

No. 683,309.

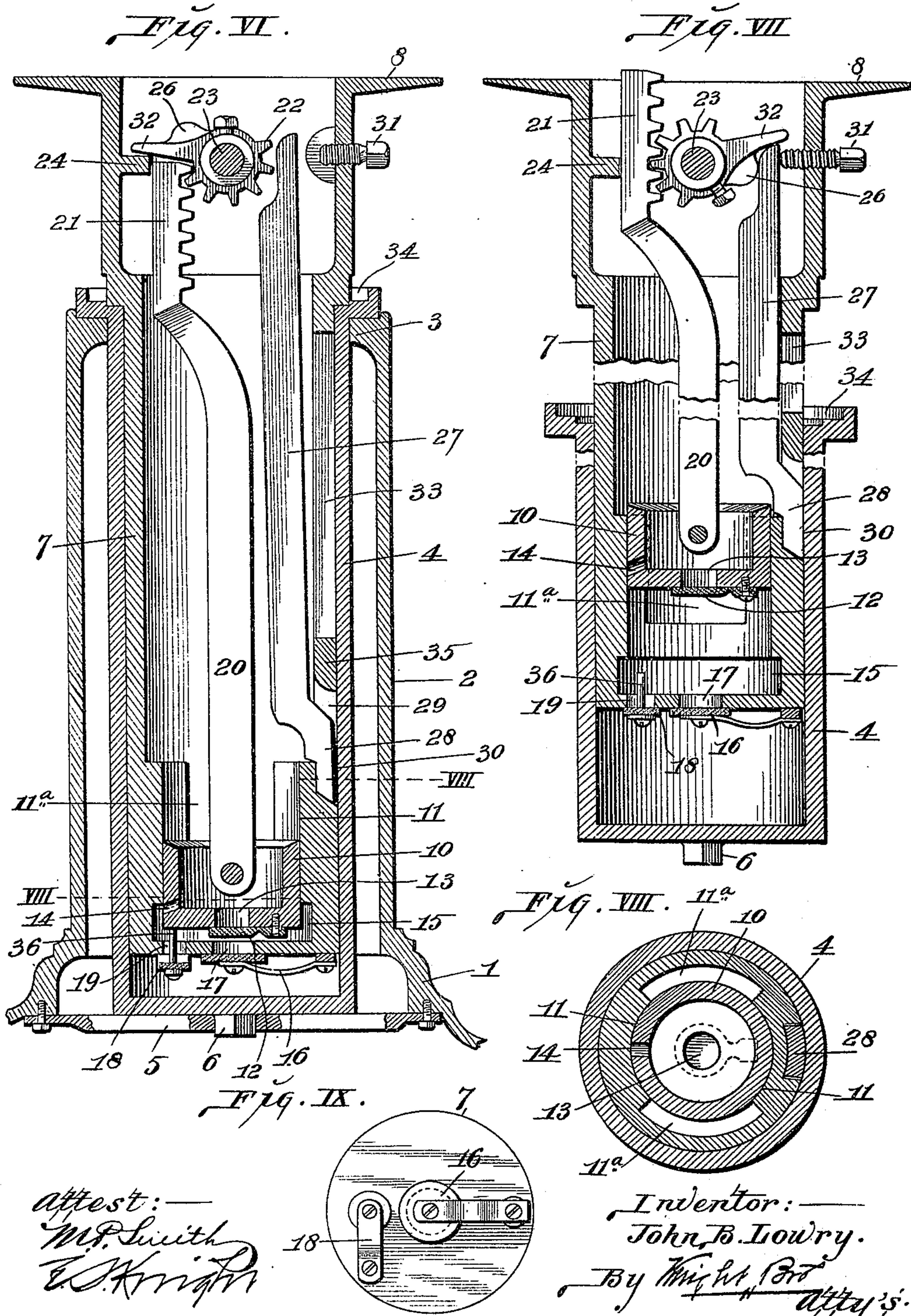
Patented Sept. 24, 1901.

J. B. LOWRY.
BARBER CHAIR.

(Application filed Mar. 1, 1901.)

(No Model.)

3 Sheets—Sheet 2.



No. 683,309.

