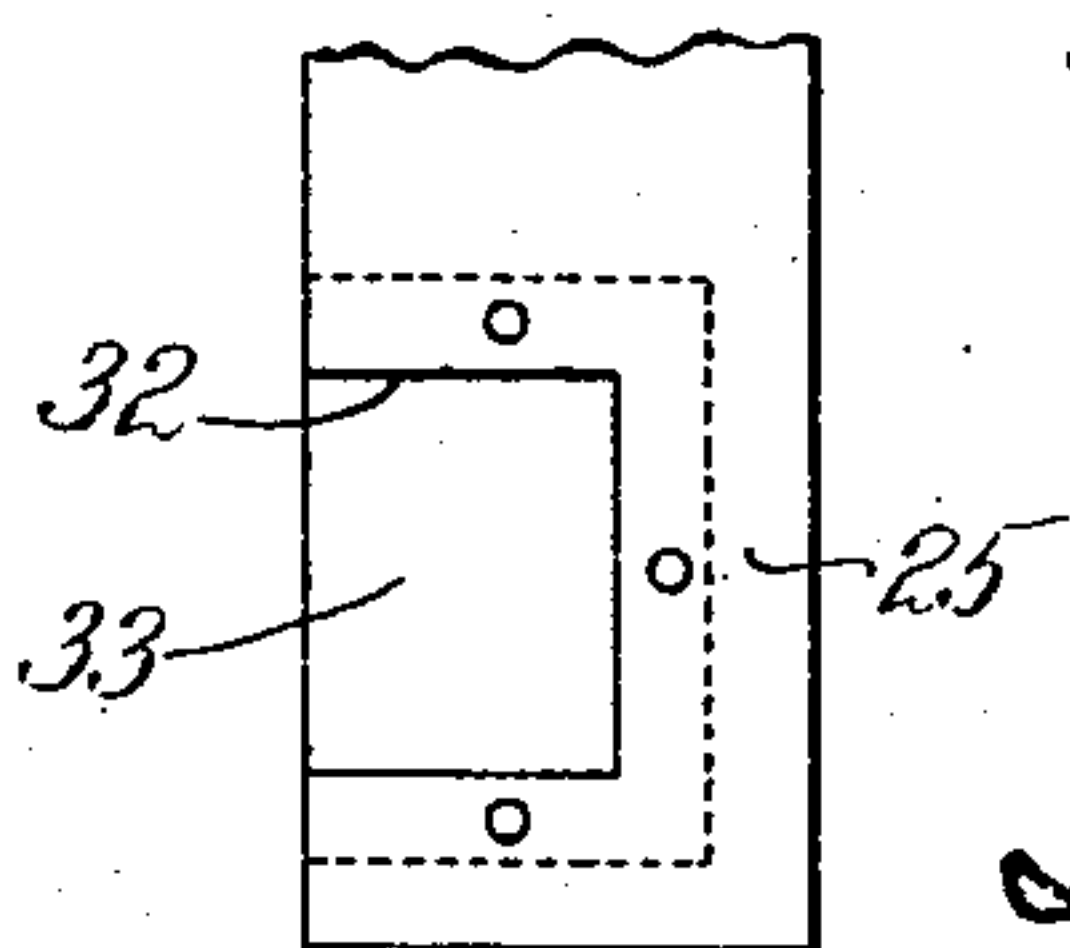
