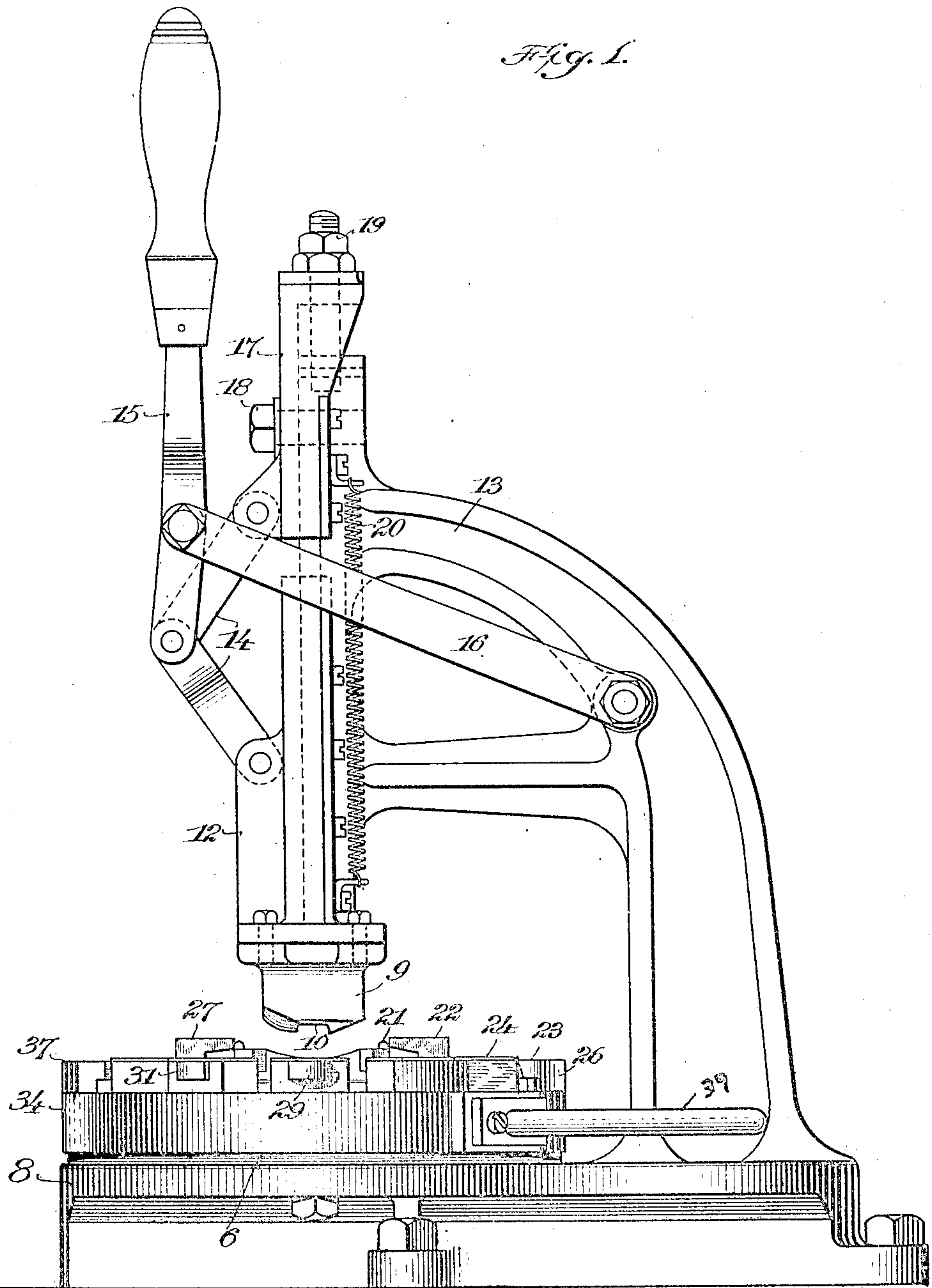


906,672.

A. AXELL.
EYEGGLASS CASE COVERING MACHINE.
APPLICATION FILED JUNE 12, 1902. RENEWED OCT. 14, 1908.

Patented Dec. 15, 1908.

3 SHEETS—SHEET 1.



Witnesses:

Alfred H. Hildreth
Oliver E. White.

