W. R. Hinsdale,

Drill Rod Grab.

No. 49,628. Patented Aug. 29, 1865.

Fig: 1.

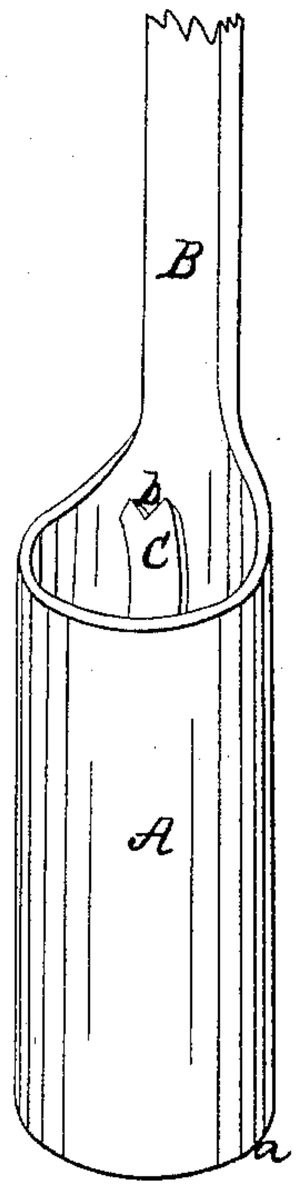


Fig: 2.

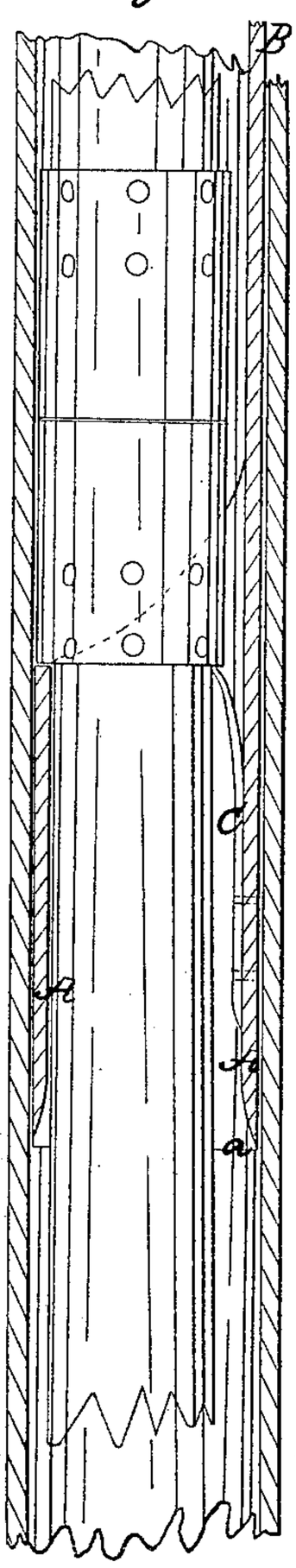
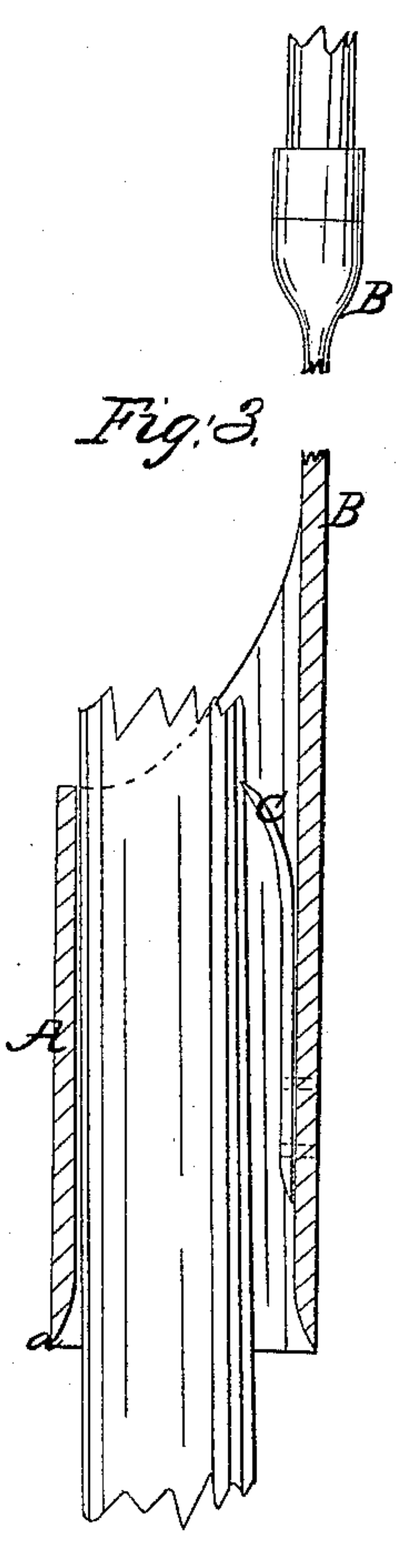


Fig: 3.



