

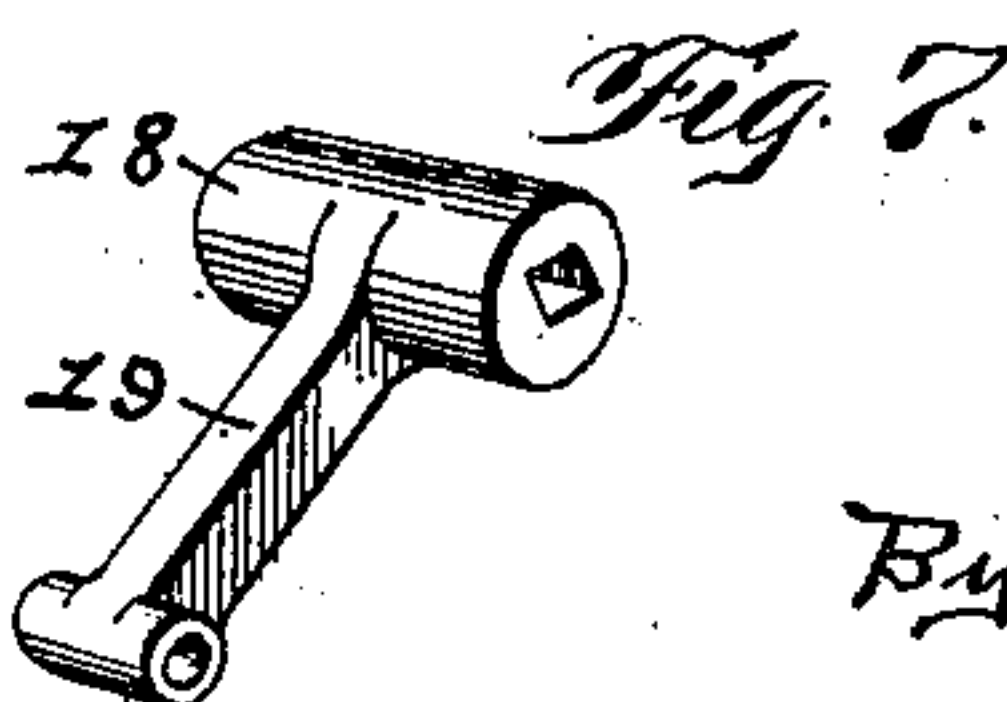
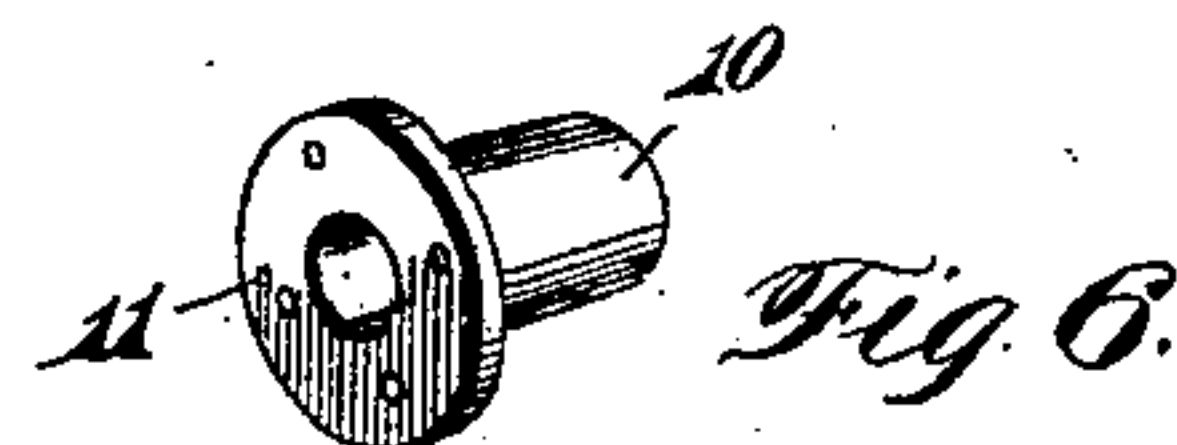
