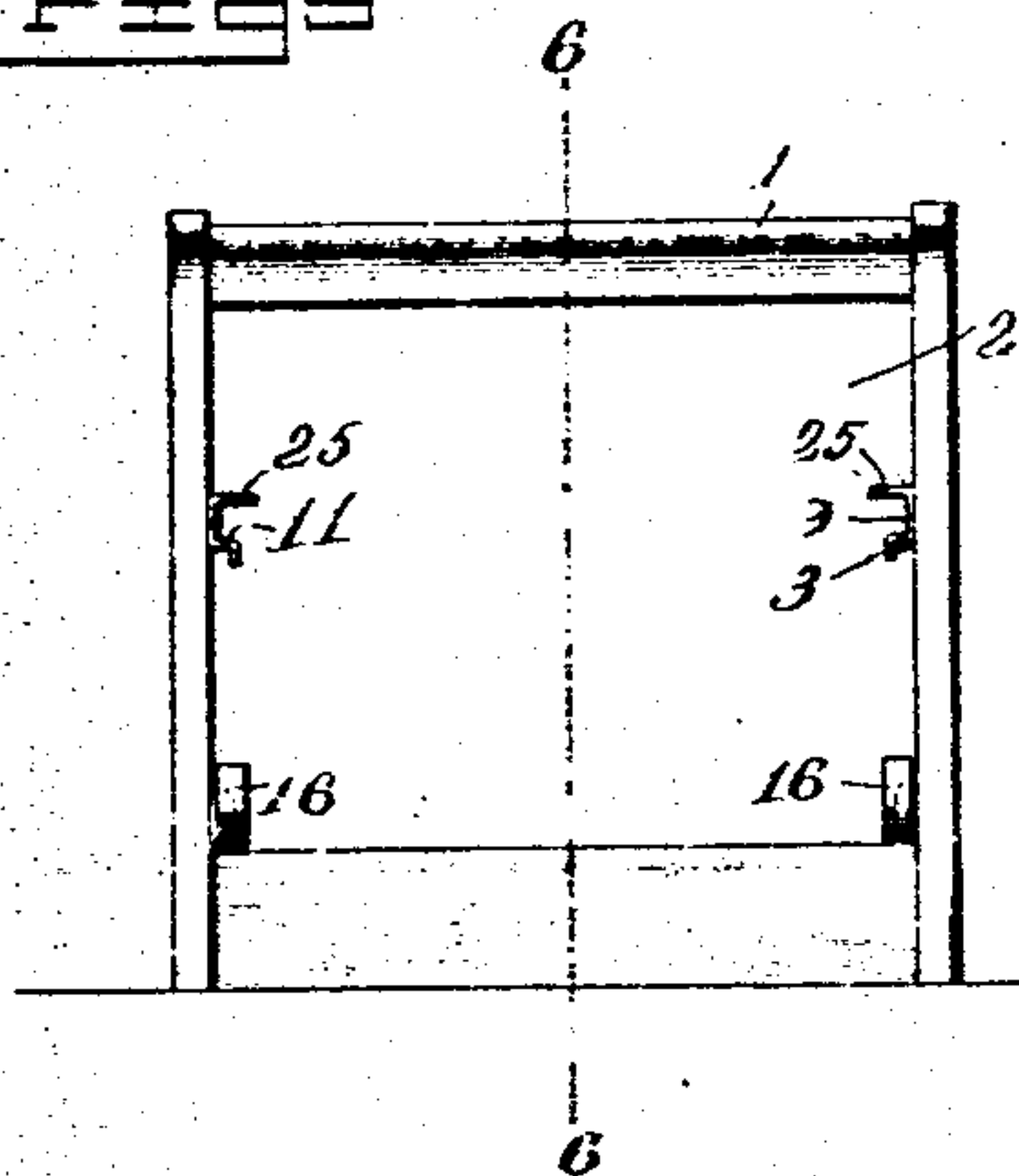


Fig 6

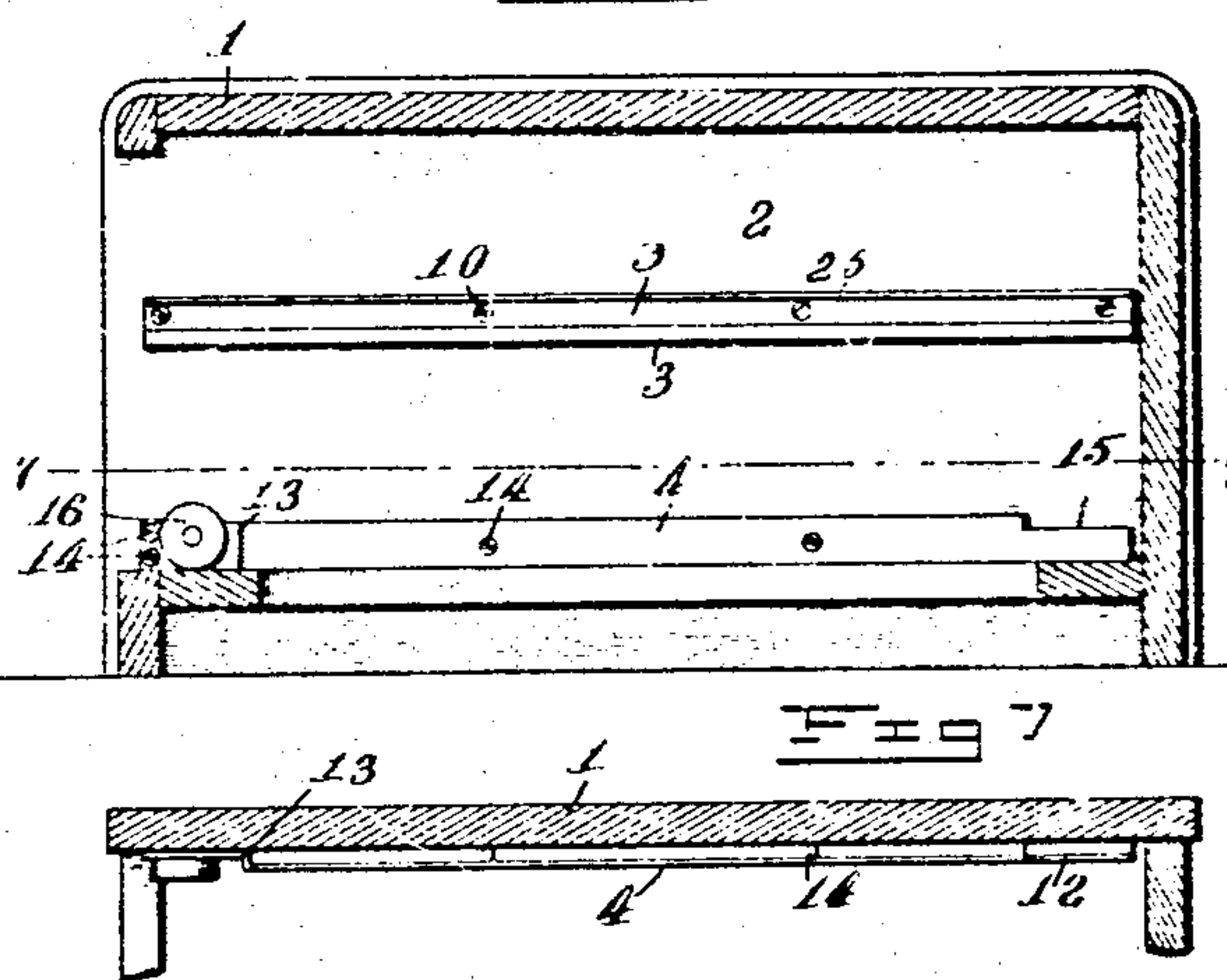


Fig 7

