

A. B. WENINK.
REGISTER.
APPLICATION FILED MAY 8, 1908.

967,095.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

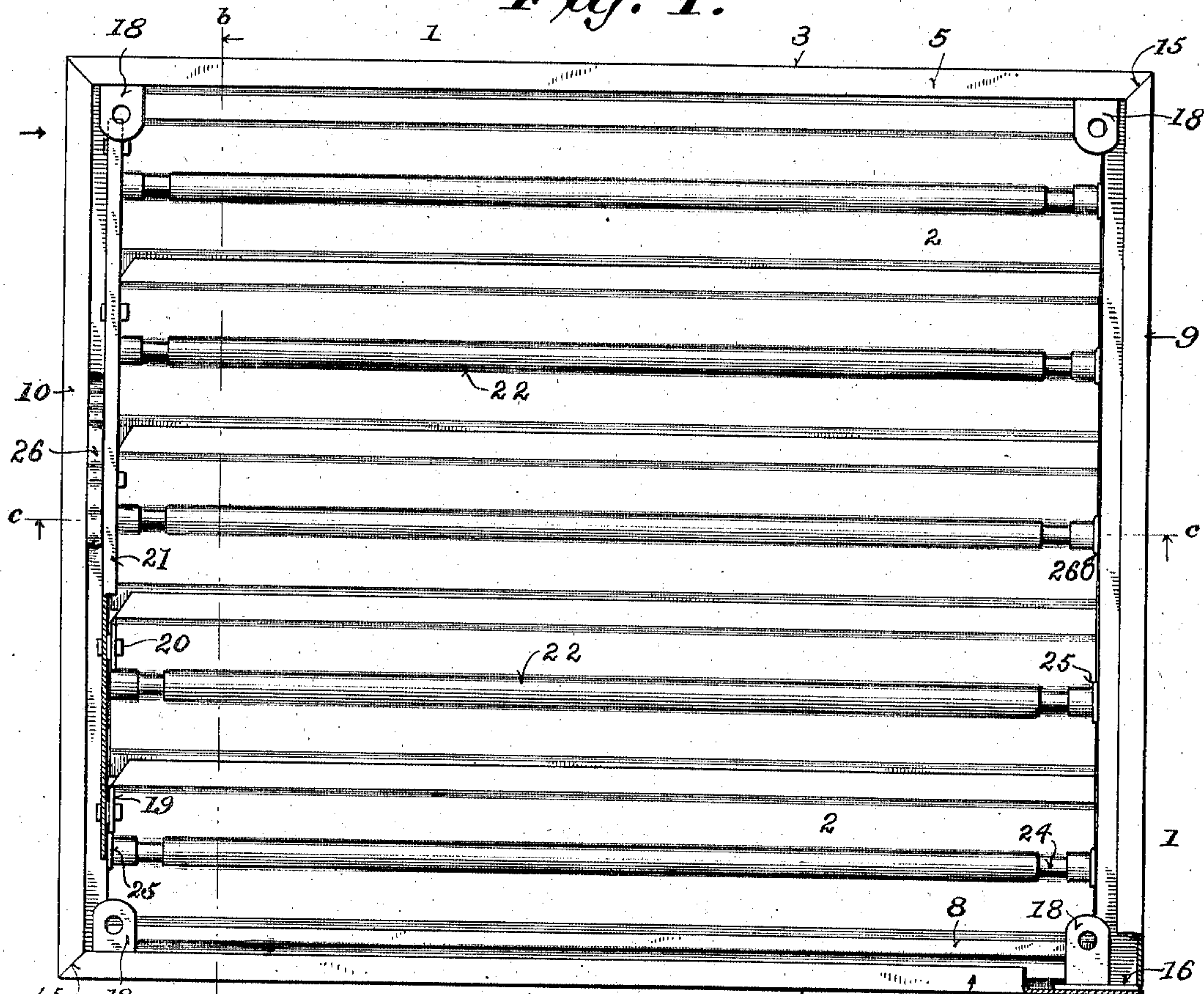


Fig. 2.