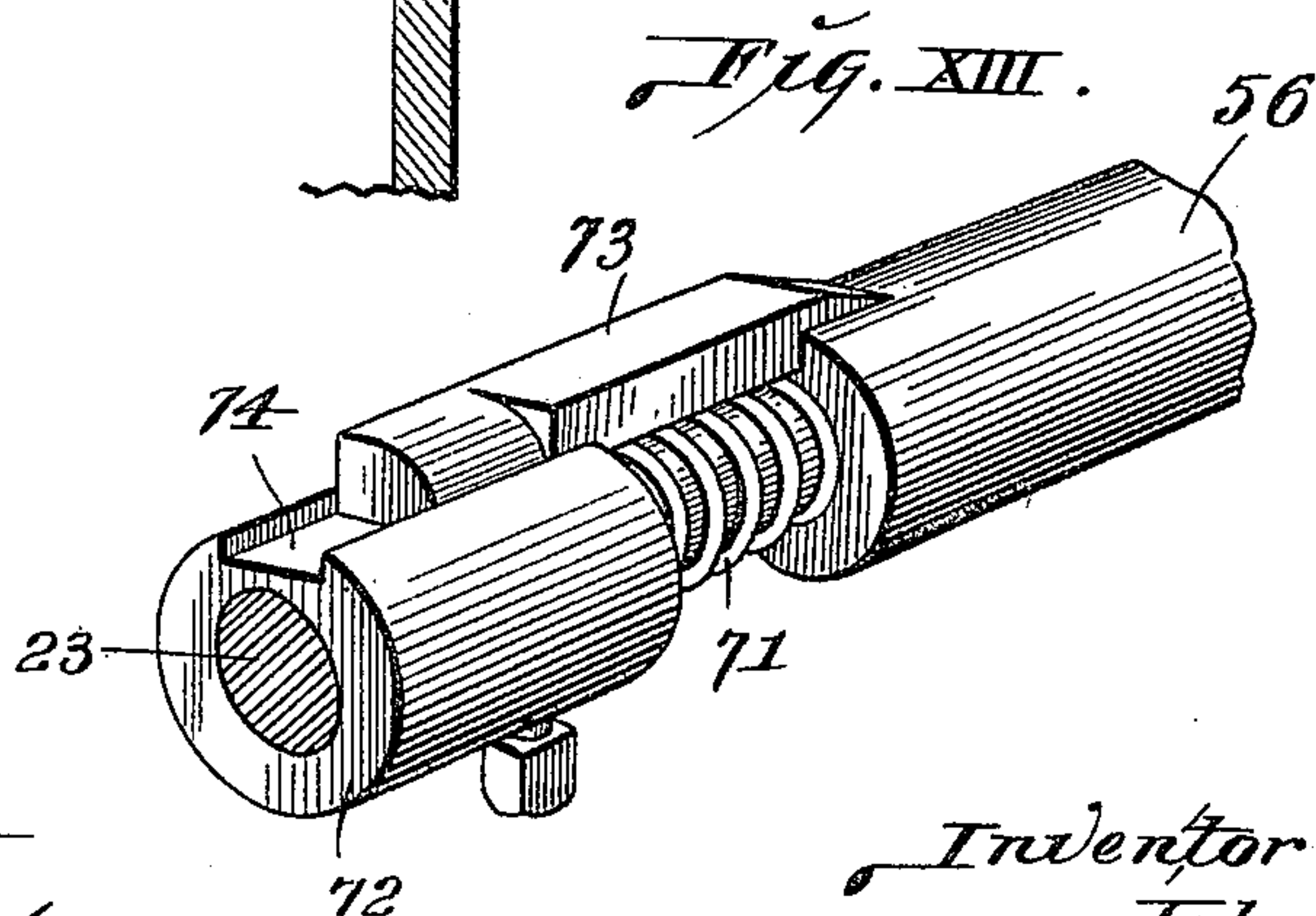
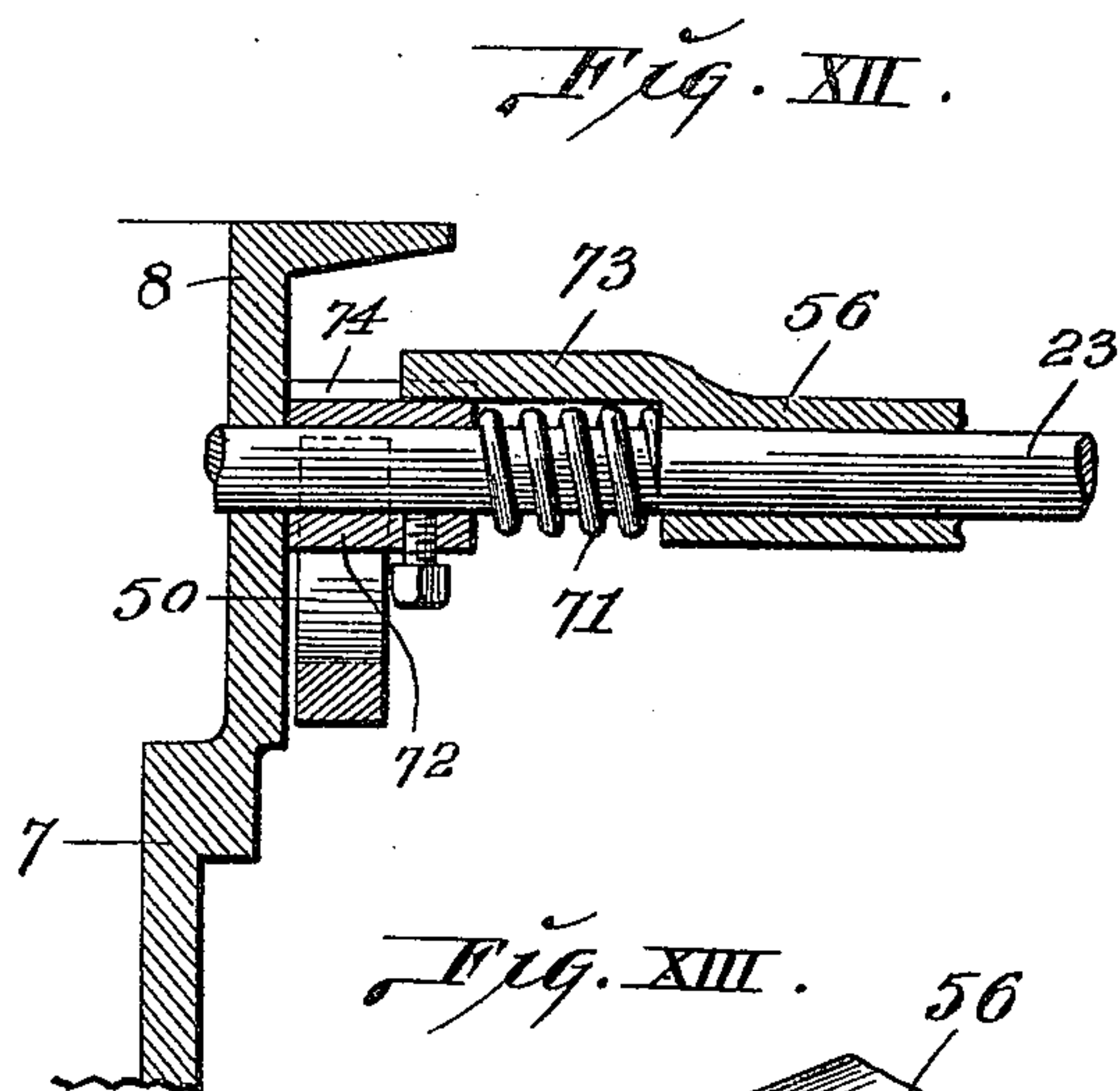
