

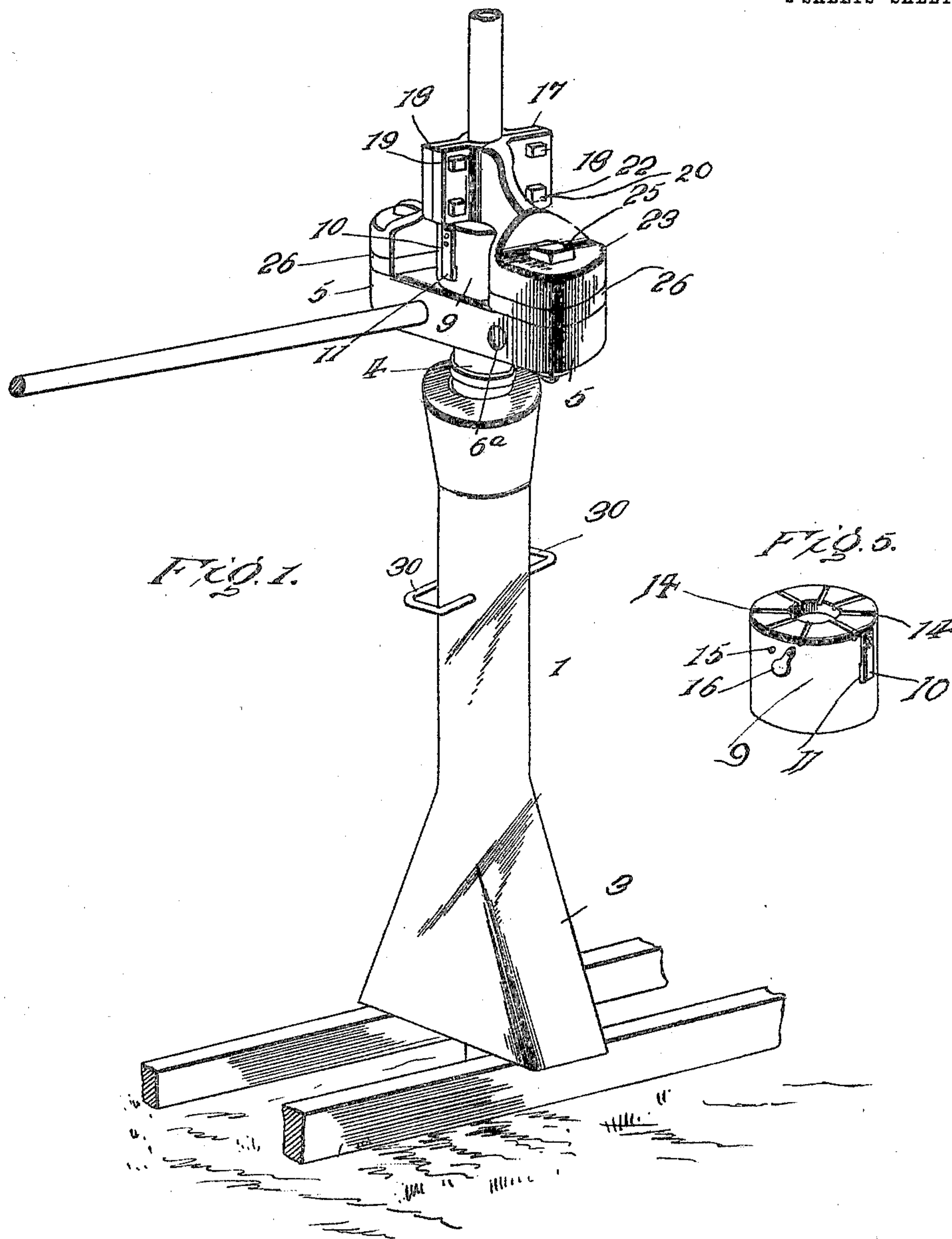
No. 817,363.

PATENTED APR. 10, 1906.

H. B. CUNNINGHAM.
PIPE PULLING JACK.

APPLICATION FILED DEC. 11, 1905.

