(No Model.)

W. E. LINDSEY.

DERRICK.

No. 450,695. Patented Apr. 21, 1891.

Fig. 1.

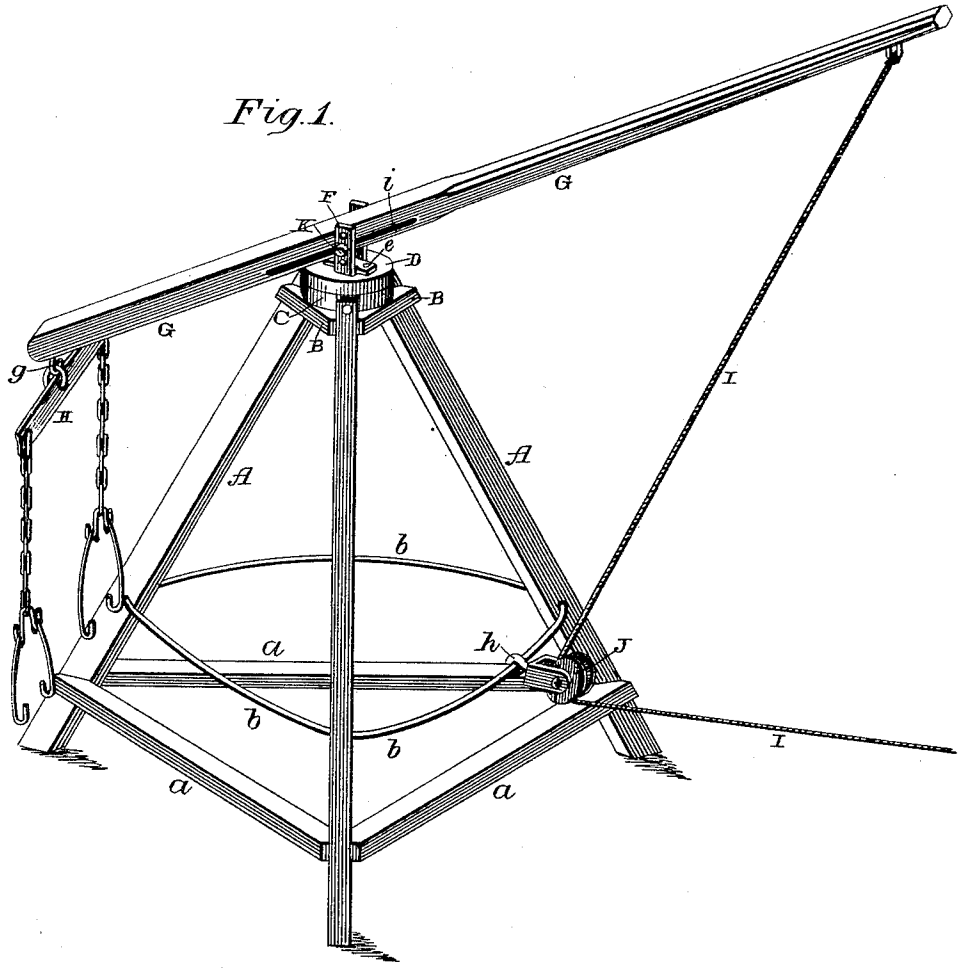
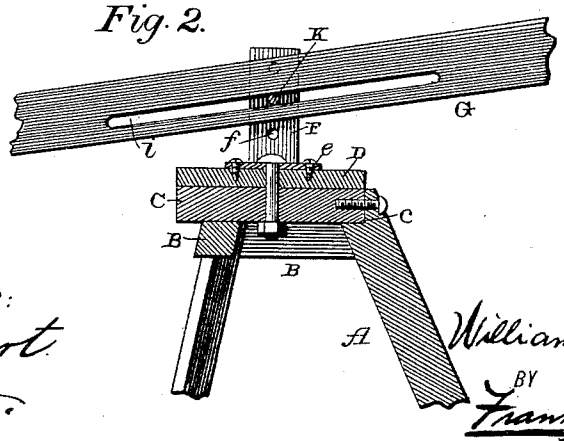


Fig. 2.



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DERRICK.

SPECIFICATION forming part of Letters Patent No. 450,695, dated April 21, 1891.

Application filed December 9, 1890. Serial No. 374,057. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. LINDSEY, a citizen of the United States, residing at Larissa, in the county of Cherokee and State of Texas, have invented certain new and useful Improvements in Derricks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains 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.