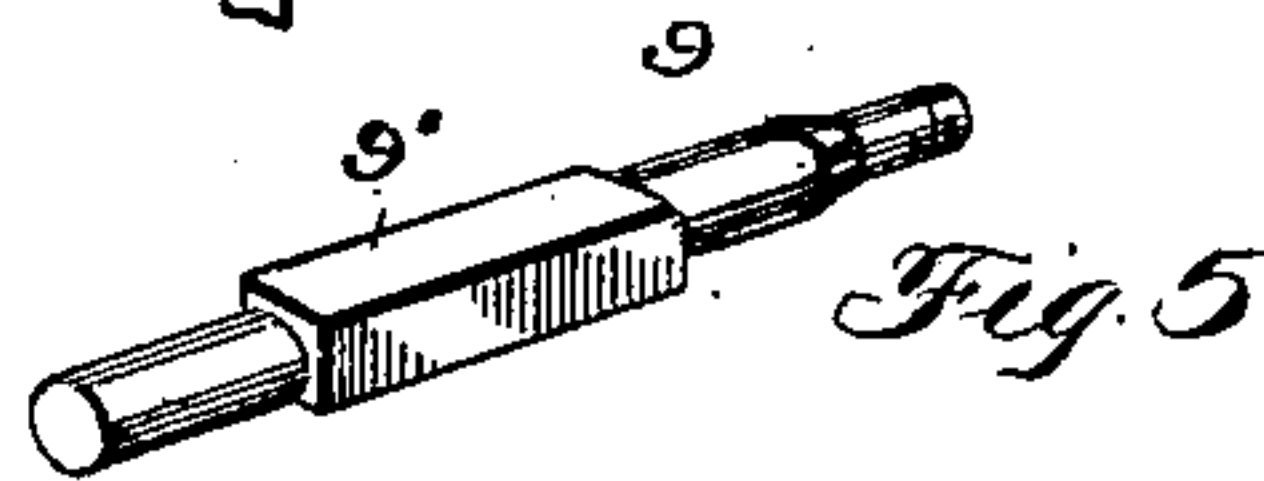
