E. A. L. ROBERTS.

ADJUSTERS FOR PISTONS OR POLISH-RODS OF OIL-WELL PUMPS.

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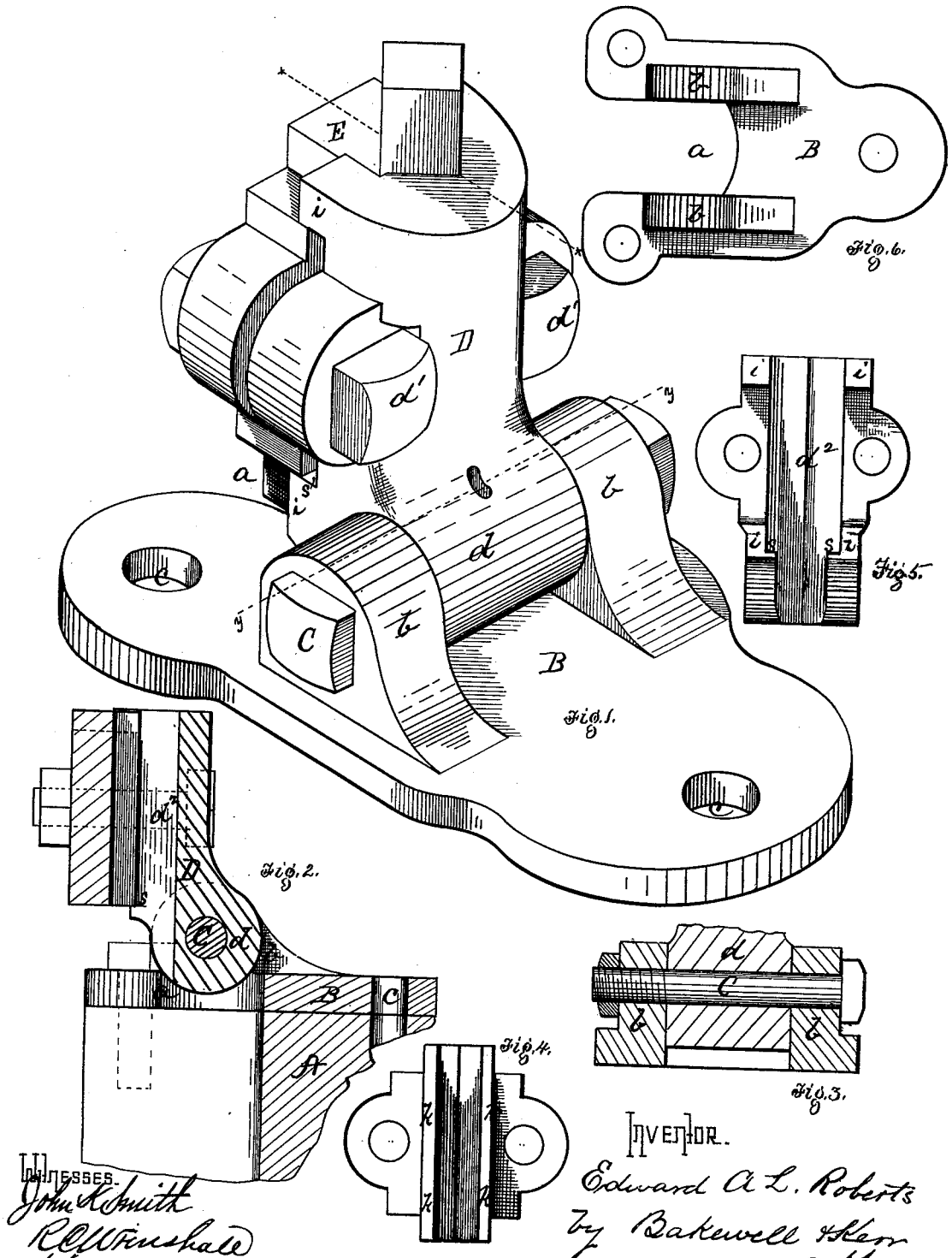

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IMPROVEMENT IN ADJUSTERS FOR PISTONS OR POLISH-RODS OF OIL-WELL PUMPS.

Specification forming part of Letters Patent No. **195,728**, dated October 2, 1877; application filed August 14, 1877.

To all whom it may concern:

Be it known that I, EDWARD A. L. ROBERTS, of Titusville, in the county of Crawford and State of Pennsylvania, have invented a new and useful Improvement in Piston-Rod Adjusters; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a top view of devices embodying my invention. Fig. 2 is a sectional view on the line *x x*, Fig. 1. Fig. 3 is a section on the line *y y*, Fig. 1. Figs. 4, 5, and 6 are detached views of the several parts constituting my adjuster.