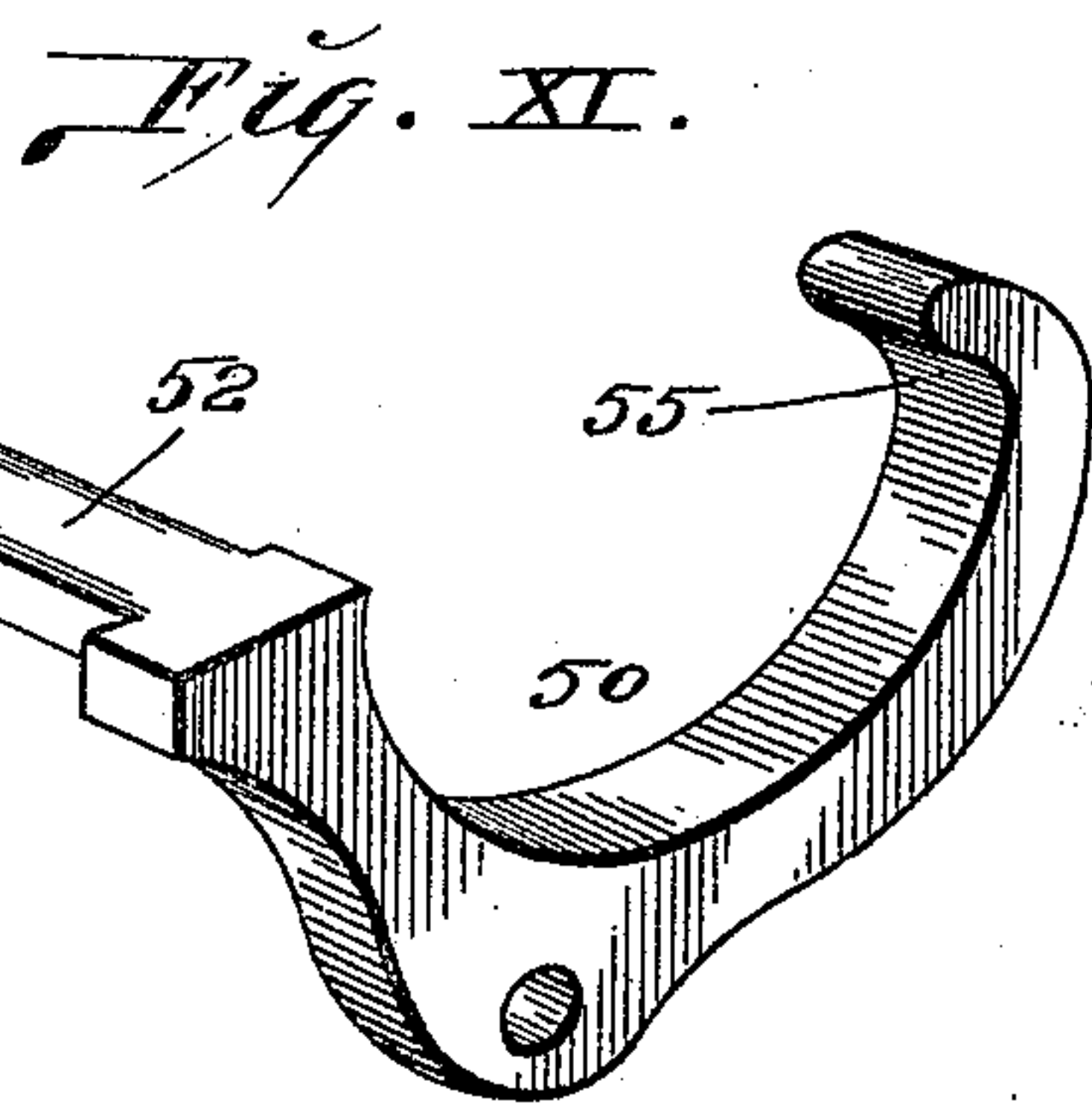
