

No. 681,202.

Patented Aug. 27, 1901.

H. L. DE ZENG, JR.
TELESCOPIC MOUNTING FOR GUNS.

(Application filed Dec. 15, 1900.)

(No Model.)

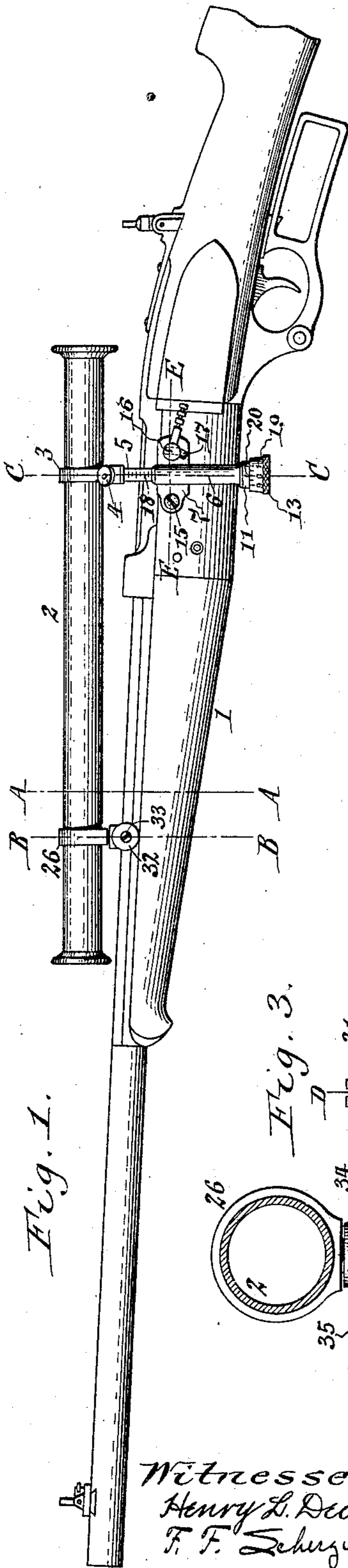


Fig. 1.

