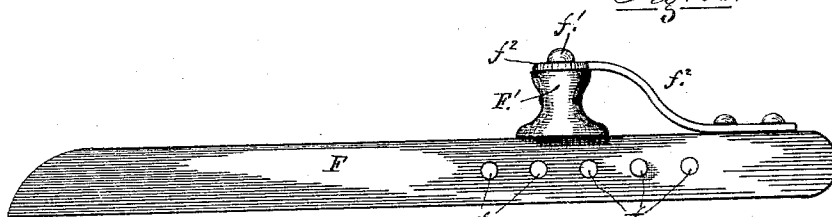
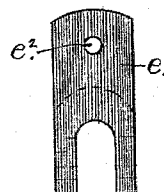
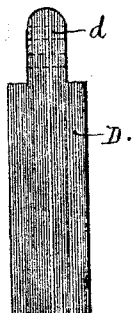
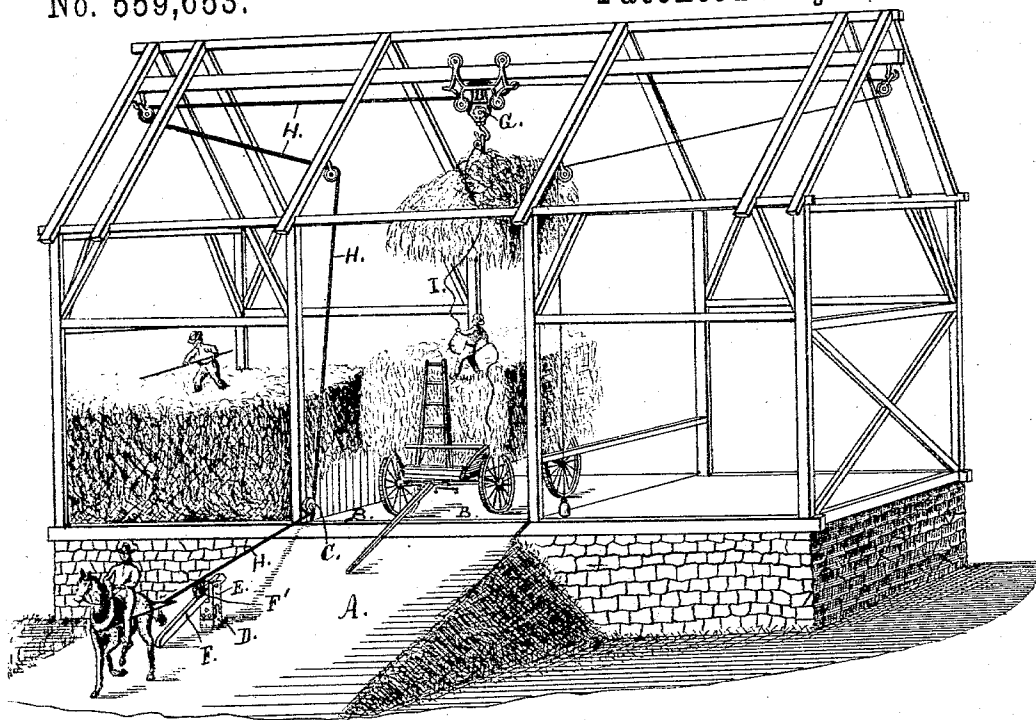


H. E. WITMER.
HAY ELEVATOR JACK.

No. 559,653.

Patented May 5, 1896.



Witnesses:
J. Grant Johnston
Frank G. Urban.

Inventor
Henry E. Witmer.

