

(No Model.)

J. E. BIRD.

WAGON HOISTING APPARATUS.

No. 313,803.

Patented Mar. 10, 1885.

Fig. 1

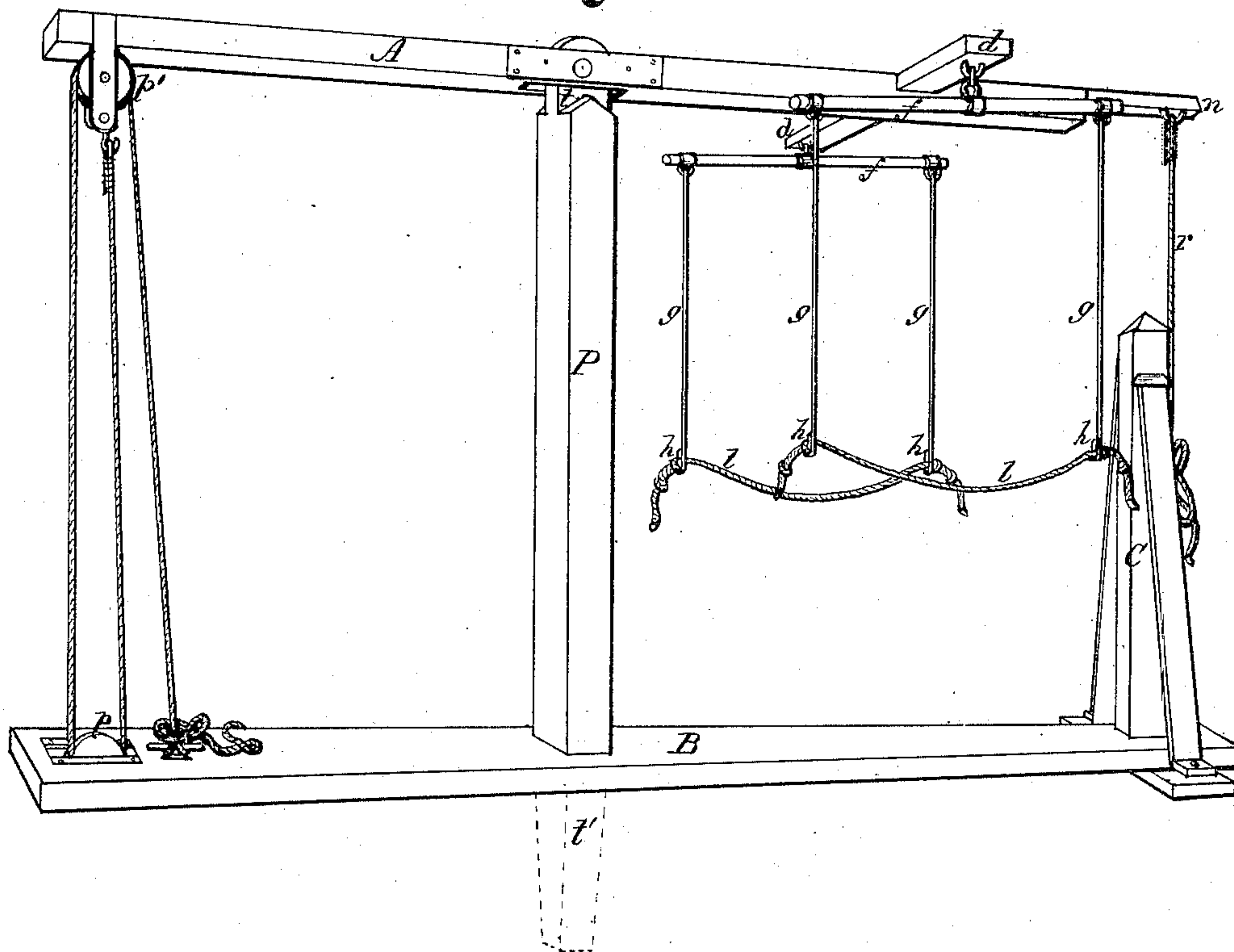
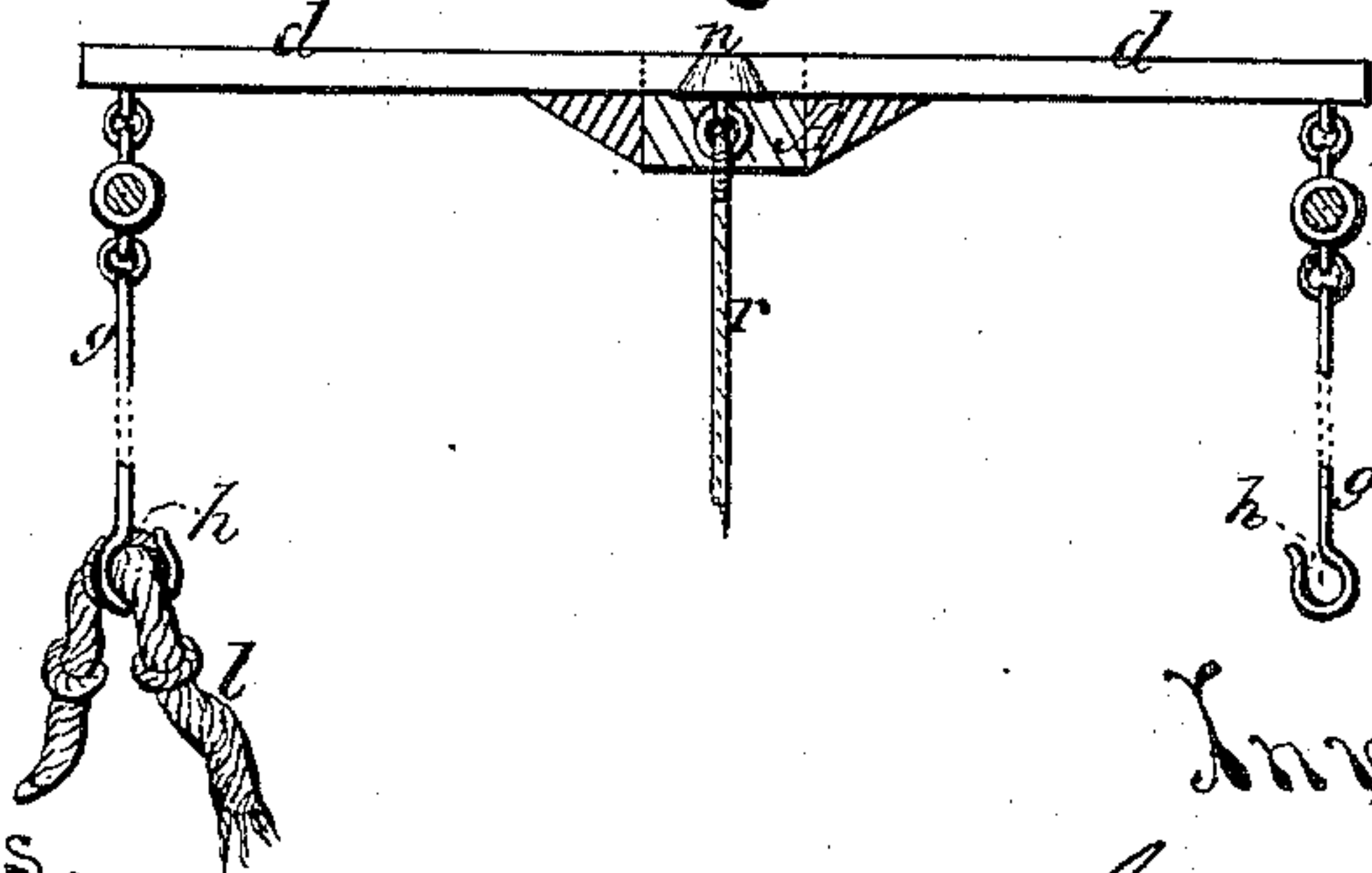


