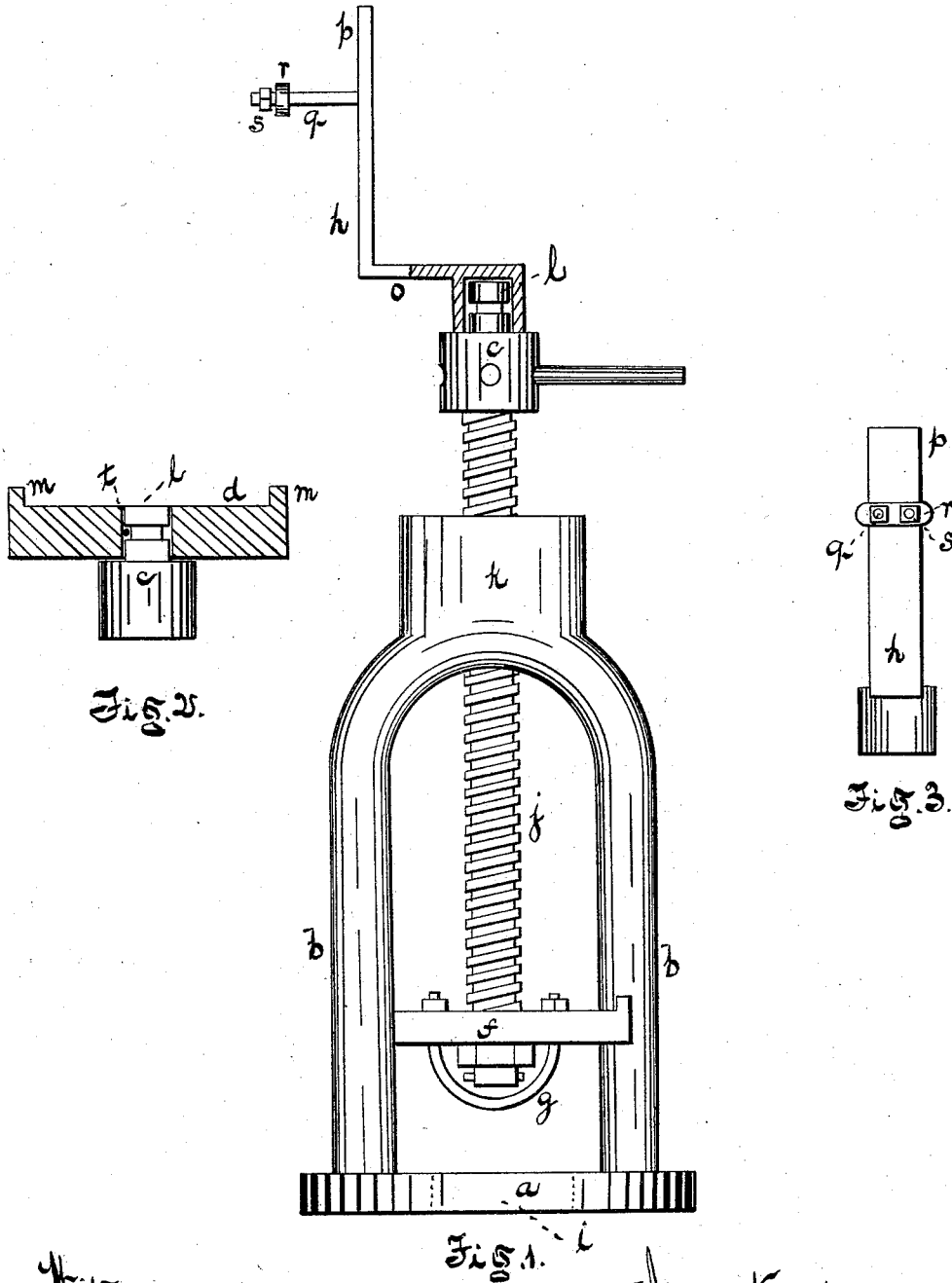


F. HANSON.
Jack-Screw.

No. 218,877.

Patented Aug. 26, 1879.



Witnesses:
Herbert J. Buggs
James O. Crook

Fig. 1.

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UNITED STATES PATENT OFFICE.

FREEMAN HANSON, OF HOLLIS, MAINE.

IMPROVEMENT IN JACK-SCREWS.

Specification forming part of Letters Patent No. **218,877**, dated August 26, 1879; application filed June 4, 1879.

To all whom it may concern:

Be it known that I, FREEMAN HANSON, of Hollis, in the county of York and State of Maine, have invented certain new and useful Improvements in Screws; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 shows the screw with post-lifter. Fig. 2 shows the bridge-lifter. Fig. 3 shows the post-lifter, side view.

Same letters show like parts.

The object of my invention is to produce a jack-screw of improved construction by which a variety of operations can be performed, as hereinafter described.

a shows the base; *b*, the crotchet-stand. *k* is the top part; *d*, the bridge-hoister or movable top. *f* is the lifting device at the bottom end of the screw. *g* is the arrangement for drawing spikes, &c., and *h* is the post-puller, &c.

The base-piece has a hole, *i*, through which a cord or chain can pass from the bottom end of the screw for several purposes.

j is the screw working in a female screw in the part *k* at the top of the crotchet-stand *b*.

On the top of the screw is the arbor *l*, which receives the bridge-hoisting device *d*. This device is removable. The device is so made as to take up the two rods or bars or spans of an iron bridge, one on each of its ends, or near them. The device is provided with two lips to prevent these bars from slipping off, (see *m*.) The same remarks can be made of the device *f* at the bottom end of the screw. This lifter *f* can be used when the bars or rods to be lifted are too near the chords to admit a jack-screw of the usual height being placed between them.

The arrangement *g* is for attaching a chain or cord or other thing when the screw is used for lifting heavy articles. The chain or cord

then drops through the hole *i*. The piece *f* can be removed from the lower end of the screw, and instead thereof an arrangement like a common pair of pinchers attached, so that they will seize the head of a bolt or spike, and so draw it up when the screw is turned.

A very secure way of holding the device *f* is to place a nut below it on the end of the bar of the screw, and then pass a bolt through the nut and the screw-bar.

The post-puller *h* has a socket, *n*, to fit over the arbor *l* on the top of the screw. It has a shoulder, *o*, so as to project sufficiently out over the crotchet-arms. There is also provided the lip or plate *p* to hold the post vertically and straight. *q* are rods or side pieces to pass on each side of the post. Across from one to the other of these rods extends the collar *r*. The post is held between the plate *p*, rods *q*, and collar *r*. The nuts *s* are then screwed up on the rods *q*, so as to bind and tightly hold the post. Then, by turning the screw *j*, the post will be raised.

The screw *j* is turned by a lever fitting holes in the head *c*. Both the lifters *d* and *f* can be turned so as to accommodate themselves somewhat to the articles to be lifted. *d* can be turned completely around, and it can be removed from the arbor *l* by pulling out the pin *t* when the post-puller is to be used.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a lifting-jack, the circular base *a*, with the hole *i* and nut-head *k*, in combination with the screw *j*, cross-head *f*, and loop attachment *g*, substantially as herein described.

2. In combination with a lifting-jack, the socket *n*, shoulder *o*, upright *h*, rods *q*, and collar *r*, substantially as set forth and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FREEMAN HANSON.

Witnesses:

WILLIAM HENRY CLIFFORD,
HERBERT G. BIGGS.