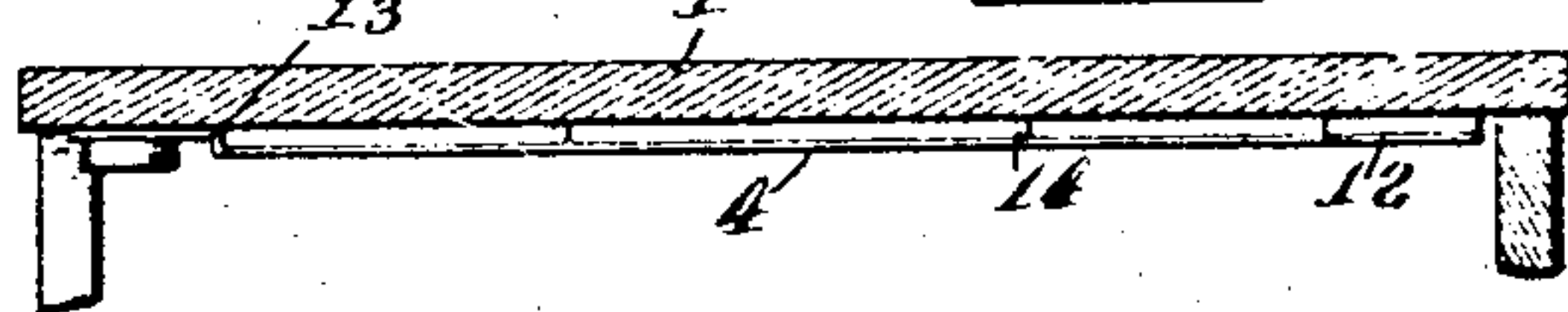


Fig 8

Fig 9

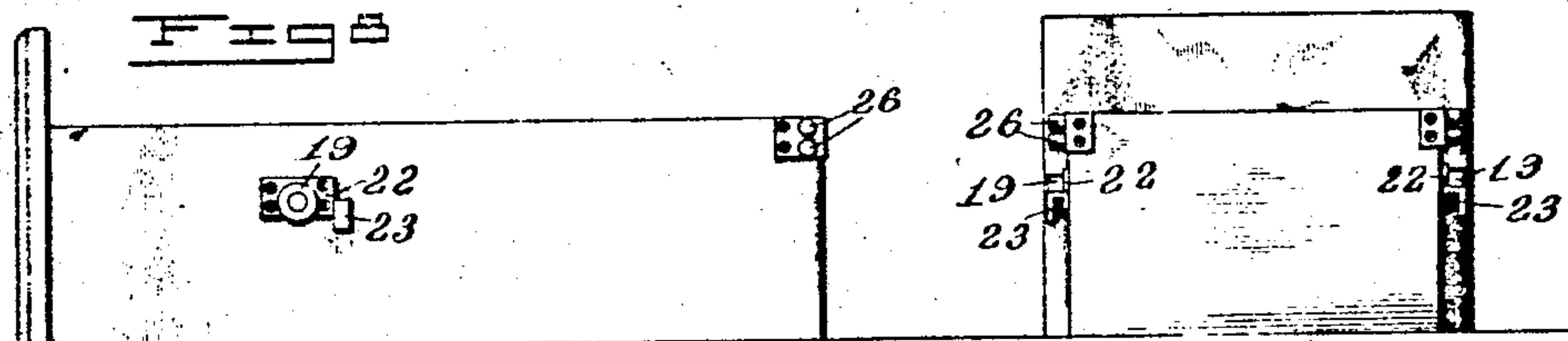


Fig 10

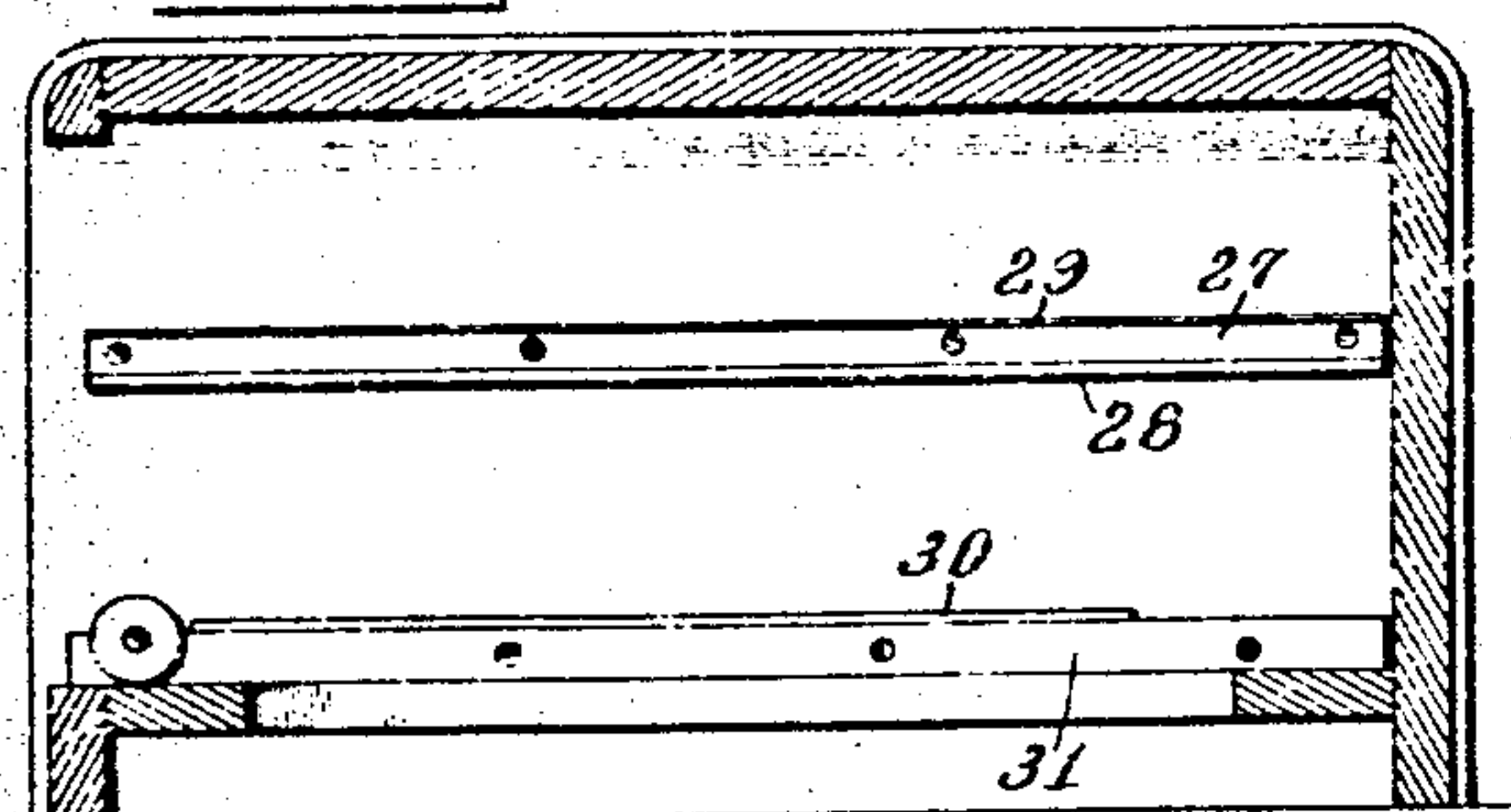