2 SHEETS—SHEET 1.



Inventor

H. B. Cunningham,

Witnesses
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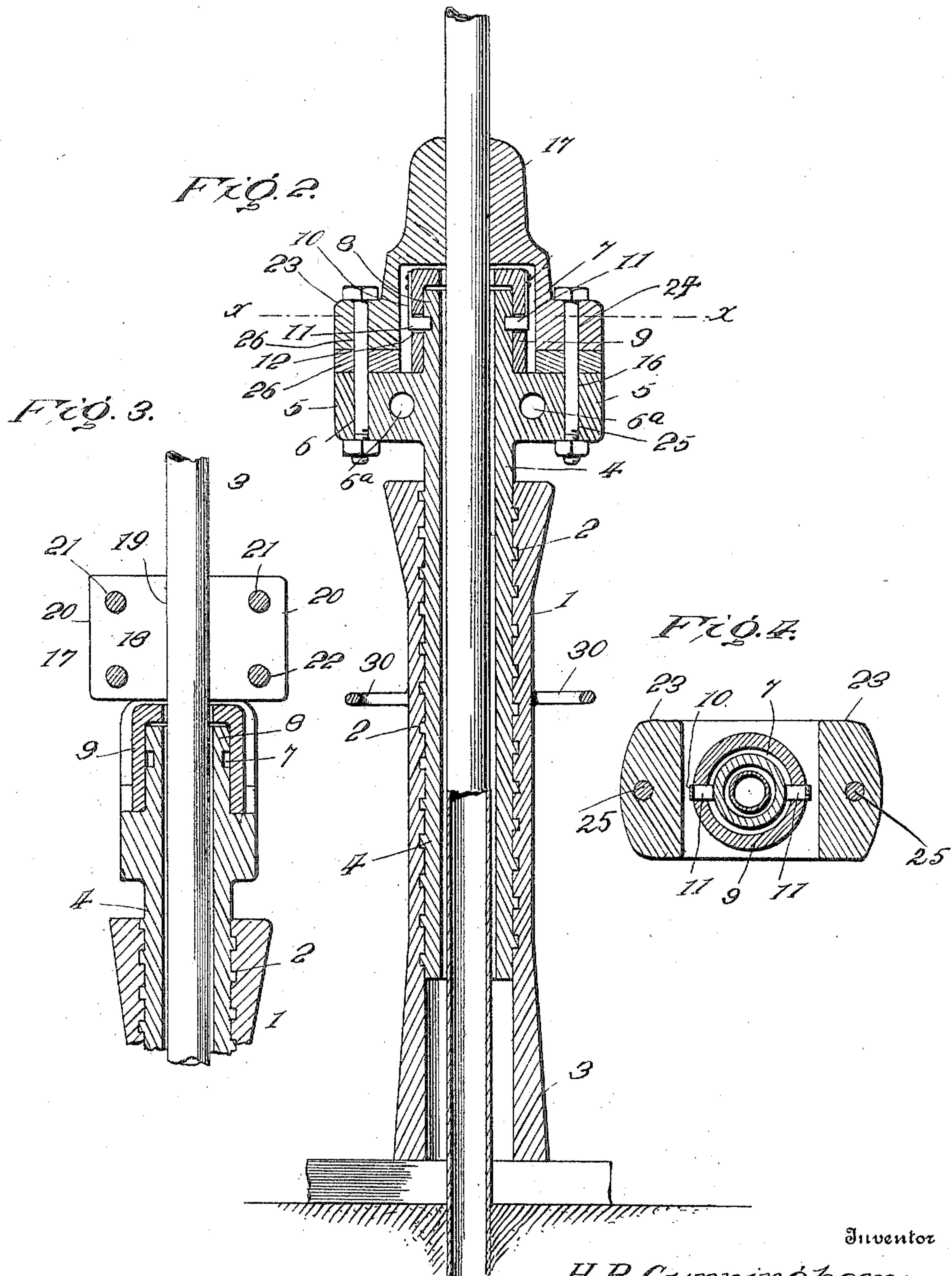
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UNITED STATES PATENT OFFICE.

HUGH B. CUNNINGHAM, OF ARNOT, PENNSYLVANIA.

PIPE-PULLING JACK.

No. 817,363.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed December 11, 1905. Serial No. 291,342.

