

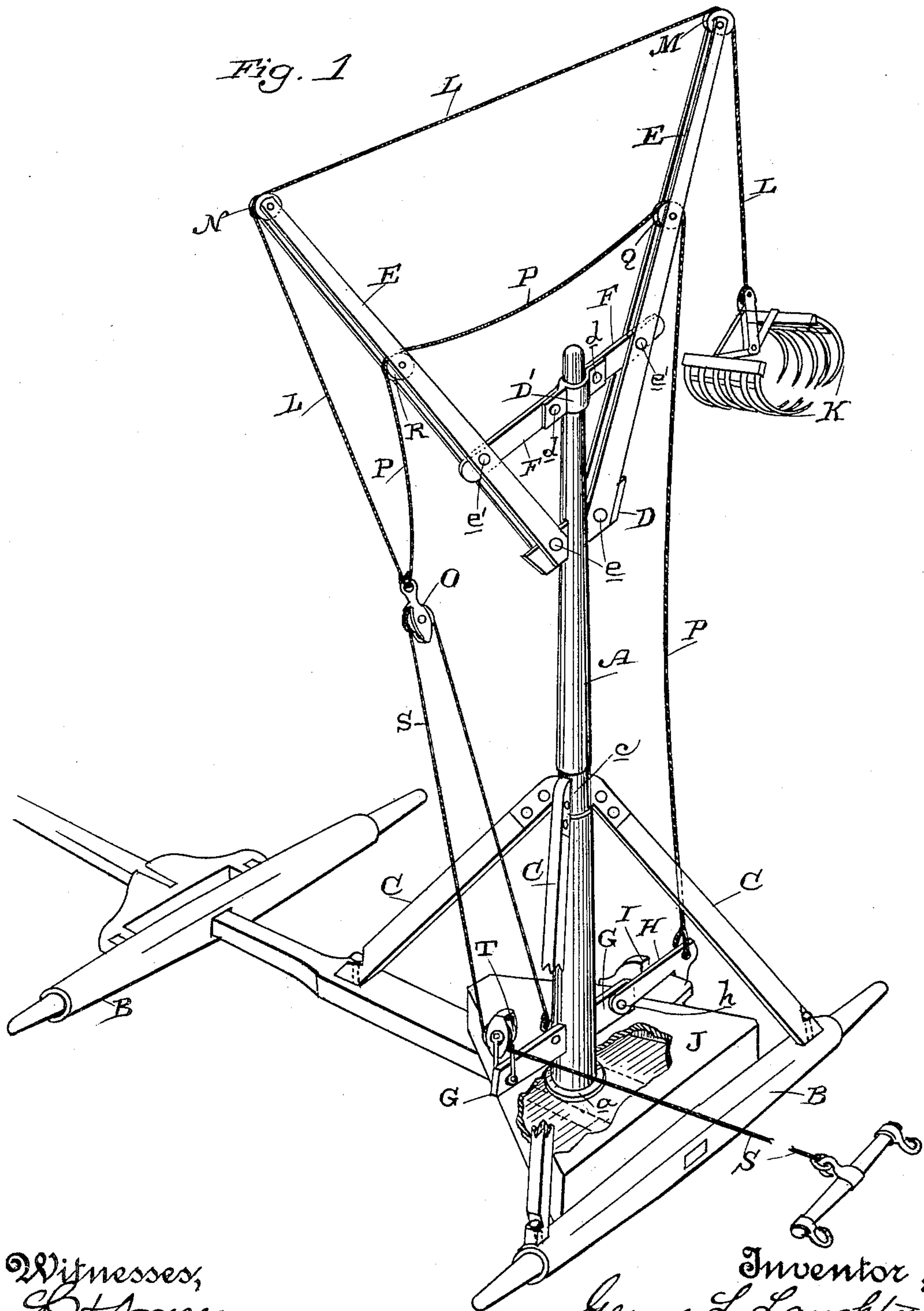
(No Model.)

2 Sheets—Sheet 1.

G. L. LAUGHTON.  
DERRICK.

No. 477,129.

Patented June 14, 1892.