Fig 12

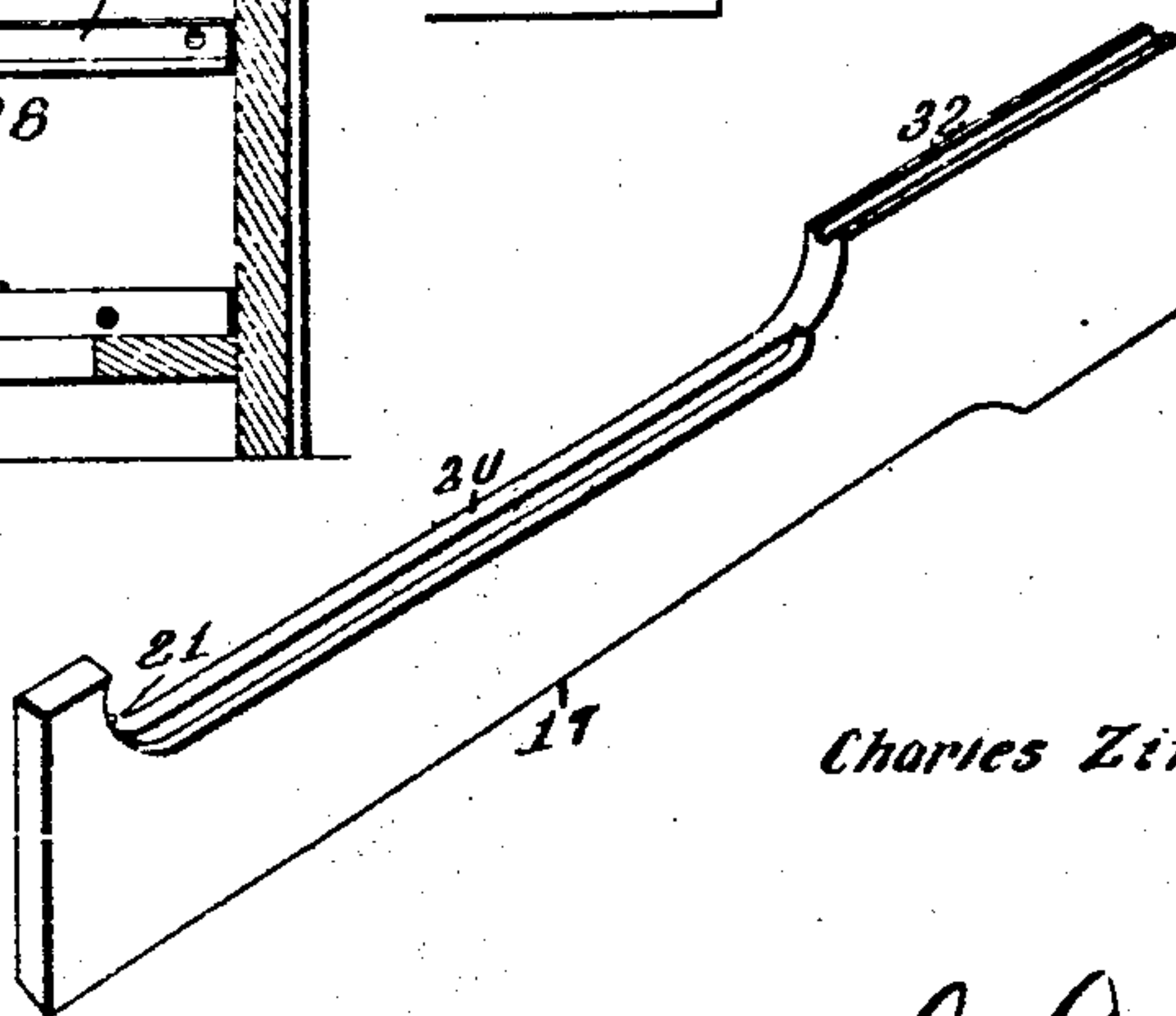
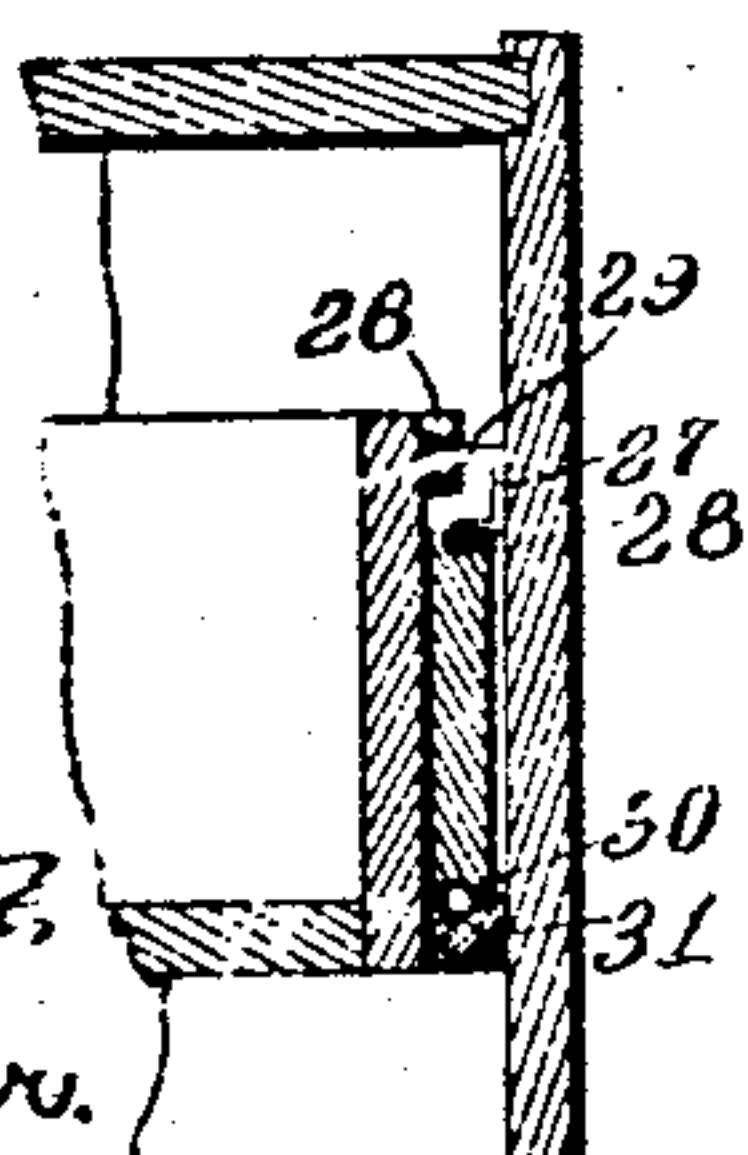