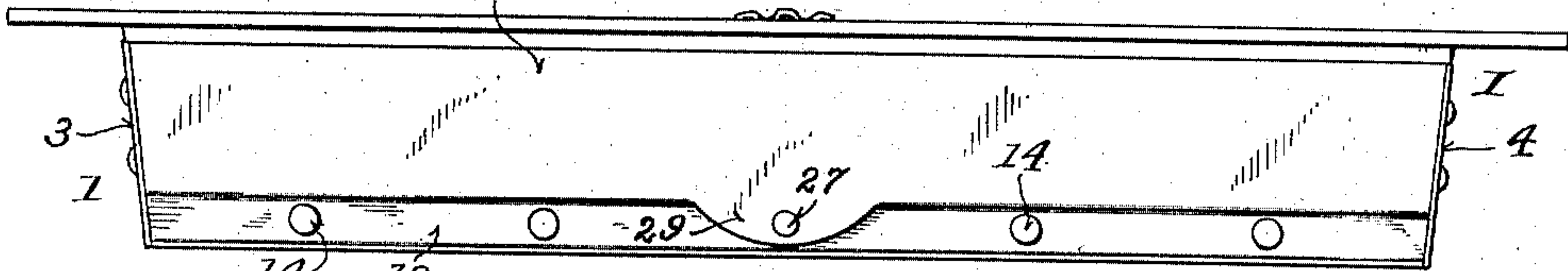
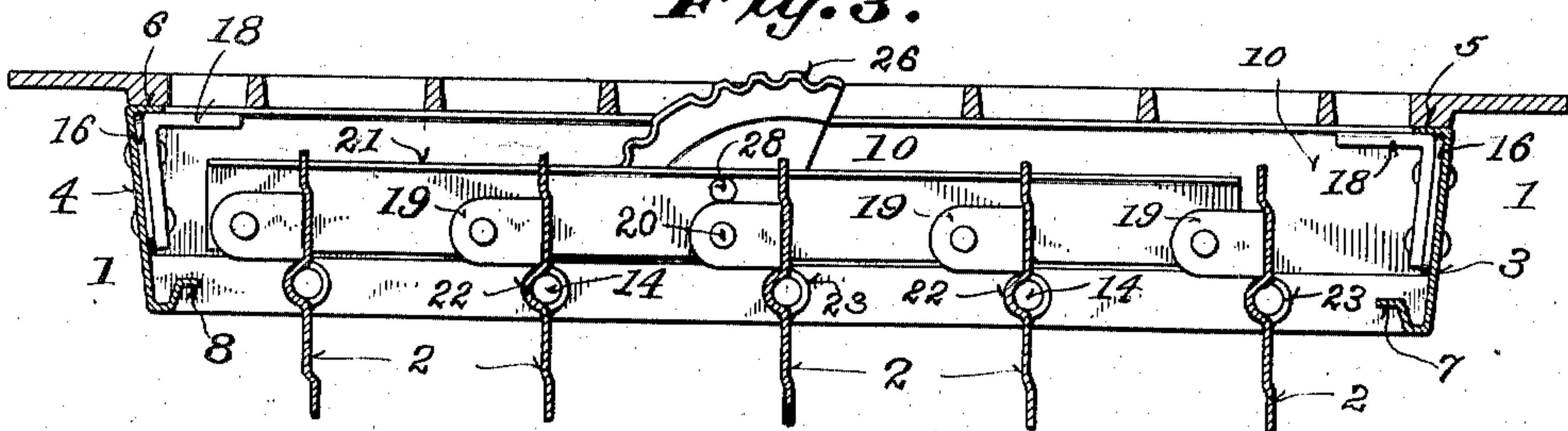


Fig. 3.



Witnesses:

Tred Palm

Chas. L. Goss.

Inventor:

Arthur D. Wenink

By Wm. H. Flowers, Arthur H. Fawcett

Attorneys.

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2 SHEETS—SHEET 2.

