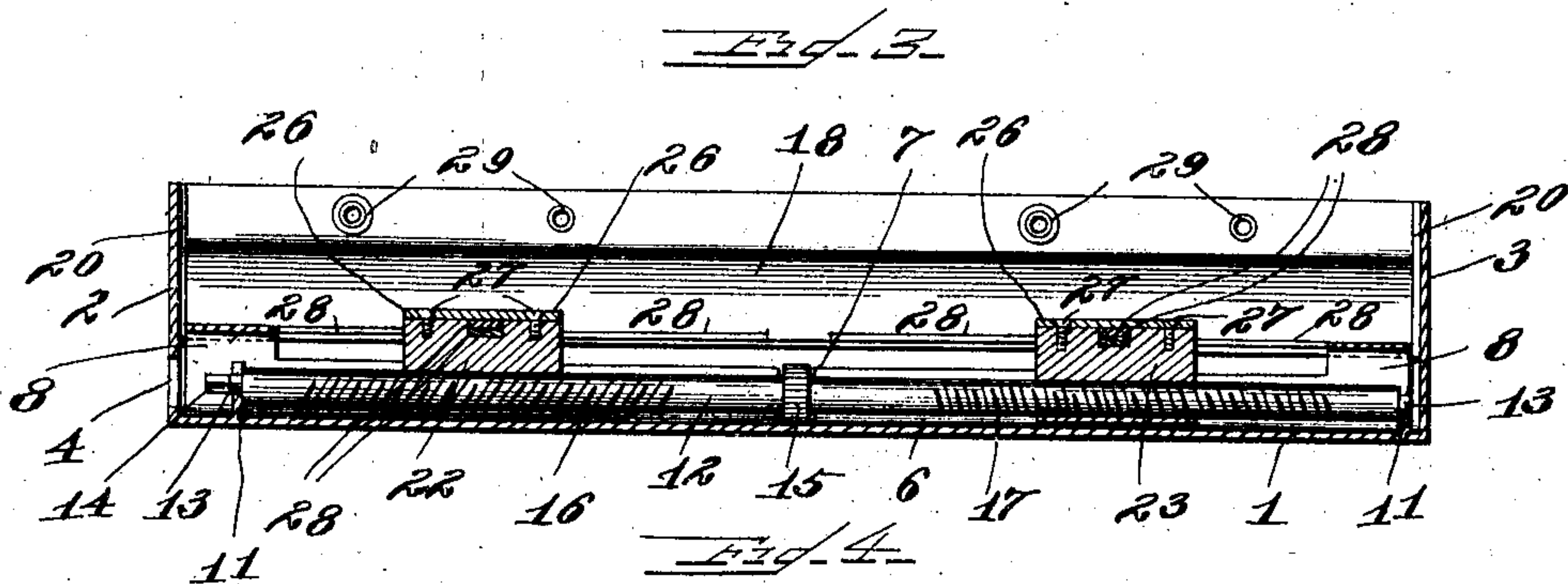
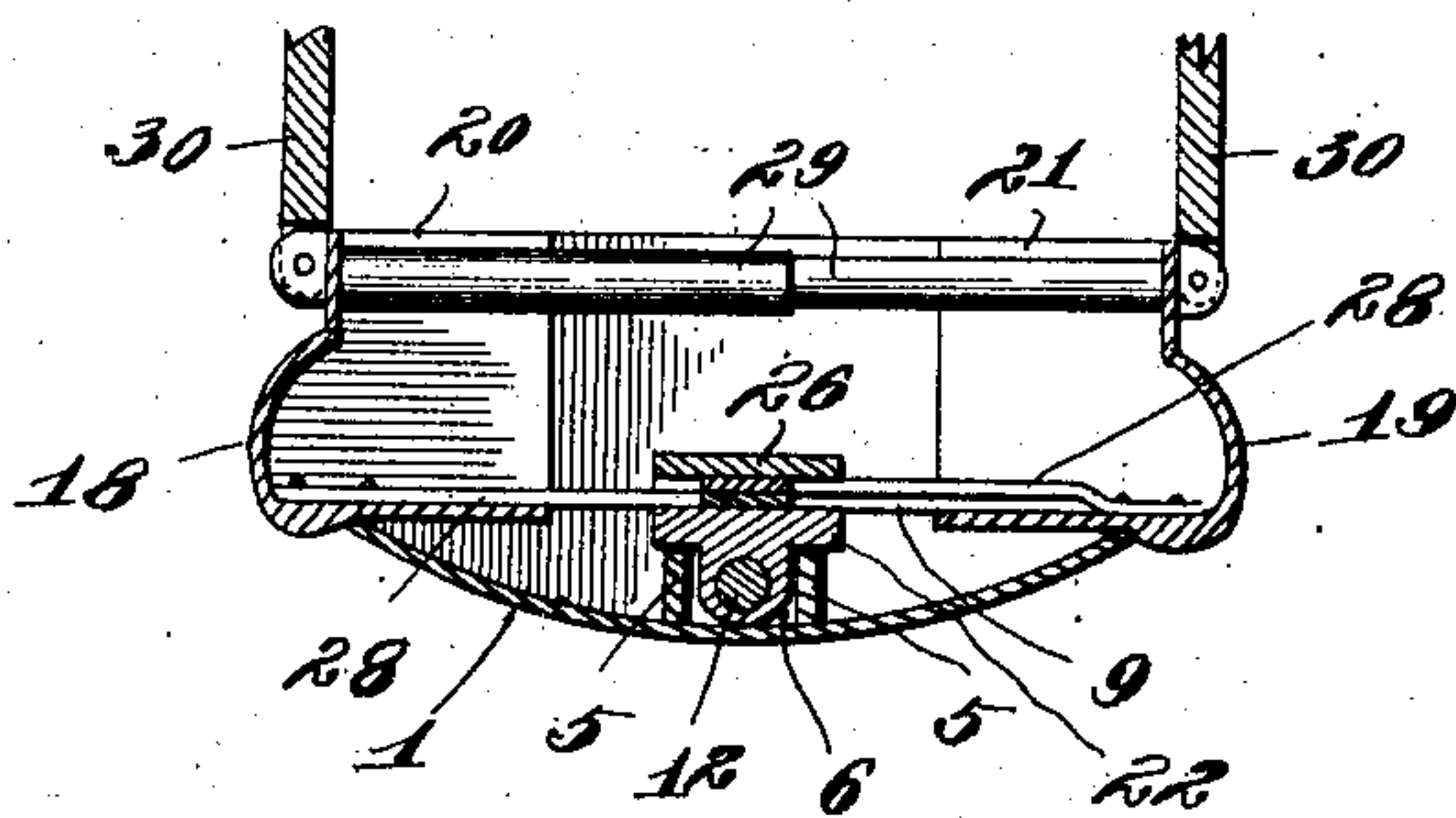