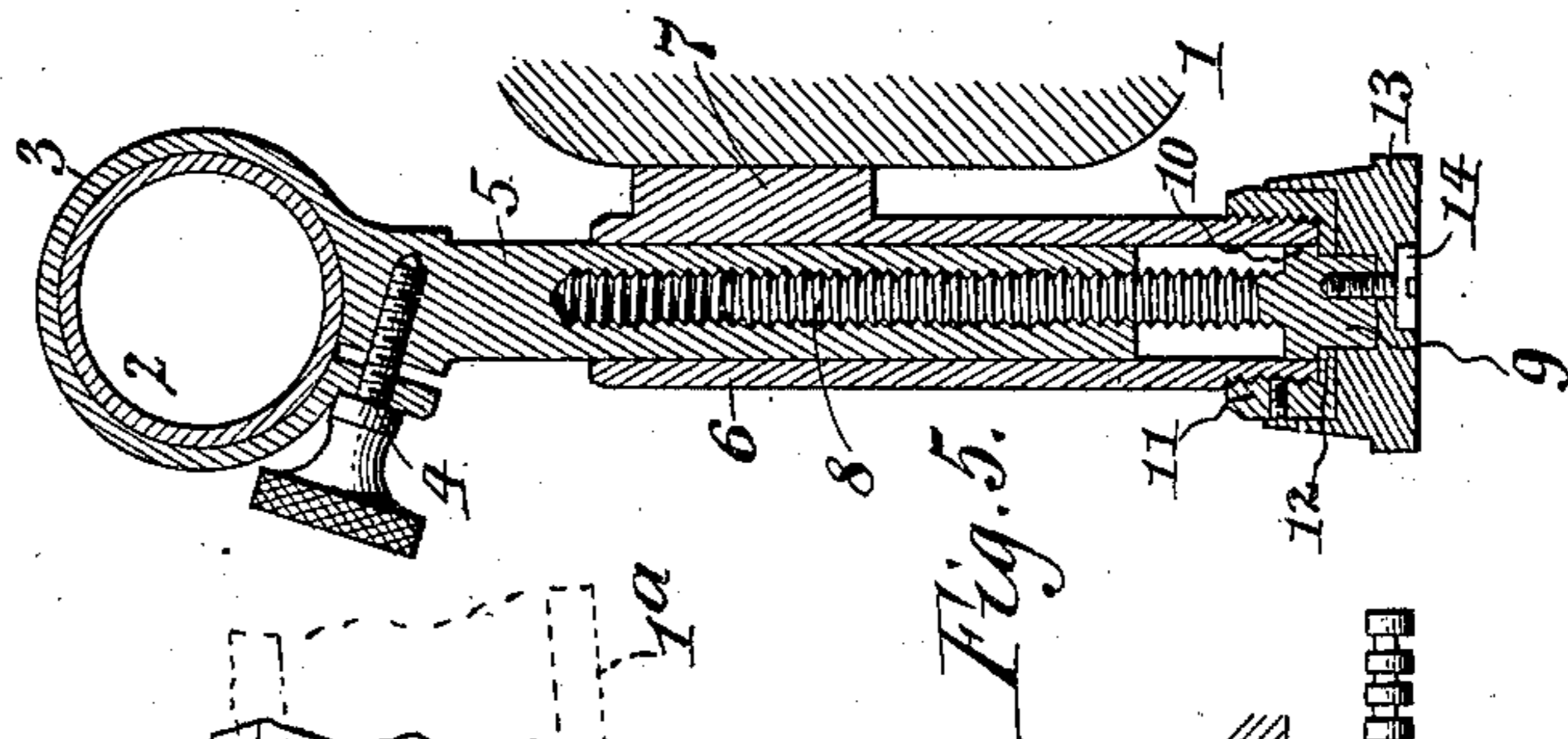


Fig. 5.

