

No. 733,505.

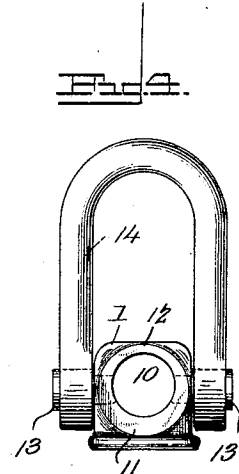
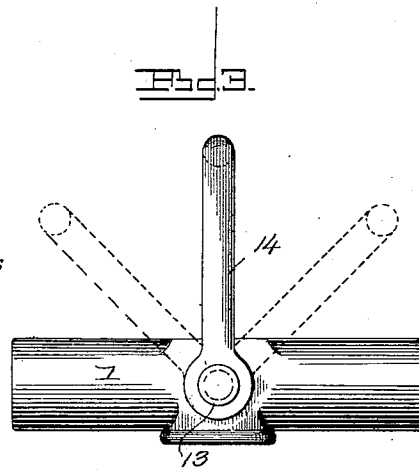
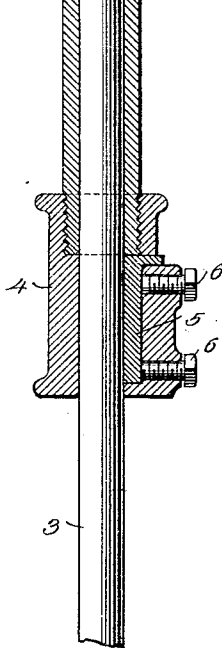
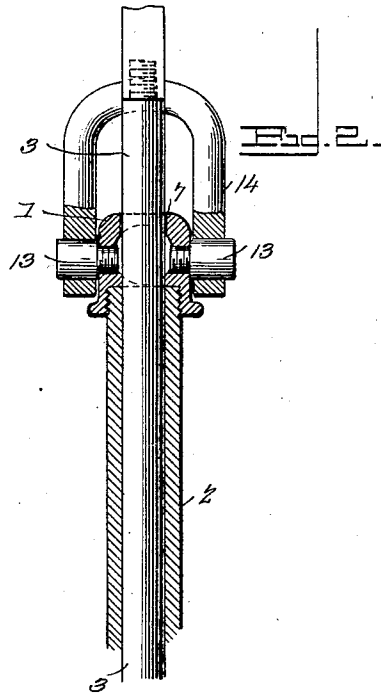
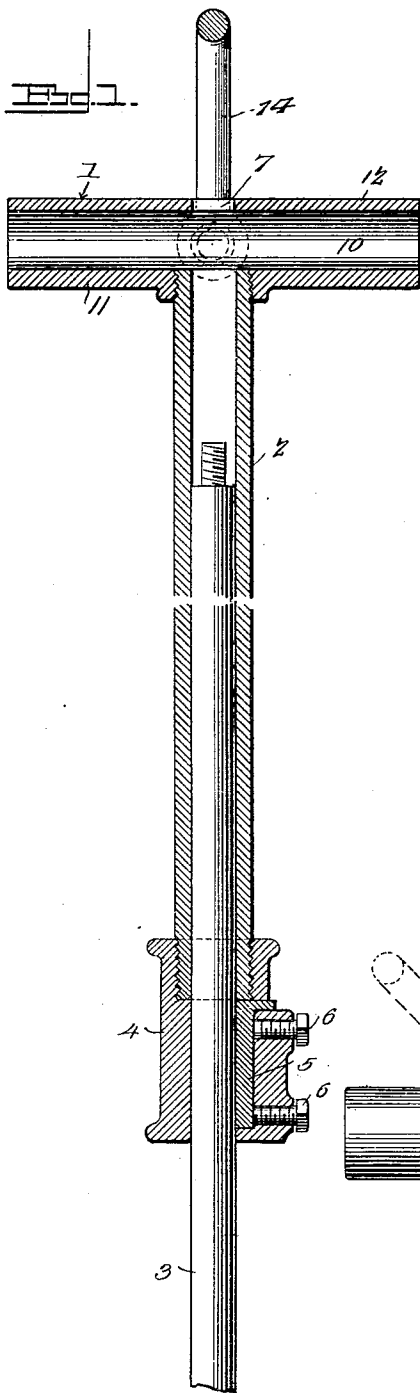
PATENTED JULY 14, 1903.