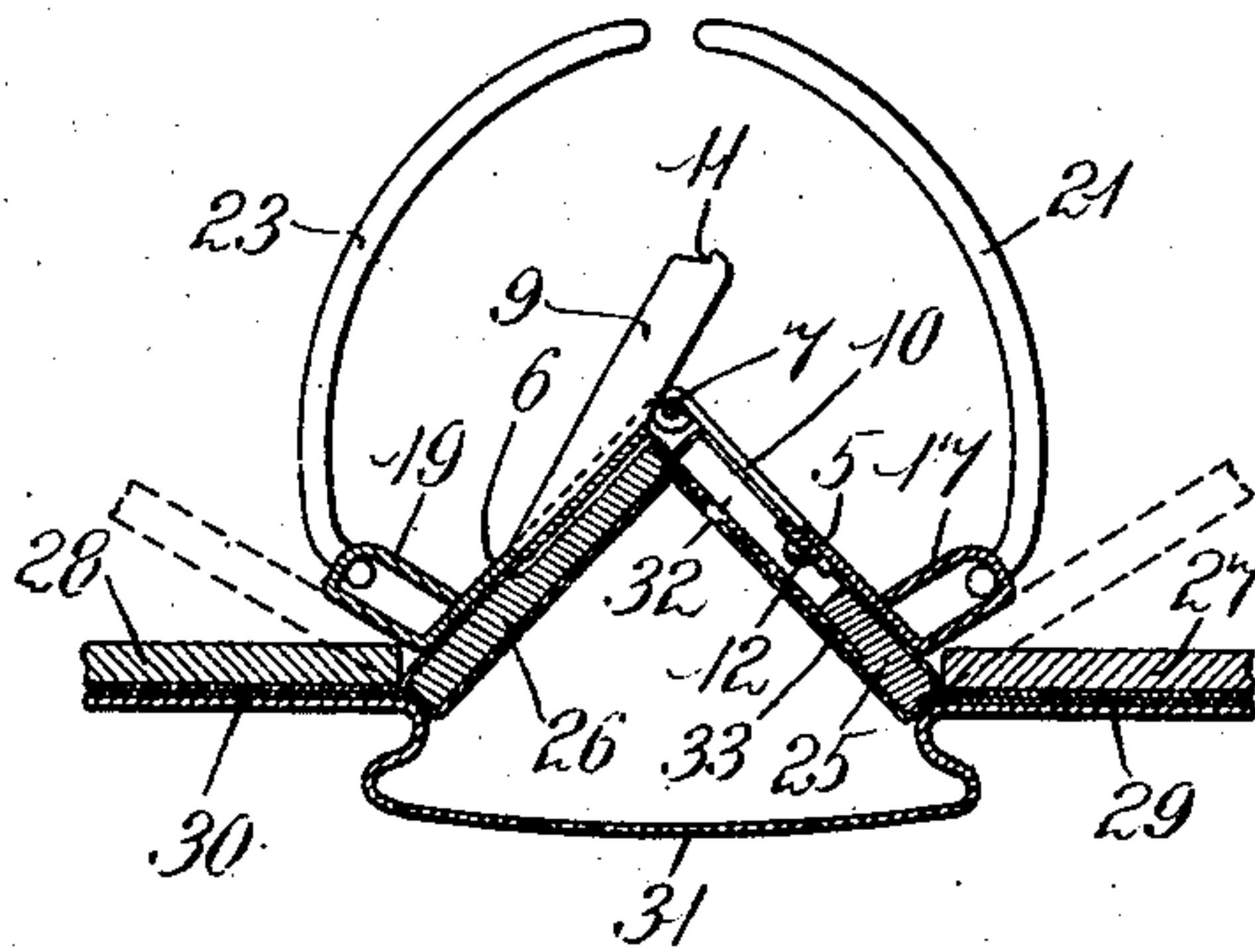
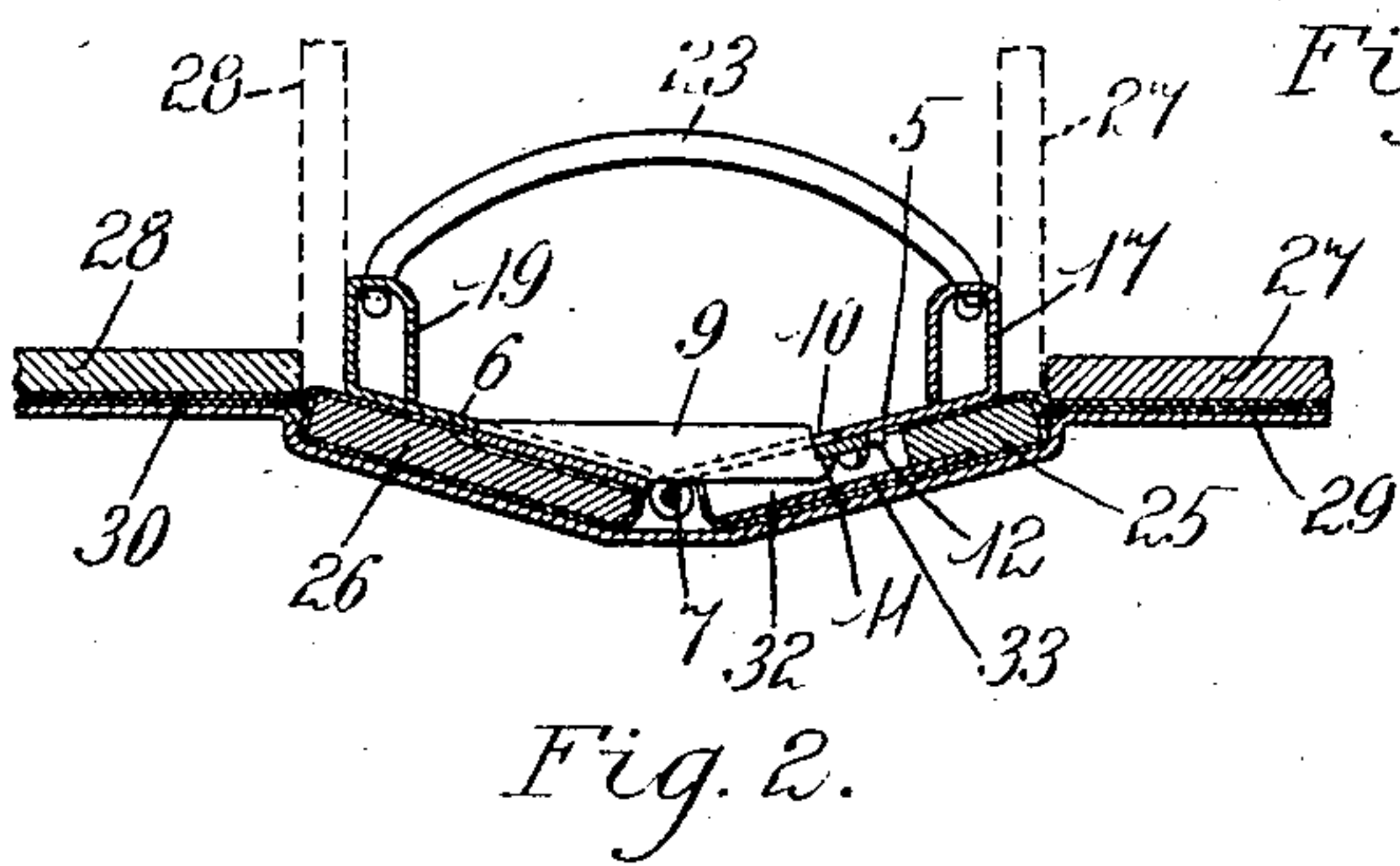