Inventor:

Adolph Axell
by his attorneys
Philip Van Curen Fish

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Fig. 2.

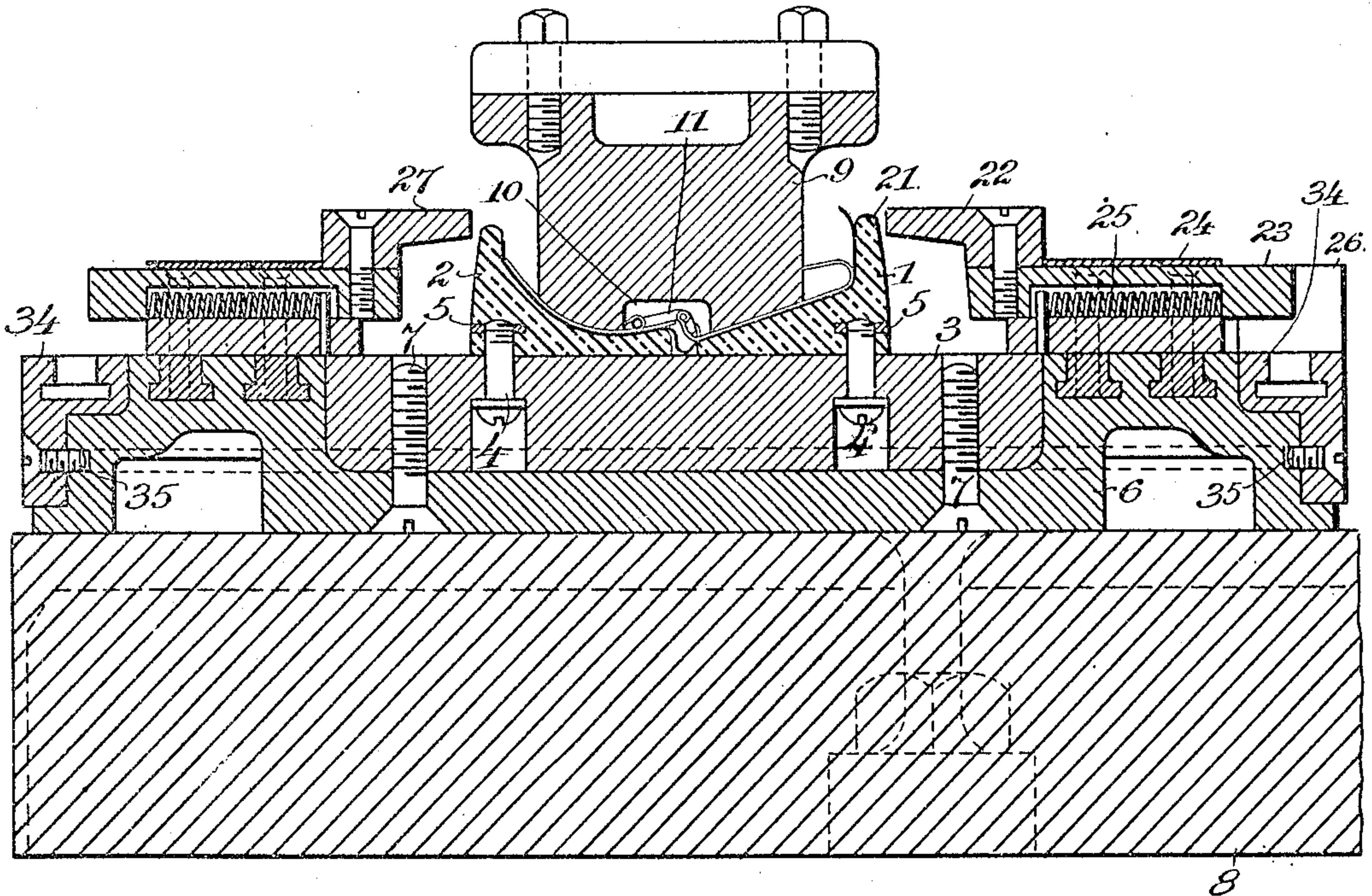
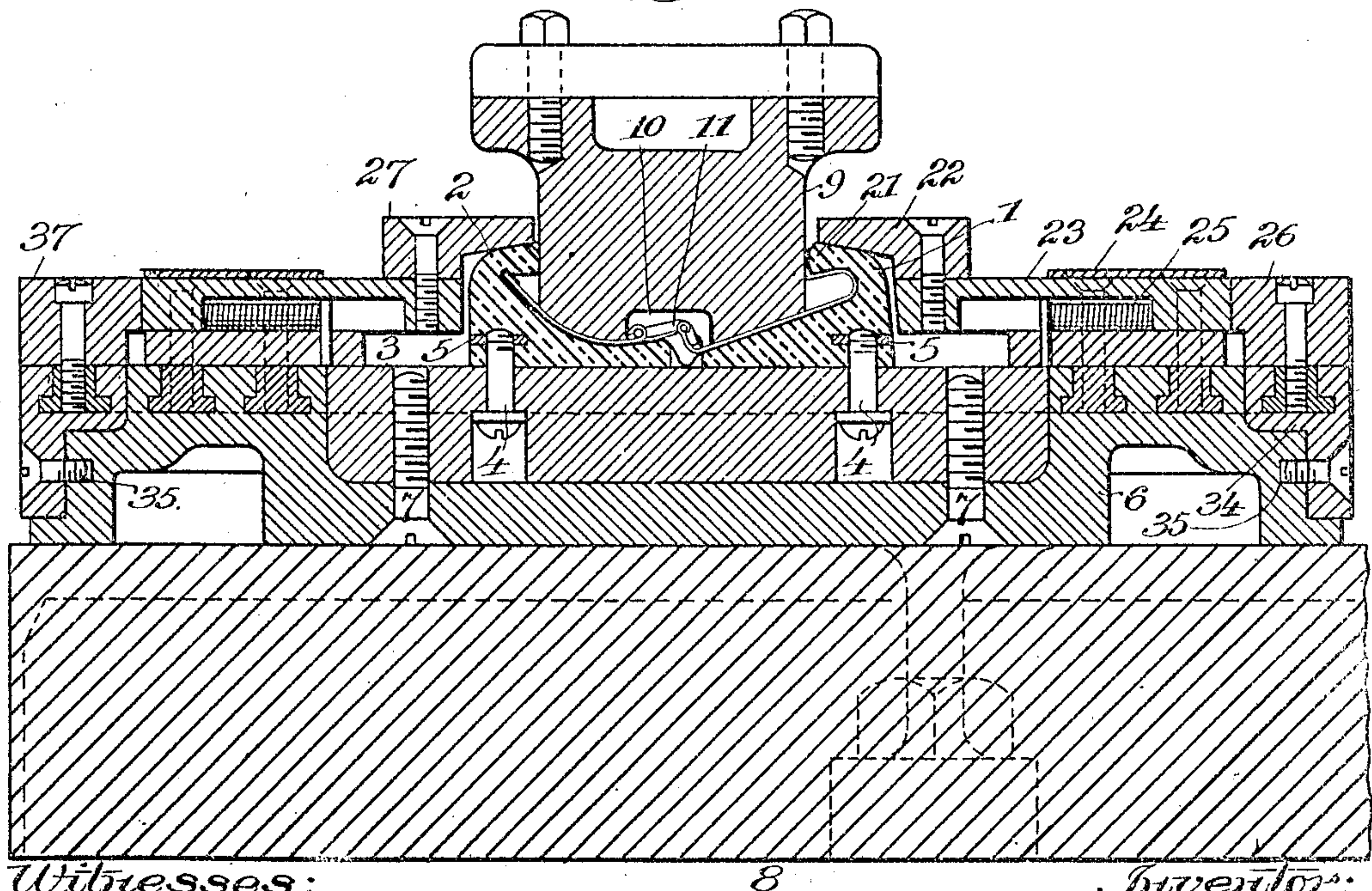