A. C. PRICE.
PUMP ROD ADJUSTER FOR OIL WELLS.

APPLICATION FILED JULY 10, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



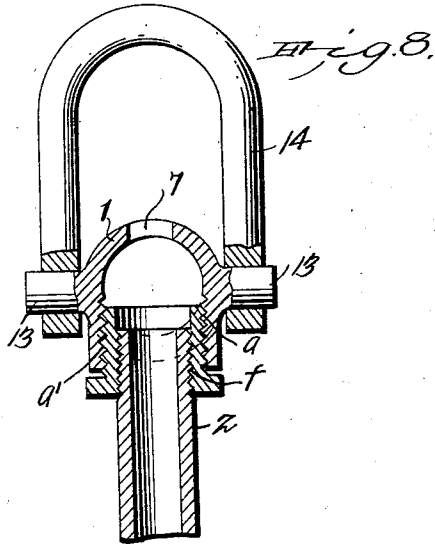
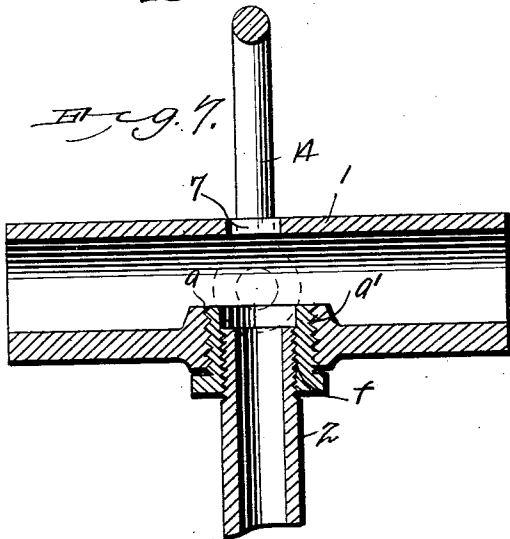
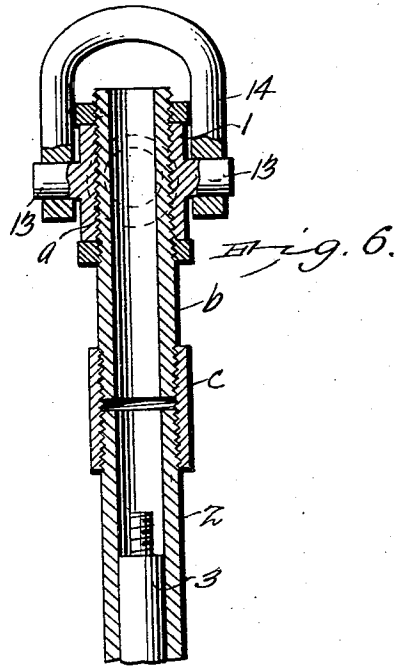
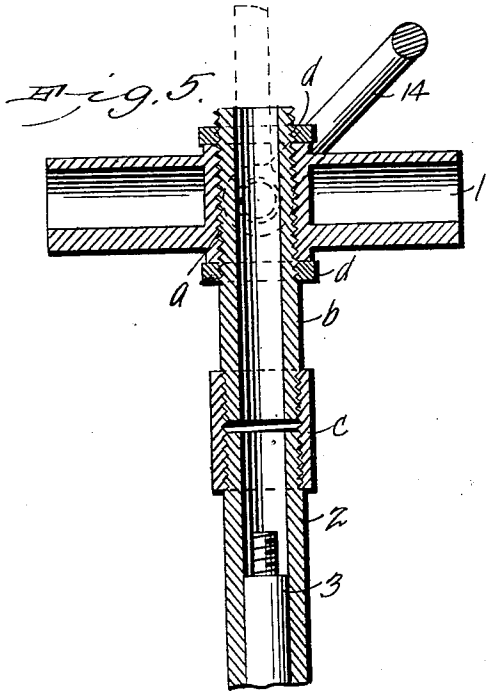
Witnesses
D. Stewart
J. W. Gardner

A. C. Price Inventor
by *C. A. Snow & Co.*
Attorneys

A. C. PRICE.
PUMP ROD ADJUSTER FOR OIL WELLS.
APPLICATION FILED JULY 10, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses
E. J. Stewart
J. W. Garner

A. C. Price, Inventor.
 by *C. A. Snow & Co.* Attorneys

UNITED STATES PATENT OFFICE.

ALLEN C. PRICE, OF RENFREW, PENNSYLVANIA.

PUMP-ROD ADJUSTER FOR OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 733,505, dated July 14, 1903.

Application filed July 10, 1902. Serial No. 115,085. (No model.)

To all whom it may concern:

Be it known that I, ALLEN C. PRICE, a citizen of the United States, residing at Renfrew, in the county of Butler and State of Pennsylvania, have invented a new and useful Pump-Rod Adjuster for Oil-Wells, of which the following is a specification.

My invention is an improved pump-rod adjuster for oil-wells, and relates particularly to the piston-rod and cross-head, the objects of my invention being to effect improvements in the construction of the piston-rod and cross-head whereby the piston-rod is adapted to pass through and project beyond the upper side of the cross-head in an adjuster of the "grip" type.