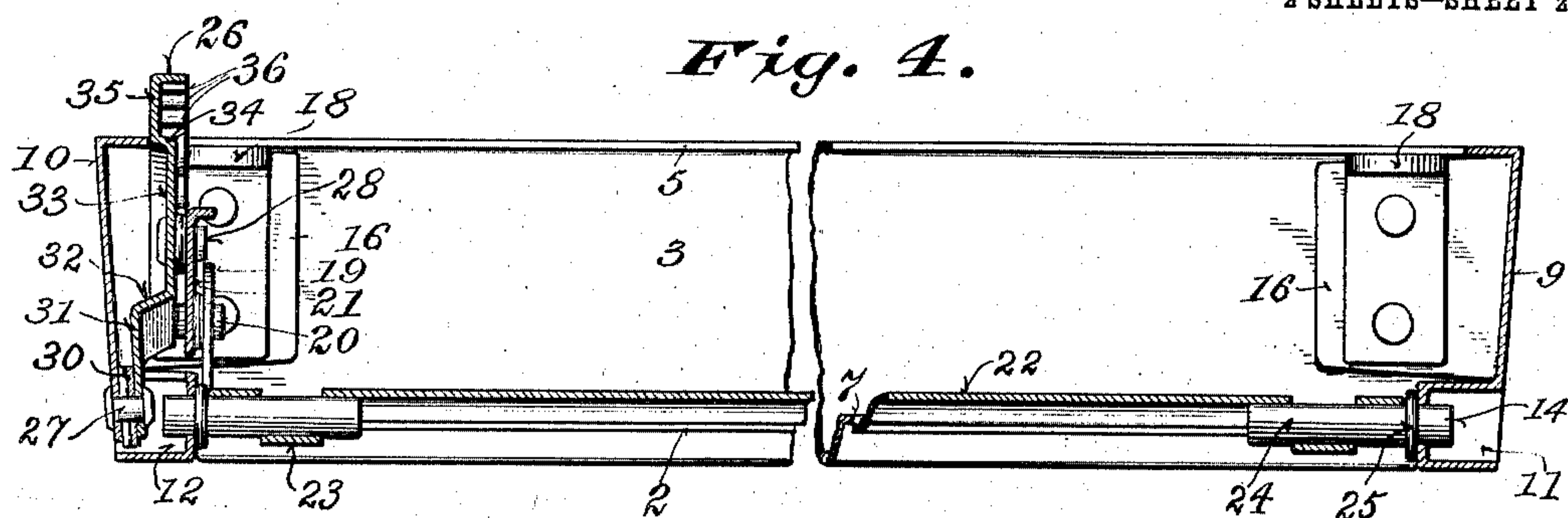


Fig. 4.

