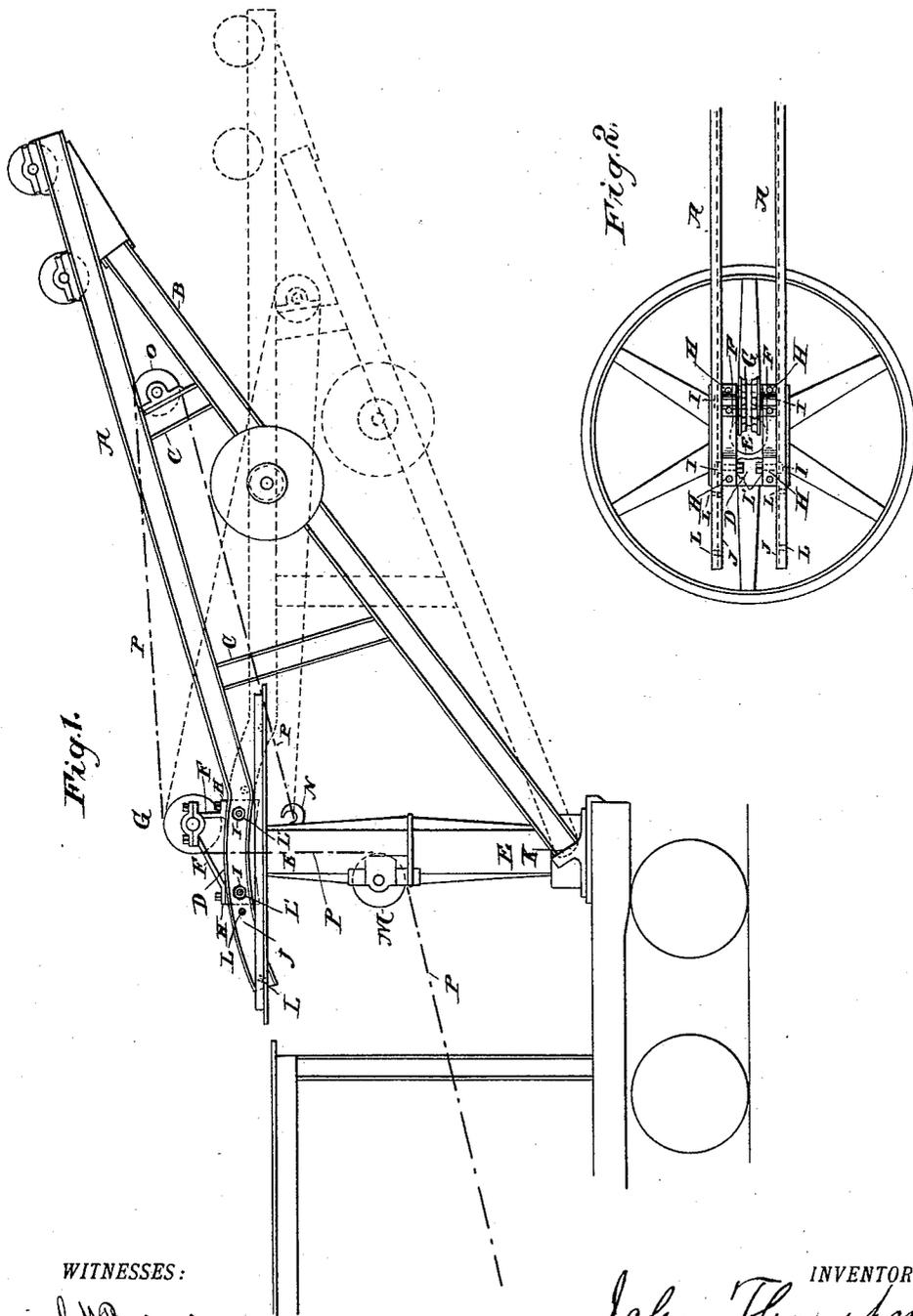


(No Model.)

J. THOMPSON.
DERRICK.

No. 410,997.

Patented Sept. 10, 1889.