My invention consists in the peculiar construction and combination of devices hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a sectional view of a pump-rod adjuster for oil or deep wells provided with a piston-rod and cross-head embodying my improvements. Fig. 2 is a similar view taken on a plane at right angles to Fig. 1. Fig. 3 is a detail elevation of the cross-head. Fig. 4 is a similar view at right angles to Fig. 3. Figs. 5 and 6 are sectional views taken on planes at right angles to each other, showing a modification. Figs. 7 and 8 are similar views showing another modification.

The cross-head 1 is secured to the upper end of the tube 2, through which a piston-rod 3 passes and in which the piston-rod is adjusted for the purpose of regulating the stroke thereof, as is usual in machines of this class. To the lower end of the tube 2 is secured a sleeve 4, which may be provided with any suitable means for clamping the piston-rod therein to secure the piston-rod at any required adjustment. As here shown, the sleeve 4 is provided with a gib 5 and set-screws 6 for thus clamping the piston-rod therein.

The cross-head is provided with a central vertical opening 7, which registers with the bore of the tube 2, thereby permitting the piston-rod to pass through said opening 7 of the cross-head and project above the cross-head, as shown in Fig. 2, for purposes of adjustment.

The cross-head is cast hollow to form a longitudinal bore 10 therethrough, which bore is eccentrically disposed, so that the material below the same is thicker, as at 11, than it is above the bore, as at 12. By thus casting the cross-head with the bore therethrough the cross-head is considerably lightened and a corresponding economy of material effected, and by the eccentric disposition of the bore the lower side of the cross-head, which is subjected to the greatest wear on the bearings at the end of the walking-beam, is thickened to prolong the life of the cross-head.

From the central portion of the cross-head on opposite sides thereof, project trunnions 13, which may be either cast integrally with the cross-head or formed separately therefrom and screwed thereto, the latter construction being shown in the drawings. These trunnions serve to pivotally attach to the cross-head a suitable member, preferably in the form of a bail or link 14 for the attachment of suitable tackle, and said bail or link may be swung to one side out of the way of the piston-rod when the latter projects above the cross-head in the position shown in Fig. 2 and as indicated in dotted lines in Fig. 3 during adjustment or while the rod is being inserted or withdrawn through the cross-head into or out of the tube.

In practice the tube 2 is usually an ordinary two-inch pipe, and heretofore it has been usual to connect the tube 2 directly to the cross-head by threading the latter and the entering end of the tube. Necessarily owing to the size and thickness of the tube these screw-threads are somewhat fine and are likely to break and crumble under the stress to which they are subjected by the motion of the beam to which the cross-head is attached, with the result that in a comparatively short time the threads in the opening in the cross-head become so worn and broken that a tube 2 cannot be attached to the cross-head in this manner, thus rendering the cross-head useless. To obviate this objection, the cross-head may be formed, as shown in Figs. 5 and 6, with a threaded opening *a* entirely across the same, and the tube 2 provided with a section *b*, which extends entirely through this opening and is threaded to engage the

thread thereof. This section is connected to the tube 2 by a coupling *c* and is provided with lock-nuts *d*, screwed on the section *b* and bearing against the upper and lower sides of the cross-head to strengthen the connection between the cross-head and the section *b*. When the threads at the lower end of the latter engaged by the coupling *c* become worn, the section *b*, which is very inexpensive, may be detached from the cross-head and replaced by another. This enables the cross-head to be used indefinitely and greatly prolongs the life thereof.

In Figs. 7 and 8 I show another modification to accomplish this purpose, in which the opening *a* in the cross-head is of a diameter exceeding that of the tube 2 and is coarsely screw-threaded, as at *a'*. In this opening is screwed a correspondingly threaded bushing which has a threaded opening *f* of a diameter to correspond with the tube 2, the upper end of the latter being screwed into said threaded opening in the bushing. Owing to the size of the screw-threads *a'* in the cross-head, said threads are not likely to wear or crumble. When the interior threads in the

bushing become worn, the bushing is removed and replaced by another.

Having thus described my invention, I claim—

1. In a pump-rod adjuster, a cross-head having a bore eccentrically disposed therein, the axis of the bore being above that of the cross-head, substantially as described. 30

2. In a pump-rod adjuster, the combination with a tube, of a pump-rod removably mounted therein, a cross-head mounted on one end of the tube and having an opening adapted to admit of the passage of the rod to and from the tube, and a tackle-attaching member pivoted to the cross-head in central alinement with the tube and adapted to swing on its pivot out of the path of the rod during its insertion into or removal from the tube. 40

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 45

ALLEN C. PRICE.

Witnesses:

THOS. BOWSER,
NETTIE L. TURNER.