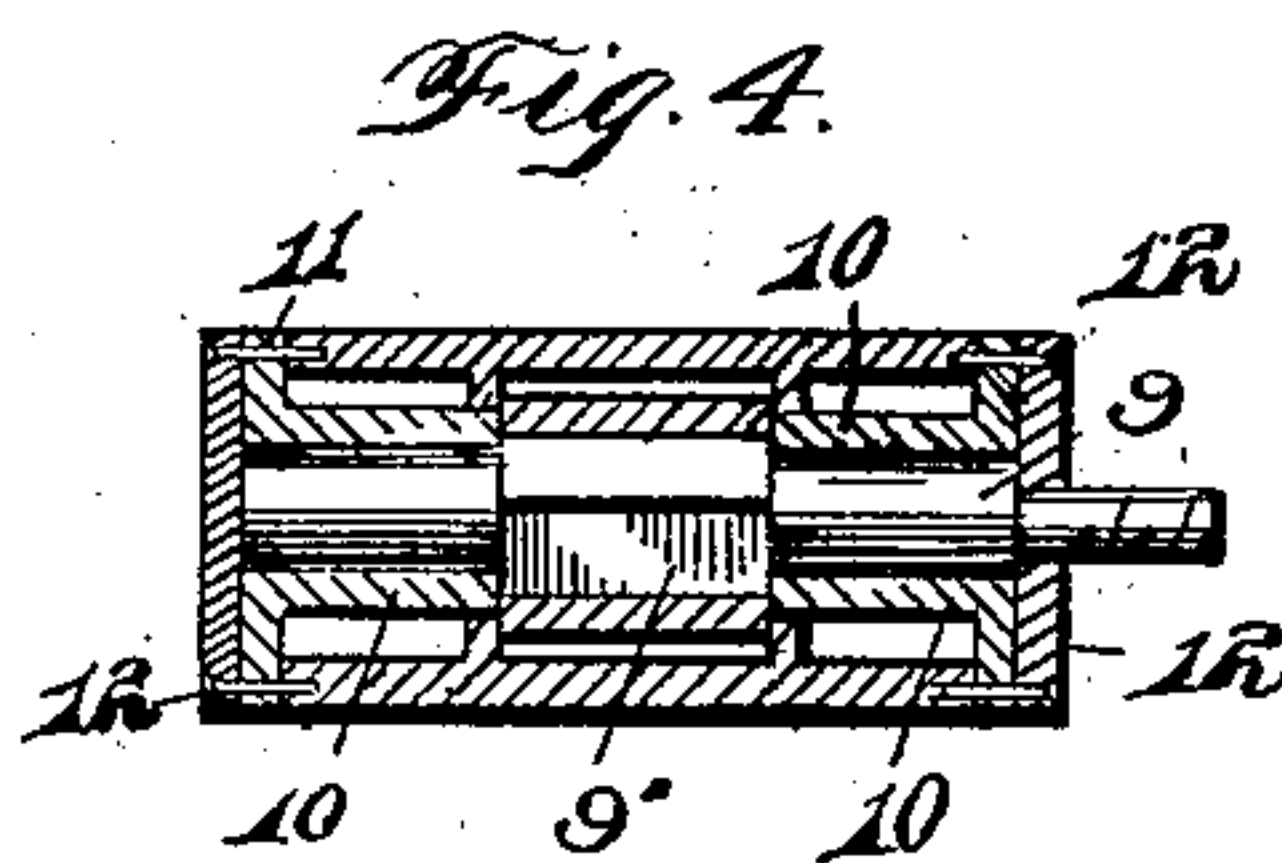
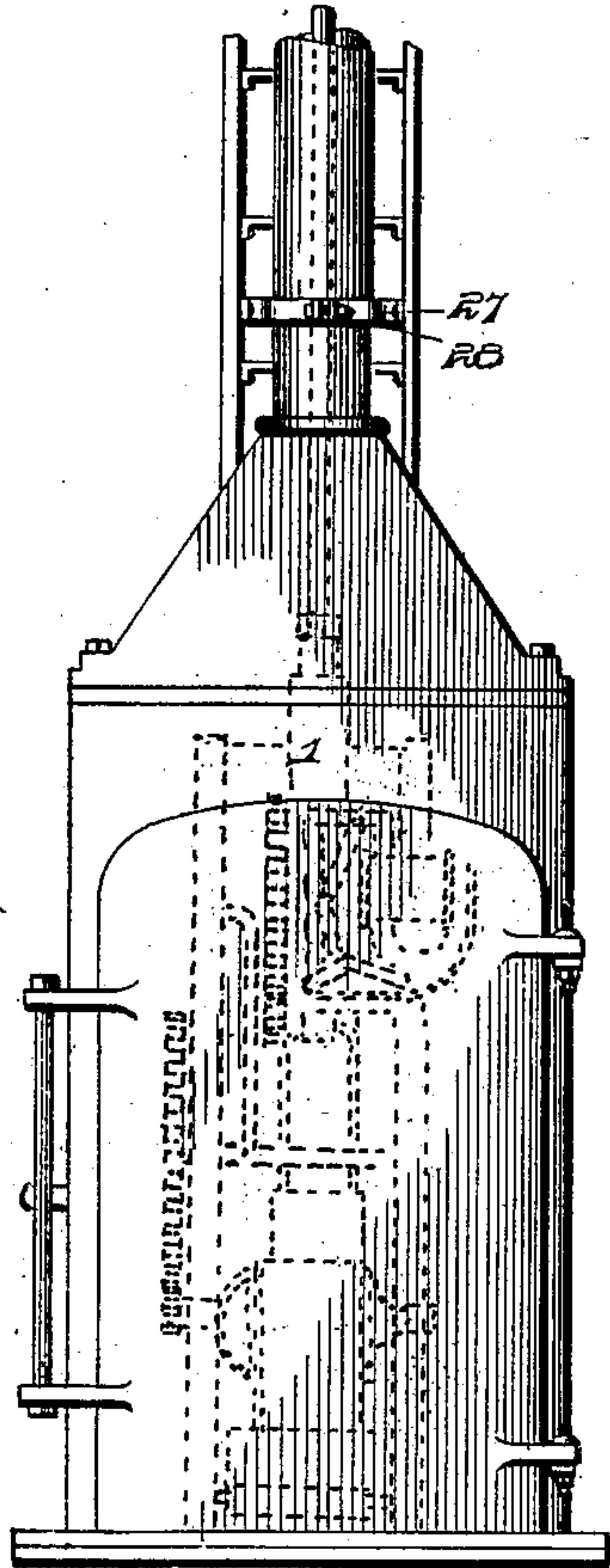