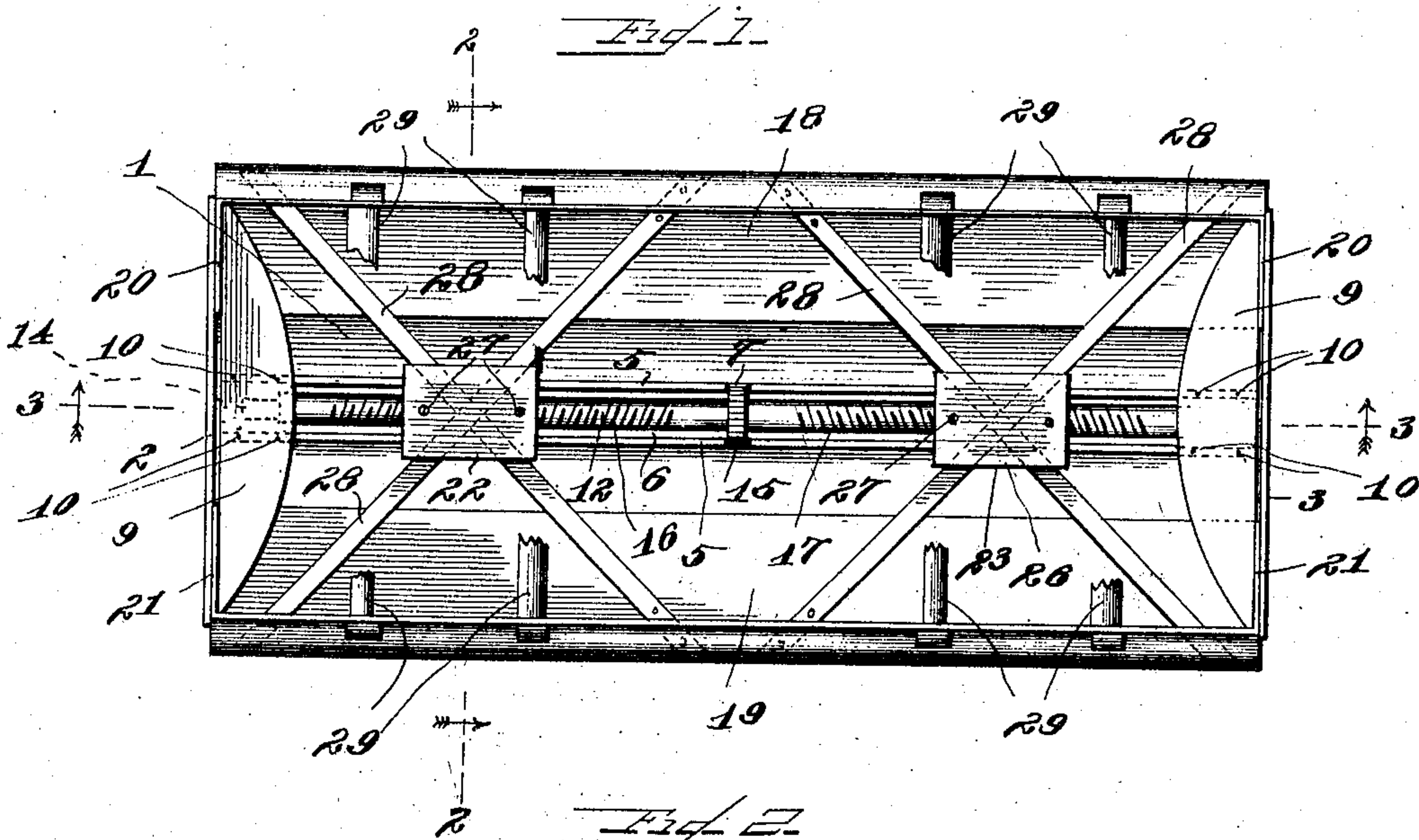