By *Daniel H. Herr.*
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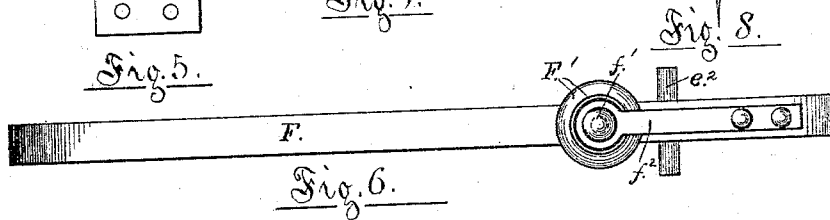
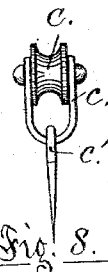
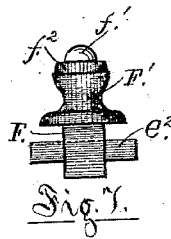
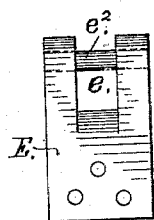
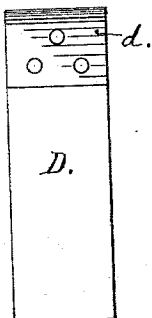
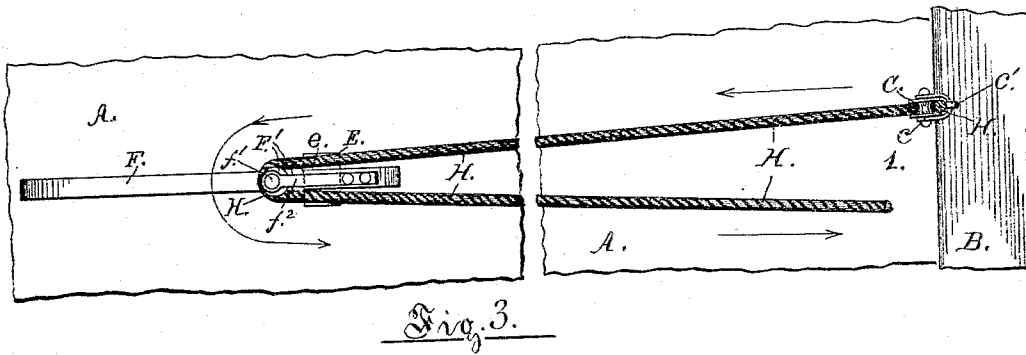
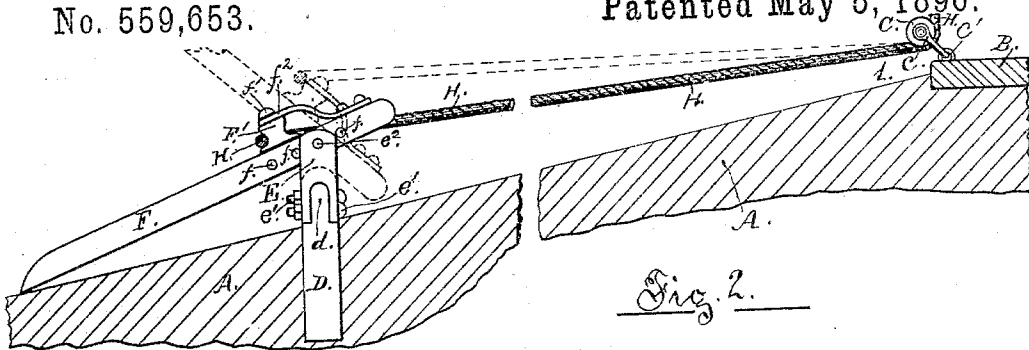
(No Model.)

2 Sheets—Sheet 2.

H. E. WITMER.
HAY ELEVATOR JACK.

No. 559,653.

Patented May 5, 1896.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY E. WITMER, OF MARIETTA, PENNSYLVANIA.

HAY-ELEVATOR JACK.

SPECIFICATION forming part of Letters Patent No. 559,653, dated May 5, 1896.

Application filed November 7, 1890. Serial No. 370,635. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. WITMER, of Marietta, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Jacks; and I do hereby 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.

My invention relates to improvements in a jack to be used in connection with a rope having one end attached to a carrier running on an elevated track, adapted to hold a loaded hook suspended and convey it to the dropping-point, and to return again to the loading-point for another load, and a horse hitched to the other end of the rope, and the jack is of that class in which a pulley is pivoted to turn perpendicularly to the upper face of a tilting arm or lever, which in turn is pivoted or fulcrumed to a standard or jaw affixed to the upper end of a post or base firmly planted in the ground where the jack is to be used.

The object of my invention is to provide means so that when the horse is done pulling, having drawn a loaded hook up and to the dropping-point, the horse will be at the starting-point, with a saving of at least half the distance he formerly traveled over, as well as the wear and tear to the rope from dragging it over the ground.

The purposes of my invention are attained by the mechanism and devices illustrated in the accompanying drawings, similar letters and numerals referring to similar parts throughout the several views, in which—

Figure 1 is a perspective view showing a carrier in place, in connection with which the elements of my invention are used, said elements appearing in position on the slope; Fig. 2, a partial vertical section of a slope or embankment leading to a barn-floor, showing the elements of my invention, in side elevation and in full lines, in place, and dotted lines indicating the position of the lever at the moment of releasing the rope; Fig. 3, a top view of Fig. 2, showing the hoisting-rope continued to the starting-point; Fig. 4, an enlarged front elevation of the supporting-post; Fig. 5, a similar view of the fulcrum-jaw, showing the fulcrum-pin in full and dotted lines in place; Fig. 6, an enlarged top

view of the lever, showing the pulley, the brace, and the pivot-pin in place; Fig. 7, an enlarged view of Fig. 6, viewed from the left; Fig. 8, a front view, enlarged, of the grooved pulley, link, and staple detached from the plank in Fig. 2; Figs. 9 and 10, views from the right, respectively, of Figs. 4 and 5; and Fig. 11, a view from below of Fig. 6.