Fig 11



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3 SHEETS--SHEET 3.

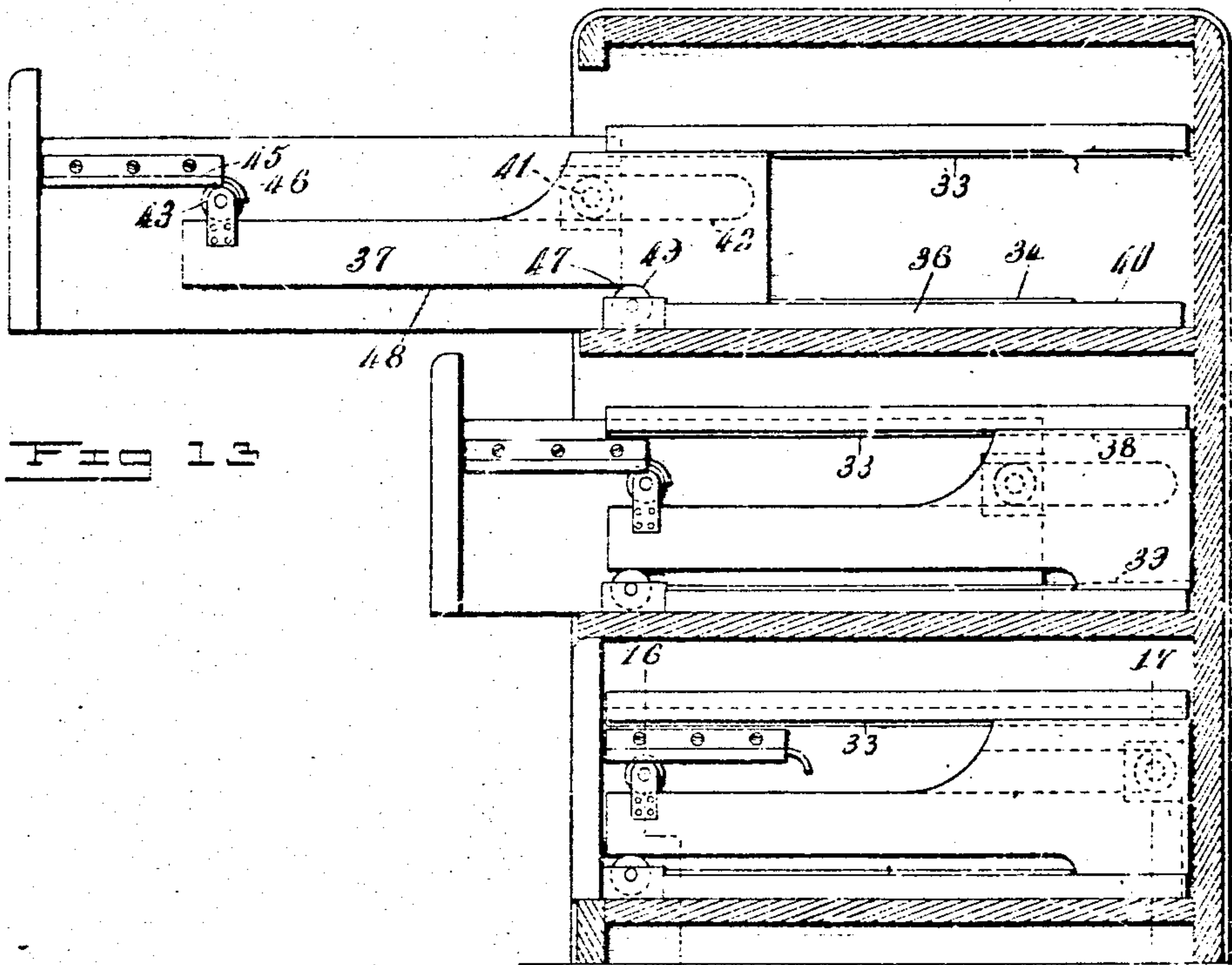


Fig 13