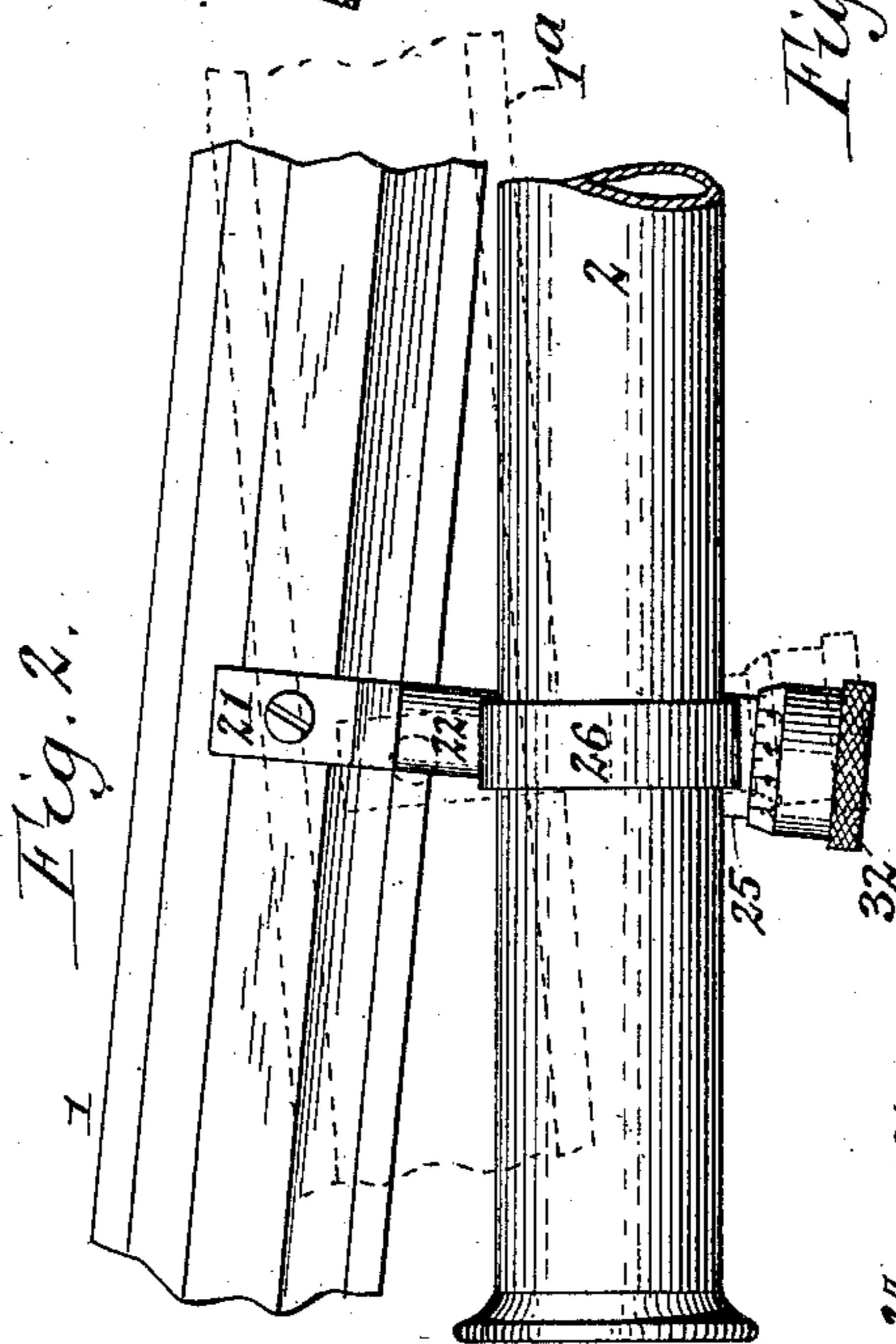


Fig. 2.

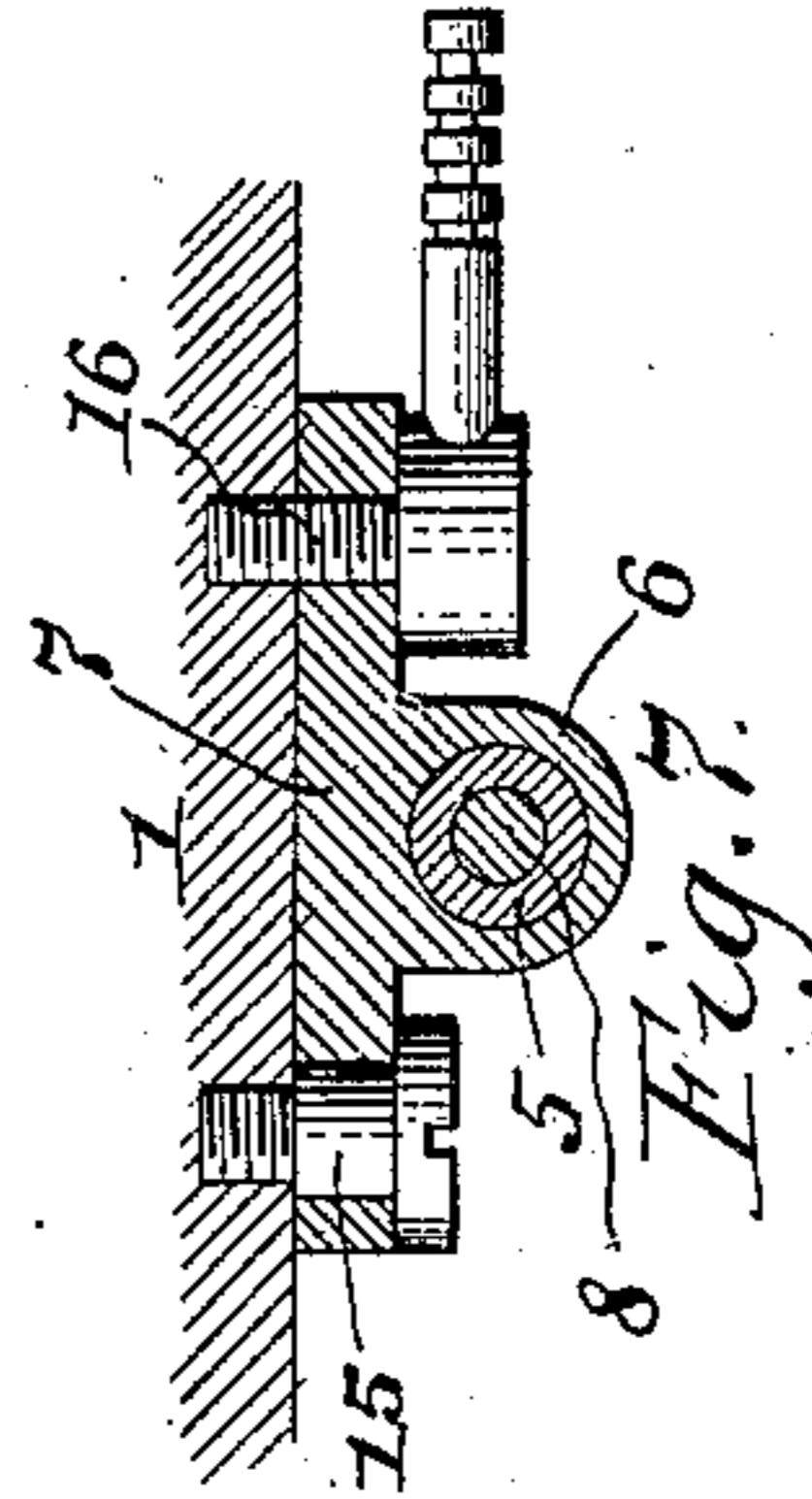


Fig. 7.