Witnesses,  
*G. H. Hume*  
*J. A. Bayless*

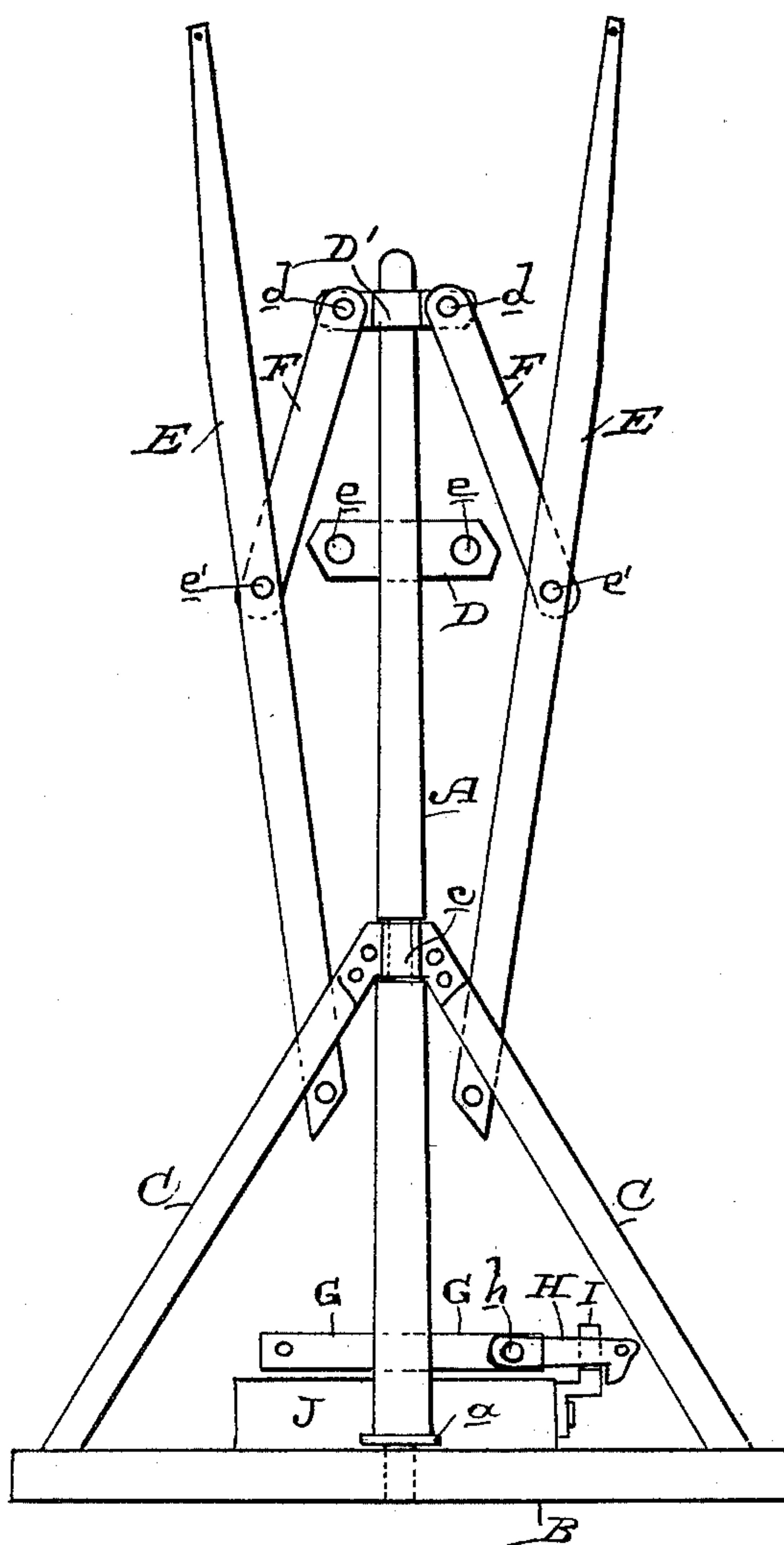
Inventor,  
*George L. Laughton*  
*R. Dewey & Co. atty*

2 Sheets—Sheet 2.

No. 477,129.

Patented June 14, 1892.

*Fig. 2.*



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George L. Loughton  
By Denny & Co. atty



# UNITED STATES PATENT OFFICE.

GEORGE L. LAUGHTON, OF RENO, NEVADA.

## DERRICK.

SPECIFICATION forming part of Letters Patent No. 477,129, dated June 14, 1892.