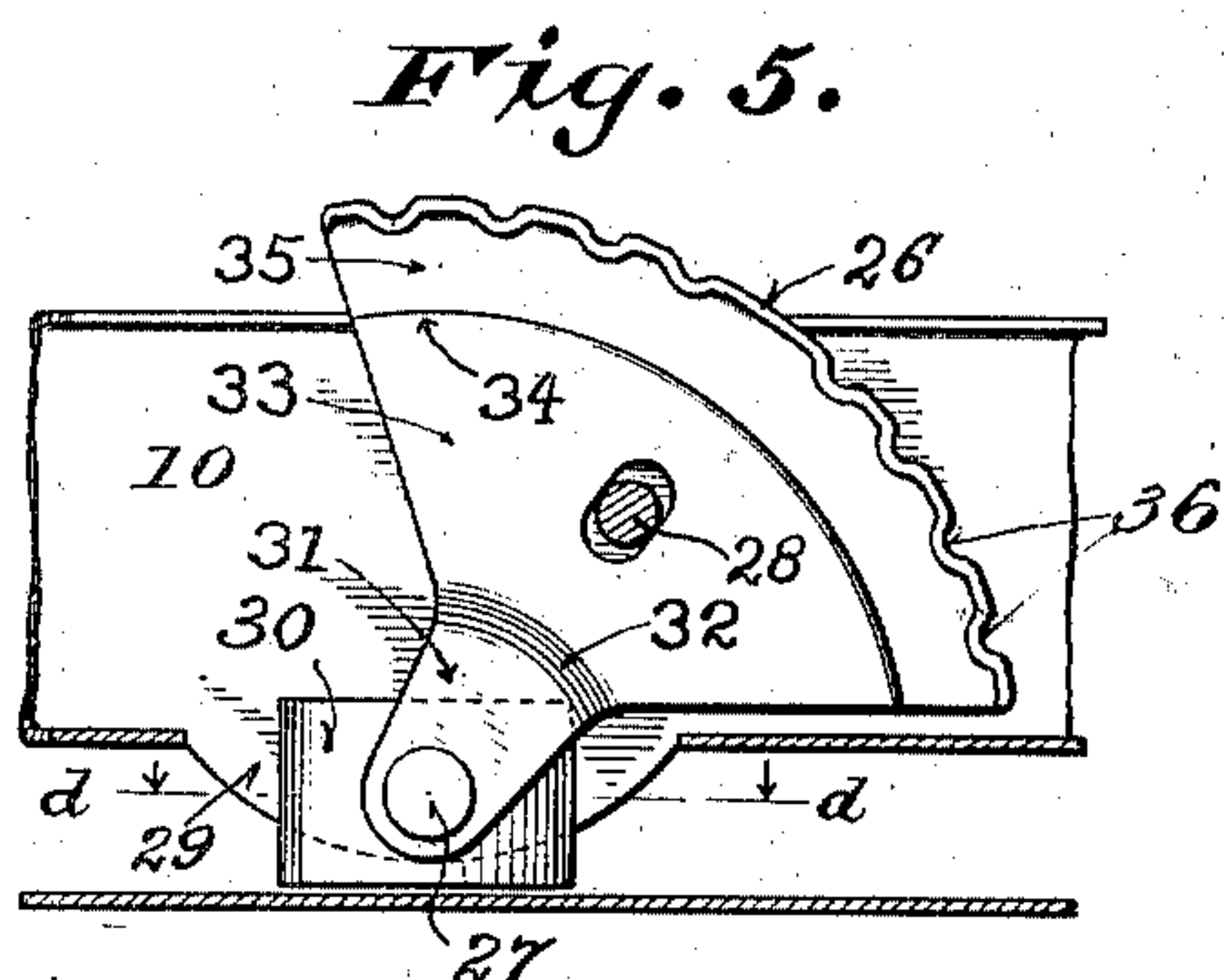


Fig. 5.

