(No Model.) 2 Sheets—Sheet 1.

W. LOUDEN.

JACK AND TRIP PULLEY FOR HAY CARRIERS.

No. 527,531. Patented Oct. 16, 1894.

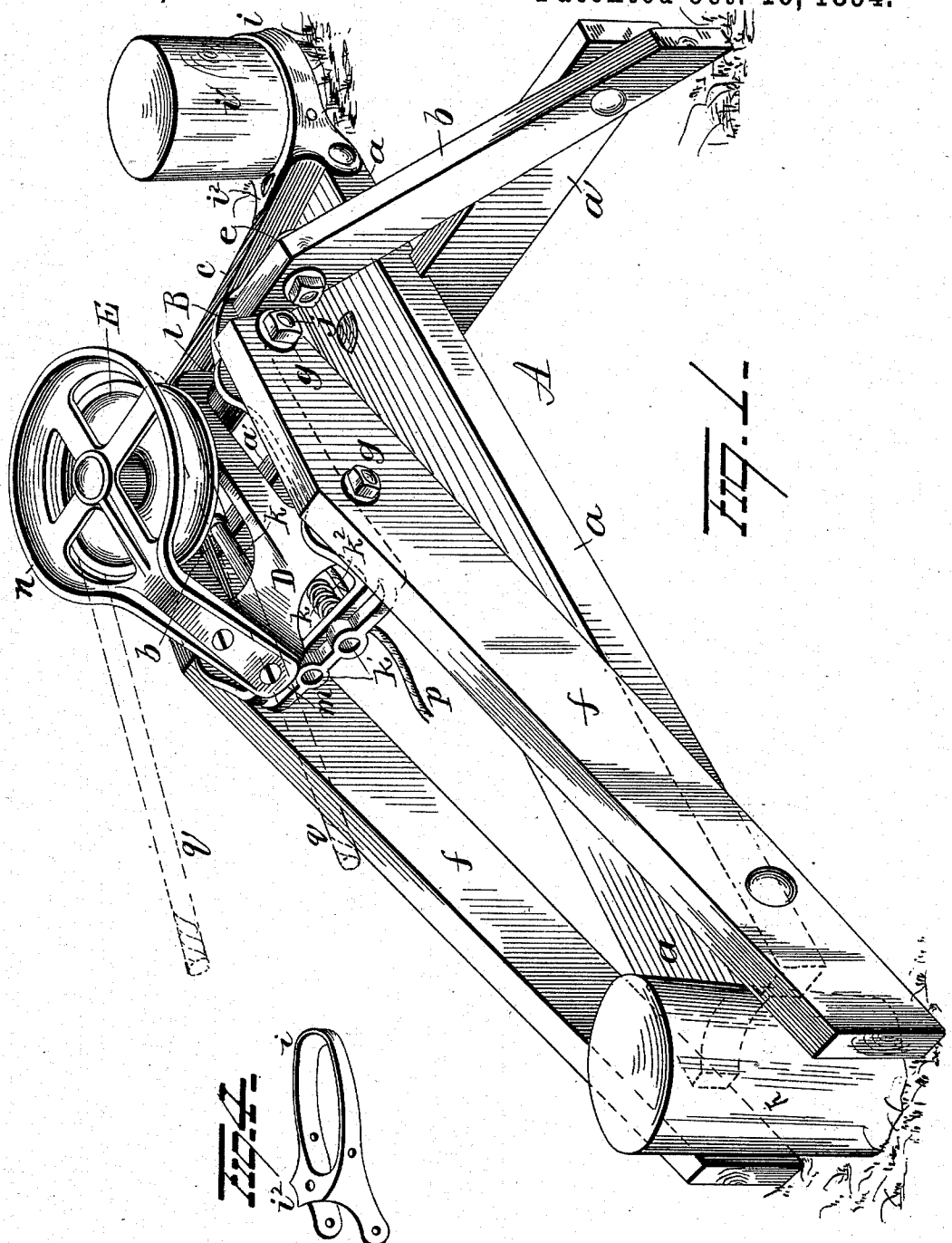

Fig. 1.

Fig. 4.

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Fig. 2.