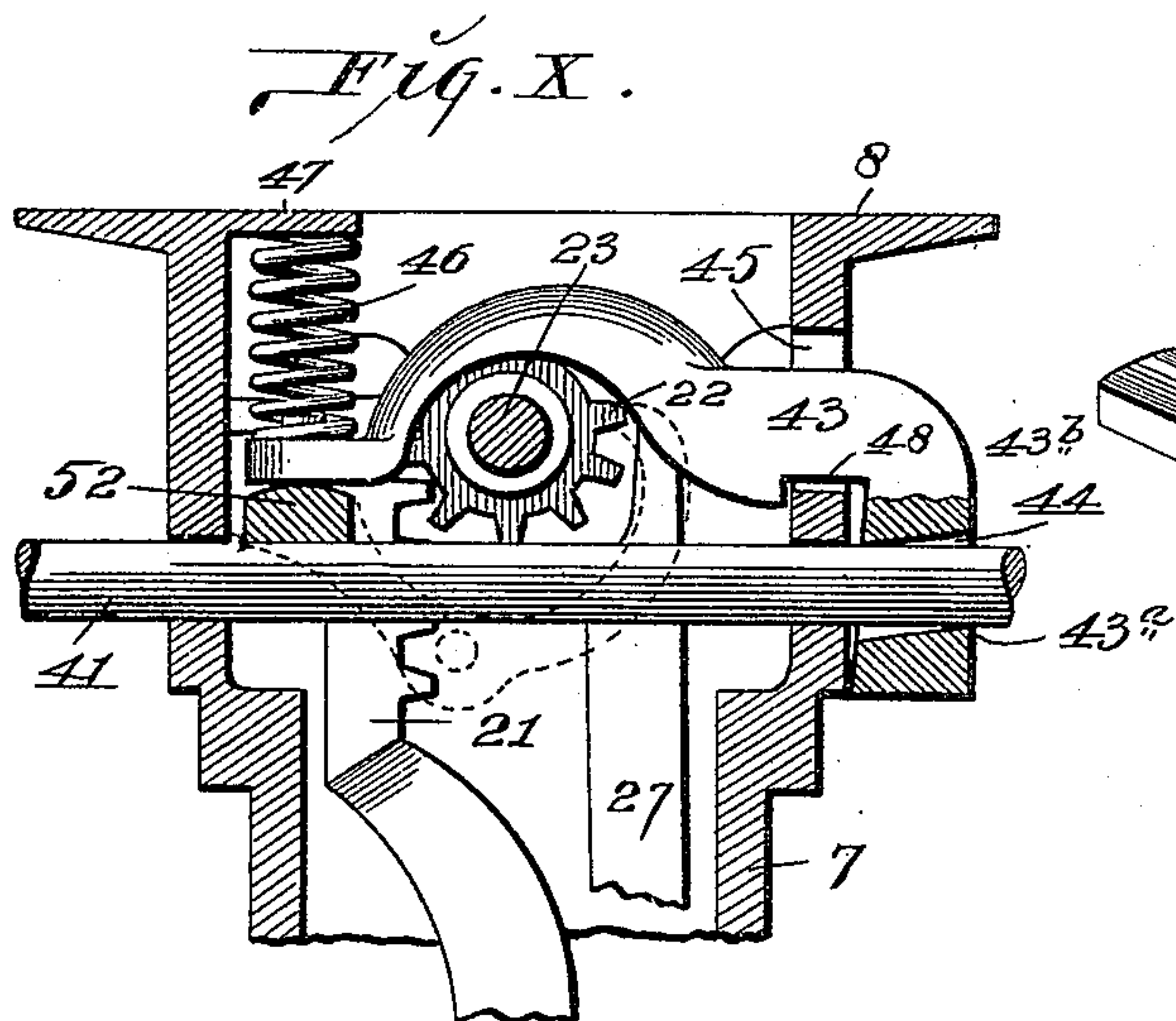
Patented Sept. 24, 1901.