WITNESSES:

Wm Benjamin
Frederick Smith

INVENTOR

John Thompson
BY *Phillips Abbott*
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UNITED STATES PATENT OFFICE.

JOHN THOMPSON, OF BUCYRUS, OHIO, ASSIGNOR TO THE BUCYRUS FOUNDRY AND MANUFACTURING COMPANY, OF SAME PLACE.

DERRICK.

SPECIFICATION forming part of Letters Patent No. 410,997, dated September 10, 1889.

Application filed June 7, 1889. Serial No. 313,501. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMPSON, a citizen of the United States, and a resident of Bucyrus, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Derricks, of which the following is a specification.

The object of this invention is to facilitate the manipulation and transportation of steam shovels and derricks. The normal position of the crane or boom of such apparatus is of much greater height than will pass through tunnels or under bridges, and to permit them to do so they have to be lowered frequently, at great trouble and considerable expense.

My invention consists in the peculiar construction of such apparatus herein described, whereby the crane may be speedily, safely, and inexpensively brought to its lowered position for the purposes of transportation or repair, and again replaced for use.

In the drawings, Figure 1 illustrates a side view of the invention. Fig. 2 illustrates a top view thereof.

In both figures such parts only of the apparatus are shown as will make the invention clear.

A are the upper braces of the crane. B are the lower ones. They are braced together by cross-pieces C C or in any other preferred manner.

D is a casting, which is provided with a central circular opening by which the casting revolves on the head of the mast E.

F F are brackets bolted to or integral with the casting D, in the upper part of which a sheave G is journaled. The casting is also provided with rearwardly and forwardly extending portions H H H H, through which holes are made for the reception of bolts I I I I, which attach the ends of the upper braces A to the casting. The end portions of the upper braces, as seen at J J, are made on the arc of a circle, which is struck from the foot of the lower braces B, where they engage with the rotary sockets K, as usual; and these arc-shaped ends of the upper braces are provided with double sets of bolt-holes L L L' L'.

M is a sheave set in the rear side of the mast, and N is a hook or its equivalent on the front of the mast.

O is a sheave set in the frame-work of the crane.

P is a chain or rope attached at one end to the hook or its equivalent N. Thence it passes over the sheave O, thence rearwardly over the sheave G set in the casting, thence downwardly through the mast, and out rearwardly to a windlass passing under the sheave M.

The operation is obvious. When desired to lower the crane for transportation or any other purpose, hoist on the chain P until the crane is lifted so that the strain is taken off of the bolts I I I I, which during the normal position of the crane are in the forward holes L' L' of the upper braces. Then slack up on the hoisting-chain P slowly, during which act the crane will descend, rocking on the lower ends of the lower braces, until the rearward holes L L in the upper braces register with the bolt-holes in the casting. Then reinsert the bolts.

The adjustment is to be such that when the bolts are in the rearward holes L L the crane will be sufficiently low to pass under bridges, through tunnels, &c.

To readjust the apparatus for renewed use, the above-stated operations are reversed.

I do not confine myself to the details of construction shown, since it will be apparent to those skilled in this art that many alterations may be made therein and still the essentials of my invention be employed.

I claim—

1. The combination, in a machine of the class described and shown, of upper and lower braces, the rearward ends of the upper braces being formed on the arc of a circle struck from the base of the lower braces and provided with a plurality of bolt-holes, a casting turning on the head of the mast, to which the ends of the upper braces are bolted, and means whereby the crane may be adjusted to different elevations to admit of the coincidence of different bolt-holes in the upper braces with those in the casting, substantially as set forth.

2. The combination, in a machine of the class described and shown, of the upper braces A, the rearward ends whereof are curved as shown and provided with a plurality of bolt-holes, the lower braces B, set in a rotary socket at the foot of the mast, a rotary casting D, set on the top of the mast and provided with bolt-holes, substantially as described, and means for hoisting and lowering

the braces, substantially as and for the purposes set forth. 10

Signed at Bucyrus, in the county of Crawford and State of Ohio, this 20th day of April, A. D. 1889.

JOHN THOMPSON.

Witnesses:

LEONARD HOWLETT,
W. B. CRITTENDEN.