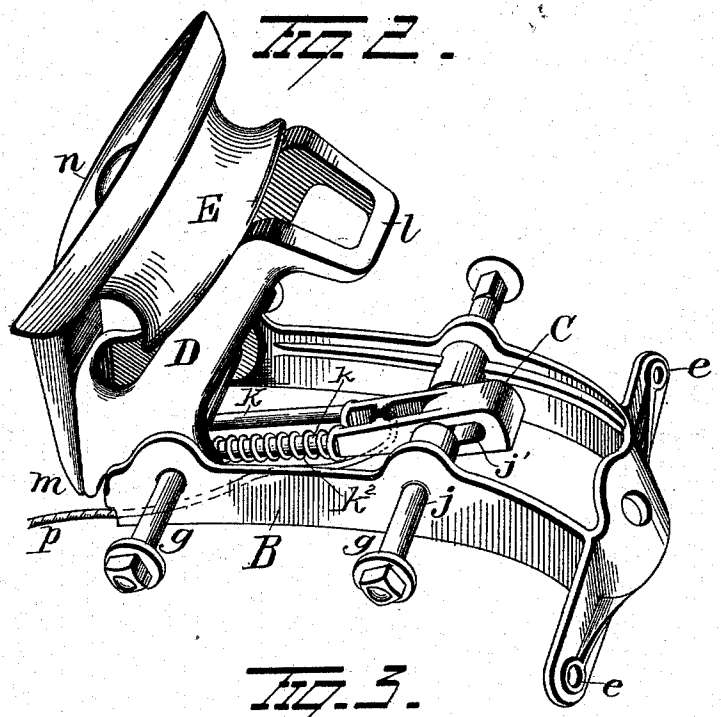
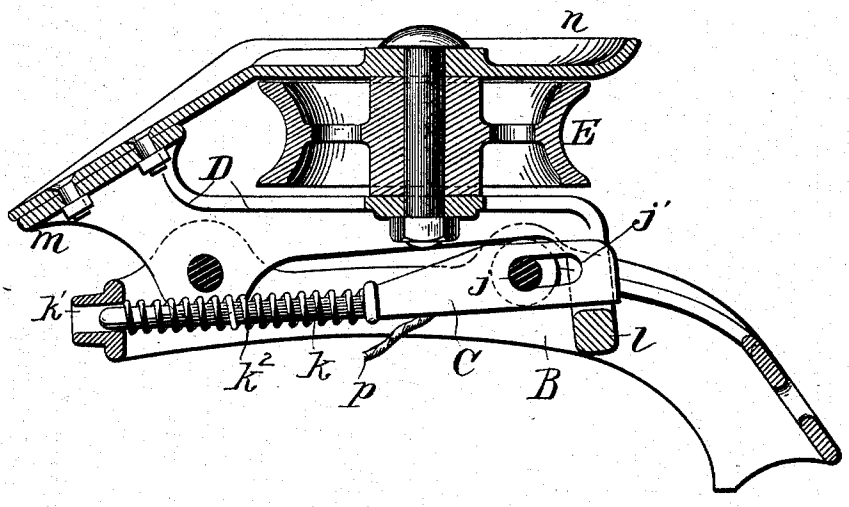


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM LOUDEN, OF FAIRFIELD, IOWA.

JACK AND TRIP-PULLEY FOR HAY-CARRIERS.

SPECIFICATION forming part of Letters Patent No. 527,531, dated October 16, 1894.

Application filed May 14, 1892. Serial No. 433,023. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LOUDEN, a citizen of the United States, residing at Fairfield, in the county of Jefferson, and State of Iowa, have invented certain new and useful Improvements in Jacks and Trip Pulleys for Hay-Carriers; 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 an improvement in hay carrier apparatus, and more particularly to an improved jack and trip pulley carried thereby, the object of the invention being to construct and arrange the jack in such manner that it will properly support the trip pulley and so that the rope will be properly guided onto said pulley from any direction.

A further object is to construct the pulley frame in such manner that the pulley and latch can be located inside the same while the jack is secured to the outside.

A further object is to construct the upper hinged portion of the pulley frame in such manner that the rope will be permitted to run nearly around the pulleys without wearing on the frame.

A further object is to construct the jack and pulley frame in such manner that double ropes may be employed.

A further object is to construct and arrange the latch in such manner relatively to the pivoted portion of the pulley frame that its operation will assist the movement of said hinged portion of the frame in either direction.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view illustrating the jack and pulley frame secured thereto. Fig. 2 is a view of the pulley frame and pulley, showing the frame open. Fig. 3 is a sectional view of the pulley frame and pulley. Fig. 4 is a separate view of the strap for securing the jack to the stake.

A represents the jack which comprises a comparatively long timber *a* and a shorter timber *a'* disposed at right angles thereto in proximity to one end thereof, said timbers *a*, *a'* forming a cross. From the ends of the timber *a'*, two braces *b*, extend upwardly and inwardly and meet at their upper ends. A timber or brace *c*, extends upwardly in a diagonal direction from the end of the timber *a* nearest the timber *a'* and terminates at the apex of the braces *b*, *b*.

