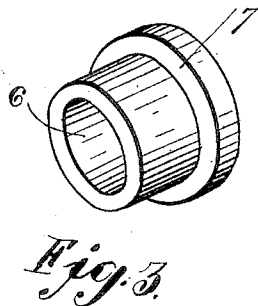
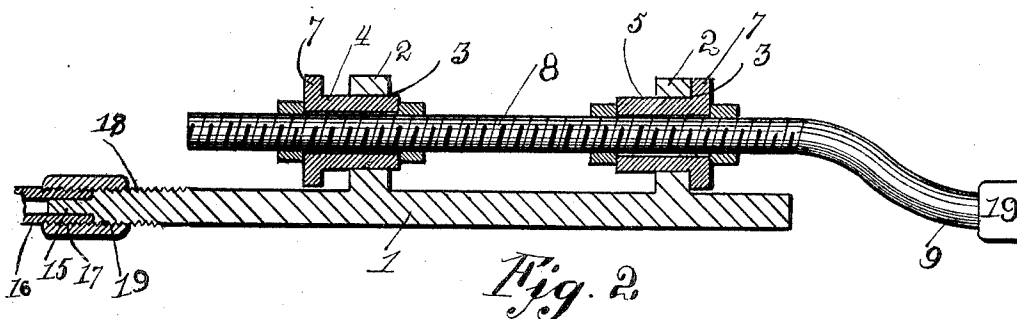
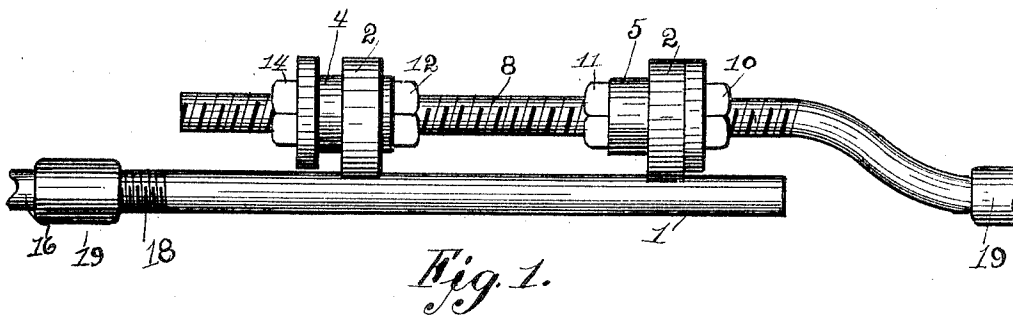


No. 811,350.

PATENTED JAN. 30, 1906.

C. H. WRIGHT & W. E. MARSHALL.
ADJUSTABLE MEANS FOR RODS, BARS, OR CABLES.

APPLICATION FILED SEPT. 8, 1905.



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UNITED STATES PATENT OFFICE.

CHARLES H. WRIGHT AND WILLIAM E. MARSHALL, OF GLENFIELD,
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ADJUSTABLE MEANS FOR RODS, BARS, OR CABLES.

No. 811,350.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed September 8, 1905. Serial No. 277,560.

To all whom it may concern:

Be it known that we, CHARLES H. WRIGHT and WILLIAM E. MARSHALL, citizens of the United States of America, residing at Glenfield, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Means for Rods, Bars, or Cables, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in adjustable means for rods, bars, and cables; and the invention has for its object the provision of novel means whereby the length of a rod, bar, or cable can be adjusted to conform to any desired length.

The invention is primarily intended for use in connection with interlocking devices, as switches, detector-bars, signal and brake rods, where it is often essential that the strokes of signal or brake rods be adjusted to accomplish a perfect actuation of the mechanism controlled by the signal or brake rod. In this connection the invention is particularly adapted for signal-rods, which are generally constructed of sections of pipe or tubing, and in order to insure a perfect operation of the signal it is often necessary that the signal-rods be adjusted to give the proper stroke to the signal. We have devised a device which can be readily used in connection with the signal-rods for changing the stroke of said rods.

With the above and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, to be hereinafter more fully described, illustrated, and pointed out in the claims.

The essential features of the invention are necessarily susceptible to structural change without departing from the scope of the invention; but the preferred embodiments are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our improved device. Fig. 2 is a longitudinal sectional view, and Fig. 3 is a perspective view of one of the cups employed in connection with the device.

