(No Model.)

P. KELLY.

DERRICK.

No. 271,474. Patented Jan. 30, 1883.

Fig: 1.

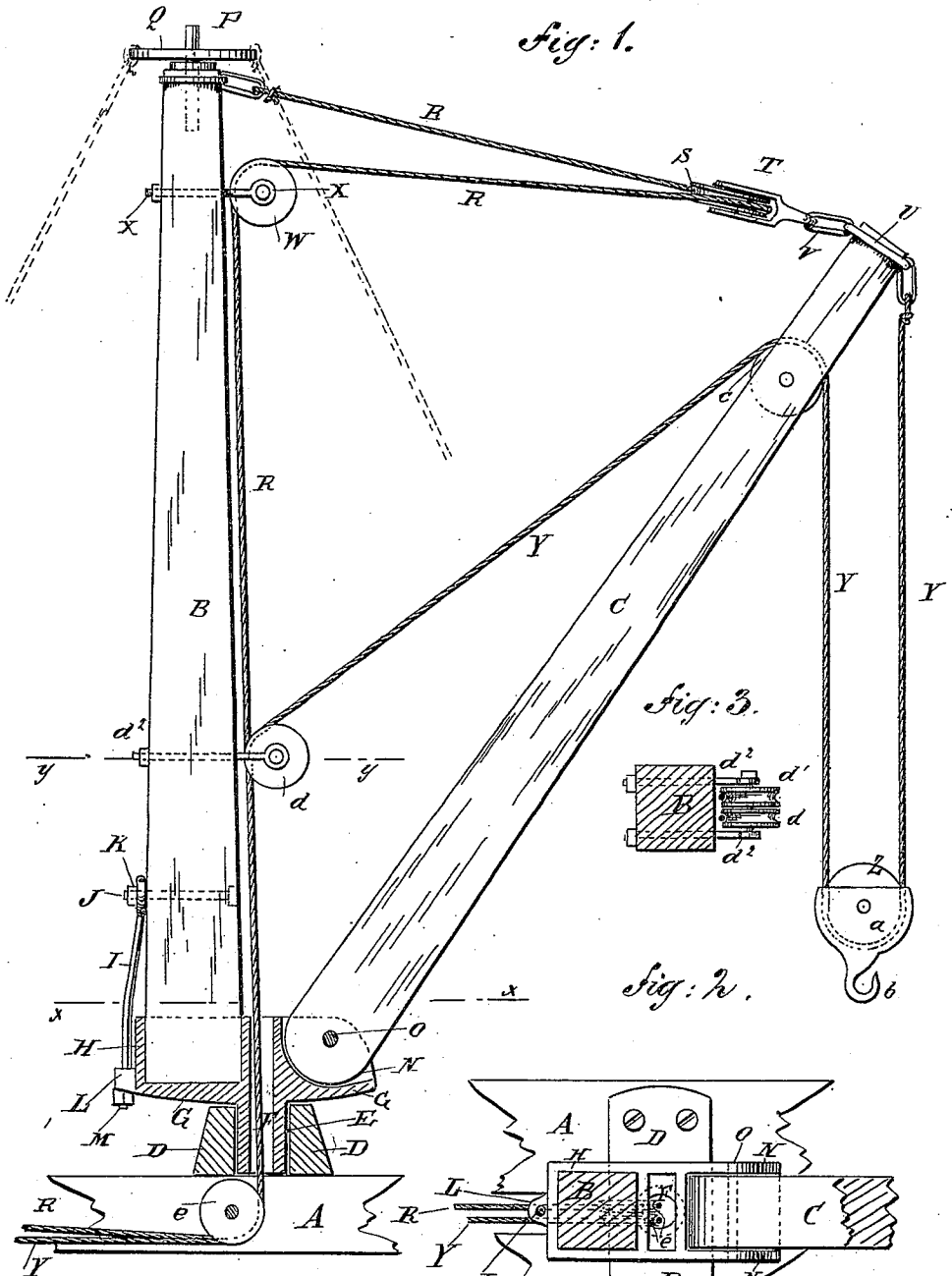
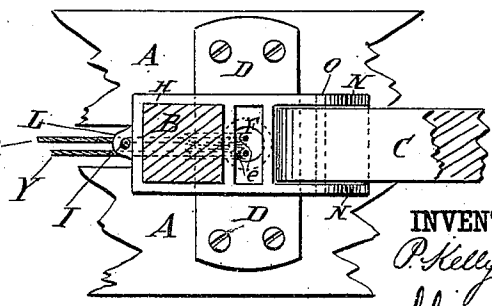


Fig: 3.

Fig: 2.



WITNESSES:

Chas. Nida.