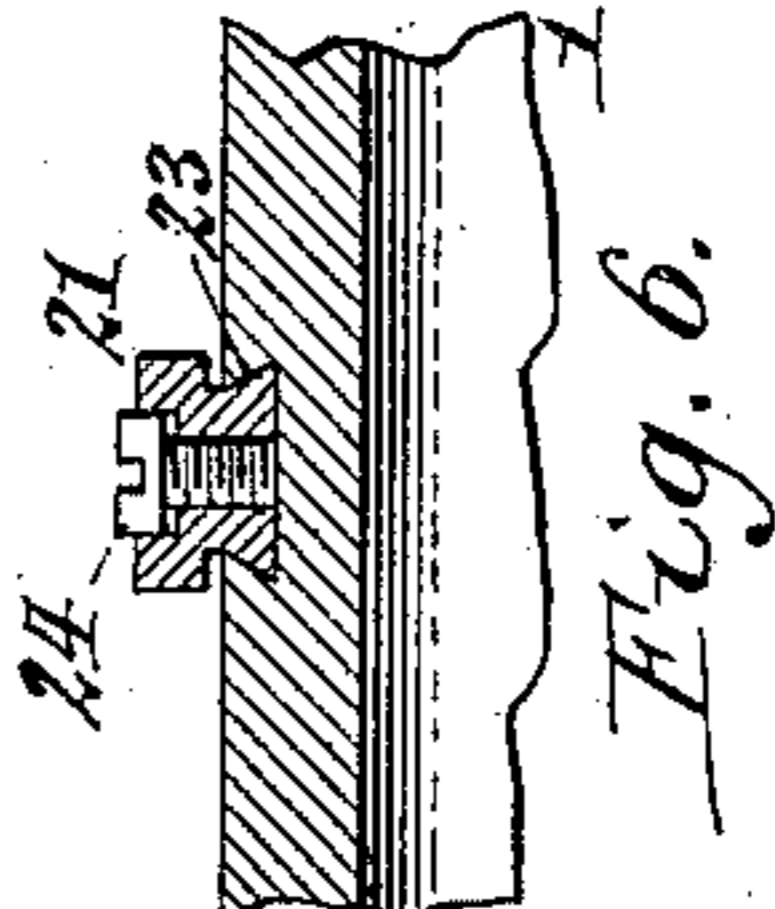


Fig. 6.