To all whom it may concern:

Be it known that I, HUGH B. CUNNINGHAM, a citizen of the United States, residing at Arnot, in the county of Tioga and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Pulling Jacks, of which the following is a specification.

The object of my invention is to provide an improved construction of jack designed particularly for withdrawing pipes or casings from oil-wells and diamond-drill holes and for pulling drill-rods when fast and embodying novel features of construction and arrangements of parts whereby the pipe or casing may be readily lifted by a continuous instead of an intermittent movement and without alternately securing the clamp to the pipe and detaching it to secure a fresh hold.

The invention also comprehends means whereby the pipe or casing may be withdrawn without any danger of buckling or kinking the same.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view illustrating my invention. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a vertical sectional view of the upper end of the jack, taken substantially at right angles to Fig. 2. Fig. 4 is a horizontal sectional view on the line X X of Fig. 2. Fig. 5 is a detail perspective view of the swivel-head mounted on the upper end of the screw-rod of the jack.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates a post or standard which is hollow throughout its length and is provided on its interior wall with a screw-thread 2 and is also provided with a flared or enlarged lower end 3 to form a suitable supporting base or foot. The post or standard 1 has mounted in it an exteriorly-screw-threaded hollow rod 4, the threads of which coact with the threads on the interior of the standard and which is provided at its upper end with a yoke 5, provided at opposite ends with vertical openings 6. The yoke 5 is also provided with transversely or horizontally extending recesses or holes 6^a, designed to receive the end of a rod

or similar tool for turning the hollow screw-rod 4. The rod 4 extends slightly above the yoke 5 and is provided on its upper extremity with an exterior annular groove 7 and a rim-flange 8 thereabove. A head 9 in the form of a cap, as shown, is fitted over the upper extremity of the screw-rod 4 and is provided at diametrically opposite points with members 10, carrying latch-lugs 11, projecting through openings 12 and mounted in said annular groove, whereby the head is swiveled with respect to the screw-rod and is mounted to turn in a horizontal plane thereon. The upper surface of the head is radially notched, as shown at 14. The head 9 is also preferably provided with an oiling-opening 15, which extends obliquely therethrough in a downward direction and is normally closed by a spring-plate 16.

17 designates a two-part clamp, the two sections or parts of which are designated 18. Each of said sections is provided with a middle semicircular recess 19, the said recesses meeting, as shown, and forming a circular opening extending vertically through the clamp and preferably of a diameter slightly less than the diameter of the pipe or casing which it is intended shall be withdrawn. The two sections 18 of the clamp are provided with oppositely-extending laterals or wings 20, which are provided with registering apertures 21, designed to receive bolts 22, so that the two parts may be tightly secured together around the pipe or casing, and each section 18 is further provided with a downwardly-projecting finger 23, provided with a vertical aperture 24 in vertical alinement with the apertures in the respective ends of the yoke on the upper end of the screw-rod 4. Apertured fillers or washers 26 are preferably interposed between the ends of the yoke and the downwardly-projecting fingers of the clamping-sections, and clamping-bolts 25 extend through the registering apertures in order to secure the clamp to the screw-rod and bind the parts rigidly together.

The post or standard may be provided at opposite sides with projecting loop-handles 30, by which it may be carried from place to place.

In the practical operation of my improved jack the jack is inserted over the pipe or casing with the latter extending entirely there-through, and the two sections of the clamp are adjusted so as to bind the pipe or casing tightly. By means of a rod or suitable im-

plement or shaft inserted in one of the transverse apertures of the yoke of the screw-rod the latter may be turned either by man or horse power, as may be desired. By turning the screw-rod the latter will at the same time be raised, drawing the pipe or casing upwardly with it. As the pipe or casing is incased in a comparatively long housing constituted by the post or standard 1 and the superposed parts, it will not be liable to bend or buckle by the torsional strain placed thereon in the operation of turning the screw-rod, but will be drawn up without danger of injury.

As my improved jack may be used for moving purposes generally without the clamping portion, the swiveled head 9 is provided to support the entire pressure in said event, and the grooves in the upper face of said head are for the purpose of preventing the head from turning around when so used. The object of the filling-pieces or washers 26 is that sometimes it is impossible to turn the pipe or casing, and in such event it is necessary to work the jack alone. Hence when the yoke is being turned and the clamp is at a standstill there will be no rubbing of the clamp and yoke with the filling-pieces or washers left out.