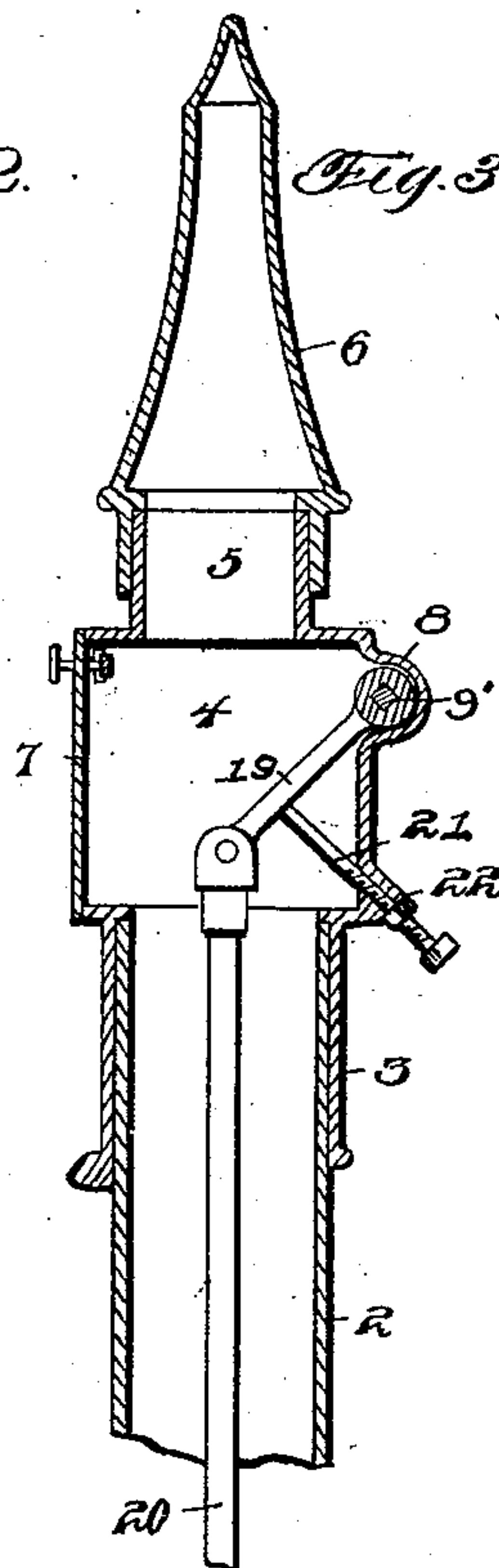
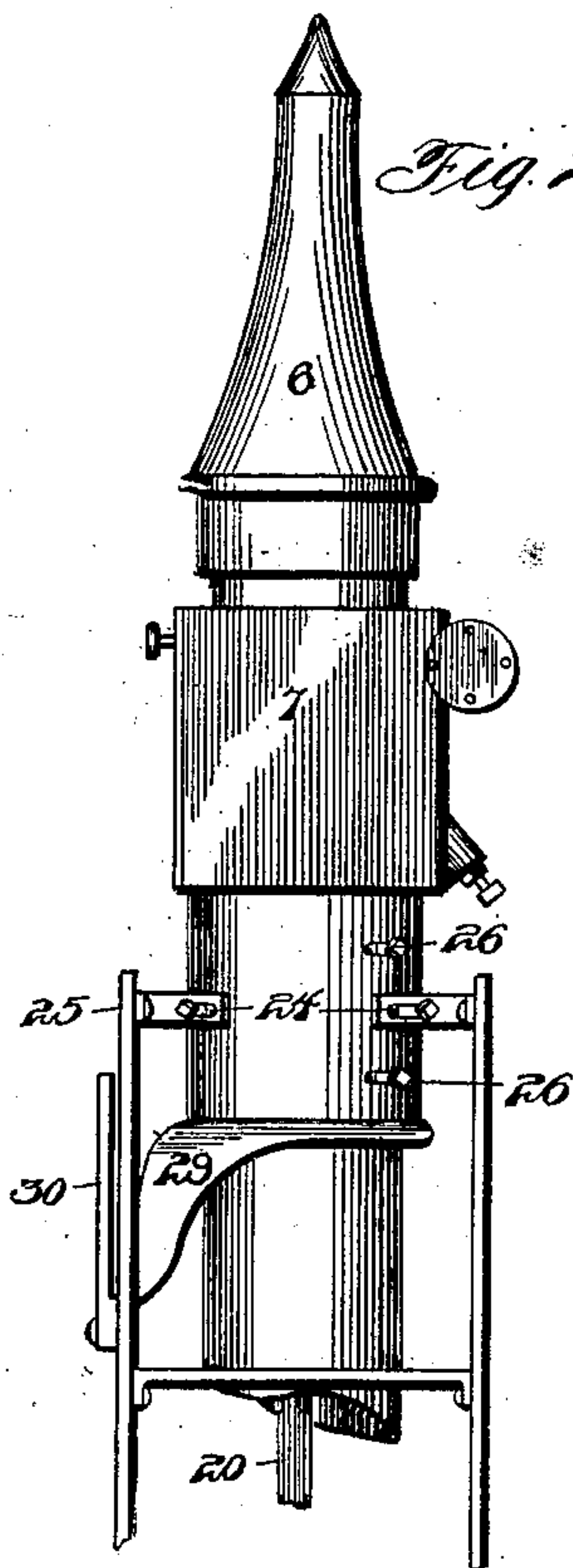