No. 768,256.

PATENTED AUG. 23, 1904.

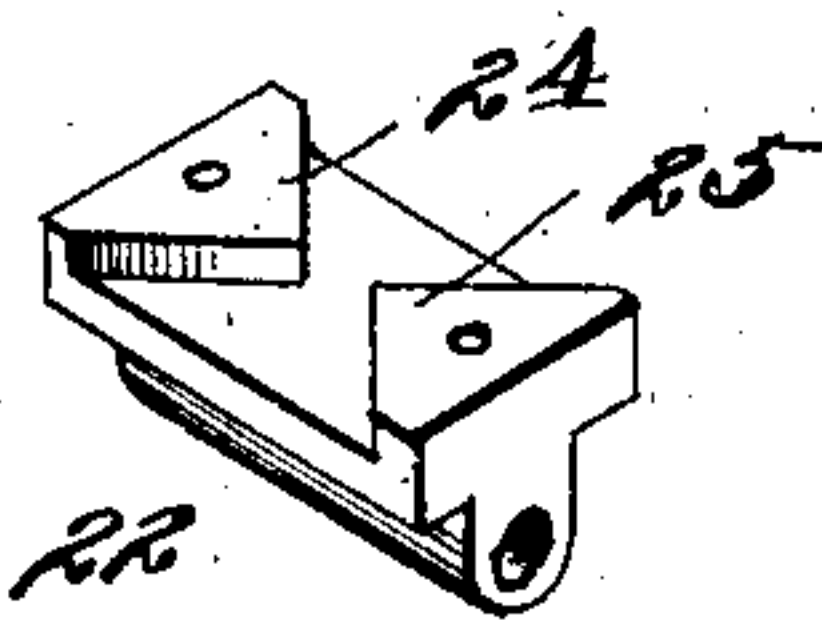
I. WIDE.
LOOSE LEAF BINDER.
APPLICATION FILED APR. 25, 1904.

NO MODEL.



WITNESSES

W. Paulschmidt
George L. Chindahl



INVENTOR

Ivan Wide
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UNITED STATES PATENT OFFICE.

IVAN WIDE, OF CHICAGO, ILLINOIS.

LOOSE-LEAF BINDER.

SPECIFICATION forming part of Letters Patent No. 768,256, dated August 23, 1904.

Application filed April 25, 1904. Serial No. 204,781. (No model.)

To all whom it may concern:

Be it known that I, IVAN WIDE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention, as stated, relates to loose-leaf binders, and refers particularly to an improved means for expanding and contracting the body of such a binder in order to change its capacity for holding leaves.

The invention further refers to various improvements in detail, hereinafter more particularly pointed out.

In the accompanying drawings, Figure 1 is an inner face view of a binder embodying the features of my invention, and Fig. 2 is a transverse section through said binder on dotted line 2 2 of Fig. 1. Fig. 3 is a longitudinal central section through the binder, and Fig. 4 is a perspective view of one of the saddle-blocks forming part of the adjusting mechanism.