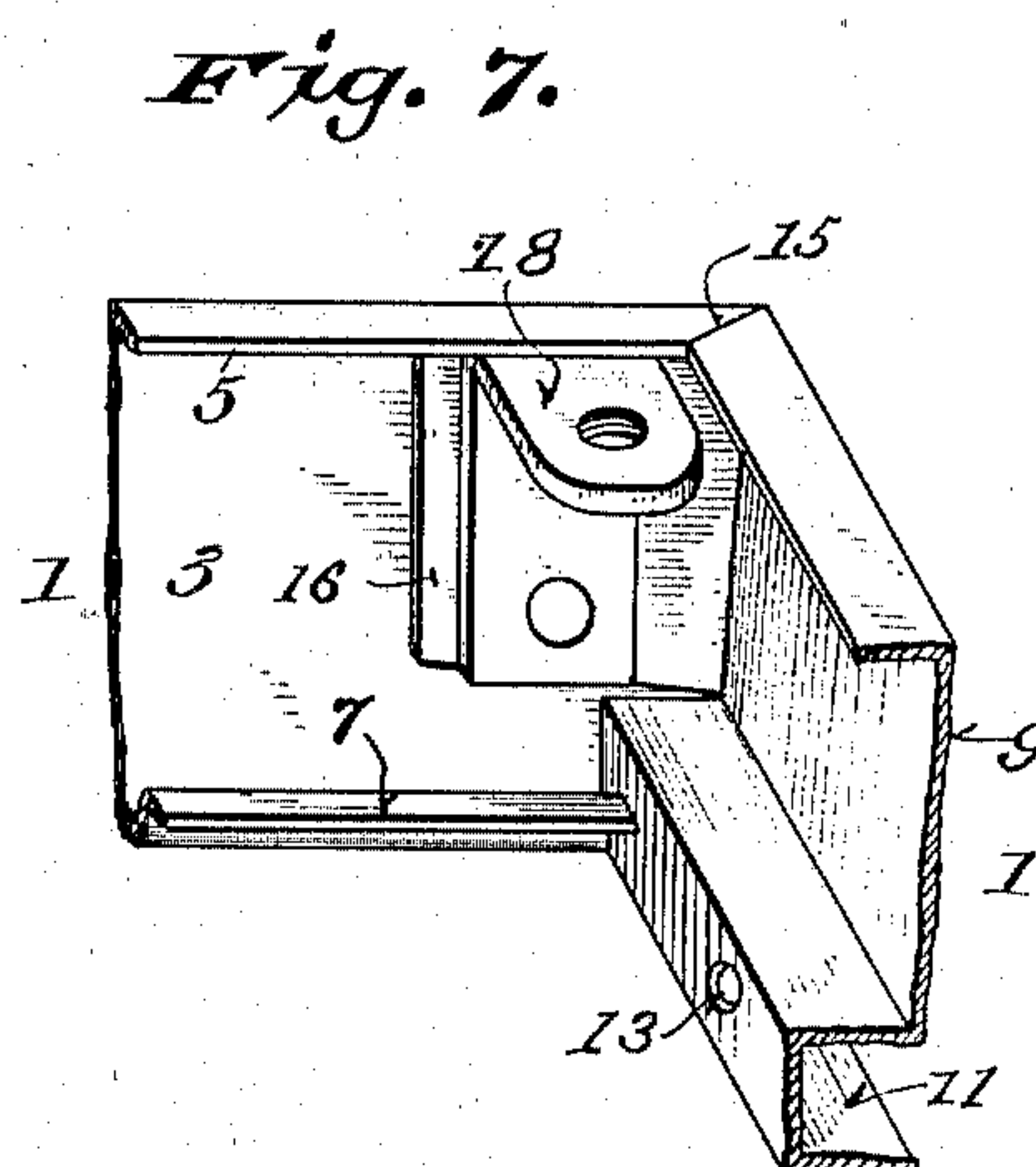


Fig. 7.

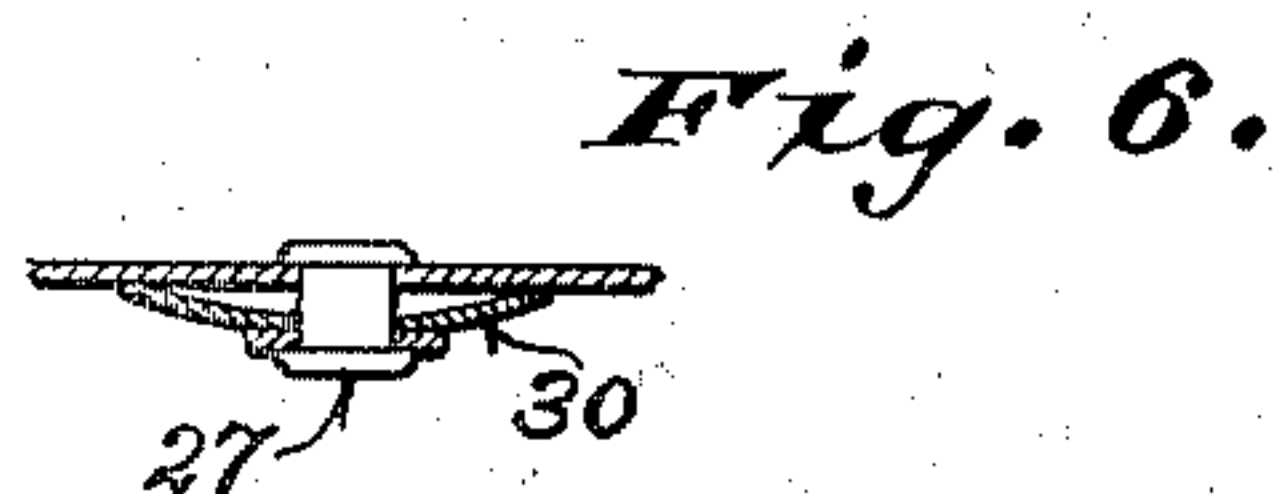


Fig. 6.

Fig. 8.