C. Bedgwick

INVENTOR:

P. Kelly

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PATRICK KELLY, OF POUGHKEEPSIE, NEW YORK.

DERRICK.

SPECIFICATION forming part of Letters Patent No. 271,474, dated January 30, 1883.

Application filed December 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, PATRICK KELLY, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and useful Improvement in Derricks, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improvement, partly in section. Fig. 2 is a sectional plan view of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a sectional plan view of a part of the same, taken through the line *y y*, Fig. 1.

The object of this invention is to simplify the construction of derricks and promote convenience in operating them.

The invention consists essentially in the derrick-foot formed of a plate having upon its lower side a hollow pivot and upon its upper side seats for the lower ends of the post and boom, whereby the said post and boom will be securely connected and held. The derrick-post is secured to the foot by an eyebolt secured to the said foot and fastened to the said post by a bolt, as will be hereinafter fully described.

A represents the base, B the post, and C the boom, of the derrick.

To the base A is attached the plate D, through which is formed an aperture, E, to serve as a socket for the pivot F, formed upon or attached to the foot G. The pivot F is made hollow for the passage of the operating-ropes. The foot G has a socket, H, upon the rear part of its upper side, to receive and serve as a seat for the lower end of the post B, where it is secured in place by the eyebolt I, through the eye of which passes the bolt J. The bolt J also passes through the post B, and is provided with a nut, K, to fasten the eyebolt I securely to the rear side of the said post B. The eyebolt I passes down at the rear side of the post B, passes through an eye, L, in the rear end of the foot G, and has a nut, M, screwed upon its lower end. With this construction the bolts I J fasten the post B to its seats H, and at the same time serve as a brace to strengthen the said post B against the pull of the weight being handled.

The bottom and rear side of the seat N, formed in the forward part of the foot G, is rounded, as shown in Fig. 1, for the rounded lower end of the boom C to rest in. The lower end of the boom C is hinged in its seat N by a bolt or rivet, O, passing through the said end and through the sides of its seat N, as indicated in Figs. 1 and 2.

To the upper end of the post B is attached a pivot, P, upon which is placed the plate Q, to which the guys are attached, so that the movements of the said post will not affect the guys that hold the said post in a vertical position.

To the upper end of the post B is attached the end of a rope, R, which passes around a pulley, S, the block T of which is connected with the outer end of the boom C by a band, U, and link V, or other suitable means. From the pulley S the rope R passes to and around a pulley, W, connected with the upper part of the post B by eyebolts X, passing through the said post, and in the eyes of which the journals of the said pulley W revolve. From the pulley W the rope R passes down along the forward side of the post B, passes between the guide-pulley *d'*, Fig. 3, and the post B, and passes through the hollow pivot F, and is connected with a drum and axle or other suitable operating mechanism. The pulley *d'* is pivoted to eyebolts d^2, which pass through the post B. With this construction, by operating the rope R the outer end of the boom C can be adjusted at any desired height.

To the outer end of the boom C is attached the end of a rope, Y, which passes around the pulley Z, the block *a* of which is provided with a hook, *b*, for the convenient attachment of the weight to be handled. From the pulley Z the rope Y passes around the guide-pulley *c*, pivoted in a slot in the outer end of the boom C, and a guide-pulley, *d*, pivoted to the eyebolts d^2. From the pulley *d* the rope Y passes down along the forward side of the post B, passes through the pivot F, and is connected with a drum and axle or other suitable mechanism. With this construction, by operating the rope Y the weight can be readily and quickly raised and lowered. The ropes R Y, after passing through the hollow pivot F, pass around guide-pulleys *e*, pivoted to the base A, and from which the said ropes pass to the operating mechan-

ism. The hollow pivot F is placed directly beneath the space between the seats H N, so that the ropes R Y can pass in straight lines from the guide-pulleys *d' d* through the said pivot F. With this construction all the mechanism will be in sight of the operators, so that if any part of the said mechanism gets out of place or out of order it can be readily seen and made right.

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

1. In a derrick, the foot G, made, substantially as herein shown and described, with a plate having upon its lower side a hollow pivot, F, and upon its upper side seats H N for the derrick post and boom, as set forth.

2. In a derrick, the combination, with the socket-plate D, the post B, and the boom C, of the foot G, having upon its lower side a hollow pivot, F, and upon its upper side seats H N for the said post and boom, substantially as herein shown and described, whereby the post and boom are securely supported and connected, as set forth.

3. In a derrick, the combination, with the foot G and the post B, of the eyebolt I and the fastening-bolt J, substantially as herein shown and described, whereby the said post is strengthened and held in place, as set forth.

PATRICK KELLY.

Witnesses:
JAMES T. GRAHAM,
C. SEDGWICK.