Fig. 3.



Witnesses:
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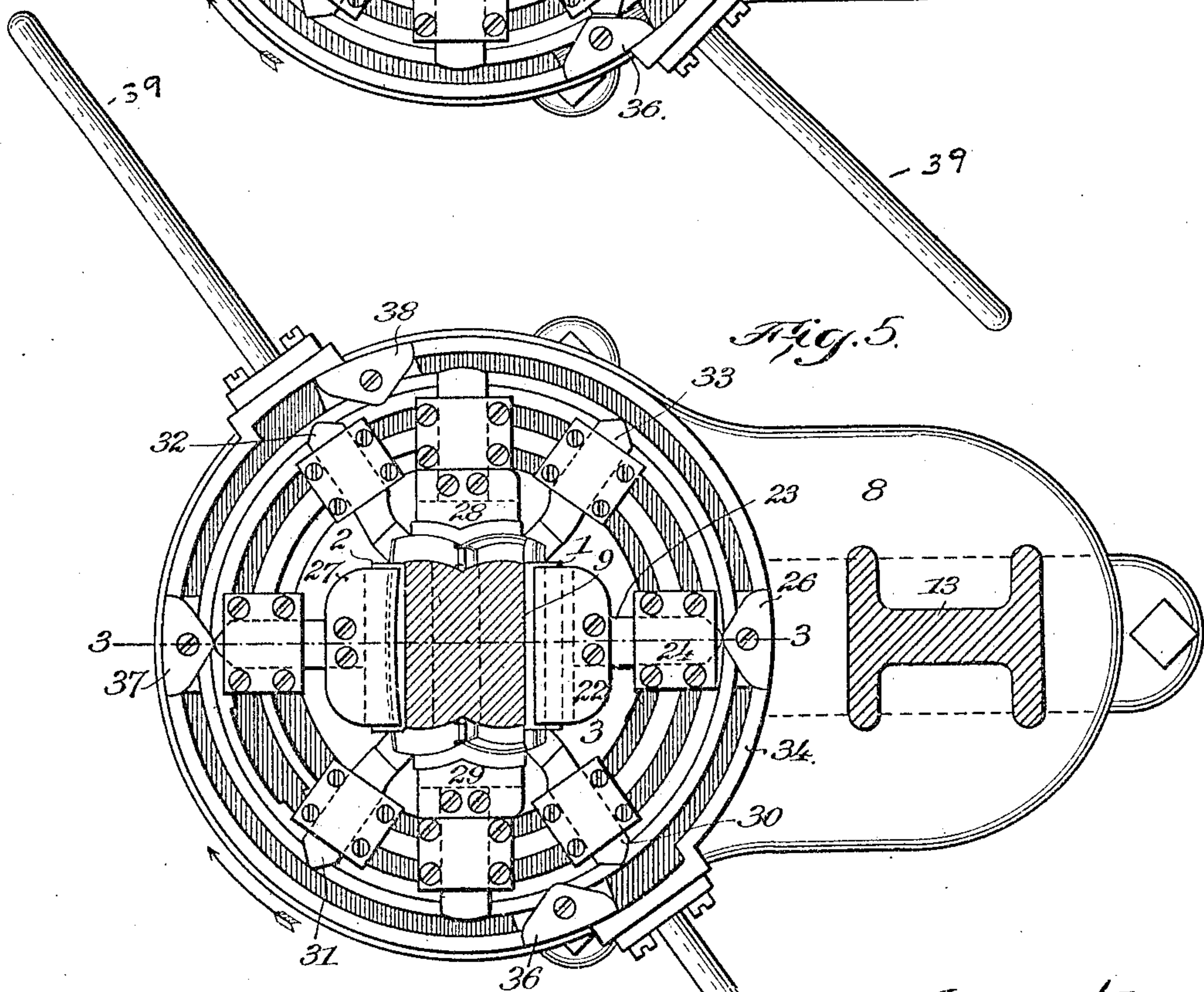
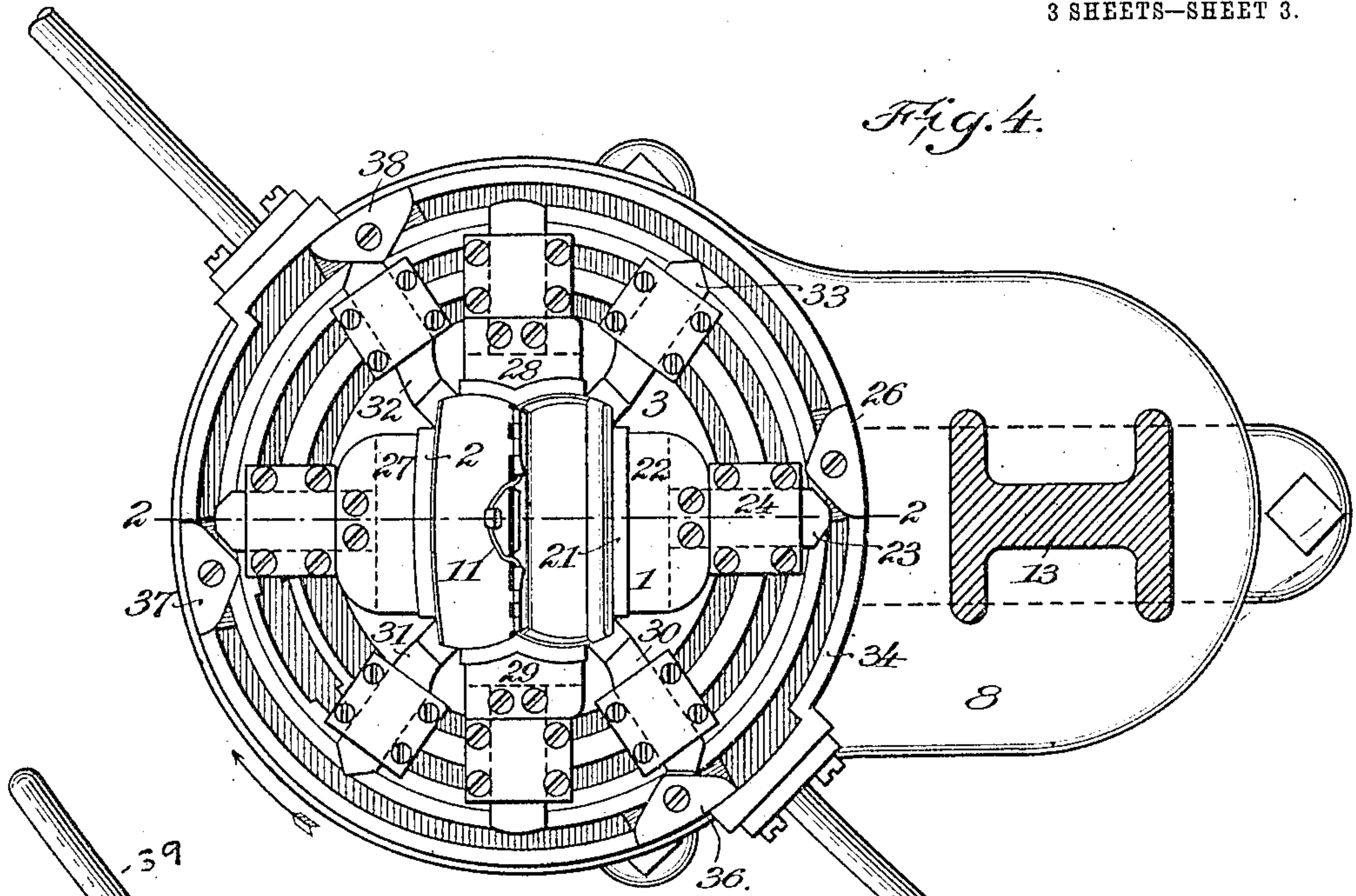
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