J. B. LOWRY.
BARBER CHAIR.

(Application filed Mar. 1, 1901.)

(No Model.)

3 Sheets—Sheet 3.



Attest:—
M. Smith
E. S. Knight

Inventor:—
John B. Lowry.
By Wright & Bro
attys.

UNITED STATES PATENT OFFICE.

JOHN B. LOWRY, OF ST. LOUIS, MISSOURI, ASSIGNOR TO AUGUST KERN
BARBER SUPPLY COMPANY, OF SAME PLACE.

BARBER-CHAIR.

SPECIFICATION forming part of Letters Patent No. 683,309, dated September 24, 1901.

Application filed March 1, 1901. Serial No. 49,448. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. LOWRY, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Barber-Chairs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 The object of my present invention is to construct in a simple and effective manner a barber-chair of the class in which a liquid (preferably oil) is pumped from one chamber into another to elevate the seat of the chair
15 and is allowed to flow back to lower the seat.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side view of my improved chair.
20 Fig. II is a detail elevation, the operating-shaft being shown in section. Fig. III is a plan view with the seat removed. Fig. IV is a detail section taken on line IV IV, Fig. I. Fig. V is a detail section taken on line V V,
25 Fig. IV. Fig. VI is a vertical section through the cylinders of the chair. Fig. VII is a like view, part broken away and showing the parts in a different position from that shown in Fig. VI. Fig. VIII is a horizontal section taken
30 on line VIII VIII, Fig. VI. Fig. IX is a bottom view of the inner cylinder. Fig. X is a detail vertical section taken on line X X, Fig. III. Fig. XI is a perspective view of the lever that moves the foot-rest clamp. Fig. XII
35 is a detail vertical section showing part of the inner cylinder, part of the operating-shaft, and the inner end of the sleeve that moves the lever shown in Fig. XI. Fig. XIII is a detail perspective view showing part of the
40 operating-shaft and the lever-moving sleeve.

1 represents the base of the chair, from which rises a hollow stem 2, having an in-turned flange 3 at its upper end. Within the stem 2 fits a cylinder 4, the upper part of
45 which fits snugly against the flange 3 of the stem and the lower part of which rests against a plate 5, secured to the base 1, as shown in Fig. VI, the cylinder having a non-circular lug 6 fitting in a perforation in the plate 5
50 and which holds the cylinder from turning. Within the cylinder 4 is another cylinder

having a flange 8 on its upper end, upon which the seat 9 of the chair rests and to which the seat is secured.