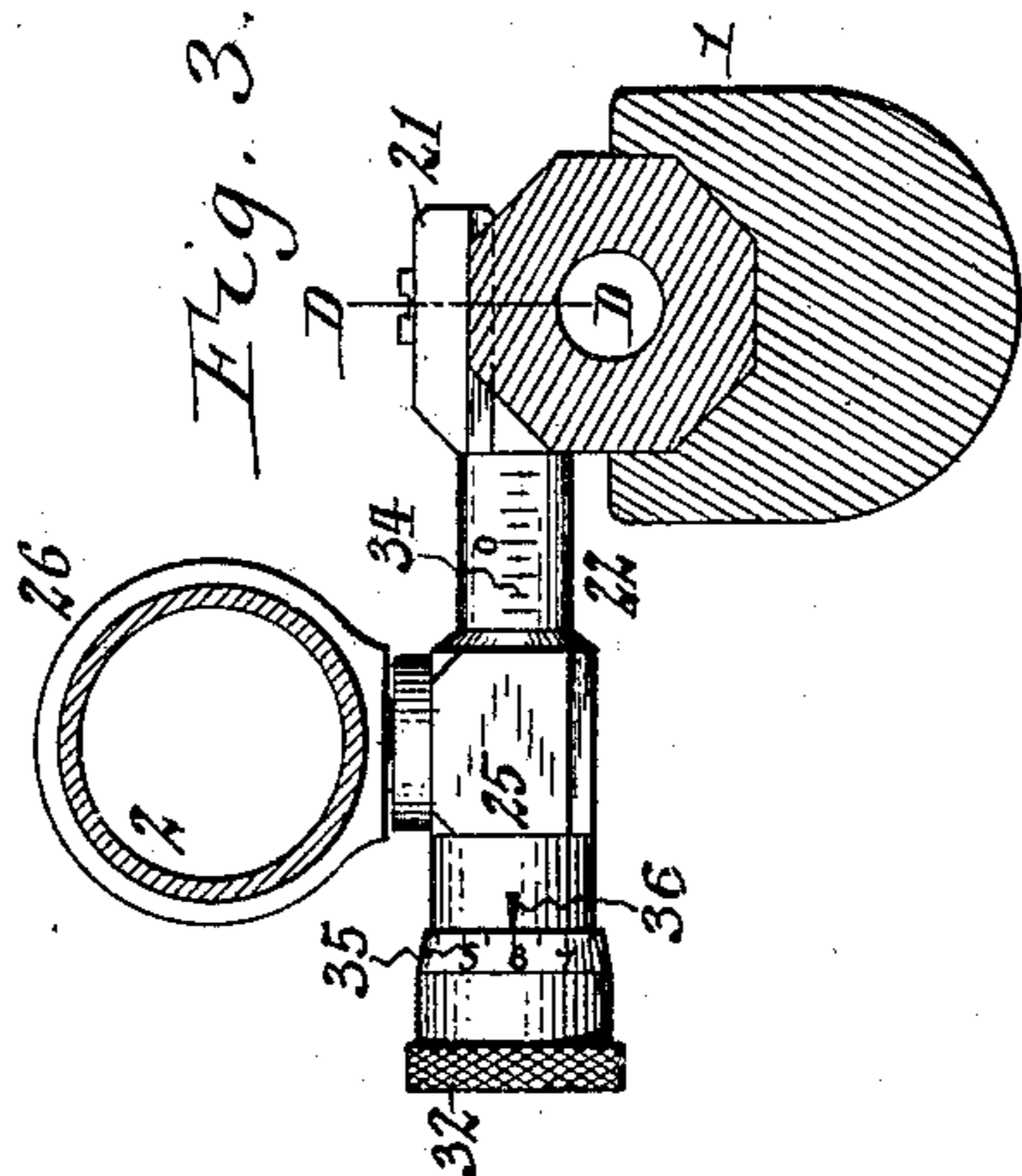


Fig. 3.