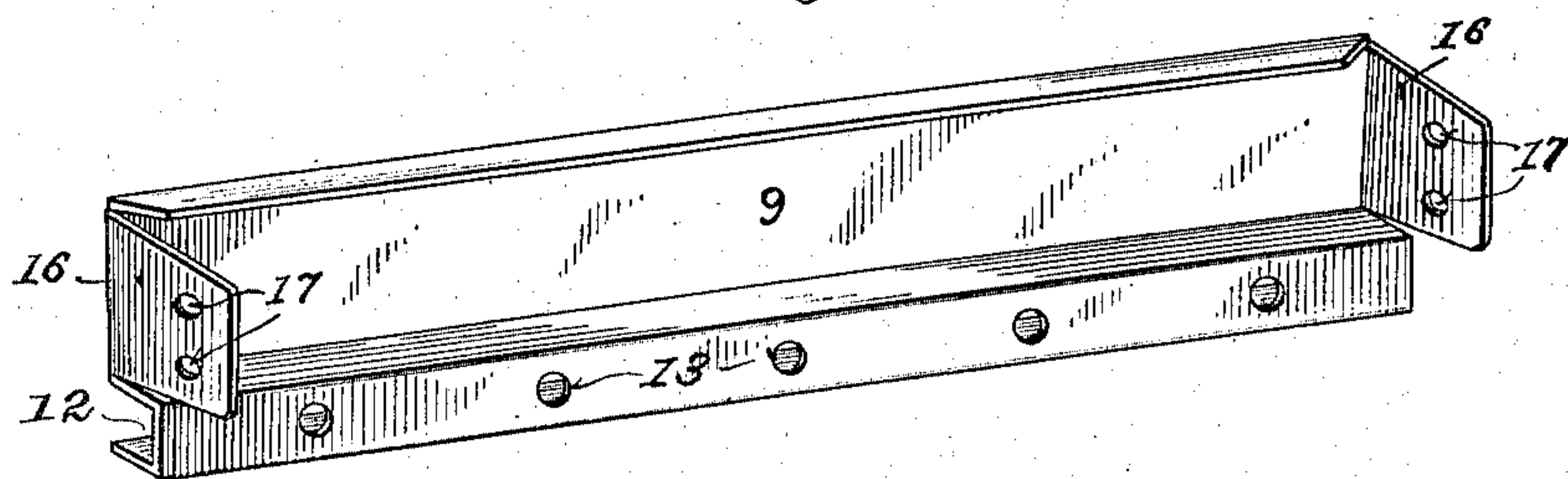
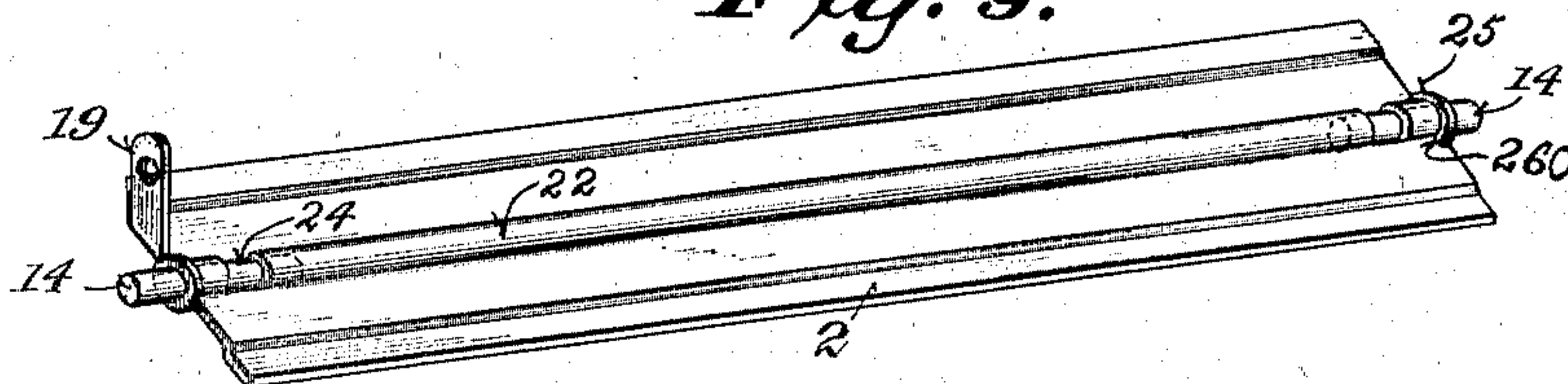


Fig. 9.