10 represents a plunger fitting snugly in the
55 lower part 11 of the inner cylinder and adapted to reciprocate vertically therein. To the bottom of the plunger is secured a flap-valve 12, closing when seated a port or opening 13. In one side of the plunger there is formed a
60 passage 14, which when the plunger is in its lowest position forms a communication between the hollow interior of the plunger and an enlargement 15 of the bore in the part 11
65 of the inner cylinder. To the bottom of the inner cylinder there is secured a flap-valve 16, adapted when seated to close an opening 17 in the bottom of the cylinder. There is
70 also secured to the bottom of the inner cylinder a flap-valve 18, adapted when seated to close an auxiliary opening 19 in the bottom
of the cylinder.

20 represents a link connected to the plunger 10 and the upper end of which is provided with a rack 21, that is engaged by a
75 pinion 22, secured to an operating-shaft 23; the rack being held into engagement with the pinion by a lug 24, formed on the inside of the upper end of the inner cylinder.

25 represents a handle or lever secured to
80 the outer end of the shaft 23. To raise the seat of the chair, the operator takes hold of the handle 25 and rocks the shaft 23 back and forth by moving the handle in both directions from the vertical position shown by
85 dotted lines A, Fig. I, toward but not to the position shown by the full lines C, knowledge of the amount of movement of the lever necessary to elevate the chair being soon acquired by practice. This rocking of the shaft
90 causes the plunger 10 to be reciprocated in the lower portion of the part 11 of the inner cylinder, the plunger not being lowered far enough for the opening 14 to communicate with the bore 15 and not being raised high
95 enough for the bottom of the plunger to be elevated above the lower edge of the spaces 11^a in the part 11 of the cylinder. As the plunger is thus reciprocated the upward movement of it causes the oil to pass through
100 the valve 12, and the downward movement of the plunger causes the oil to pass through

the valve 16 into the space between the two cylinders, which effects the elevation of the inner cylinder and the seat of the chair. When the seat has been raised to the desired height, the handle 25 is moved to the position shown by dotted lines B, Fig. I, thus causing a cam 26 on the pinion 22 to come against the upper end of a lever 27, as shown in Fig. VII. The lever 27 fits within the inner cylinder and its bent lower end 28 fits in a slot 29 in the inner cylinder, this end of the lever being situated between the part 11 of the inner cylinder and the inside wall of the outer cylinder, as shown at 30, Figs. VI and VII. When the upper end of the lever is forced over by the cam 26, it causes the lower end of the lever to bind between the outer cylinder and the part 11 of the inner cylinder, and the two cylinders are thus locked together to prevent the rotation of the seat when it has been adjusted to the desired elevation.

The movement of the handle between positions A and B has no effect on the vertical position of the seat, inasmuch as the plunger is passing through that portion of the part 11 of the cylinder that has the spaces 11^a, so that when the seat is elevated to the desired height it can be locked and unlocked, and the foot-rest can be locked and unlocked without changing the elevation of the seat.

A set-screw 31, fitted in the upper end of the inner cylinder opposite the upper end of the lever 27, may be employed to limit the outward movement of the upper end of the lever and prevent too much strain being exerted on the lower end of the lever. The pinion 22 is provided with an arm 32, adjacent to the cam 26, and which comes against the upper end of the lever 27 and arrests the movement of the shaft 23 when the handle 25 has reached the position shown by dotted lines B, Fig. I.

33 represents a slot in the inner cylinder, through which any liquid that escapes into the cup 34 in the upper end of the outer cylinder may leak back into the inner cylinder when the latter is raised far enough from the position shown in Fig. VI to permit the slot 33 to communicate with the cup. I have shown a portion 35 of the inner cylinder between the slots 29 and 33, which serves to prevent the lever 27 from dropping out of the cylinder should the parts be handled in an inverted position before the seat of the chair is placed in position, and likewise prevents the lever from moving endwise far enough in case the chair should be inverted in handling even after the seat is applied to permit the end 28 of the lever to move out of its pocket between the outer cylinder and the upper end of the part 11 of the inner cylinder.

