(No Model.)

W. H. MARTYN, Jr.

DERRICK.

No. 305,091. Patented Sept. 16, 1884.

Fig. 1.

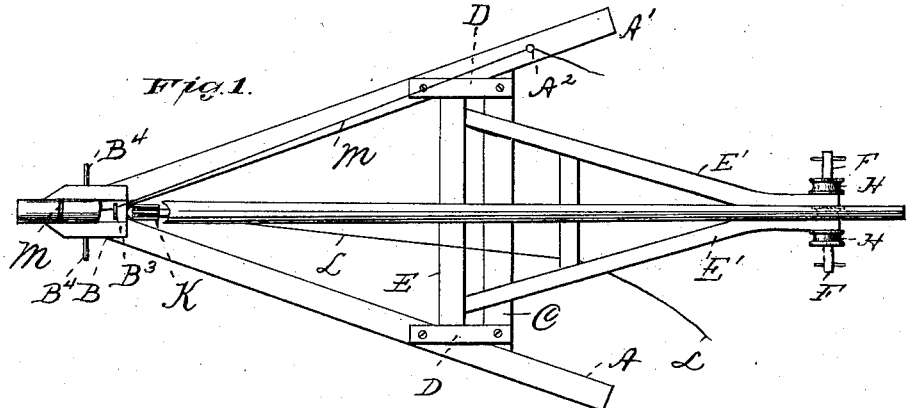


Fig 2

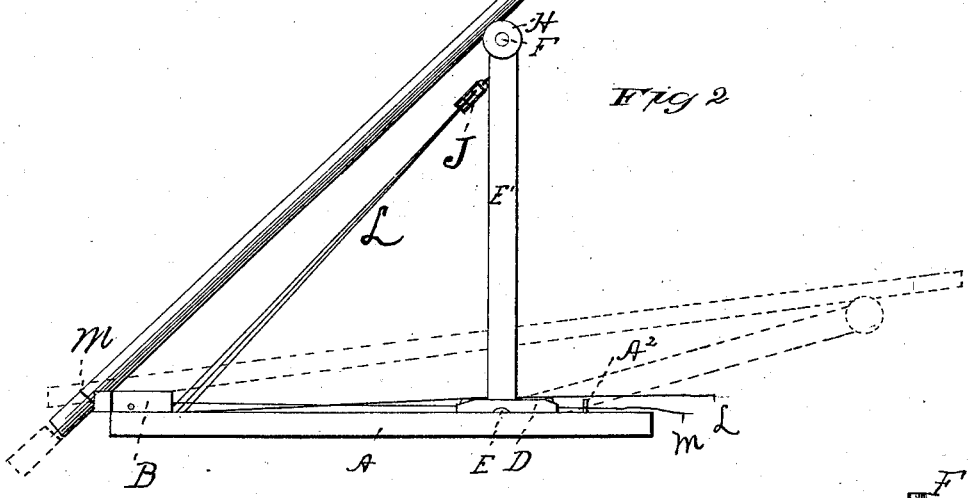


Fig. 3.

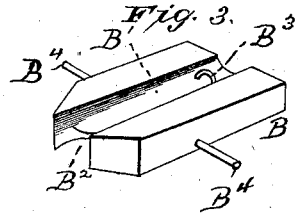
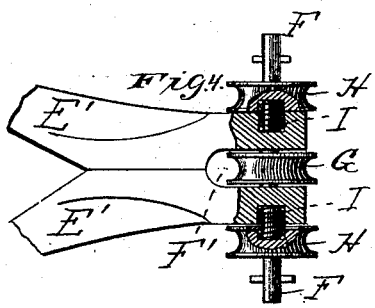


Fig 4.



WITNESSES

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DERRICK.

SPECIFICATION forming part of Letters Patent No. 305,091, dated September 16, 1884.

Application filed February 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. MARTYN, JR., a citizen of the United States, residing at Manchester, in the county of Hillsborough and State of New Hampshire, 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 and figures of reference marked thereon, which form a part of this specification.

My invention relates to derricks intended, primarily, for elevating poles and ladders; and it consists in the construction, combination, and arrangement of the several parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a plan view, and Fig. 2 is a side view, of my machine. Figs. 3 and 4 are detail views, as will be described.