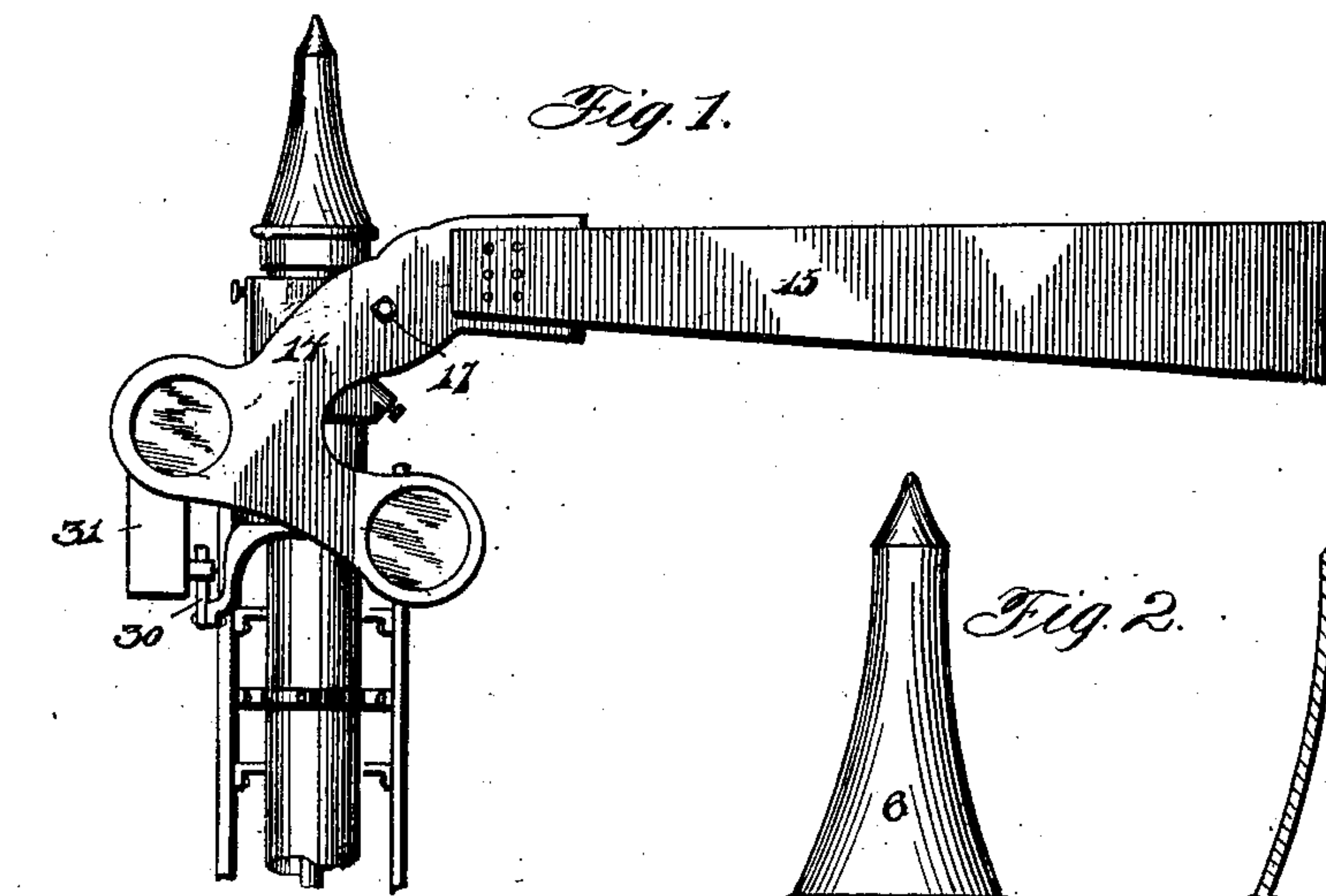
No. 685,139.