When it is desired to lower the seat of the chair, the handle or lever 25 is moved to the position shown in full lines, Fig. I, this movement of the handle being arrested by the arm 32 coming against the lug or stop 24, as

shown in Fig. VI. When the handle is moved to this position, the valve 18 is opened by the bottom of the plunger coming against a pin 36, projecting upwardly from the valve into the bore 15. The valve 18 being thus opened and the port 14 forming a communication between the bore 15 and the interior of the inner cylinder, the liquid will pass from the outer cylinder to the inner cylinder, allowing the latter to descend with the seat of the chair, and when they have descended far enough the operator simply moves the handle upwardly to close the port 14, and if he desires to lock the cylinders together to prevent the rotation of the seat he throws the handle clear over to its other position (shown by dotted lines B, Fig. I) to move the lever 27, as explained.

40 represents the foot-rest of the chair. To hold the back of the chair and the foot-rest in their adjusted tilted position, I employ a rod 41, connected to the foot-rest by means of a link 42. This rod passes through the upper end of the inner cylinder, as shown in Fig. X, and for the purpose of holding it when the seat and foot-rest have been tilted to the desired adjustment I employ a clamp-arm 43, having a vertical outer end perforated at 44 for the passage of the rod. The arm fits in a slot 45, formed in the upper end of the inner cylinder and from which the arm extends inwardly in a horizontal direction, except that it is curved upwardly and then downwardly again, so that its movement is not interfered with by the shaft 23, its inner end being held depressed by a spring 46, located between the end of the arm and a flange or lip 47 on the upper end of the cylinder. The arm is notched, as shown at 48, to fit over the bottom wall of the slot 45. The pressure of the spring 46 causes the corners 43^a and 43^b of the arm (the perforation 44 being made on an inclination) to bite the rod 41 and hold it to any adjustment to which it may be moved. When it is desired to tilt the foot-rest and back of the chair, the inner end of the arm 43 is raised to relieve the clamping action on the rod 41 by means of a lever 50. (Shown in Fig. XI.) This lever is pivoted at 51 (see Fig. I) to the upper end of the inner cylinder, and it has a horizontal extension 52, that projects through an opening 54 in the upper end of the inner cylinder, its inner end extending to a position beneath the inner end of the arm 43, as shown in Fig. X. The end of the lever 50 opposite that carrying the extension 52 is curved upwardly and inwardly, as shown at 55, Figs. II and XI.

Surrounding the shaft 23 is a sleeve 56, the outer end of which is engaged by a bell-crank lever 67, (see Fig. IV,) pivoted at 68 to the head of the handle 25. The upper end of the bell-crank lever is engaged by the inner end of a rod 69, that passes through the handle 25 and the outer end of which is provided with a button 70. When the parts are

in their normal positions, the button 70 is a short distance from the end of the handle, and the parts are held in this normal position by a spring 71, (see Fig. XII,) surrounding the shaft 23 between the inner end of the sleeve 56 and a collar 72, secured to the shaft. The inner end of the sleeve is provided with a finger 73, that fits and works in a groove 74, formed in one side of the collar 72. (See Figs. XII and XIII.) When the parts are in their normal position, the finger 73 is not in the path of the lever 50, so that the lever or handle 25 can be moved to any of its positions mentioned without the lever 50 being engaged by the finger 73 of the sleeve. When it is desired to tilt the back and foot-rest of the chair, downward pressure is exerted on the button 70 of the rod 69, which causes the lever 67 to force the sleeve 56 inwardly against the pressure of the spring 71, thus bringing the finger 73 of the sleeve into the path of the lever 50, as shown in Fig. II. When this is done, the lever is moved to revolve the shaft and the sleeve 56 with it in the direction of the arrow, Fig. II, which causes the lever 50 to be moved to the position shown by dotted lines, Fig. II, the inner end of the lever moving upwardly lifting the inner end of the arm 43 against the pressure of the spring 46, and thus relieves the binding action of the arm on the rod 41, so that the rod can slide in or out as the back and foot-rest are tilted to the desired position, and when shifted the shaft and sleeve are moved by the handle 25 in the reverse direction, and pressure being removed from the button 70 the sleeve 56 is pushed outwardly by the spring 71, thus moving the finger 73 of the sleeve out of the path of the lever 50.

80 represents a stop on the head of the cylinder 7, against which the finger 73 impinges to stop the rotation of the shaft 23 when the lever 50 has been moved to release the rod 41.

I claim as my invention—

1. In a barber-chair, the combination of an outer cylinder suitably supported, an inner cylinder having a valved bottom, a plunger fitting within the inner cylinder and having a valved bottom, an operating-shaft to which said plunger is connected, and a lever fitting between said outer and inner cylinders and adapted to be moved by the turning of said shaft to lock the inner cylinder from rotation, substantially as set forth.