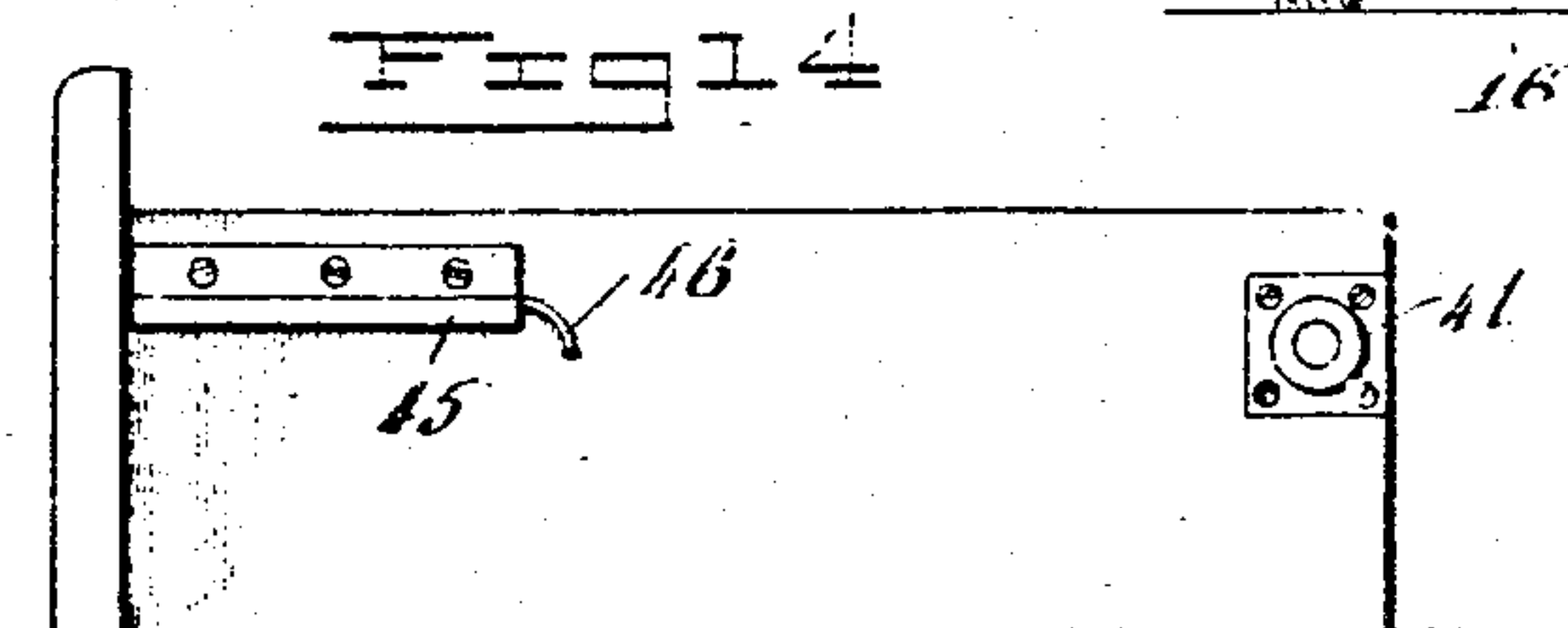


Fig 14

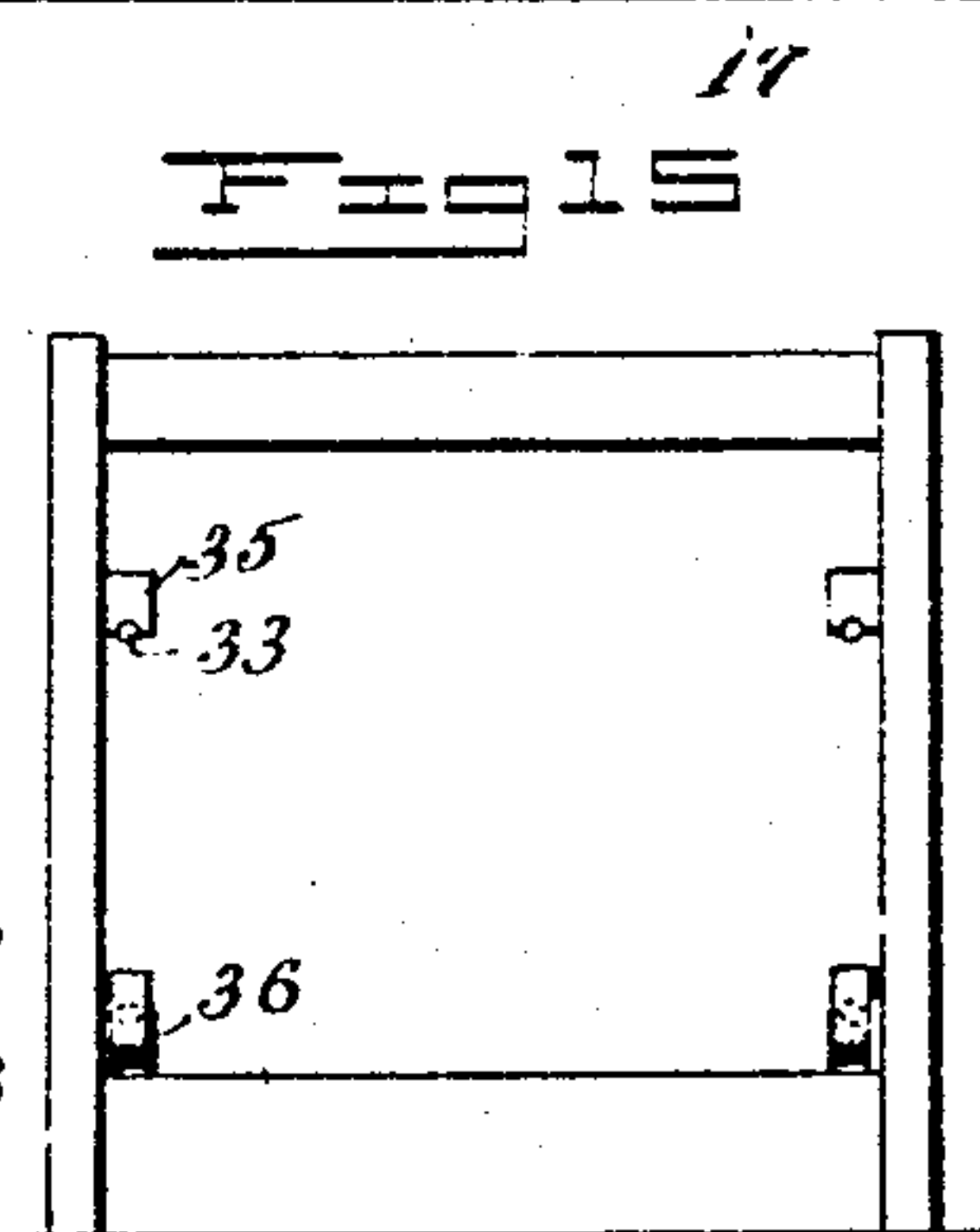


Fig 15

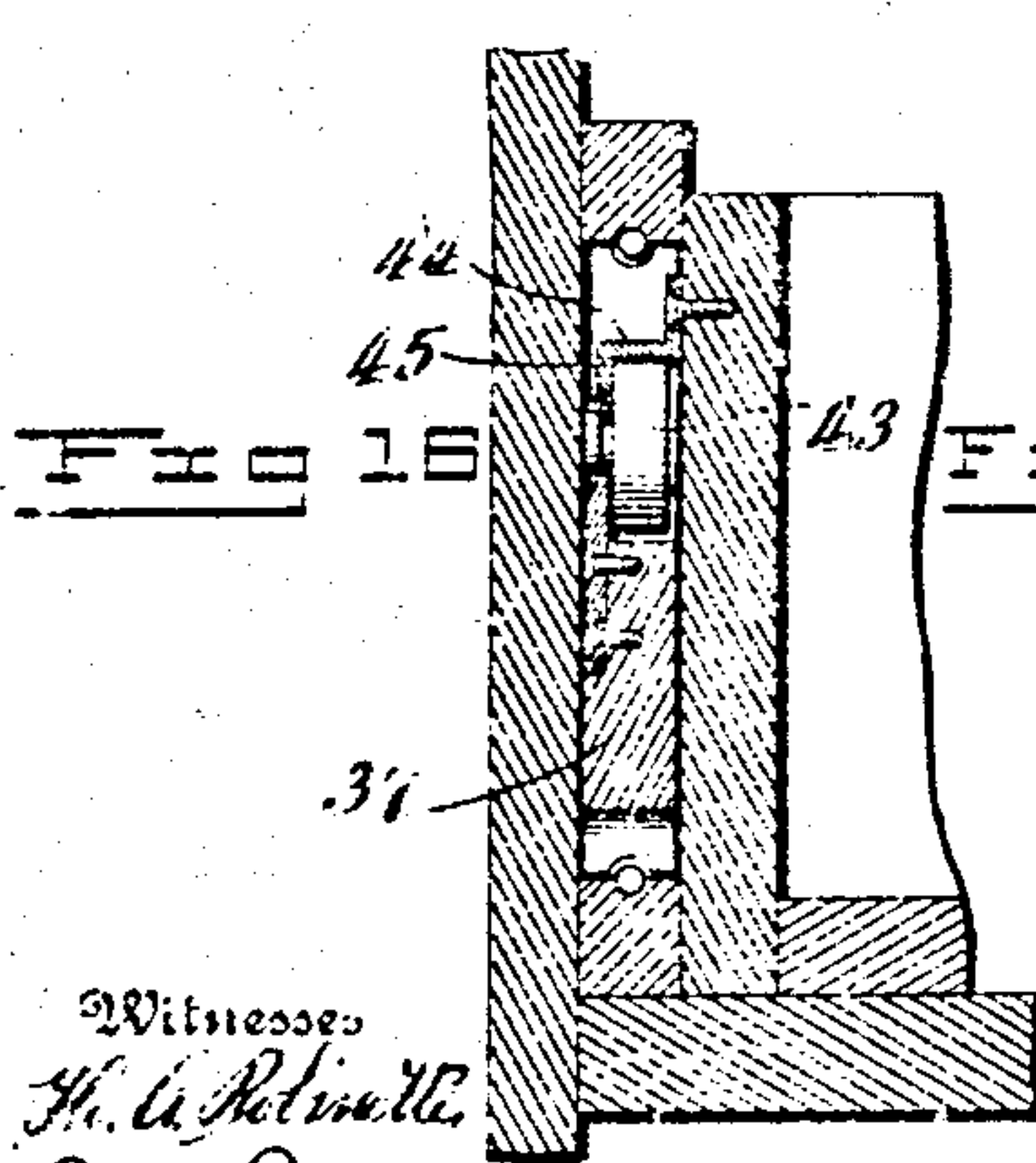