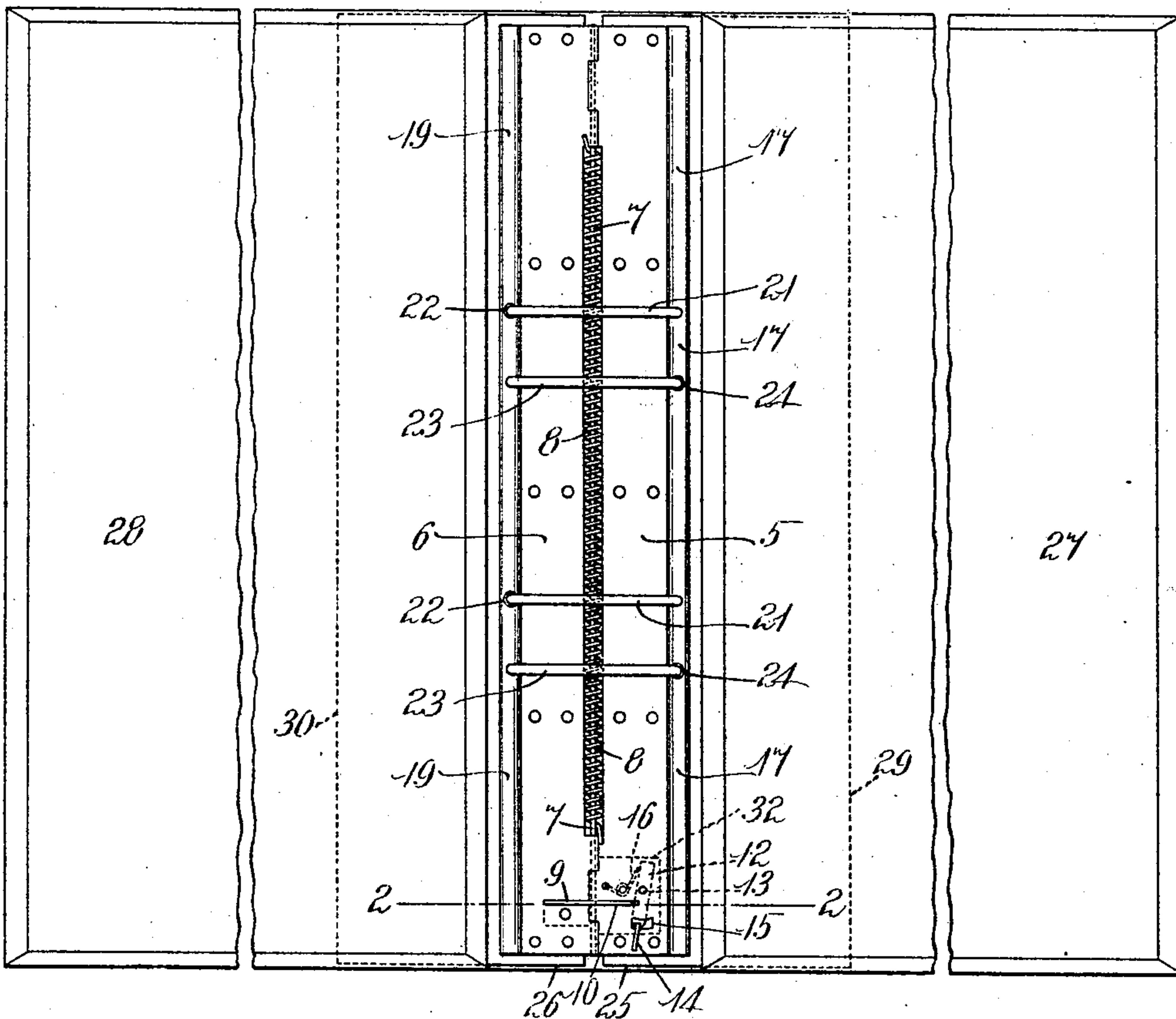