To put our invention into practice we employ a bar 1, the one side of which is provided with lugs 2 2, said lugs having openings 3 3 formed therein, the opening of one lug align-

ing longitudinally with the opening in the other lug. In the openings 3 3 of the lugs 2 2 we mount cups 4 and 5, one of these cups being illustrated in Fig. 3 of the drawings. Each cup is provided with a smooth bore 6 and with a flanged end 7, and by referring to Fig. 2 of the drawings it will be observed that the cup 4 is mounted in the opening 3 of the lug 2 reversely of the cup 5, this arrangement of the cups permitting of the flanged ends 7 of said cups engaging the outer sides of the lugs 2 2.

Extending through the cups 4 and 5 is a screw-threaded rod 8, the one end 9 of which is bent into longitudinal alinement with the bar 1, whereby when rods or bars are attached to the outer ends of the bar 1 and the rod 8 practically a continuous bar or rod is provided. Upon the screw-threaded end of the rod 8 we mount jam-nuts 10, 11, 12, and 14, the jam-nuts 10 and 11 being employed to position the rod 8 in the cup 5, while the jam-nuts 12 and 14 are employed for a similar purpose in connection with the cup 4.

The outer ends of the bar 1 and the rod 8 are preferably contracted, as at 15 15, in order that the ends of pipes or tubes may be connected to the bar and rod. In the accompanying drawings we have illustrated pipes or tubes 16 16 as mounted upon the contracted ends of the bar 1 and the rod 8, and the ends of these pipes or tubes are generally threaded, as at 17, and the ends of the bar 1 and the rod 8 threaded, as at 18, in order that sleeves 19 19 may be employed for holding the pipes or tubes in engagement with the bar and rod. This construction may be only used in connection with signal-rods, which are generally hollow and conform to pipes or tubes; but it is obvious from the construction set forth that the device can be readily used in connection with brake-rods and the like mechanism where it is desired to lengthen or shorten the stroke of the rods.

Should it be desired to lengthen or shorten the stroke of a signal or brake rod equipped with our improved device, it is only necessary to loosen the jam-nuts 10, 11, 12, and 14 and adjust the rod 8 relative to the bar 1, at which time the nuts can be again tightened to hold the rod 8 in a fixed position. In Fig. 2 of the drawings the cups 4 and 5 have been positioned whereby the rod 8 will have a slight movement independent of the bar 1; but it is observed that the jam-nuts 12 and 14 can be

readily adjusted to bring the flanged end of the cup 4 in engagement with the lug 2, and thereby hold the rod 8 fixed relative to the bar 1.

5 We do not care to confine ourselves to the manner in which we may secure the device to the ends of rods or bars in connection with which it is used, and it is thought from the foregoing that the construction, operation, and
10 advantages of the herein-described device will be apparent without further description, and various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the
15 invention or sacrificing any of the advantages thereof.

What we claim, and desire to secure by Letters Patent, is—

1. Adjustable means for rods or bars consisting of a bar, lugs carried by said bar, cups
20 mounted in said lugs, a screw-threaded rod extending through said cups, jam-nuts mounted upon said rod and adapted to lock said rod in engagement with said bar, substantially
25 as described.

2. Adjustable means for rods and bars consisting of a bar, two lugs carried by said bar, a rod extending through both of said lugs, nuts adjustably mounted upon said rod on
30 both sides of both lugs and adapted to lock

said rod in engagement with said bar, substantially as described.

3. A device of the character described, consisting of a bar, lugs carried by said bar, cups
35 mounted in said lugs, a rod extending through said cups, means for securing said rod in engagement with said cups, substantially as described.

4. In a device of the character described, the combination with rods of a bar adapted to
40 be fixed to one of said rods, two lugs carried by said bar, a third rod extending through both of said lugs, and means to secure the end of said third rod in engagement with both of said
45 lugs, substantially as described.

5. In a device of the character described, the combination with rods, of a bar adapted to be secured to one of said rods, a curved rod adapted to be secured to the other of said
50 rods, lugs carried by said bar and adapted to receive the end of said curved rod, means for adjustably securing the ends of said rod in said lugs, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES H. WRIGHT.

WILLIAM E. MARSHALL.

Witnesses:

CORA A. RANKIN,
JOHN B. MORGAN.