ADOLPH AXELL, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO WILTON E. DRAKE, OF BOSTON, MASSACHUSETTS.

EYEGLOSS-CASE-COVERING MACHINE.

No. 908,672.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed June 12, 1902, Serial No. 111,428. Renewed October 14, 1908. Serial No. 457,750.

To all whom it may concern:

Be it known that I, ADOLPH AXELL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Eyeglass-Case-Covering Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in machines for covering eyeglass cases.

Eye-glass cases are now very generally made of a sheet metal box and lid hinged together, covered on the outside with leather and on the inside with plush, and so far as I am advised of the state of the art, such cases have always heretofore been covered and lined by hand, the operation being tedious and expensive, and subject to the defects incident to occasional lack of skill or care of the operator.

The object of the present invention is to produce a machine for covering such cases, which will materially reduce the expense of labor and improve the quality of the product, besides having other advantages apparent to those skilled in the art.

To the above ends the present invention consists in the devices and combinations of devices hereinafter described and particularly defined in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a machine embodying my invention, Fig. 2 is a sectional elevation taken on the line 2—2 Fig. 4, showing the plunger; Fig. 3 is a sectional elevation on the line 3—3 Fig. 5, also showing the plunger; Fig. 4 is a plan of the die and associated parts in one position, and Fig. 5 is a plan of the die and associated parts in another position.