In the embodiment herein shown of this invention I provide a longitudinal back member 1, curved in cross-section and provided with the integral end pieces 2 and 3, the former of which has an opening 4 for receiving a socket key or wrench (not shown) by means of which the binder is expanded and contracted. On its inner concave side the back 1 has two longitudinal ribs 5 extending parallel with each other and forming between them a groove 6. Intermediate their ends the ribs 5 have an opening 7, and at their ends said ribs are provided with the raised portions 8 for receiving guide-plates 9, secured in any suitable manner, as by the screws 10, to the raised portions 8 of said ribs. Near its opposite ends the groove 6 is provided with the bearings 11.

An operating-shaft 12 is adapted to lie within the groove 6 and at its opposite ends is provided with the reduced portions 13 for the bearings 11. One of its ends is also squared, as at 14, to receive an operating key or wrench. Near its center the shaft 12 is fitted with a fixed collar 15, adapted to lie within the opening 7 in the ribs 5, and at each side of said collar the shaft is provided with

right and left hand screw-threads 16 and 17, respectively.

Side members 18 and 19 are adapted to have a sliding engagement with the back 1. They are respectively provided with ends 20 and 21 and slide beneath the guide-plates 9, the ends 20 and 21 passing between the end pieces 2 and 3 of the back and the outer edges of said guide-plates.

Saddle-blocks 22 and 23 are mounted upon the operating-shaft 12 and are internally screw-threaded to correspond with the screw-threads 16 and 17 on said shaft. The upper faces of the saddle-blocks are provided with two wedging-points 24 and 25, facing each other. A cover-plate 26 is secured to the upper face of each saddle-block by means of screws 27.

Operating-rods 28 in pairs, rigidly secured at one end to the side members 18 and 19, near the middle portions thereof, extend diagonally across the binder, the rods of each pair crossing each other between the wedges 24 and 25 of one of the saddle-blocks.

Telescoping leaf-holding pins 29 of the usual construction are mounted upon the side members 18 and 19, and said side members also carry the usual hinged covers 30.

To open or close the binder, a socket-key is placed upon the square portion 14 of the operating-shaft 12 and said shaft rotated. A rotation of the shaft imparts a longitudinal movement to the saddle-blocks 22 and 23, said blocks sliding upon the ribs 5. A movement of the blocks toward the ends of the binder moves the point of crossing of the operating-rods 28 of each pair toward the ends of the binder, and therefore will cause the sides of the binder to move outwardly. A rotation of the operating-shaft in a contrary direction moves the saddle-blocks toward the center of the binder, moving the point of crossing of said rods inwardly, and contracts the binder.

Leaves are placed within and removed from the binder in the usual manner—that is to say, by distending the side members 18 and 19 from the back member 1 until the ends of the telescoping holding-pins 29 are separated.

It is apparent that various changes may be made in the embodiment herein illustrated of

my invention without departing from the spirit and scope thereof. Therefore I desire to have it understood that I do not limit myself to the particular construction herein shown and described.

I claim as my invention—

1. In a loose-leaf binder, in combination, two side members slidably supported with relation to each other; two rods crossing each other, each rod being rigidly secured at one of its ends to one of said side members; and means for changing the point of crossing of said rods to move said side members toward or from each other.

2. In a loose-leaf binder, in combination, a back member; two side members slidably supported with relation to said back member; two rods crossing each other, each rod being rigidly secured at one of its ends to one of said side members; and means for changing the point of crossing of said rods to move said side members toward or from each other.

3. In a loose-leaf binder, in combination, two side members slidably supported with relation to each other; two rods crossing each other, each rod being rigidly secured at one of its ends to one of said side members; a member embracing said rods at their point of crossing; and means for moving said member at a right angle with the line of movement of said side members.

4. In a loose-leaf binder, in combination, two side members slidably supported with relation to each other; two rods crossing each

other, each rod being secured at one of its ends to one of said side members; a member embracing said rods at their point of crossing; and a shaft having a screw-thread engagement with said member for moving said member at a right angle with the line of movement of said side members.

5. In a loose-leaf binder, in combination, two side members slidably supported with relation to each other; two pairs of rods, the rods of each pair crossing each other, each rod being secured at one of its ends to one of said side members and the two pairs extending in opposite directions; a member for each pair of rods, said member embracing said rods at their point of crossing; and means for moving said embracing members in opposite directions.

6. In a loose-leaf binder, in combination, two side members slidably supported with relation to each other; two pairs of rods, the rods of each pair crossing each other, each rod being secured at one of its ends to one of said side members and the two pairs extending in opposite directions; a saddle-block for each pair of rods, said saddle-block embracing said rods at their point of crossing; and a shaft having a screw-thread engagement with said saddle-blocks for moving said saddle-blocks in opposite directions.

IVAN WIDE.

Witnesses:

L. L. MILLER,
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