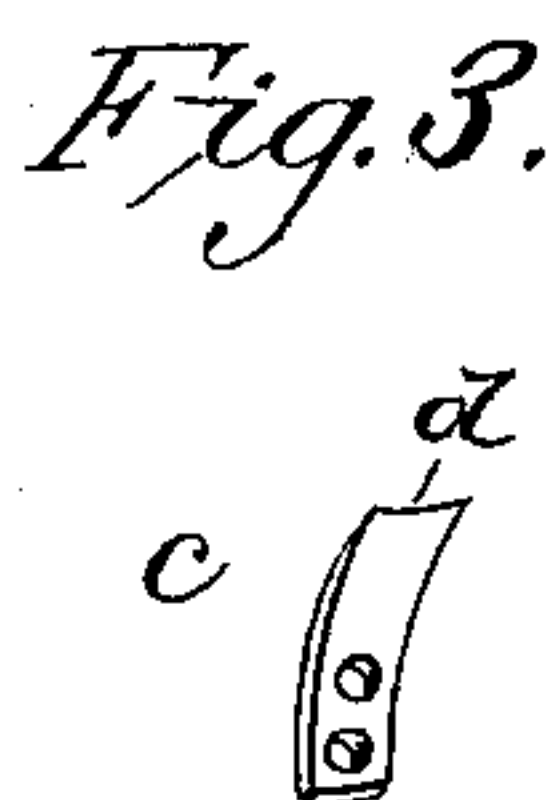
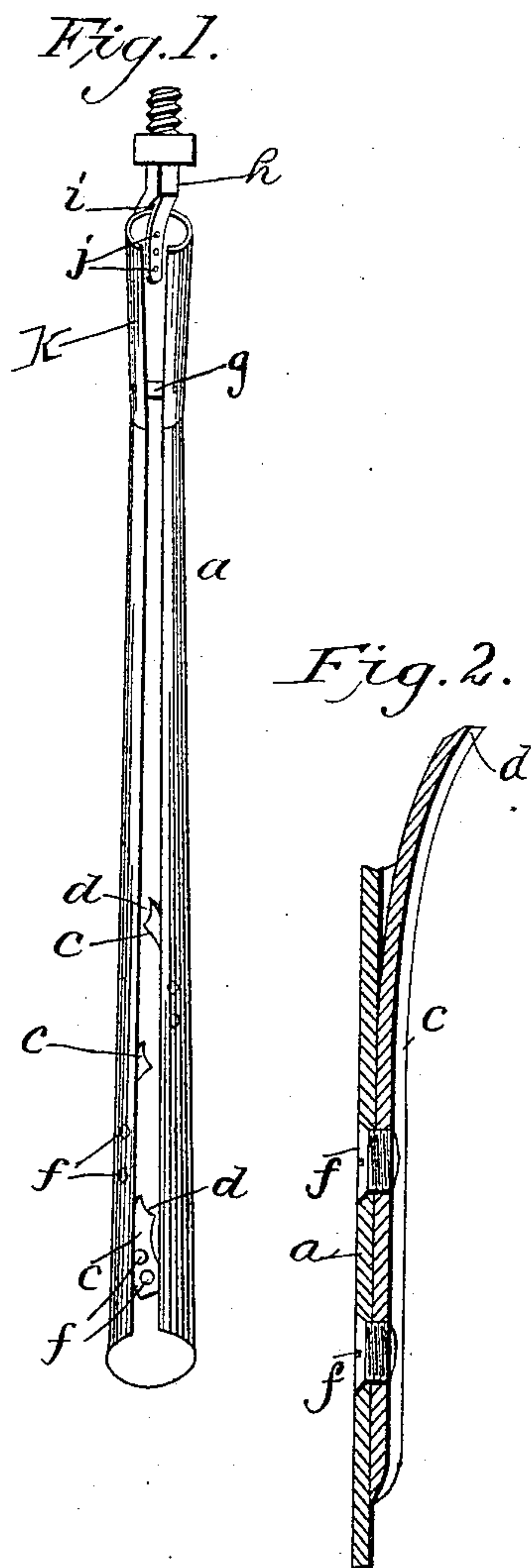


(No Model.)