My invention contemplates, in its broader aspects, the use of a die to receive the covering material and case and a plunger to press the case and covering material together. It is immaterial to my invention what shape, form or relative arrangement of these parts is employed.

The die for receiving the covering material and case of the illustrated embodiment of my invention consists of two pieces of

rubber marked respectively 1 and 2 shaped to conform to the outside of the lid and bottom of the box of the case. These two pieces 1, 2, are separated slightly along the medial line of the die as illustrated particularly in Fig. 2 to afford a space to receive a surplus fold of the material as shown. This affords a convenient arrangement for providing the material necessary to extend around the back of the box when the lid is closed. The parts of this die are secured to the plate 3 by means of screws 4 passing up through the plate and being threaded into washers or frame 5 embedded in the rubber of the dies. The plate 3 is secured to a plate 6 by means of screws 7 which plate 6 is mounted upon the base 8 of any convenient form of press.

The plunger 9 provided with the cavity 10 to receive the spring 11 of the case is mounted upon a vertical slide 12 carried by the over-hanging frame 13 of the press in any suitable or convenient way. Means are provided for forcing the plunger downward and any convenient means may be employed for this purpose such as the toggle levers 14 pivoted at their opposite ends to the slide 12 and a stationary part of the frame of the machine. A lever 15 pivoted to the center of the toggle and also pivoted to connecting rod 16 operates to straighten the toggle to cause the plunger 9 to be forced down into contact with the work. The upper end of the toggle is preferably pivoted to an adjustable support 17 secured in place upon the upper part of the frame of the machine by a bolt 18 and capable of being adjusted vertically, when the bolt 18 is loosened, by means of the bolt 19. The spring 20 attached at its lower end to the slide 12 and at its upper end to a stationary part of the frame of the machine affords a convenient means for lifting the plunger 9 when the toggle is broken. It is to be observed that the die corresponds in shape to the contour of the box and lid adapted to be forced therein, so that the die may be said to have bending surfaces for bending up the covering material at the edges of the box and lid.

The above described arrangement is such that a piece of covering material such as leather may be laid in the die, having a fold extended down into the space between the parts 1 and 2 of said die, then the out-

side of the lid and the bottom of the box being covered with any suitable paste or adhesive material, the box, the lid being opened, is laid down in the die, the handle 5 15 is then depressed straightening the toggle and causing the plunger to descend to engage the inside of the box and lid of the eye-glass case, thereby pressing the box firmly against the die which results in se- 10 curely attaching the covering material to the outside of the box and lid.

It is not material to my invention that the die should be made of rubber as other materials may be employed for this purpose but 15 I prefer to use rubber as it readily adapts itself to the slight variations in the shapes of the eye-glass cases. I believe I am the first to use a die and plunger for securing covering material upon boxes or cases of 20 irregular form in which the die is formed approximately or exactly to fit the outer surface of the article to be covered.

While I have thus described my invention as applicable to the covering of boxes with 25 covering material it is to be understood that my invention as thus far described is not limited to the covering of boxes but might be advantageously employed in the lining of boxes by placing the box in the die, covering 30 its inside with cement, and laying thereon the lining material. My invention also contemplates devices for turning the edges of the covering over the edges of the case so as to attach it to the inside of the case. In the 35 illustrated embodiment of my invention these means comprise resilient lips 21 upon the die and means for turning over the lips 21 to bend the covering material down over the edges of the case. The folder 22 attached 40 to the slide 23 mounted in the guide 24 is adapted when slid inwardly to engage the upwardly extended lip 21 at the front edge of the box and to bend such lip over moving it from the position shown in Fig. 2 to the 45 position shown in Fig. 3 whereby the lip will engage and press the edge of the covering material down upon the front edge of the box. A spring 25 normally acts to hold the slide 23 in its retracted position and a cam 50 26 acts, when moved as hereinafter described to move the slide 23 inwardly to cause the folder to operate upon the upwardly extended edge of the die.

