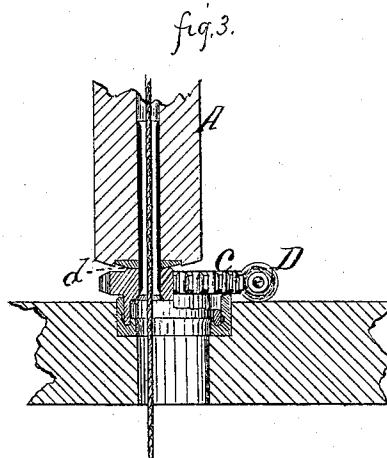
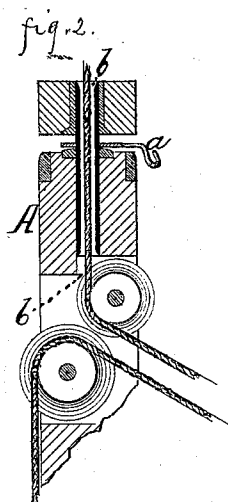
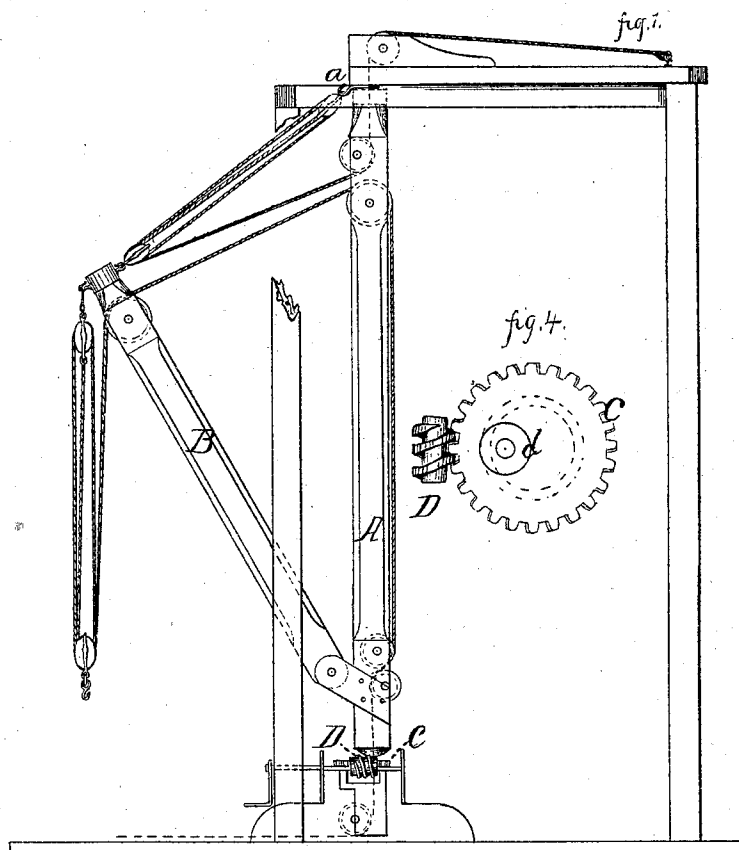


J. THAYER.
Derricks.

No. 147,530.

Patented Feb. 17, 1874.



Witnesses.
W. B. Du Kanel
Thomas. Byrne

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UNITED STATES PATENT OFFICE.

JOSEPH THAYER, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF
HIS RIGHT TO HIRAM W. McCOTTER, OF SAME PLACE.

IMPROVEMENT IN DERRICKS.

Specification forming part of Letters Patent No. **147,530**, dated February 17, 1874; application filed
October 29, 1873.

To all whom it may concern:

Be it known that I, JOSEPH THAYER, of Kansas City, county of Jackson and State of Missouri, have invented certain new and useful Improvements in Derricks, of which the following is a specification:

The object of my invention is an improvement in derricks, whereby the guys may be readily adjusted to compensate for the stretching or varying of the length of the guy-ropes from any cause whatever, and whereby the derrick may be worked and swung around as desired with the least possible force; and to this end my invention consists in providing a hollow gudgeon at the top of the derrick, through which the fall-line of the boom-tackle is passed, so that a direct draft is obtained for adjusting the length of the guy, and this being through the axis of the mast, the derrick may be swung around without straining the guy or changing the relative position of the boom. My invention also consists in stepping the mast eccentrically in a wheel or movable base, so that it will automatically swing around in either direction by throwing the foot of the mast off the center, which is done by turning the base on its center. The weight in this case becomes the operating means to swing the derrick.

Referring to the drawings forming a part of this specification, Figure 1 is an elevation of the derrick complete, showing, in dotted lines, the hollow gudgeon. Fig. 2 is a section of the upper end of the mast, showing the fall-lines of the guy and hoisting-tackle passing over sheaves or pulleys arranged in a recess in the mast. Fig. 3 is a sectional view of the eccentric stop and movable base; and Fig. 4 is an elevation, showing the movable base in the form of a spur-wheel, and an operating-worm.

Like letters refer to corresponding parts in all of the figures.

A is the mast, having the hollow upper end, as seen at *b*, and having sheaves or pulleys, arranged as shown. B is the boom, having its

guy-rope leading from a hook or attachment, *a*, through a block (double or single) at the head of the boom; thence over a sheave in the mast, and up through the top of said mast, and thence to any point desired or most convenient for operation. The fall-line of the hoisting-tackle also passes over a sheave near the top of the mast, thence down alongside thereof, and then, through the hollow lower end of the mast, over a fixed sheave or pulley, to a windlass or other suitable or convenient operating means. C is the movable base arranged to turn on a suitable bed or bearing. The mast A is stepped eccentrically in the movable part C, as shown at *d*. A worm-screw, D, is arranged to mesh with the cogs on the base C for turning the same, and thus the mast is thrown from a plumb or vertical position.

The mast being thrown out of plumb, it is obvious that the suspended weight will cause the derrick to swing in either direction as the base is turned one way or the other.

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

1. The combination, in a derrick, of an eccentrically-stepped mast, A, provided with a hollow gudgeon at its upper end, with the guy-rope, boom B, and revolving hook *a*, substantially as and for the purpose set forth.

2. In a derrick, the combination, with a movable base, of an eccentrically-stepped mast, as and for the purposes specified.

3. The combination of the eccentrically-stepped mast A, cogged movable base C, and worm-screw D, as specified.

In testimony that I claim the foregoing as my invention I hereunto affix my signature this 22d day of October, 1873.

JOSEPH THAYER.

Witnesses:

RICHARD ROBERTSON,
J. E. HAVENS.