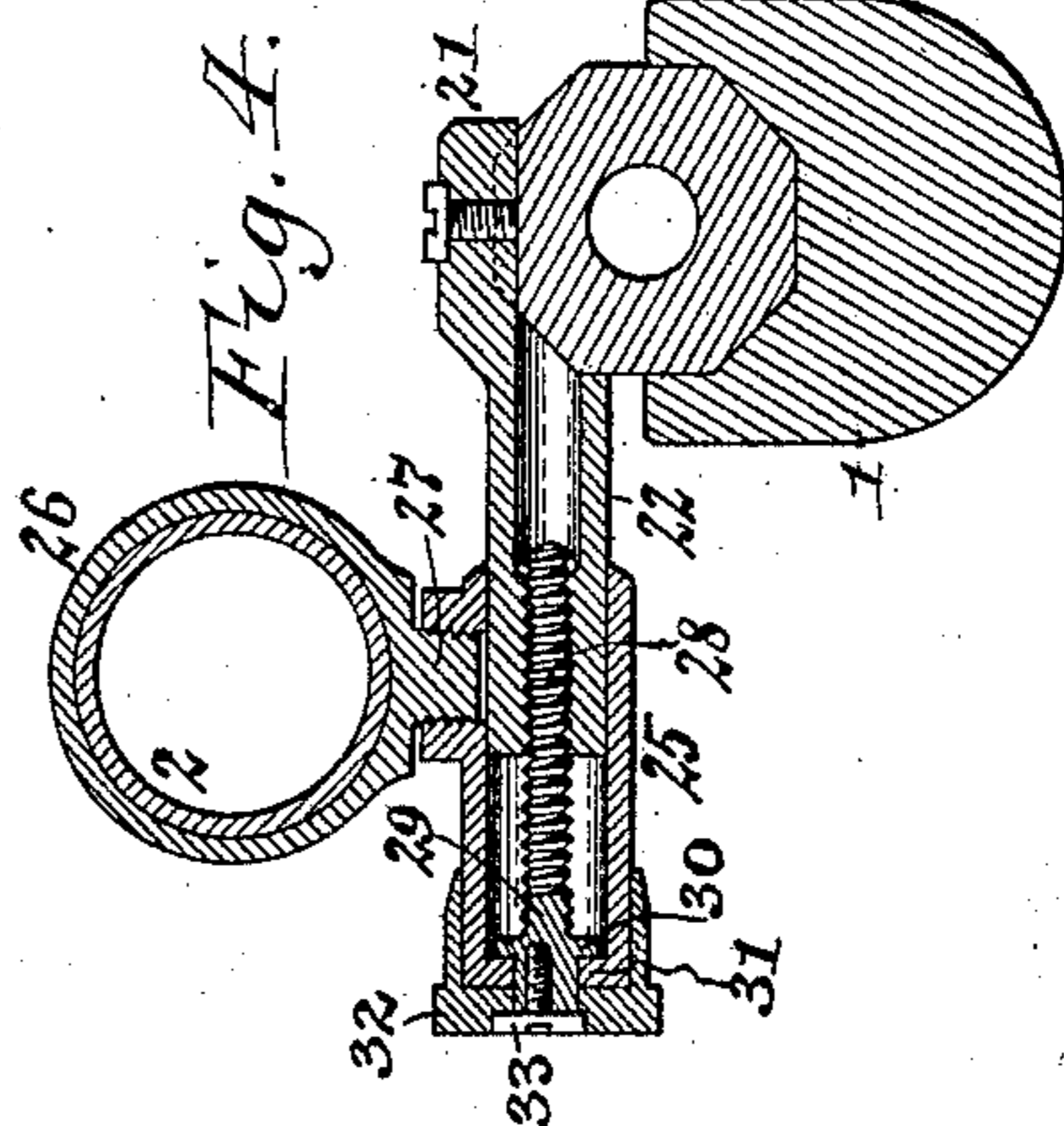


Fig. 4.

Witnesses:
Henry L. Deck.
F. F. Schuyler.

Henry L. De Zeng Jr. Inventor
By William H. Brown Attorneys

UNITED STATES PATENT OFFICE.

HENRY L. DE ZENG, JR., OF BUFFALO, NEW YORK, ASSIGNOR TO CATARACT TOOL AND OPTICAL COMPANY, OF SAME PLACE.

TELESCOPIC MOUNTING FOR GUNS.

SPECIFICATION forming part of Letters Patent No. 681,202, dated August 27, 1901.

Application filed December 15, 1900. Serial No. 40,044. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. DE ZENG, JR., a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Telescope-Mountings for Guns, of which the following is a specification.

The object of this invention is to produce an improved telescope-mounting for guns which permits of readily and accurately adjusting the telescope on the gun and which is not liable to get out of order by striking obstacles or to be loosened by the firing shocks of the gun.

In the accompanying drawings, Figure 1 is a fragmentary side elevation of a gun provided with my improved telescope-mountings. Fig. 2 is a fragmentary top plan view on an enlarged scale, showing the front mounting connecting the telescope and the gun, the relative position of the gun and telescope being exaggerated to illustrate the invention more clearly. Figs. 3, 4, and 5 are transverse sections, on an enlarged scale, in lines A A, B B, and C C, Fig. 1, respectively. Fig. 6 is a fragmentary longitudinal section in line D D, Fig. 3. Fig. 7 is a fragmentary longitudinal section, on an enlarged scale, in line E E, Fig. 1.

Like numerals of reference refer to like parts in the several figures.

The gun 1 and the telescope 2, which is mounted lengthwise upon the gun, may both be of any suitable construction, and the mountings which adjustably support the telescope on the gun may be constructed to support the telescope lengthwise over the gun or on one side thereof. The mountings which are shown in the drawings are constructed to support the telescope on the left-hand side of the gun.

The telescope is adjustably connected at its front end with the gun by a mounting which permits the telescope to be tilted fore and aft and to be shifted bodily laterally with reference to the gun-barrel, and the rear end of the telescope is adjustably connected with the gun by a mounting which permits the telescope to be tilted fore and aft and also turn in a horizontal plane on a vertical pivot.

The rear mounting, which adjustably connects the rear end of the telescope with the gun, is substantially the same as that shown and described in my pending application for Letters Patent for telescope-mountings for guns filed May 28, 1900, Serial No. 18,182, and is constructed as follows:

3 represents a split clamping-collar which embraces the rear part of the telescope and which is clamped to the same by a screw 4, connecting the ends of the split collar. The lower side of the clamping-ring is provided with a depending tubular adjusting-shank 5, having an internal screw-thread. The lower end of the shank slides in a vertical guide-sleeve 6, which is arranged on a supporting-plate 7, mounted on the left side of the gun-frame.