Having thus described the invention, what is claimed as new is—

1. A device of the character described, comprising a hollow post or standard, a hollow rod mounted therein, means whereby a rotation of the rod will effect a longitudinal movement thereof with respect to the standard, a clamp arranged to be secured to a pipe or the like above said rod, and means for connecting said clamp to said rod, and a swivel-head mounted on the rod below the clamp.

2. A device of the character described, comprising a hollow post or standard, a hollow rod mounted therein, means whereby a rotation of the rod will effect a longitudinal movement thereof with respect to the standard, a clamp arranged to be secured to a pipe or the like above the rod, and a swivel-head mounted on the rod and designed to support the clamp.

3. A device of the character described comprising a hollow post or standard, a hollow rod mounted therein, means whereby a rotation of said rod will effect a longitudinal movement thereof with respect to the standard, the said rod carrying a yoke, a clamp constructed in two sections designed to be clamped together around a pipe or casing, and an adjustable connection between said clamp and said yoke.

4. A device of the character described comprising a hollow post or standard, a hollow rod mounted therein, means whereby a rotation of said rod will effect a longitudinal movement thereof with respect to the standard, said rod being provided with a vertically

and transversely apertured yoke, the transverse apertures being designed to receive a turning-tool, a sectional clamp designed to embrace a pipe or casing and provided with clamping means, and bolts working in the vertical apertures of the yoke and connected to said clamping-sections as and for the purpose set forth.

5. A device of the character described comprising a hollow post or standard, a hollow rod mounted therein, means whereby a rotation of said rod will effect a longitudinal movement of the same with respect to the standard, a clamp carried by said rod, the upper end of said rod being formed with an annular groove, and a head surrounding the upper end of the rod and provided with a latch-lug working in said groove to connect the head to the rod.

6. A device of the character described comprising a hollow post or standard, a hollow rod mounted therein, means whereby a rotation of said rod will effect a longitudinal movement of the same with respect to the standard, a clamp carried by said rod, the upper end of said rod being formed with an annular groove, and a head surrounding the upper end of the rod and provided with a latch-lug working in said groove to connect the head to the rod, the upper face of said head being provided with radial notches or recesses.

7. A device of the character described comprising a hollow post or standard, a rod mounted therein, means whereby a rotation of the rod will effect a longitudinal movement thereof with respect to the standard, the upper end of the rod being provided with a yoke which is formed at its opposite end with apertures, a sectional clamp designed to embrace a pipe or casing and provided with clamping means for binding itself thereto, each section of said clamp being provided with a downwardly-extending finger having a vertical aperture therein, and bolts working through the apertures in the yokes and the aperture in said finger, whereby to secure the clamp to the head, as and for the purpose set forth.

8. A device of the character described comprising a hollow post or standard, a hollow rod mounted therein, means whereby a relative rotation of said parts will effect a longitudinal movement of the rod with respect to the standard, a clamp arranged to be secured to a pipe or the like above the rod, and a swivel-head supported on said rod and provided in its upper surface with notches, as and for the purpose set forth.

9. A device of the character described, comprising a hollow post or standard, a rod mounted therein, means whereby a rotation of the rod will effect a longitudinal movement thereof with respect to the standard, the upper end of the rod being provided with a yoke, a sectional clamp designed to embrace a pipe

or casing and provided with clamping means for binding itself thereto, each section of said clamp being provided with a downwardly-extending finger, means for connecting said fingers to the said yoke, and filler-pieces arranged to be inserted between the said fingers and yoke, as and for the purpose set forth.

10. A device of the character described, comprising a hollow post or standard, a rod mounted therein, means whereby a rotation of the rod will effect a longitudinal movement thereof with respect to the standard, a sec-

tional clamp provided with laterals designed to embrace a pipe or casing with the laterals abutting against each other, means for connecting said laterals together to bind and clamp them to a pipe or casing, and means for connecting said clamp to said rod.

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

HUGH B. CUNNINGHAM. [L. s.]

Witnesses:

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