Fig 16

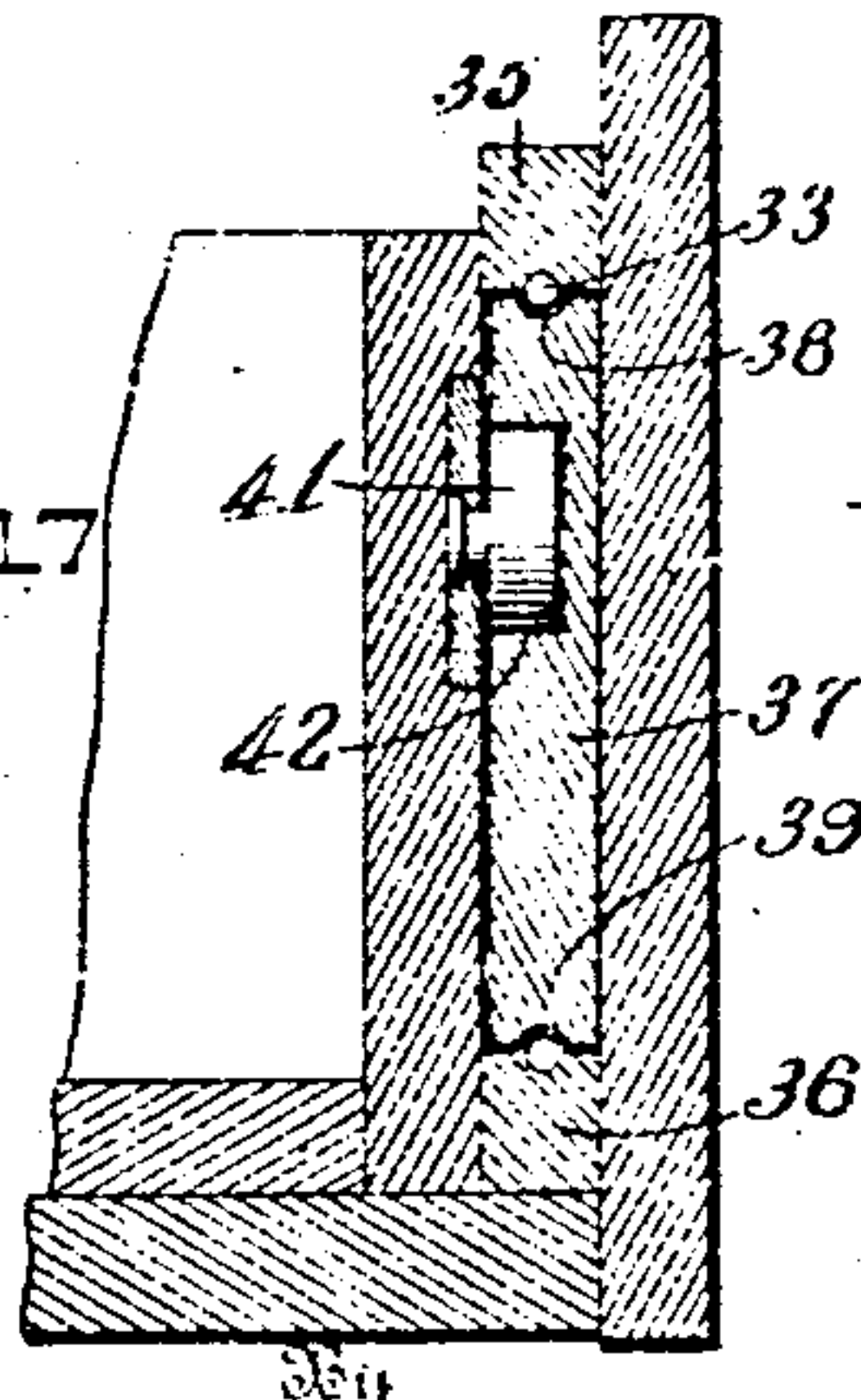


Fig 17

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UNITED STATES PATENT OFFICE.