L. R. HITCHCOCK.
SUCKER ROD SOCKET.

No. 471,975.

Patented Mar. 29, 1892.



Witnesses:

Jennie Hitchcock
L. R. Hitchcock

Inventor:

Luke R. Hitchcock

UNITED STATES PATENT OFFICE.

LUKE R. HITCHCOCK, OF FOUR MILE, NEW YORK.

SUCKER-ROD SOCKET.

SPECIFICATION forming part of Letters Patent No. 471,975, dated March 29, 1892.

Application filed November 16, 1889. Serial No. 330,626. (No model.)

To all whom it may concern:

Be it known that I, LUKE R. HITCHCOCK, a citizen of the United States, residing at Four Mile, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements which relate to Sucker-Rod Sockets, of which the following is a specification.

My invention relates to a device for removing broken sucker-rods from oil or other wells; and my object is to provide a more effective easily-operated extractor than those hitherto in use.

With this purpose in view my invention consists in the peculiar features and combinations of parts more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a vertical exterior view of my complete device, and Figs. 2 and 3 views of details.

The reference-letter *a* denotes a tube provided with a longitudinal slit throughout its length. This tube is substantially funnel-shaped, having a gradual taper as it extends upward, whereby the lower end of the tube is enlarged to more readily receive the end of a broken sucker-rod *b* and become tightly wedged within the tube when it is slipped down over it. On the interior of the lower part of the tube is located at short intervals a series of spring-catches *c*, which project inward and upward and are provided at their ends with concavities *d*, which enable them to more firmly grasp the broken end of the sucker-rod. These catches are fastened to the tube by means of short screws *f*, which pass through the tube and have their heads accessible to the exterior of the tube, whereby they can be readily removed by means of a screw-driver for the purpose which will hereinafter appear. The upper edges of the tube are tied against spreading by means of a strap *g*, which has its opposite ends riveted or otherwise suitably fastened to the opposite edges of the tube. The means by which this tube is attached to the rod by which it is raised and lowered consist of a bracket *h*, having a bifurcated end *i*, which passes astride the upper edge of the tube, to which it is fast-

ened by the rivets *j*. The upper end of the bracket is screw-threaded to receive the end of the operating-rod, which is detachably secured thereto.

In using my device the operator first screws the operating-rod onto the bracket *h* and lowers the tube into the well containing the broken sucker-rod, and when the tube reaches the broken end its flaring mouth passes over it, and as the end passes up into the tube it slides past the upwardly and inwardly projecting ends of the spring-catches and wedges itself in between the yielding walls of the tube. The longitudinal slit or slot in the tube permits it to have this yielding or retractile force to more snugly grasp the end of the rod. When thus secured, the tube is withdrawn from the well and will in the majority of cases carry with it the sucker-rod.

It will be seen that the combined grasping force of the interior walls of the tube upon the sucker-rod, together with that of the spring-catches, gives the extractor an exceedingly tenacious hold. When the end of the sucker-rod has been drawn above ground, the extractor can be readily removed by unscrewing the short screws which hold the spring-catches, thereby releasing their hold.

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

1. The combination of a tube having oppositely-flaring ends and provided with a longitudinal slit, a screw-threaded bracket rigidly secured to the upper end of the tube, and internal spring-catches attachable and detachable from the exterior of the tube, in the manner and for the purpose set forth.

2. In a sucker-rod extractor, a tube provided with a longitudinal slit, in combination with a transverse strap secured to the edges of the slit to prevent the tube from spreading and internal spring-catches, all arranged in the manner and for the purpose set forth.

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

LUKE R. HITCHCOCK.

Witnesses:

JENNIE HITCHCOCK,
LEE G. HITCHCOCK.