Witnesses
R. F. Osgood.
J. A. Davis.

Inventor.
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UNITED STATES PATENT OFFICE.

WILLIAM R. HINSDALE, OF BROOKLYN, NEW YORK.

IMPROVED EXTRACTOR OF TUBES, DRILLS, &c., FROM OIL-WELLS.

Specification forming part of Letters Patent No. **49,628**, dated August 29, 1865.

To all whom it may concern:

Be it known that I, WILLIAM R. HINSDALE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Spring Catch-alls or Sockets for Raising Rods, Tubes, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of my improved device; Fig. 2, a central vertical section of the same situated in the elevating-tube of an oil-well, and in the act of raising a rod provided with couplings; Fig. 3, a similar view of the same in the act of raising a smooth wooden rod.

Like letters of reference indicate corresponding parts in all the figures.

My improved device is intended more particularly for removing "sucker" or pump rods from oil-wells, but is also equally adapted to raising iron or wooden rods of any kind, or tubes or drills.

The invention consists in the combination of a short tube or cylinder or equivalent and a projecting spring or springs inside it, the whole so arranged as to slide down easily over the end of the rod to be raised, and then catch it to hold it.

As represented in the drawings, A is the tube or cylinder, which may be of any desirable size and length, but for use in oil-wells it is made of a diameter to easily slide up and down in the outer elevating or oil tube, and of a length only to insure the necessary strength to properly receive the necessary size of spring within and to brace against the weight of rod to be raised. In order to easily pass over the end of the rod to be raised, the lower end of the tube is preferably made beveled or sharp-edged outward, as represented at *a*, Figs. 2 and 3. It is obvious that the form of the tube may be modified without changing the nature of the invention. The top of the tube is provided with a bar or extension, B, on one side, as shown, leaving the top open. This bar is of sufficient length to allow the sucker-rod to project through far enough to enable the spring presently to be described to catch under the couplings of the sections. To the top of the bar are attached rods or a rope for operating the device.

On the inside of the tube above described is situated a spring or springs, C, secured at the bottom, but projecting upward and inward, as represented, so that the top or tops come about level with the top of the tube. The spring or springs may or may not be armed with teeth *b b*. Instead of the form of spring represented any other accomplishing a like effect may be employed.

In drawing a sucker or pump rod from an oil-well, two effects are necessary—first, to encircle or embrace it, and, second, to take hold of it in such a manner as to raise it. These two effects are perfectly accomplished in my device. The tube A fits over and around the top of the rod to be raised and clasps or holds it steady, while the spring or springs C catch either under the couplings of the rod, (if there are any,) as shown in Fig. 2, or catch against the side of the rod, (if the same is smooth,) as shown in Fig. 3.

In operating, a sufficient weight of rod or shaft is connected with the device to enable it to fall with considerable force, so that when it strikes the top of the sucker-rod it will be driven over it. This effect is more perfectly accomplished by making the lower end of the tube sharp-edged, as before described. When the rod to be raised is provided with couplings the top of the spring or springs, being situated level with the top of the tube, causes the coupling to catch both over the spring and the top of the tube, so as to have a double bearing, as indicated in Fig. 2.

In oil-wells the sucker-rods are frequently made of wooden sections with iron couplings composed of two parts which screw together. The rivets that hold these couplings to the wood frequently break out, leaving the end of the wood projecting upward, and this, receiving the blows of the upper portion, becomes bruised and slivered, so as to fill the area of the oil-tube and render it exceedingly difficult to attach any apparatus for removing the rod. My device, by falling with considerable momentum, having sufficient weight of rod attached, is driven easily over the end of the wood, and in this condition holds, so that the rod can be

easily withdrawn. My device thus combines effectiveness with strength and economy of space.

Owing to the difficulty of catching and holding the sucker-rod by the means now employed at oil-wells, it is frequently the case that the whole tubing must be raised, and consequently the seed-bag around the tubing must be destroyed. This is not only a work of great difficulty, but the well is frequently greatly injured by so doing. It is obvious that the employment of my device remedies this difficulty, for I am enabled to catch and hold the sucker-rod securely, and thereby obviate the necessity of raising the tubing.

What I claim is—

The cylinder A, to which the bar B is attached at one side, so as to afford no obstruction to the passage of the rod to be raised through the said cylinder to any desired extent, and which is constructed sharp-edged at the lower end, as described, in combination with the spring C, the top of which is nearly on a level with the top of the said cylinder, for the purpose specified, all arranged in the manner herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WM. R. HINSDALE.

Witnesses:

JAY HYATT,

AARON MILLER.