Patented Oct. 22, 1901.

R. HERMAN.
ADJUSTABLE HEAD FOR SIGNALS.

(Application filed May 1, 1901.)

(No Model.)



Witnesses
Frank G. Campbell
J. P. Appelman.

Inventor
R. Herman
By McEurt & Co.
Attorneys

UNITED STATES PATENT OFFICE.

REINHOLD HERMAN, OF CRAFTON, PENNSYLVANIA.

ADJUSTABLE HEAD FOR SIGNALS.

SPECIFICATION forming part of Letters Patent No. 685,139, dated October 22, 1901.

Application filed May 1, 1901. Serial No. 58,303. (No model.)

To all whom it may concern:

Be it known that I, REINHOLD HERMAN, a citizen of the United States of America, residing at Crafton, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Heads for Signals, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in adjustable heads for signals, and has for its object to provide a head which will be rotatable on its axis, so that the signal-arm may be adjusted to any
15 desired position irrespective of the position of the signal mechanism.

My invention relates particularly to that class of signals known as the "semaphore" type. In this type of signals a signal-operating mechanism is usually employed which is
20 arranged within a casing placed beside the track. On this casing is a tubular support which carries the spectacle-frame to which the semaphore-arm is attached. A rod extends through this tubular support and connects the semaphore-arm with the signal-operating mechanism.

It is the object of my invention to mount the head of this support in such a manner
30 that the same may be rotated irrespective of the remainder of the support, so that the signal and semaphore arm, the lamp, and ladder may be swung simultaneously or moved around to any desired position irrespective
35 of the tubular support and the box or casing and locked in any position desired and retaining the relative position to each other when so moved. This is particularly desirable when the signal is located at a curve in
40 the track, on bridges, and in many other places where it is difficult to so place the box or casing that the signal may be properly alined.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate like parts throughout the views of the drawings, in which—

50 Figure 1 is a side elevation of the signal-mechanism casing, the signal or semaphore

arm and tubular support and ladder partly broken away. Fig. 2 is a side elevation of my improved rotatable head, showing a part of the tubular support and ladder. Fig. 3 is
55 a vertical sectional view thereof. Fig. 4 is a cross-sectional view through the head, showing the shaft to which the operating-rod is connected. Fig. 5 is a detail perspective view of the shaft. Fig. 6 is a like view of
60 the shaft or lever-arm which connects the shaft with the rod. Fig. 7 is a similar view of one of the bearings for the shaft.