In the drawings, A represents an embankment or slope constituting the driveway leading from a lower level to the floor above the stables, on which are situated the storage mows in what is known as the "Swiss" or "bank" barn; B, a plank constituting the edge or beginning of the barn-floor; C, a grooved pulley pivoted between the arms of a clevis *c*, securely affixed to the barn-floor by a staple *c'*; D, a post set securely in the ground and having at its upper end a tenon *d*, adapted to have the lever-fulcrum block attached thereto; E, the lever-fulcrum block, being a rectangular body having at its upper end a jaw *e*, adapted to have pivoted therein the tilting lever, and situated transversely in its lower end is a U-shaped socket or recess adapted to receive the tenon *d* and to be bolted thereto by bolts *e'*, the upper end of the jaw being provided with a pivot-pin *e''*; F, the tilting lever, being a rectangular beam having toward one end and along the center line of its wider sides a series of holes *f* through its body, through which the pivot-pin *e''* passes to fulcrum the lever F to the jaw *e*, and whereby the lever-fulcrum may be changed as the case may require; F', a grooved pulley placed perpendicularly on the upper face of the lever and pivoted thereto by a bolt *f'*, which in turn is braced by the curved strap *f''*, being bolted to the lever near the rear or shorter end from the fulcrum; G, a grooved pulley turning in a block adapted to be drawn up to and held suspended from a carrier or ear adapted to run on a track situated above to convey a loaded hook drawn up to the place where the load is to be dropped. (This carrier being in common use and forming no part of my invention is shown in position in Fig. 1, but not referred to by letter.)

It is a rope having one end at the station 1, Figs. 2 and 3. From thence the rope extends forward to and across the distant face of the jack-pulley F', thence rearward to and under

the grooved pulley C, thence to the carrier and under the grooved pulley G, and has its other end attached to said carrier, and the lifting or carrying hook is provided with tripping mechanism whereby, its load may be dropped, and I designates a portion of a smaller rope having one end attached to the tripping or releasing mechanism of the hook and the other end at the starting or loading point, whereby the load on the hook may be dropped therefrom and the hook drawn back to the loading-point for another load.

Now, the elements of my invention being in the several positions as described, and as illustrated in Figs. 1, 2, and 3, and a horse hitched to the end of the rope H at the station 1 and pulling in the direction indicated by the arrows, the hook, with its load, will have been drawn up to the carrier by the pulley G, Fig. 1, and held till released. The horse continuing the draft in the same direction, the increased tension on the rope H will cause the lever F to tilt up, and when it assumes the position indicated by dotted lines, Fig. 2, said rope will slip off the pulley F' and the carrier on the track convey the loaded hook to the dropping-point, when a pull on the rope I will release the hook, drop its load, and draw the hook and carrier back to the loading-point. It may here be observed that the horse after having drawn a loaded hook to the dropping-place (station 1) ready to draw up a second load, having made no useless walk dragging the slack rope over the ground.

Having now described my invention, what I do consider new, and desire to secure by Letters Patent, is—

1. A hoisting-jack comprising the following instrumentalities: an upright post having its lower end firmly planted into the ground and its upper end projecting above the sur-

face thereof, a vertical block having a two-pronged jaw at its upper end and its lower end removably secured to the upper end of said post, a tilting lever having its lower end resting on the ground and its higher end adjustably pivoted between the prongs of said jaw, a grooved pulley vertically disposed and rotatably pivoted to the upper side of said lever, and a hoisting-rope engaging the groove on the forward side of said pulley, all substantially as described and for the purpose set forth.

2. In a hoisting-jack, in combination, the post, D, with the tenon, *d*; the block, E, having the U-shaped socket, and the fulcrum-jaw, *e*, with the securing-bolts and nuts, *e'*, and the fulcrum pivot-pin, *e''*; the tilting lever, F, having the pivot-orifices, *f*, with the grooved pulley, F', the axial pivot-pin, *f''*, and the brace-strap, *f''*, all arranged, combined and secured in position, substantially as described and for the purpose set forth.

3. The combination in a hoisting-jack, with a post planted in the ground, having a fulcrum-jaw removably secured to the upper end thereof and a tilting lever adjustably pivoted to the arms of said jaw, of a grooved pulley pivoted vertically to the upper face of said lever, and braced as shown, whereby a rope engaging said pulley on the forward face thereof will move forward while the motive force applied to the end of said rope is moving rearward, substantially as described and for the purpose hereinbefore set forth.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

HENRY E. WITMER.

Witnesses:

JOHN BAKER,
JAS. M. BAKER.