S. H. WIBERG.
 TEMPORARY BINDER.
 APPLICATION FILED NOV. 13, 1909.

968,620.

Patented Aug. 30, 1910.



Witnesses.
 Franklin E. Low.
 Sydney E. Taft.

Fig. 4.

Inventor:
 Sven Hj. Wiberg
 by his attorney
 Charles S. Gooding.

UNITED STATES PATENT OFFICE.

SVEN HJ. WIBERG, OF READING, MASSACHUSETTS, ASSIGNOR TO BONG BINDER COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

TEMPORARY BINDER.

968,620.

Specification of Letters Patent. Patented Aug. 30, 1910.

Application filed November 13, 1909. Serial No. 527,834.

To all whom it may concern:

Be it known that I, SVEN HJ. WIBERG, a citizen of the United States, residing at Reading, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Temporary Binders, of which the following is a specification.

This invention relates to temporary binders in which two plates are hinged together, the two members of the hinge being connected by a torsional spring in such a manner as to normally spread them apart, said hinge plates having curved impaling pins extending from one plate across the other, said impaling pins being so formed and of such length that when the hinge plates are spread apart, loose sheets may be added to, or removed from, said impaling pins, and when said hinge plates are brought toward each other, they are locked in position, with the impaling pins extending through the loose sheets, thus binding them together.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof, and refers particularly to the means for locking the hinge plates with the impaling pins extending through the sheets against the action of the spring which tends to spread these hinge plates apart.