2. In a barber-chair, the combination of an outer cylinder suitably supported, an inner cylinder having a valved bottom, a plunger fitting in the inner cylinder and having a valved bottom, an operating-shaft, a rack-and-pinion connection between said shaft and plunger, a lever arranged within the inner cylinder and the lower end of which fits between the two cylinders, and a cam carried by said pinion and which is adapted to engage the upper end of said lever, substantially as set forth.

3. In a barber-chair, the combination of an

outer cylinder suitably supported, an inner cylinder having a valved bottom, a plunger fitting within the inner cylinder and having a valved bottom, an operating-shaft journaled in the upper end of the inner cylinder, a rack-and-pinion connection between said shaft and plunger, a lever arranged within the inner cylinder and the bent lower end of which fits in a slot in the inner cylinder and is adapted to exert a binding force between the two cylinders when the lever is moved, a cam on said pinion adapted to move the upper end of said lever, and an arm on said pinion adapted to come against the upper end of said lever, and to limit the movement of the shaft when the cam has moved the lever to lock the cylinders together, substantially as set forth.

4. In a barber-chair, the combination of an outer cylinder suitably supported, an inner cylinder having a valved bottom, a plunger fitting within the inner cylinder and having a valved bottom, an operating-shaft, a rack-and-pinion connection between said shaft and plunger, a lever arranged within the inner cylinder and the lower end of which fits between the two cylinders, a cam on said pinion adapted to engage the upper end of said lever and a set-screw fitted in the upper end of the inner cylinder and which is adapted to arrest the movement of said lever by said cam, substantially as set forth.

5. In a barber-chair, the combination of an outer cylinder, suitably supported, an inner cylinder carrying the seat of the chair, an operating-shaft journaled in the inner cylinder, means connected to the shaft for pumping liquid from the inner cylinder into the outer cylinder, and means operated by the shaft for holding the back and foot-rest of the chair to any desired adjustment, and consisting of a rod connected to the foot-rest and which passes through the upper end of the inner cylinder, a clamping-arm fitting in an opening in the inner cylinder, and the outer end of which is perforated for the passage of said rod, a spring acting to depress the inner end of said arm, a lever pivoted to the inner cylinder and having an extension that projects beneath the inner end of said arm, a spring-actuated sleeve surrounding said shaft and having a finger adapted to be projected into the path of said lever, an operating-handle secured to said shaft, a bell-crank lever pivoted to said handle, and one end of which engages said sleeve, and a rod fitting within the handle the lower end of which bears against the other arm of said bell-crank lever, and the outer end of which projects beyond the end of the handle, substantially as set forth.

6. In a barber-chair, the combination of an outer cylinder suitably supported, an inner cylinder carrying the seat of the chair, an operating-shaft journaled in the inner cylinder, means connected to the shaft for pumping liquid from the inner cylinder into the outer cylinder, and means operated by the shaft

for holding the back and foot-rest of the chair to any desired adjustment, consisting of a rod connected to the foot-rest and which passes through the upper end of said inner cylinder, a clamping-arm fitting in an opening in the inner cylinder, and the outer end of which is perforated for the passage of said rod, a spring acting to depress the inner end of said arm, a lever pivoted to the inner cylinder and having an extension that projects beneath the inner end of said arm, an operating-shaft provided with a handle, and means carried by said shaft and handle for moving the said lever to lift the inner end of the clamping-arm; the perforation in said arm through which said rod passes being inclined to form corners 43^a and 43^b, substantially as set forth.

7. In a barber-chair, the combination of an outer cylinder suitably supported, an inner cylinder carrying the seat of the chair, an operating-shaft journaled in the inner cylinder, means connected to the shaft for pumping liquid from the inner cylinder into the outer

cylinder, and means operated by the shaft for holding the back and foot-rest of the chair to any desired adjustment, and consisting of a rod connected to the foot-rest and which passes through the upper end of the inner cylinder, a clamping-arm fitting in an opening in the inner cylinder and the outer end of which is perforated for the passage of said rod, a spring acting to depress the inner end of said arm, a lever pivoted to the inner cylinder, and having an extension that projects beneath the inner end of said arm, an operating-shaft provided with a handle, and means carried by said shaft and handle for moving said lever to lift the inner end of the clamping-arm, substantially as described.

In testimony whereof I have hereunto set my hand this 26th day of February, 1901.

JOHN B. LOWRY.

In presence of—
E. S. KNIGHT,
M. P. SMITH.