Witnesses:

Tired Palm

Chas. L. Goss.

Inventor:

Arthur B. Wenink

By Ninkla Flanders Arthur Fausett

Attorneys.

UNITED STATES PATENT OFFICE.

ARTHUR B. WENINK, OF MILWAUKEE, WISCONSIN.

REGISTER.

967,095.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed May 8, 1908. Serial No. 431,545.

To all whom it may concern:

Be it known that I, ARTHUR B. WENINK, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Registers, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

This invention relates to hot air registers, ventilators and similar structures, the purpose of the invention being to provide a simpler structure than the structures now in use, and a structure which can be manufactured more cheaply and which possesses certain advantages which will be pointed out in this specification.

Referring to the drawings which accompany this specification and form a part thereof, and on which the same reference characters designate the same elements wherever they may appear in each of the several figures, and which drawings illustrate an embodiment of my invention, Figure 1 is a plan view of a register, the usual grille or covering plate being omitted; Fig. 2 is an end elevation looking in the direction of the arrow on Fig. 1; Fig. 3 is an elevation in section on the line *b b*, Fig. 1, looking in the direction of the arrow; Fig. 4 is an elevation in section on the line *c c*, Fig. 1; Fig. 5 illustrates a detail in elevation; Fig. 6 illustrates a detail on line *d d*, Fig. 5; Fig. 7 illustrates a detail of a corner of the register frame in perspective; Fig. 8 illustrates in perspective a detached end piece of the register frame; Fig. 9 illustrates in perspective one of the slats of the register.

Referring to the drawings, the numeral 1 designates generally the frame of the register, which is provided with the slats 2 and operating mechanism for manipulating said slats.

One of the principal objects of this invention is to provide a register which can be made by fewer operations and which will contain a less number of parts than the registers now in use, whereby simplicity of construction is afforded and cheapness of production is assured.

One of the objects of this invention is to

provide a register frame which shall have a smooth exterior surface so that it may be fitted closely and accurately into the aperture provided for its reception.

In order to obtain the results above indicated, the register frame 1 is composed of two similarly shaped but oppositely disposed side pieces 3 and 4, the top edges of said side pieces, which are preferably composed of sheet metal, being bent over at a little more than a right angle, as indicated by the numerals 5 and 6, while the lower edges of said side members 3 and 4 are bent inwardly and upwardly and provided with lips 7 and 8 with which the slats 2 at the sides of the register are adapted to coact in order to close the passageway through the register casing.

The frame is provided with two end pieces 9, 10, the tops of which are also turned over like the tops of the side pieces, but each of said end pieces is preferably bent inwardly, thence downward and outwardly, to form channel-shaped sections 11 and 12, these channel-shaped sections of the end pieces being provided with apertures 13 to receive the pintles 14 of the slats 2. This construction prevents dust which may be carried through the register opening, from accumulating in the channel-shaped parts of the end pieces.

The bent over portions 5 and 6 of the side members of the frame are beveled at their ends, as indicated generally by the numeral 15, and the corresponding bent over portions of the end pieces 9 and 10 are similarly beveled, so that an accurate joint is formed between the said parts of said members, and the upstanding sides of the end members of the frame are provided with integrally formed projections 16, bent over at right angles and provided with apertures 17 through which rivets or bolts may be passed to unite the end and side members of the frame together.

In the drawings I have illustrated the end members 9 and 10 as being provided with the projections 16, but of course it is obvious that the side members 3 and 4 might be provided with these projections, or each of the members of the frame might be provided with a projection at one end only, but

the construction which the drawings illustrate is the construction which I prefer at present.

The side members 3 and 4 are provided with apertures adapted to register with the apertures 17 in the projection 16, and the clips 18 to which the usual grille plate is secured, as shown in Fig. 3, are provided with apertures adapted to register with the above mentioned apertures, so that a single set of rivets or bolts may be employed to unite a side member with an end member, and a clip to said members.