8 represents a vertical adjusting-screw whereby the adjusting-shank and the parts connected therewith are raised and lowered. This screw is arranged lengthwise in the guide-sleeve 6 and engages with its upper screw-threaded end in the internal thread of the adjusting-shank, while its lower end is connected with the lower end of the guide-sleeve, so that it is free to turn, but is held against axial movement. The rotatable connection between the screw and guide-sleeve consists of a head 9, arranged on the lower end of the screw and provided with a downwardly-facing shoulder 10, a retaining-cap 11, secured to the lower end of the guide-sleeve by a screw-joint and provided with an inwardly-projecting flange or shoulder 12, bearing against the shoulder of the head, a finger-piece or button 13, arranged on the lower end of the head and bearing against the under side of the retaining-cap, and a fastening-screw 14, connecting the finger-piece and the head of the adjusting-screw. Upon turning the adjusting-screw 8 by means of its finger-piece the adjusting-shank and the rear part of the telescope mounted on the upper end thereof are raised or lowered, and thereby tilted fore and aft more or less relatively to the gun-barrel. In order to permit the supporting-plate 7 and the parts mounted thereon to follow the movement of the adjusting-shank as the latter tilts while being raised

and lowered, one end of the supporting-plate is pivoted by a horizontal or transverse screw 15 to the side of the gun-frame. The supporting-plate is held in position after adjustment by a clamping-screw 16, arranged in a segmental slot 17 in the opposite end of the supporting-plate. The elevation of the rear part of the telescope with reference to the gun-barrel is determined by graduations 18, arranged on the outer side of the adjusting-shank and adapted to be read off at the upper end of the guide-sleeve. Partial turns of the adjusting-screw are indicated by graduations 19, arranged on the periphery of the finger-piece and moving past a mark 20 on the retaining-cap; as shown in Fig. 1.

The front mounting, whereby the front end of the telescope is adjustably supported on the gun, is constructed as follows:

21 represents a bracket which is secured to the top of the gun-barrel and which is provided with a laterally-projecting tubular shank 22. The bracket is fastened to the gun-barrel by a dovetail joint 23 and a clamping-screw 24, arranged on the bracket and bearing against the gun-barrel, as shown in Figs. 4 and 6.

25 represents a tubular carriage or sleeve which is capable of sliding lengthwise on the tubular shank of the bracket and also capable of turning on said shank.

26 represents a supporting-collar which receives the front end of the telescope and which is pivotally connected on its under side by a vertical pivot with the top of the carriage 25, so that the telescope can turn in a horizontal plane on the carriage upon moving the latter and the front end of the telescope bodily toward and from the gun-barrel. This pivotal connection between the supporting-collar and the carriage preferably consists of an externally-screw-threaded stem 27, which depends from the lower side of the supporting-collar 26 and engages with a screw-threaded opening formed in the upper side of the carriage 25.

28 represents an adjusting-screw whereby the carriage is moved lengthwise on the shank of the bracket. This screw engages at its inner end with an internal screw-thread in the supporting-shank 22, while its outer end is connected with the carriage 25, so that it is free to turn within the carriage, but the latter is compelled to move axially with the screw. The rotatable connection between the screw 28 and the carriage 25 consists of a head 29, arranged on the outer end of the screw and having an outwardly-facing shoulder 30, which engages with an inwardly-facing shoulder 31 on the carriage, a rotary finger-piece 32, mounted on the outer end of the carriage, and a fastening-screw 33, connecting the finger-piece and the head of the adjusting-screw, as shown in Figs. 1 and 4.

The lateral position of the front end of the telescope relative to the front end of the gun-

barrel is determined by graduations 34, which are arranged on the supporting-shank and which are read off at the inner end of the carriage-sleeve and denote complete turns of the adjusting-screw 28. Partial turns of the adjusting-screw are indicated by graduations 35, arranged on the periphery of the finger-piece 32 and moving past a mark 36 on the carriage-sleeve, as shown in Fig. 3.