CHARLES ZIMMERLI, OF ROCHESTER, NEW YORK, ASSIGNOR TO VETTER DESK WORKS, OF ROCHESTER, NEW YORK.

CABINET.

No. 879,233.

Specification of Letters Patent.

Patented Feb. 19, 1908.

Application filed May 22, 1907. Serial No. 375,044.

To all whom it may concern:

Be it known that I, CHARLES ZIMMERLI, citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Cabinets, of which the following is a specification.

My invention relates to improvements in supporting means for drawers, and it consists in the constructions, combinations and arrangements herein described and claimed.

An object of my invention is to provide an improved construction which minimizes all shocks and disagreeable noises, and insures a silent operation of the drawers and their cooperating parts.

A further object of my invention is to provide a simple and durable construction adapted to strongly support the drawer in all of its positions, and which eliminates the disagreeable jarring, or rattling, caused in previous constructions by the lost motion, or play, between the parts when the drawer is in its fully opened position.

A further object of my invention is to provide an improved construction capable of being conveniently assembled and stripped, and in which the several parts are positively confined against accidental shifting or displacement.

In the accompanying drawings, forming a part of this application and in which similar reference symbols indicate corresponding parts in the several views, Figure 1 is a sectional elevation illustrating a preferred embodiment of my invention applied to a three-drawer cabinet, the plane of section being taken on the inner face of one side of the cabinet; Fig. 2 is a perspective view, on a larger scale, of one of the slides shown in Fig. 1; Fig. 3 is a sectional view on the line 3—3 of Fig. 2; Fig. 4 is a sectional view on the line 4—4 of Fig. 2; Fig. 5 is a front elevation of a one-drawer cabinet, with the drawer and slides removed therefrom; Fig. 6 is a sectional view on the line 6—6 of Fig. 5; Fig. 7 is a detail sectional view on the line 7—7 of Fig. 6; Fig. 8 is a side elevation of one of the drawers employed in the cabinet illustrated in all the preceding figures; Fig. 9 is a rear elevation of the drawer shown in Fig. 8; Fig. 10 is a longitudinal sectional view of a one-drawer cabinet, illustrating a slightly modified construction of the slide tracks; Fig. 11 is a detail transverse sectional view, showing

one side of the cabinet illustrated in Fig. 10, with the drawer and slide positioned therein; Fig. 12 is a perspective view, on a larger scale, illustrating the form of slide employed with the construction shown in Figs. 10 and 11; Fig. 13 is a view similar to Fig. 1, illustrating a modified construction applied to a three-drawer cabinet; Fig. 14 is a side elevation of the drawer employed in the construction shown in Fig. 13; Fig. 15 is a front elevation of one of the drawer receptacles shown in Fig. 13; Fig. 16 is a detail sectional view, on a larger scale, taken on the line 16—16 of Fig. 13; and Fig. 17 is a similar view, taken on the line 17—17 of Fig. 13.

Referring to Figs. 1—9 of the drawings, 1 indicates a cabinet provided with any desired number and arrangement of drawer receptacles 2. Upper tracks 3 and lower tracks 4 are secured to the sides of the several receptacles for guidingly engaging metal angle-plates secured to the tops and bottoms of the rear portions of slides 5. Said angle plates comprise base portions 6 suitably secured to the slides, as by screws 7, and vertical flanges 8.

The upper tracks are shown comprising dependent flanges 3 supported by offset portions 11 of plates 9, which are suitably secured to the sides of the drawer receptacles, as by screws 10. The parts are preferably so constructed that the dependent flanges 3 slidably engage the flanges 8 and the bases 6 of the angle pieces carried by the slides; thereby providing a metal contact throughout the engagement of the slides with the upper tracks for slidably supporting the former and confining them against lateral movement.

The lower tracks are shown comprising metal plates 4 having their rear portions suitably spaced from the sides of the drawer receptacle at 12 and their forward ends correspondingly spaced by offset portions 13; said plates being secured to the cabinet by screws 14. The plates 4 are preferably so arranged that they will slidably engage the flanges 8 and the bases 6 on the bottoms of the slides; thereby providing a metal contact throughout the engagement of the slides with the lower tracks for slidably supporting the former and confining them against lateral movement.

As shown especially in Figs. 1 and 6, the rear ends of the lower tracks 4 are provided

with recesses 15 of sufficient size to permit swing of the lower flanges 8 therethrough when the slides are adjusted in their rear-most position; whereby the slides can be swung laterally from engagement with the lower tracks to a position permitting free withdrawal of their upper flanges 8 from engagement with the upper tracks.

Bearing rollers 16 are rotatably carried by the offset portions 13, in position to extend above the tracks 4 for engagement with lower ways 17 on the slides 5 above the bottoms thereof. The rear ends of said ways terminate in curved stops 18 for engaging the bearing rollers 16 to limit the forward extension of the slides, as shown in the upper drawer of Fig. 1. The engagement of the curved stops with the bearing rollers provides firm supports for the slides in the fully extended position of the latter, and exert a wedging action tending to eliminate all lost motion, or play, between said slides and their tracks.

Bearing rollers 19 are secured to the forward portions of the drawers in position for engaging upper ways 20 which extend along the slides, and terminate at their forward ends in curved stops 21 for engaging said rollers to limit the forward movement of the drawers on the slides. By suitably forming the curved stops 21, for engagement with the peripheries of the bearing rollers 19, all tendency to force said rollers upward off their ways 20 will be eliminated and the shock of such engagement minimized.

The rollers 19 are shown carried by plates 22 secured to the drawers, and carrying lugs 23 projecting within recesses 24 extending along the ways 20 for locking the slides against lateral movement relative to the drawers. The lugs 23 can be advantageously formed by properly bending over a portion of the plate 22, as shown especially in Figs. 1, 8 and 9.

The plates 9 are shown with their upper portions offset to provide tracks 25 extending parallel to the slide tracks 3 and 4. Rollers 26 are secured to the rear portions of the drawers in position to engage the upper and lower faces of said tracks 25, for supporting the drawers throughout their travel.

It will be noted that the tracks 25 constitute stationary supports for the rear ends of the drawers at a point above the slide tracks and the slide ways 20 supporting the forward portions of the drawers; thus providing a smoothly running construction and insuring firm support of the drawers and slides in all of their positions.