The extension 16 as clearly illustrated by the drawings, are secured to the adjacent members on the inside of the frame, as distinguished from the outside of the frame, whereby an extremely neat and finished smooth joint is formed at the corners of the frame, as the ends of the side pieces terminate flush with the outside faces of the end pieces, and this feature is one to which I especially desire to direct attention, as I intend to make this construction a feature of my claims.

The slats 2 are preferably formed from sheet metal, and each of them is provided with an upturned lug 19, which has an aperture adapted to receive a pin 20 carried by the operating bar 21, to rock said slats about their pintles 14 in the ordinary way.

Each slat is provided with an upwardly arched strengthening bead 22, a portion of the metal of said arch being punched out to form a reverse arch 23, the pintles 14 being adapted to be received between the arches thus formed and securely held thereby.

The pintles 14 are preferably formed of rivets or pins 24, provided with shoulders 25, the slats at the ends of the arch 22 being provided with recesses 26 within which the shoulders 25 are received, so that the outer faces of said shoulders are flush with the ends of the slats, whereby a tight joint is assured between the ends of the slats and the end members of the frame, while at the same time the shoulders 25 protect the apertures 13 and prevent dust from passing through them.

An operating wheel 26 is pivotally secured to the end member 10 of the register frame by a pivot 27, and is connected with the operating bar 21 by the pin 28, the pivot 27 being located below the bar 21 and pin 28, so that as the wheel 26 is rocked upon the pivot 27, the bar 21 is reciprocated and the slats 2 are opened or closed in the customary manner.

In order that the pivot 27 may be located near the lower edge of the end member 10 and at the same time may be so placed that it will not interfere with the slats, and to

avoid the use of a separate piece secured to said end member for receiving pivot 27, the construction illustrated by the drawings is adopted.

It will be noticed by reference to Figs. 2, 4 and 5 of the drawings, that a lip 29 is punched out of the metal forming the top of the channel-shaped part 12 of said member, said lip being bent downwardly and backwardly into the plane of the outside face of said end member, and the pivot 27 is secured in this lip, a spring 30 being interposed between said lip and the wheel 26 to hold the wheel in an adjusted position by friction.

The wheel 26 is preferably stamped from sheet metal, and is formed, as clearly shown by Fig. 4 of the drawings, with an upwardly extended portion 31, which is apertured to receive the pivot 27, an inwardly bent portion 32, an upwardly extending portion 33, an outwardly extending portion 34, at a point about coinciding with the inturned upper edges of the end members of the register frame, an upwardly extending portion 35, the upper edge being bent over and provided with corrugations, as indicated by the numeral 36, this construction permitting a compact arrangement of parts and insuring their retaining their relative positions as the operating bar 21 is retained between the lugs 19 and the portion 33 of the wheel. The wheel 26 bears against the spring 30 below the operating bar 21 and against the inturned upper edge of the end piece 10 above said bar, whereby any tendency of the wheel 26 to tip lengthwise of the pivot 27 is obviated.

What I claim is:

1. The combination with a register slat provided with an upstanding strengthening arch, a part of said arch being punched out to provide a reverse arch, of a trunnion provided with a shoulder retained between said two arches, the end of said slat being recessed to receive the shoulder on said trunnion so that the outside face of said shoulder is substantially flush with the end of said slat.

2. The combination in a register, of a frame member provided with a channel-shaped portion, a lip being punched out of a part of said channel-shaped portion and bent back into the plane of said member with an operating wheel pivoted to said lip.

3. The combination in a register of a frame member composed of side and end members, the end members being provided with inwardly extended channel-shaped portions, said inwardly extended channel-shaped portions being provided with apertures to receive the trunnions of the slats, slats provided with trunnions, an operating bar operatively connected to said slats, a

lip punched out of a part of the inwardly
extended channel-shaped portion of one of
the end members and bent back into the
plane of said member, an operating wheel
5 pivoted to said lip and adapted to bear
against the upper part of the end member
to which it is pivoted, said wheel being op-
eratively connected with said operating bar

at a point between its pivot and the upper
part of said end member.

In witness whereof I hereto affix my sig-
nature in presence of two witnesses.

ARTHUR B. WENINK.

Witnesses:

CHAS. L. GOSS,

FRANK E. DENNETT.