Upon adjusting the telescope the same is first moved forward or backwardly in its front and rear supporting-collars to the desired position. The front part of the telescope is then moved bodily laterally toward or from the barrel of the gun by adjusting the front mounting horizontally, and then the rear part of the telescope is moved bodily up or down with reference to the gun-barrel by adjusting the rear mounting until the telescope and gun-barrel are in the desired relation, after which the clamping-screws 4 16 are tightened. Upon moving the front part of the telescope toward or from the gun-barrel the front part of the telescope turns in a substantially horizontal plane on the vertical pivot 27, which connects the supporting-collar 26 and the carriage-sleeve 25 of the front mounting, and the rear part of the telescope turns in a substantially horizontal plane on the vertical pivot 5 6, connecting the supporting-collar and the supporting-plate of the rear mounting. Upon adjusting the rear part of the telescope up or down the rear supporting-plate 7 turns in a vertical plane on the horizontal pivot 15, which connects the supporting-plate and the gun-frame, and the front part of the telescope turns in a vertical plane by reason of the horizontal pivotal connection between the carriage-sleeve 25 and the shank 22. When the wind-pressure is toward the right side of the gun, the front end of the telescope and the barrel are separated, as shown in full lines in Fig. 2, until the telescope and gun-barrel diverge forwardly sufficiently to compensate for the deviation of the projectile which is produced by the action of the wind or drift. When the wind-pressure is toward the left side of the gun, the front end of the telescope and the gun-barrel are moved toward each other, so that the telescope and barrel converge forwardly, as shown by dotted lines 1^a in Fig. 2, and the wind-pressure toward that side of the gun is overcome.

By this construction of telescope-mountings for guns the position of the telescope may be readily and accurately adjusted to any required angle relative to the gun-barrel for sighting at ranges of varying distances and also to compensate for wind in either direction.

The forwardly-diverging position of the gun and telescope, as shown in full lines, Fig. 2, and the forwardly-converging position of these parts shown in dotted lines in the same figure are both exaggerated for the pur-

pose of more clearly illustrating the lateral adjustment of the gun and telescope with reference to each other.

I claim as my invention—

5 1. The combination with a gun-telescope, of a carriage capable of horizontal transverse adjustment on the gun, and a support which receives the telescope and which is connected by a vertical pivot with said carriage, substantially as set forth.

10 2. The combination with a gun-telescope, of a carriage capable of horizontal transverse adjustment on the gun and also of a rotary adjustment in a vertical plane fore and aft of the gun, and a support which receives the telescope and which is connected by a vertical pivot with said carriage, so that the telescope can be turned in a horizontal plane, substantially as set forth.

20 3. The combination with a gun and a telescope, of a bracket secured to the gun and provided with a cylindrical shank which projects horizontal laterally from the gun, a tubular carriage which is capable of sliding lengthwise and also turning fore and aft thereon, and a collar which supports the telescope and which is connected with the carriage by a vertical pivot, substantially as set forth.

30 4. The combination with a gun and a telescope, of a bracket secured to the gun and provided with a cylindrical shank which projects horizontal laterally from the gun, a tubular carriage which is capable of sliding lengthwise on said shank and also turning fore and aft thereon, a supporting-collar which receives the telescope and a vertical pivot-screw which is arranged on the supporting-collar and which engages with a screw-threaded opening in said carriage, substantially as set forth.

45 5. The combination with a gun and a telescope, of a bracket secured to the gun and provided with a cylindrical shank which projects horizontal laterally from the gun, a tubular carriage which is capable of sliding

lengthwise on said shank and also turning fore and aft thereon, an adjusting-screw whereby the carriage is moved lengthwise on the shank, and a supporting-collar which receives the telescope and which is connected with the carriage by a vertical pivot, substantially as set forth. 50

6. The combination with a gun and a telescope, of a bracket secured to the gun and provided with a cylindrical shank which projects horizontal laterally from the gun, a tubular carriage which is capable of sliding lengthwise on said shank and also turning fore and aft thereon, a supporting-collar which receives the telescope and which is connected by a vertical pivot with the carriage, an adjusting-screw working in a threaded opening in the shank and provided with a head which engages with an inwardly-facing shoulder on the carriage, and a finger-piece bearing against the outer end of the carriage and secured to the head of the adjusting-screw, substantially as set forth. 65

7. The combination with a gun and a telescope, of a supporting-collar which receives the rear part of the telescope and which is provided with a depending cylindrical shank, a supporting-sleeve in which said shank is capable of sliding vertically and turning horizontally, a supporting-plate carrying the supporting-sleeve and connected with the gun by a horizontal pivot, a supporting-collar which receives the front part of the telescope, a carriage which is connected with said front supporting-collar by a vertical pivot, and a bracket upon which said carriage is capable of sliding horizontally toward and from the gun and also turning fore and aft of the gun, substantially as set forth. 75 80 85

Witness my hand this 8th day of December, 1900.

HENRY L. DE ZENG, JR.

Witnesses:

JNO. J. BONNER,
THEO. L. POPP.