Like letters refer to like parts wherever they occur.

My invention relates to adjusters for the polish-rods of oil and similar wells, and for like purposes where piston-rods are employed.

It is well known that in pumping oil-wells the position of the working-barrel and valves and the stroke of the piston, to give the best results, have to be determined by experiment, and for such purposes, as well as others, the connection between the rod and walking-beam has to be varied from time to time, or adjusted.

The object, therefore, of my invention is to obtain such a construction of the "adjuster" and its walking-beam connections as will avoid the use of arms on the walking-beam, as at present practiced, and permit of the ready disconnection of the beam and "polish-rod" without the removal of the clamp or adjuster from the rod, or the loss of adjustment upon reconnecting the rod and walking-beam.

I will now proceed to describe my invention specifically, so that others skilled in the art to which it appertains may make and use the same.

A indicates the walking-beam, having the usual slot at its end for the passage of the polish-rod. B is a bearing-plate, which may be of any suitable form, but is preferably heart-shaped, as shown, with a slot, *a*, corresponding to the slot of the walking-beam, and provided with lugs or ears *b b* on both sides of slot *a*, perforated, as shown, for the passage of a large bolt, C, which performs the function of a pivot for the adjuster or clamp, as well as forming the connection between the same and the walking-beam. The plate B is secured to the end of the walking-beam by lag-screws *c*, or in other suitable manner, and may be located on top, as in the drawing, or against the under face of the beam, if preferred, being equally convenient in either position. D and E represent the halves of the clamp or box for holding the polish-rod. The half D is formed with an eye or loop, *d*, for the passage of bolt C, by means of which the clamp or adjuster is connected to the beam, and has two or more lateral lugs for bolts d^1, which secure the two parts D and E. This half has also a central and longitudinal V-shaped groove, as at d^2, for the polish-rod, guide-lugs *i* to center the opposite plate E, and shoulders *s* to prevent the endwise movement of plate E. Plate E is formed of the same general shape as plate D, but has lateral shoulders *k* parallel to its V-groove, which, entering between the guide-lugs, cause the halves D and E to register properly. The halves of the adjuster are held and drawn together by screw-bolts *l*, and clamp a polish-rod or piston-rod in the manner shown at R.

Instead of forming the clamp or adjuster in two parts, as before specified, it may be cast in a single piece with rod-groove, either round, oval, or square, as preferred, with a single lateral lug for a bolt, d^1, and a slot extending into the polish-rod space on one side, so that the clamp can be closed on the polish-rod by said bolt d^1.

When the clamp or adjuster is made in halves, as first specified, the sections may be connected on one side by a hinge, or one half may be formed with a lip to take under a lug or into a slot in the other half, and in such case a single bolt, d^1, will serve to hold the parts D E together, and cause them to firmly clamp the polish-rod.

The form of the polish-rod groove is immaterial, provided it is adapted to receive and bite upon the polish-rod when the clamp is closed.

The plate B being properly secured to either the top or bottom of the walking-beam, as preferred, and the clamps D F secured to the pol-

ish or piston rod, connection is made with the beam by means of bolt C, which also serves as a pivot for the adjuster.

The advantages of my invention are, first, the heart-shaped bearing-plate takes the place of the wooden boxes now in use, and the adjuster runs with less friction, and can be put upon the walking-beam with less work than any adjuster known to me; secondly, I avoid the use of arms on the walking-beam, the large bolt serving as a bearing, and on removal permits the rod and clamp to be removed together, so that the rod will be properly adjusted when it is put back and bolt C put in; thirdly, the construction of the clamping-plates permits them to take in a rod varying from three-fourths to one and a half inch in diameter.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an adjuster for piston-rods, a bearing-plate provided with perforated ears or lugs, in combination with a clamp-section having an eye or loop for connecting the two by a removable pin or bolt, substantially as and for the purpose specified.

2. In an adjuster for piston-rods, the combination of clamp-sections having V or other grooves and guides, substantially as and for the purpose specified.

3. The combination of two clamp-sections, having guides, one of said sections having a check or stop shoulder, substantially as and for the purpose specified.

In testimony whereof I, the said EDWARD A. L. ROBERTS, have hereunto set my hand.

EDWARD A. L. ROBERTS.

Witnesses:

GEO. A. CHASE,

BENJ. B. LIPPINCOTT.