Fig. 2



Witnesses.

John Welsow

L. A. Massi

Inventor.

James E. Bird.

R. E. Nelson

Atty.

UNITED STATES PATENT OFFICE.

JAMES E. BIRD, OF LA MONTE, MISSOURI.

WAGON-HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 313,803, dated March 10, 1885.

Application filed November 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. BIRD, a citizen of the United States of America, residing at La Monte, in the county of Pettis and State of Missouri, have invented certain new and useful Improvements in Wagon-Hoisting Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention is an improved hoist, more especially adapted for country use, and embraces the following novel features: A lever-beam working upon the top of a pivot-standard, and having on its burden end an intercrossing bar, to each end of which is mid-hung a transverse swing-bar, to the ends also of each of which are attached a pair of pendulous rods, which have their lower ends bent into hook-eyes, in and between which knotted bearing-lashers are end-caught and swung; also, on the power end of said lever-beam a fixed pulley, and on the counter end an extension-bar, to the outer end of which is fastened a regulative rope; also the beam-standard, having its foot cut into a long and square tenon, the lower portion of which is tapered to a blunt point, and extends for a suitable distance below the bottom of the standard-sleeper, into which said foot is stepped and mortised; and, finally, a steadying-post is mortised into the end of said sleeper, directly below the outer end of said extension-bar, and into the other end of said sleeper there is set a counter fixed pulley, through sheave of which, together with that of the pulley overhead, the lever-beam-tackle fall is rove, all of which and their purposes are hereinafter more fully described, and illustrated by the accompanying drawings, in which like letters designate identical parts of my invention in the different figures, respectively.

Figure 1 is a perspective elevation of my device, showing the several parts of the same in normal position and ready for use; and Fig. 2 is an end section of the lever-beam, showing the intercrossing bar, its transverse swing-bars in section, and sectional portions of the bearing-lashers.