This invention relates to certain new and useful improvements in derricks or machines or devices for hoisting stone, heavy timbers, or any other articles; and it has for its objects, among others, to provide a simple, cheap, easily erected and operated device of this character which can be manipulated with ease and by which the article being elevated or lowered may be changed in position without moving the support. I provide a swiveled block or plate, on which the operating-lever is pivoted or fulcrumed. I provide for varying of the pivot of the lever to give greater or less leverage. I make the brace of the support serve as a guide for the lower pulley, so that it may be swung around at pleasure.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The novelty in the present instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of the improved derrick in position for use. Fig. 2 is a vertical section through the turn-table on which the operating-lever is pivoted.

Like letters of reference indicate like parts in both of the views.

Referring now to the details of the drawings by letter, A designates a support, which is preferably of the tripod form shown to combine strength with lightness. Other forms of support may, however, be employed in connection with the other features of the invention, and perhaps serve equally as well.

The frame is suitably braced near the bottom by braces *a*, and other braces may be employed, if found necessary. I have found it sometimes advisable to employ additional braces, such as *b*, at a point about one-third the height of the tripod, and have usually formed these braces in the following manner: I take a stout wire or rod and pass it through openings in the uprights of the tripod and secure the ends in any suitable manner. This wire or rod serves not only as a brace but also as a guide for the lower pulley or roller, which will soon be described. The uprights of the tripod are at their upper ends cut away to form horizontal shoulders or bearings *c*, and the said uprights are braced at their upper ends by the short triangular braces B, which are so arranged that their upper faces will be on a level or flush with the said shoulders or horizontal bearings to form a broad bearing-surface for the plate C, which is secured between the upper ends of the uprights and rests upon the said braces and bearings, as plainly shown in the drawings. This plate may be secured rigidly in place in any suitable manner, as, for instance, by screws or nails passed through the plate from the outer edges into the ends of the uprights or from the uprights into the plate.

D is a turn-table adapted to turn upon the plate C, and it is swiveled thereto by the vertical pin E, held to the turn-table and passed loosely through an opening in the said plate. Secured to the upper face of the turn-table is the substantially inverted-**U**-shaped plate or yoke F, through the horizontal portion of which the said pin E passes, and it is further secured by additional fastenings, as *e*. The vertical substantially parallel portions of the yoke are provided with a plurality of holes *f*, so that the fulcrum of the operating-lever may be changed as occasion may require.

G is the operating-lever of suitable material and length, according to the character of the work for which the device is to be employed. It is provided at one end with a hook or other equivalent device *g*, from which is loosely suspended an equalizing-bar H, to the ends of

which are loosely hung by chains or other flexible means the grapples, hooks, or other preferred form of grabs or holding devices. More than one set of these may be employed, if desired. To the other end of the lever is attached one end of a rope, cord, or chain I, the other end of which passes over a pulley or roller J, and thence to within reach of the operator.

The pulley or roller J is loosely hung from a hook or other analogous means *h*, which is loosely sleeved on the brace *b*, so that the said roller or pulley may be moved along on the said brace or wire when it is desired to swing the lever around to change the position of the article being carried by its other end.

K is the fulcrum of the lever. It is passed through a longitudinal slot *i* in the lever, and is held in the yoke F, being designed to be changed vertically into any one of the holes *f* to vary the fulcrum of the lever when desired. The fulcrum K works loosely in the said slot, so that the lever may be slid endwise to aid in lifting the load.

The operation will be readily understood, and a detailed description thereof is not deemed necessary.

It is deemed important that the fulcrum-pin K work loosely in the slot *i* of the lever, as by this means when the longer arm of the lever is depressed in raising a weight, as the rope I shortens between the lever and the pulley J as the lever assumes a horizontal or nearly horizontal position, the lever with weight will slide toward the power end, and thus the weight can be more easily raised to a greater height, and at the same time brought nearer to the support, if desired. The fulcrum is automatically changed as the lever reaches a horizontal position.

What I claim as new is—

1. The combination, with the tripod-support, the turn-table, and the yoke thereon, of the operating-lever having a longitudinal slot in which its fulcrum works loosely and is free to slide, means for varying the vertical position of the fulcrum, the holding devices, and the operating-rope, all substantially as shown and described.

2. The combination, with the tripod-support, the plate, the turn-table, and the yoke thereon, of the lever fulcrumed on the yoke and having a longitudinal slot, in which its fulcrum works loosely, the equalizing-bar loosely suspended from the lever, the holding devices loosely suspended from said bar, the operating-rope attached to one end of the lever, and the pulley over which the said rope passes suspended from braces on the tripod and movable along the same, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. LINDSEY.

Witnesses:
D. T. WHITE,
J. H. NABORS.