Referring to the drawings by reference-numerals, 1 indicates the inclosing box or casing for the signal-operating mechanism,
65 (not shown,) and on this box or casing is mounted a tubular support 2. Mounted on the upper end of this tubular support 2 is a rotatable head 3, which in the accompanying
70 drawings is shown as formed with a box 4, terminating in a tubular extension 5, on which is mounted a cap-piece or dome 6. The box 4 is provided with a suitable door 7, so that access may be had to the interior thereof
75 when desired. The one side of this box or box portion 4 is bulged to form a journal-box 8, in which is mounted shaft 9. The ends of the journal-box are open, and I mount there-
80 in two bearing-sleeves 10 for the reception of the shaft 9, the sleeves having flanged ends 11, which abut against the ends of the journal-box and are secured thereto by tap-screws or in any suitable manner. These tap-screws
85 also secure the cap-plates 12 to the ends of the journal-box by engaging through the same and through the flanged ends of the bearing-sleeves into the end walls of the journal-box. The one end of the shaft 9 is threaded and
90 extends through the one cap-plate 12 to receive the spectacle-frame 14, which carries the signal or semaphore arm 15, the spectacle-frame being held on the threaded end of the shaft by the nut 17. The shaft 9 is provided
95 about midway of its length with a squared portion 9' to receive a sleeve 18, carried by the crank or lever arm 19, the lower end of which is pivotally connected to the upper end of the operating-rod 20, that connects the
100 crank or lever arm with the signal-operating mechanism. The box portion of the head 3 has an opening in the bottom thereof of suf-

5 sufficient size to give free movement to the rod
 20 when the signal is operated, and the de-
 sired adjustment of the crank or lever arm
 19 is effected by means of a set-screw 21, ar-
 5 ranged in a bushing 22, formed integral with
 the box portion 4, the said set-screw extend-
 ing into the box portion at an angle, so as to
 engage the crank 19. Where signals of this
 type are employed, it is the usual practice to
 10 provide a ladder, by means of which access
 may be had to the signal-arm when desired
 by the repair men or others so authorized.
 This ladder I support from the rotatable head,
 so that when the latter is adjusted or swung
 15 around on the post the ladder will be adjusted
 to conform to the position of the semaphore-
 arm. For this purpose I provide tap-screws
 24 in the head 3, to which the upper end of
 the ladder 25 is connected. These screws ex-
 20 tend into the tubular portion of the head
 only and are preferably not engaged with the
 tubular support, the head being secured in
 the desired position on the latter by means of
 screws 26. The ladder 25 is further supported
 25 by means of straps 27, connected thereto and
 brought around the tubular support and their
 ends fastened by set screws or bolts 28. When
 it is desired to adjust the head, these screws
 or bolts may be loosened, so as to allow the
 30 ladder to swing with the head, as the latter
 may be readily moved when the set-screws
 26 are loosened. The tubular head 3 carries
 an integral bracket-arm 29, which has a
 bracket 30 for supporting the lantern 31.
 35 With this construction it will be observed
 that the semaphore-arm may be adjusted to
 its proper position irrespective of the position
 in which the signal-operating mechanism and
 its casing may be placed with respect to the
 40 track, thus affording a great advantage in
 places where it may be inconvenient to place
 the casing and its mechanism in such a posi-
 tion as the same will aline with the track.
 The throw of the semaphore-arm may be reg-
 45 ulated by the set-screw 24.

While the construction as herein shown
 and described embodies a practical form of
 my invention, yet I do not wish to unduly
 limit myself to the exact construction shown,
 50 as it will be apparent that various changes
 may be made in the details of construction
 without departing from the general spirit of
 the invention.

Having fully described my invention, what
 55 I claim as new, and desire to secure by Letters
 Patent, is—

1. In signal-supports, a rotatably-mounted
 head to which the signal-arm is connected,
 and a ladder connected to said rotatable
 60 head, substantially as described.

2. In combination with a support, a head
 rotatably mounted thereon, and a ladder con-
 nected to the head and support and rotata-
 ble in unison with the head, substantially as
 65 described.

3. In combination with a tubular support,
 a head rotatably mounted thereon, a sema-

phore-arm connected to said head, and a lad-
 der connected to the head and to the support,
 said ladder being rotatable in unison with the 70
 head.

4. In combination with a support, a head
 rotatably mounted thereon, a semaphore-arm
 carried by said head, said head having a box
 portion provided with a door, means for se- 75
 curing the head to the support, and a ladder
 connected to the head and movable there-
 with, substantially as described.