The base-frame consists, preferably, of two beams, A A′, arranged at an angle to each other, and having their convergent or forward ends provided with a supporting-block, B, and connected near their divergent or rear ends by a cross-beam, C, as most clearly shown in Fig. 1. Two brackets or bars, D, are made fast on the upper side of beams A A′ and B, and are extended parallel to each other. The block B is provided on its upper side with a groove, B′, and is bifurcated or slotted at the outer end, B^2, of this groove, as shown in Fig. 3, and for the purposes presently described. A staple, B^3, is secured in this groove B′, near its inner end. Studs B^4 are extended laterally from the block. A pin, A^2, is secured on the beam A′, near the forward end of same. The elevating-frame is composed of base or pivot beam E and beams E′ E′, mounted on said beam E, and having their upper ends converged, as shown. The base-beam E has its ends journaled in the brackets D, and when lowered, as shown in dotted lines, Fig. 2, the beams E′ bear against the cross-beam C. By this construction the upper end of the elevating-frame is held above the level of the base-frame, so it can be more easily raised, in the manner presently described. A rod or shaft, F, is passed transversely through the elevating-frame at the upper end of the latter, and is extended on opposite sides thereof, as shown. The end of the elevating-frame is slotted at F′, and the pulley G is journaled on rod F within said slot. This pulley G is grooved, as shown, for the purpose hereinafter specified. Pulleys H H are journaled on the extended ends of the rod F on opposite sides of the elevating-frame. The bearing of these pulleys H is sufficiently long to permit a lateral movement of said pulleys thereon. A spring, I, preferably coiled, bears between the inner face of the pulleys H and the elevating-frame and presses pulleys H outward, for the purpose presently described.

My machine is intended for raising poles—such as are used for telegraph or electric-light wires—and also for raising ladders, in which case they are useful at fires, as will be understood. A pulley-block, J, is secured to the upper end of the elevating-frame, and a block, K, having several pulleys, is secured to the forward end of the base-frame. The rope L has one end secured to the upper end of the elevating-frame, and is rigged in blocks J K in an obvious manner, and is carried from block K toward the rear of the machine, where it is connected with the operating mechanism. This may be a winch mounted on the rear end of the base-frame, or steam-engine or horse-power.

It will be understood that where so desired a gang of men may operate the device by drawing on the rope L. As the said rope is drawn out, the elevating-frame is raised from the position indicated in dotted lines to that shown in full lines, Fig. 2. It is manifest that if the rope be drawn farther the elevating-frame will be tilted toward the supporting-block, so that the pole or ladder may be brought to a vertical position or be inclined at an angle opposite that in which it is shown in said Fig. 2. In the latter case hooks or equivalent devices should be secured on the upper end of the elevating-frame and embrace pole or ladder and hold same to the elevating-frame when it is tilted at an angle to the vertical, opposite that shown in Fig. 2. To raise a pole it is laid in the groove of the supporting-block and in the pulley G, the elevating-frame being lowered to the position indicated in dotted lines, Fig. 2. A rope, M, is secured around the base of the pole and is carried

through staple B^3, or other suitable guide, and thence rearward and secured to a pin or stud, A^2, on one of the beams of the base-frame. This holds the pole from sliding off the derrick until it has been raised to a proper point, when, by slacking the rope from the pin M', the pole can be easily lowered into the hole dug to receive it, the base being properly arranged in connection with said hole, as will be understood. The slot B^2 serves to steady the post, as will be understood. In raising a ladder the side rails of same are slotted at their lower ends and placed on studs B^4, and are rested at their upper ends in pulleys H. These rails diverge toward their lower ends, and as the ladder is raised the springs I force the pulleys out to correspond to the gradually-increasing width apart of the said rails.

While I prefer to form the pulleys H with flanges on both ends, they may be made with a flange on their inner ends only, and the springs I will hold the pulleys in proper arrangement to support the ladder. When the ladder has been raised to a proper point, it is lifted off the supporting-block, when the machine may be used to raise other ladders, as will be understood.

It is manifest that my machine may be mounted on wheels without involving a departure from the principles of my invention.

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

1. In a derrick, substantially as herein described, the combination of the base-frame provided at its forward end with a support or block, the elevating-frame pivoted to the rear end of the base-frame, and provided on its upper end with anti-friction guide-pulleys, and suitable elevating devices, substantially as set forth.

2. The base-frame and supporting-block secured at the forward end of the base-frame, and grooved on its upper face and bifurcated at its outer end, combined with the elevating-frame pivoted to the rear end of the base-frame, and provided at its upper end with anti-friction pulleys, and elevating devices, substantially as set forth.

3. The herein-described derrick, composed of the base-frame provided with the supporting-block B and cross-beam C, the elevating-frame journaled to the base-frame, and provided at its upper end with anti-friction pulleys, and the elevating devices, substantially as set forth.

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

WILLIAM H. MARTYN, JR.

Witnesses:
M. P. CALLAN,
EDWARD BROOK.