Figs. 10, 11 and 12 illustrate a construction exactly similar in all respects to that previously described, with the exception of a slight modification in the slide tracks and the faces on the slides cooperating therewith.

In this modification, plates 27, corresponding to the previously described plates 9, are bent to provide curved rails 28; supporting rails 29 being carried by said plates for engaging the rollers 26 on the rear ends of the drawers. The lower tracks comprise rods, or bars, 30 which extend above suitable supports 31 secured to the sides of the drawer receptacles. The tops and bottoms of the rear portions of the slides are preferably provided with curved metal ways 32, which are inset therein for engaging said upper and lower tracks. As shown especially in Fig. 10, the rear ends of the lower tracks 30 are recessed, or cut away, for a sufficient distance above their supports 31 for permitting the lower guide ways 32 to be swung laterally from engagement with the lower tracks, in the removal of the slides. The drawers and their supports on the slides are exactly similar to those shown in the preceding figures and need not be further described.

Figs. 13 to 17 illustrate another modification, in which the drawer receptacles are provided with upper slide rails 33 and lower slide rails 34; said rails comprising bars, or rods, suitably extending from supports 35 and 36 secured to the sides of the receptacles.

The slides 37 are preferably provided with metal ways 38 and 39 at their rear portions for engagement, respectively, with the upper and lower slide tracks; said lower slide tracks 34 being recessed, or cut away, at 40 for permitting lateral swing of the ways 39 from engagement therewith in the removal of the slides.

Bearing rollers 47 extend above the lower tracks 34 in position for engagement with lower guide ways 48 on the slides; the rear ends of said ways terminating in curved stops 49 for limiting the forward extension of the slides on their tracks.

Bearing rollers 41 are secured to the rear portions of the drawers in position to engage guide ways 42 formed in the slides for guiding and supporting the rear portions of the drawers during their travel therein. The forward portions of the slides carry bearing rollers 43 in position for engagement by tracks 44 secured to the forward portions of the drawers; said tracks carrying flanges 45 extending into engagement with the outer faces of the bearing rollers 43 for confining said bearing rollers and their supporting slides 37 from lateral movement relative to the drawers. The rear ends of the tracks 44 terminate in curved stops 46 for engaging the peripheries of the bearing rollers 43 to limit the forward movement of the drawers on the slides 37. This provides a very firm and satisfactory construction, and one in which the curved stops can be formed of more or less resilient material, if desired, for further minimizing danger of shocks during operation.

I have illustrated and described preferred and satisfactory constructions, but, obviously, changes could be made within the spirit and scope of my invention.

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

1. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, cooperating bearing rollers and ways carried by said respective elements, said ways being provided with curved stops for engagement with said bearing rollers, and tracks in said receptacle guidingly engaging the tops and bottoms of said slides, substantially as described.

2. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, cooperating bearing rollers and ways carried by said respective elements, said ways being provided with curved stops for engagement with said bearing rollers, tracks in said receptacle guidingly engaging the tops and bottoms of said slides, and means engaging said drawer for guiding the latter in a plane parallel to said tracks, substantially as described.

3. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, and upper and lower tracks in said receptacle guidingly engaging the rear portions of said slides for confining the latter against lateral movement, said lower tracks being provided with recesses in their rear ends, whereby said slides can be swung laterally from engagement with said lower tracks to position permitting their withdrawal from engagement with said upper tracks, substantially as described.

4. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, upper and lower tracks in said receptacle guidingly engaging the tops and bottoms of said slides, bearing rollers extending above the forward portions of said lower tracks, and ways on said slides above the bottoms thereof for engaging said rollers, said ways formed to provide curved stops at their rear ends for engaging the peripheries of said rollers upon extension of the slides, substantially as described.

5. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, cooperating bearing rollers and ways carried by said respective elements, said ways formed to provide curved stops for engagement with said bearing rollers, upper and lower tracks in said receptacle guidingly engaging the tops and bottoms of said slides, bearing rollers extending above the forward portions of said lower tracks, and ways on said slides above the bottom thereof for engaging said rollers, said ways formed to provide curved stops at their rear ends for engaging the peripheries of said rollers upon

extension of the slides, substantially as described.

6. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, upper and lower tracks in said receptacle, flanges carried on the rear portion of said slides in guiding engagement with said tracks for confining the slides against lateral movement, bearing rollers extending above the forward portions of said lower tracks, and ways on said slides above the bottoms thereof for engaging said rollers, said ways formed to provide curved stops at their rear ends at a distance on said slides forward of the flanges carried by the latter, said curved stops engaging the peripheries of the bearing rollers upon full extension of the slides from the drawer receptacle, whereby all play or rattling of the slides in their tracks will be prevented when the former are in their fully extended position, substantially as described.

7. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, bearing rollers carried by said drawers, ways on said slides in engagement with said rollers, said ways formed to provide curved stops at their forward ends for engaging the peripheries of said rollers to limit the forward movement of the drawer on said slides, and tracks in said receptacle guidingly engaging the tops and bottoms of said slides, substantially as described.

8. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, bearing rollers carried by said drawers, ways on said slides in engagement with said rollers, said ways formed to provide curved stops at their forward ends for engaging the peripheries of said rollers to limit the forward movement of the drawer on said slides, said slides being provided with recesses extending along said ways, lugs carried by said drawers and extending within said recesses for locking the slides from lateral movement relative to the drawer, tracks in said receptacle, and flanges on the tops and bottoms of the slides engaging said tracks for confining said slides against lateral movement, substantially as described.

9. In a cabinet provided with a drawer receptacle, the combination of a drawer and slides, means for slidably supporting the forward portion of said drawer on said slides, slide tracks in said receptacle guidingly engaging the tops and bottoms of said slides, a supporting track in said receptacle, and means for slidably supporting the rear end of said drawer on said supporting track, substantially as described.

10. In a cabinet provided with a drawer receptacle, the combination of a drawer and slides, means for slidably supporting the forward portion of said drawer on said slides, slide tracks in said receptacle guidingly en-

gaging the tops and bottoms of said slides, supporting tracks in said receptacle above and parallel to said slide tracks, and means for slidably supporting the rear portion of said
5 drawer on said supporting tracks substantially as described.

11. In a cabinet provided with a drawer receptacle, the combination of a drawer and slides, bearing rollers carried by said drawer,
10 ways on said slides engaging said rollers, slide tracks in said receptacle guidingly engaging the tops and bottoms of said slides,

track rails extending from the sides of said receptacle, and rollers carried at the rear portion of said drawer in engagement with 15 the upper and lower faces of said track rails, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES ZIMMERLI.

Witnesses:

ED. L. VETTER,
A. G. VETTER.