Application filed August 28, 1891. Serial No. 403,999. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE L. LAUGHTON, a citizen of the United States, residing in the city of Reno, Washoe county, State of Nevada, have invented an Improvement in Derricks; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of derricks especially adapted for stacking hay.

It consists in the novel construction of the mast, arms, and operating-ropes hereinafter fully described, and specifically pointed out in the claims.

The object of my invention is to provide a simple, effective, and portable derrick of this class.

Referring to the accompanying drawings, Figure 1 is a perspective view of my derrick in position ready for use. Fig. 2 is an elevation of same, showing it folded.

A is the mast, mounted and adapted to turn axially in a foot-plate *a*, which is carried by a frame of suitable character, either resting on the ground or, as here shown, mounted upon running-gear B. The mast is supported by braces C, preferably three in number, the lower ends being secured to the frame and the upper ends secured to a sleeve *c*, fitted about the mast and in which said mast turns.

Secured transversely to the mast at its upper portion is a piece D, to which the inner ends of the adjustable arms E are secured by a bolt or pin *e* of such a character that the arms may be firmly set in the position to which they are fixed and may be removed to allow them to be disconnected from said piece.

To the mast near its top is secured a second piece D', to which are secured by bolts or pins *d* the brace-arms F, the outer ends of which are pivoted to the main arms E by bolts or pins *e'*.

Secured to the mast near its base is a cross-bar G, to one end of which is pivoted at *h* a latch H, which drops by gravity behind a fixed stop I, secured to the frame or to some part thereof, such as the tool-box J of the frame.

K is a hay-fork or other device or carrier for the load or weight. To this is secured the load-rope L, which passes up and over a pulley M in the end of one of the arms E, thence across to a pulley N in the end of the other arm E, and thence down to block O.

P is the latch-rope, secured at its lower end to the latch, thence passing upwardly to and over a pulley Q in one arm E, thence over and down around a pulley R in the other arm E, and thence to the block O.

S is the draft-rope. It is secured at one end to the lever G at a point near the mast. It thence passes up around the block O, thence down and through a pulley T on the end of lever G, and thence to the horse or other power.

The operation of my derrick is as follows: In working position the mast is upright and the arms E extend therefrom at about an angle of forty-five degrees. The latch H holds the mast from turning. The load being now taken by the fork, the draft-rope is pulled out, and this, drawing down the block O, draws in on both the load-rope and the latch-rope. The load is thus raised, and when the latch-rope becomes taut it pulls up the latch, thus freeing the mast, and the further pull on the draft-rope, acting through lever G, causes the mast to turn axially and carry the load to the position desired. This turning of the mast may take place at the proper time by regulating the length of the latch-rope, so that it will release the latch at the moment desired. Now to reduce the derrick to smaller compass the bolt or pin connections of the arms E and brace-arms F are loosened, the lower ends of the arms E completely released from the piece D and unshipped, and then said arms may be dropped down toward a vertical position.

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

1. In a derrick, the combination of an axially-turnable mast, diverging arms carried thereby, a load-lifting rope carried by the arms, a latch to hold the mast from turning and to relieve it, and a rope connected with the latch and with the load-lifting rope to operate said latch at the proper time, substantially as herein described.

2. In a derrick, the combination of the axially-turnable mast having the cross-bar, the latch secured to said bar to hold and release the mast, the divergent arms secured to the mast, the load-rope carried by the arms, the latch-rope secured to the latch and carried by said arms, the block O, to which the load and latch ropes are secured, and the draft-rope

passing over the block and connected with the bar of the mast, substantially as herein described.

3. In a derrick, the combination of the axi-  
5 ally-turnable mast, the divergent arms remov-  
ably secured thereto, the brace-arms pivotally  
connected with the mast and with the arms,  
the cross-bar secured to the mast and the latch  
carried by the cross-bar, the load-rope carried  
10 by the arms, the latch-rope carried by said  
arms and secured to the latch, the block O, to

which said ropes are connected, and a draft-  
rope secured to the bar, passing over the block,  
and down through a pulley at the end of the  
bar, substantially as herein described. 15

In witness whereof I have hereunto set my  
hand.

GEORGE L. LAUGHTON.

Witnesses:

JOHN SUNDERLAND,  
ALFRED NELSON.