The folder 27 engages and folds over the 55 edge of the die at the front edge of the lid being similarly mounted in all respects to the folder 22. The folders 28 and 29 engage and operate to fold the edges of the material over the ends of the case, being arranged in 60 the same manner as the folder 22 above described. Similar folders 30, 31, 32 and 33 are arranged to operate upon the covering material at the corners of the case to engage and fold over such portions of the covering 65 material. The rotatable ring 34 is mounted

upon the plate 6 being provided with screws 35 which enter a corresponding groove in the periphery of the plate 6 to hold the same in position. Handles 39 are fixed to the ring 34 70 by which it may be turned. Cams 36, 37 and 38 are mounted upon this ring 34 in such positions that they operate in the following manner as the ring 34 is turned by the handles 39: The cams 26 and 37 first engage the 75 slides of the folders 22 and 27, it being understood that the plunger has descended to its lowermost position engaging and holding the case in the die, and the cams unereby force in the lips of the die at the front of the case and at the front of the lid thereby fold- 80 ing over the covering material at what might be called the sides of the case. Then the cams 36 and 38 engage the slides of the folders 28 and 29 and move them in to fold over the covering material at the ends of the case. 85 After this has been done the cams 26, 36, 37 and 38 engage and operate the slides of the folders 30, 31, 32 and 33 respectively thereby folding the covering material over the corners of the case. 90

Certain features of my invention it will clear to those skilled in the art, are not limited in their utility to the covering of eye- 95 glass cases but might also be used for lining eye-glass cases, or for covering or lining other things, and as to such features, therefore, I do not intend that the claims directed thereto should be limited to a machine for covering eye-glass cases although such use is 100 the principal use for which my invention is adapted.

I do not intend that the claims, except where they are limited by their express terms to the specific construction illustrated in the 105 accompanying drawings and described in the foregoing description, should be limited to such construction, as my invention is, I believe, broad and generic in character, and capable of embodiment in a wide variety of 110 forms.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

1. A machine for covering eye-glass cases, having, in combination, means for holding 115 the case and covering material, with the covering material bent upward about the sides of the case and a plurality of successively acting devices for turning different portions of the edges of the material inward 120 over different portions of the edges of the case, substantially as described.

2. A machine for covering eye-glass cases, having, in combination, a die provided with a space to receive a surplus portion of cov- 125 ering material, and means for pressing the case against the cover in the die except at said space, substantially as described.

3. A machine for covering eye-glass cases, having, in combination, a die shaped to fit 130

the outside of the box and lid, provided with upwardly extended lips to bend up the outwardly extended portions of the covering material and means for folding over the lips to secure the margins of the covering material on the inside of the box and lid, substantially as described.

4. A die for covering eyeglass cases, having a bending surface extending beyond the edge of the case to bend up the covering material at the edge of the case, substantially as described.

5. A machine for covering eye-glass cases, having, in combination, a covering die having a bending surface extending beyond the edge of the case to bend up the covering material at the edge of the case, and means for pressing the bent up edge of covering material down on the upper surface of the case, substantially as described.

6. A machine for covering eye-glass cases, having, in combination, a die, a plunger for holding a case and covering material in the die; folding devices for folding over the edge of the covering material, slides carrying the folding devices, a ring surrounding the slides, and cams carried by the ring and arranged to engage the slides to actuate the same when the ring is rotated, substantially as described.

7. A machine for covering eye-glass cases, having, in combination, a die having two portions conforming to the body and the cover of a case respectively when in open position, and a space between the two parts to receive a fold of the covering material to cover the hinge, and a plunger acting to force the case against the covering material

in the die except at said space, substantially as described.

8. A machine for covering eye-glass cases, having, in combination, a die having a box receiving part and a lid receiving part, with a space between and a plunger to engage the central part of the box and lid, substantially as described.

9. A machine for covering eye-glass cases, having, in combination, an elastic die conforming to the outside of a case and provided with flexible lips extending beyond the edge of the case, a plunger for pressing the case against the die, and means for pressing inward the flexible lips to bend the covering material over the upper surface of the case, substantially as described.

10. A machine for covering eye-glass cases, having, in combination, a die for receiving a case and a plunger for pressing the case against the die, the plunger being recessed near its middle portion to avoid contact with the hinge of the case, substantially as described.

11. A machine for covering eye-glass cases, having, in combination, a rubber die conforming to the outside of the case, a plunger for holding the case against the die, laterally movable devices for folding inward the covering material at the edge of the case, and means for actuating the said devices, substantially as described.

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

ADOLPH AXELL.

Witnesses:

FRED O. FISH,

ALFRED H. HILDRETH.