The brace *c* is secured (by means of a suitable bolt) to one end of an open frame or yoke B located on the apex of the jack, while the braces *b*, *b*, are secured at their upper ends to ears *e* projecting laterally from said frame, said braces *b*, *b*, being secured at their lower ends to the ends of the timber *a'*. Two parallel timbers or braces *f*, *f*, are secured at their upper ends to the frame or yoke B at *g*, *g* and, extending downwardly in an oblique direction, are secured to the long timber *a* in proximity to its end. A stake *h* is driven in the ground between the timbers or braces *f*, *f*, and receives the end of the timber *a*. To the other end of the timber *a*, a strap *i* is secured and adapted to embrace a stake *i'*, said strap being made with a shoulder or flange i^2 whereby it may also be secured to the brace *c*.

The frame or yoke B is, as before mentioned, made open or hollow and has a bar or bolt *j* passing transversely therethrough, which bar or bolt also passes through an elongated slot *j'* in a latch bar C.

The latch bar C is preferably made with two prongs *k*, which extend forwardly and project through openings *k'* in the frame or yoke B. A spring k^2 encircles one (or both if desired) of the prongs *k*, bearing at one end against a shoulder formed on the latch bar and at the other end against the lower portion of frame B, which is hinged to the yoke or frame D at one end. The frame D is also made open or hollow, and supports between its two members, a pulley E.

One end of the lower member of the frame D is made with a loop *l* adapted to engage the latch bar C when the device is closed or the frames B, D, are parallel. The other end of the frame D is made with a narrow sloping neck or guard *m*, and the upper member of said frame is made with a curved flange or

guard n, which extends nearly around said upper portion or member of the frame. The form of the flange or guard n is such as to prevent the rope from cutting across the edge of the pulley in slipping off of it in the operation of the device, and the neck or guard m is made sloping so as to guide a rope coupler over the pulley and said neck or guard is made narrow so as to prevent the rope from wearing against it. By providing the frame D with the flaring lip or guard n running nearly around said frame, and arranging the braces of the jack as above explained, makes the pulley adapted to double ropes.

A cord p will be attached to the latch C and may conveniently pass between the timbers or braces f, f without interfering with any of the working parts of the device.

Supposing now that the rope q is passing around the pulley E and it is desired to release it,—the cord or rope p will be pulled by the operator, whereupon the latch would release the pivoted frame. Should the hinged frame stick or fail to move up promptly, a second pull and a quick release on the cord would cause the spring actuated latch bar to strike the end of the loop l and force the frame upwardly. When the hinged frame shall have moved upwardly and the rope released therefrom, the said hinged frame will fall again to its normal position by its own gravity, but will be assisted if necessary in its return to normal position, by the pressure of the prongs of the latch bar against the narrow neck or guard m, such force being exerted by pulling on the trip cord p.

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

1. The combination with a pair of timbers secured together at right angles to each other in the form of a cross, a pair of parallel braces secured at one end of one of the timbers and projecting beyond the latter whereby a recess is formed for a stake, a brace secured to the opposite end of this timber and also braces secured to the ends of the other timber, and a strap adapted to receive a stake said strap secured to one end of the frame, of a yoke or frame secured to the several braces, and a pulley frame, substantially as set forth.

2. The combination with a pair of timbers secured together, and braces extending upward toward a common center from the ends of these timbers, of a yoke secured to the several braces, a pulley frame pivoted to the yoke by one of the bolts which secures said yoke to the braces, and a slide latch having sliding connection with another of the bolts which secures the yoke to the braces, substantially as set forth.

3. The combination with a yoke having an inclining rear end, of a pulley frame pivoted to the yoke and having an inclining upper portion and a pulley over which this portion leads and terminates and a loop projecting below the inclining rear end of the yoke when the parts are in their normal position, substantially as set forth.

4. The combination with a yoke, of a pulley frame hinged thereto, said pulley frame provided with a downwardly projecting loop projecting below the upper edge of the yoke and a spring actuated slide latch adapted to enter the loop, substantially as set forth.

5. The combination with a yoke and a spring actuated slide latch connected therewith, of a pulley frame hinged to the yoke, said frame provided with a neck or guard projecting far enough downward to be struck by the latch when it is desired to throw the pulley frame down to its normal position, substantially as set forth.

6. The combination with a yoke or frame, and a pulley frame hinged thereto, of a spring actuated locking bar carried by the yoke or frame and adapted to have a sliding movement, a shank or prong projecting from said locking bar through one end of the yoke, a guard or neck projecting downwardly from the hinged pulley frame and adapted to be engaged by said prong or shank, and a loop on said hinged pulley frame adapted to be engaged by said locking bar and a pulley carried by said pulley frame, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM LOUDEN.

Witnesses:
C. J. FULTON,
R. B. LOUDEN.