The invention further consists in the manner in which the hinge plates are fastened to the covers of the binder and further in the particular construction of the hinge plates.

Referring to the drawings: Figure 1 is an inside plan view of my improved temporary binder, the covers of the binder being broken away to save space in the drawings. Fig. 2 is a sectional elevation taken on line 2—2 of Fig. 1, showing the covers open and the hinge plates locked against relative movement by the improved locking means. Fig. 3 is a sectional elevation, similar to Fig. 2, showing the hinge plates unlocked and spread or folded back by the action of the torsional spring which is connected to them, the covers being shown open in full lines and partly closed in dotted lines. The covers in both Figs. 1 and 2 are broken away to save space. Fig. 4 is a plan view of a portion of one of the hinge plates.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5, 6 are two hinge plates connected together by a pintle pin 7 which extends throughout the entire length of the plates 5 and 6 and is encircled by a torsional spring 8, one end of which is connected to the hinge plate 5, the other to the hinge plate 6 and is under tension, acting to hold said hinge plates folded back or backwardly, as illustrated in Fig. 3. The hinged plates are locked together against the action of the torsional spring 8 to hold them in their closed position or folded toward each other, as shown in Fig. 2, by an arm 9 which is rigidly fastened to the plate 6 and extends across the pintle 7 and partly across the hinge plate 5 in alinement with a slot 10 therein. The arm 9 has at its outer end a notch 11, and the outer end of said arm is adapted to engage a lever 12 pivoted at 13 to the under side of the hinge plate 5. Said lever 12 is bent upwardly at its free end at 14 to form a finger-piece and projects through a slot 15 in the hinge plate 5. A spring 16 bears against the lever 12 and holds it in the position illustrated in Figs. 1 and 2 against the free end of the arm 9, and when the parts are in the position illustrated in Fig. 2, engaging said arm in the notch 11, so that the hinge plates are locked against spreading apart or backwardly by the arm 9 and the lever 12.

The plate 5 is bent at its outer edge to form a U-shaped flange 17, and the hinge plate 6 is bent at its outer edge to form a U-shaped flange 19 thereon. The flange 17 has curved impaling pins 21, 21 fast thereto which project across said plates 5 and 6 and terminate, when the parts are in the position illustrated in Figs. 1 and 2, in the holes 22 in the flange 19. Other curved impaling pins 23, 23 are fastened to the flange 19 on the hinge plate 6 and extend across the plates 5 and 6, the free ends of said impaling pins projecting into holes 24, 24 in the flange 17, when the parts are in the position illustrated in Figs. 1 and 2.

The hinge plates 5 and 6 are fastened to back plates 25 and 26, respectively, and the covers 27 and 28 are pivotally connected to said back plates and to the hinge plates by strips of fabric or other fastening material 29, 30, which extend around said back plates

and have their edges secured to the covers 27 and 28, the same being still more firmly fastened thereto by a backing strip 31, preferably of leather. The back plate 25 is preferably slotted or recessed at 32 to receive the locking lever and the outer end of the locking arm and the spring 16 and has a thin plate 33 fast thereto to cover up said parts within said recess. The hinge plates 5 and 6 are fastened by screws or rivets, or in any suitable manner, to the back plates 25 and 26.