The letter A represents the lever-beam, and B the sleeper, into which the beam-standard P and the steadying-post C are respectively mortised. Said beam is made of suitable tim-

ber of proper size and length, and squared. It is fitly mortised, so as to tenon-pivot upon the top of the standard P, and make the power-connective arm of the lever-beam normally overbalance the burden-arm, together with its elemental parts, as shown. This may be done either by making the power-arm considerably longer than the other arm, or by counter-weights. The burden-arm of said lever-beam is furnished with an intercrossing bar, *d*, which is made of suitable timber, cut square, flush-jointed at the middle into and squarely across the beam end, as shown, and has both of its ends extended and braced squarely outward, so as to suitably suspend, at a proper distance apart, a pair of transverse swing-bars, *f*, to the ends of each of which are suitably coupled the pendulous rods *g*, which in their turn having their lower ends bent into the hook-eyes *h*, serve to hold in suspension, as shown, the knot-catching lashers *l*, together with any burden which may be adjusted and triced upon them. The standard-post P, upon which said lever-beam is pivoted, is a correspondingly-squared piece of timber of suitable size and length, and furnished at the top with the pivot-tenon *t*, whereby the standard and beam are pivot-jointed, and at the foot with a stepping-tenon, *t'*, by which the standard is mortised and vertically supported above the sleeper B, while it is equally supported below said sleeper by the tapering elongation of said foot-tenon, as shown, being thrust into a suitable post-hole made in the ground directly under said standard-mortise.

The sleeper B, into which the post P is stepped and chiefly supported, is a suitable piece of ground-timber cut square, of suitable size and length, and is suitably located either upon the ground, in the flooring, or wagon-way of a barn or other storage-house of a farm, or sufficiently below the surface of said wagon-way to protect the material of said sleeper or sill from harm or wear. The post C is mortised also into said sleeper and counterbraced, as shown, in a vertical position, and directly below the end—or the outer end of the extension-bar *n*—of the lever-beam A, which purposely gives additional steadiness to both standard and sleeper. Said extension-bar is suitably dovetailed endwise into the burden end of the lever-beam, as shown, to be readily

adjusted in place, and provided with a suitable ring-bolt, to which is secured the upper end of the regulative rope *r*, which serves to lower or loosen the normally overweighted end of said beam, and to make fast the same, as shown, to a cleat suitably fixed upon said hitching-post.

In order to suitably and co-operatively work said lever-beam, so as to raise any weight or burden lashed between the hanging rods *g*, a fitting tackle is provided, which consists of a fall rove through the sheaves of a pair of fixed pulleys, *p* and *p'*, respectively counter-placed, the one in the power-connective end of the lever-beam, and the other directly below in the end of the standard-sill.

The operation of my device is as follows: Whenever or wherever necessary or desirable to be intermittingly raising any unhandy burden—for instance, an overweighty wagon-body, or a load of timber—from its carrier or running-gear, said gear is run under the burden-arm of the lever-beam A, the counter-pendulous rods *g* are swung outside said body or load, the lashers *l* suitably passed underneath the same and caught by any of the said latchet-knots in their respective hook-eyes *h*. Then loosen the rope *r* and haul upon the aforesaid tackle-fall of the pulleys *p* and *p'*, when, said burden having been raised the desired distance, the carrier can be run out, leaving the burden suspended upon said lashers. Whenever desirable to lower said burden upon its own or another carrier, the reverse order of the hoist will be practiced. Thus the above-described machine supplies a very convenient, economical, and effective hoist in any of the oftentimes-required processes similar to those above stated, and in places remote from the means usually obtainable in such cases. Again, in order to give greater convenience and practical effectiveness to said hoist, a duplicate of the aforesaid suspensory

portion of the same may be counter-adjusted upon the power-arm of the lever-beam, which will allow the lifting-tackle to be more easily worked by merely balancing the counter-burden weights, and will double the capacity of the above-described mechanism, without changing or limiting the characteristic features or elements of my invention. Therefore,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the lever A, the standard P, and the sill B, of the intercros- ing and suspensory bar *d*, supplied with the swing-bars *f*, the pendulous and hook-eyed rods *g*, and the knotted lashers *l*, and made adjustably co-operative with the lifting-tackle *p* and *p'*, and the counter-working rope *r*, substantially as and for the purposes herein specified.

2. The combination of the lever-beam A with the standard P, having the pivot-tenon *t* and the supporting-tenon *t'*, and with the sill B, having the counter-braced post C, substantially as and for the purposes herein specified.

3. The combination, with the intercros- ing and suspensory bar *d* upon the lever-beam A, of the suspended swing-bars *f*, the pendulous and hook-eyed rods *g*, and the knot-catching lashers *l*, substantially as and for the purposes herein specified.

4. The combination, with the lever A, the pivot-standard P, and the sill B, of the lifting-tackle *p* and *p'*, and the counter-working rope *r*, substantially as and for the purposes herein specified.

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

JAMES E. BIRD.

Witnesses:

WM. L. CHIPLEY,
A. A. COLLINS.