5. In a signal, the combination with the
 support, of a head rotatably mounted on said 80
 support, a signal carried by the head and
 movable therewith, and a ladder connected to
 the head and movable in unison therewith.

6. In combination with a stationary tubu-
 lar support for signals, a head mounted on 85
 the support and capable of axial movement
 thereon without movement of the support, a
 signal carried by said head, and a ladder
 connected to the head and to the support and
 movable in unison with the head, substan- 90
 tially as described.

7. In signals, the combination with the in-
 closing box or casing for the signal-operating
 mechanism, and the tubular support carried
 by said box or casing, of a head mounted on 95
 the tubular support and capable of rotary
 adjustment thereon without movement of the
 support, a shaft journaled in said head, a
 signal-arm mounted on said shaft, a crank
 connected to the shaft within the head, an 100
 operating-rod connecting said crank to the
 signal-operating mechanism, a bracket car-
 ried by the head to support a lamp, and
 means for securing the head in the adjusted
 position on the support substantially as de- 105
 scribed.

8. In signals, the combination with the in-
 closing box or casing for the signal-operating
 mechanism, and the tubular support carried
 by said box or casing, of a head mounted on 110
 the tubular support and capable of rotary
 adjustment thereon without movement of the
 support, a shaft journaled in said head, a sig-
 nal-arm mounted on said shaft, a crank con-
 nected to the shaft within the head, an op- 115
 erating-rod connecting said crank to the sig-
 nal-operating mechanism, means carried by
 the head for adjusting said crank, and a
 bracket carried by the head to support a
 lamp, substantially as described. 120

9. In combination with the tubular sup-
 porting-post, a head therefor having a tubu-
 lar portion adapted to engage the upper end
 of the tubular support, a box-like portion 125
 above the tubular portion of the support, and
 a door forming one of the side walls of said
 box-like portion of the head, substantially as
 described.

10. In combination with the tubular sup-
 porting-post for signals, a head mounted on 130
 the support and adjustable independently of
 the support, and a door in said head whereby
 access may be had to the interior thereof, sub-
 stantially as described.

11. In a signal, the combination with the support, of a head mounted for rotary adjustment on the support and carrying the signal-arm, a lamp-supporting bracket carried by the head, and a door in the head and forming one of the side walls thereof, substantially as described.

12. In signals, the combination with a support, of a head mounted on the support and capable of rotary adjustment thereon independently of the support, a signal-arm pivotally supported from the head so as to be moved therewith when the head is adjusted on the support, and a lamp-supporting bracket carried by the head, substantially as described.

13. The combination with a hollow supporting-post for signals, of a head mounted thereon and capable of rotary adjustment independently of the support, means for securing the head in the adjusted position, a signal pivotally connected to the head, and a lamp-bracket carried by the head, the signal and lamp-bracket being movable with the head as the latter is adjusted on the support, substantially as described.

14. In signals, the combination with the hollow supporting-post, of a head mounted on the support and capable of rotary adjustment thereon without movement of the support, a shaft journaled in the head and to which the signal-arm is connected, an operating-rod connecting said shaft to the signal-operating mechanism, and means carried by

the signal-head for adjusting the throw of said rod, substantially as described.

15. In signals, the combination with a hollow supporting-post, of a common head from which the signal-arm and signal-lamp are suspended, the said head being mounted on the support and capable of rotary adjustment thereon independently of the support, substantially as described.

16. The combination with a hollow supporting-post, of a signal-head mounted thereon and capable of rotary adjustment independently of the support, the signal-arm and signal-lamp being connected to the head so as to be movable therewith around the support as the head is adjusted, and means for securing the head to the support to hold the same against rotation after being adjusted to position, substantially as described.

17. In electrically-operated signals, the combination with the hollow support, of mechanism within the hollow support for operating the signals, a head mounted on the support and capable of rotary adjustment thereon independently of the support, with the signal carried by said head and movable around the support with the head as the latter is adjusted, substantially as described.

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

REINHOLD HERMAN.

Witnesses:

JOHN NOLAND,
E. E. POTTER.