Having thus specifically described my invention, I will now proceed to describe the general operation of the same: Assuming the parts to be in the positions illustrated in Figs. 1 and 2 and it is desired to insert or remove a loose leaf in the binder, the lever 12 is pressed toward the right (Fig. 1) by means of the finger-piece 14, overcoming the tension of the spring 16 and releasing the outer end of the arm 9 by moving out of the notch 11. As soon as this movement of the lever 12 has taken place, the hinge plates are folded backwardly by the action of the torsional spring 8 from the position illustrated in Fig. 2 to that illustrated in Fig. 3 and the impaling pins are moved also from the positions illustrated in Fig. 2 to those illustrated in Fig. 3, thus making an opening between their free ends through which the loose leaves may be inserted, and when the same have been placed upon said impaling pins or removed therefrom, as may be desired, the parts are again placed in the position illustrated in Fig. 2, by closing the covers, which, during the first portion of the closing movement, move from the position shown in full lines in Fig. 3 to that shown in dotted lines therein, where it will be seen that the sides of the covers at their lower edges bear against the outside of the U-shaped flanges upon the hinge plates 5 and 6. Upon further movement of the covers toward each other or to a closed position, the hinge plates will be rocked upon their pivotal pin 7 against the action of the torsional spring 8, until, when the covers arrive at the position shown in dotted lines in Fig. 2, the arm 9 will move backwardly from the position illustrated in Fig. 3 to that illustrated in Fig. 2 and the spring actuated lever 12 will have engaged the outer end of said arm 9 in the notch 11, thus locking the same against movement relatively to the hinge plate 5.

It will be seen that the U-shaped flanges serve a three-fold purpose, viz., to strengthen the plates 5 and 6, respectively, to form a means whereby the hinge plates may be moved, by means of the covers 27 and 28, from the open or backwardly folded position to the closed position, or from the position illustrated in Fig. 3 to that illustrated in Fig. 2, and third as a support and shield

for the impaling pins. It will also be seen that the covers are pivotally connected to the back plates and to the hinge plates in a very strong and durable manner by the flexible strips of fabric 29, 30 which are firmly fastened to the covers at their edges and thence extend around the back plates in the form of loops.

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

1. A temporary binder, having in combination, two plates hinged together, an arm fast to one of said plates and projecting therefrom through a slot provided in the other of said plates, a locking lever pivoted to rock in a plane parallel to said last named plate and adapted to engage said arm beneath said last named plate and lock the same thereto, a spring acting to hold said lever in engagement with said arm, said lever projecting upwardly through another slot in said last-named plate, whereby said lever may be rocked to disengage said arm.

2. A temporary binder, having in combination, two plates hinged together, two back plates to which said hinge plates are respectively fastened, two covers, and a flexible strip of fabric extending around each of said back plates respectively and fastened to each of said covers, respectively.

3. A temporary binder, having in combination, two plates hinged together, two back plates to which said hinge plates are respectively fastened, two covers, a flexible strip of fabric extending around each of said back plates respectively, and a backing strip connecting said covers together and fastening said flexible strips to said covers.

4. A temporary binder, having in combination, two plates hinged together, two back plates to which said hinge plates are respectively fastened, a U-shaped flange on the outer edge of each of said hinged plates, two covers pivotally connected to said back plates and adapted to bear against said U-shaped flanges, a spring acting to spread said hinge plates apart, and means to lock said hinge plates together.

5. A temporary binder, having in combination, two plates hinged together, two back plates to which said hinge plates are respectively fastened, a U-shaped flange on the outer edge of each of said hinged plates, two covers pivotally connected to said back plates and adapted to bear against said U-shaped flanges, a spring acting to spread said hinges apart, an arm fast to one of said plates and projecting therefrom through a slot provided in the other of said plates, a locking lever pivoted to rock in a plane parallel to said last-named plate and adapted to engage said arm beneath said last-named plate and lock the same thereto, a spring acting to hold said lever in engage-

ment with said arm, said lever projecting upwardly through another slot in said last-named plate, whereby said locking lever may be rocked to disengage said arm.

5 6. A temporary binder having, in combination, two back plates hinged together, two metal plates rigidly fastened to said back plates, a U-shaped flange on the outer edge of each of said metal plates, and a curved
10 arm fast to each of said flanges and extending across said metal plates in opposite directions, respectively.

7. A temporary binder having, in combination, two plates hinged together, two back

plates to which said hinge plates are respectively fastened, a U-shaped flange on the outer edge of each of said hinge plates, and two cover plates pivotally connected to said back plates and adapted to bear against said U-shaped flanges. 15 20

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SVEN HJ. WIBERG.

Witnesses:

CHARLES S. GOODING,
LOUIS A. JONES.