June 30, 1925.

1,544,124

O. G. BAUMGARTENER

PULLEY HANDLER AND ROPE CATCHER

Filed Aug. 23, 1924 2 Sheets-Sheet 1

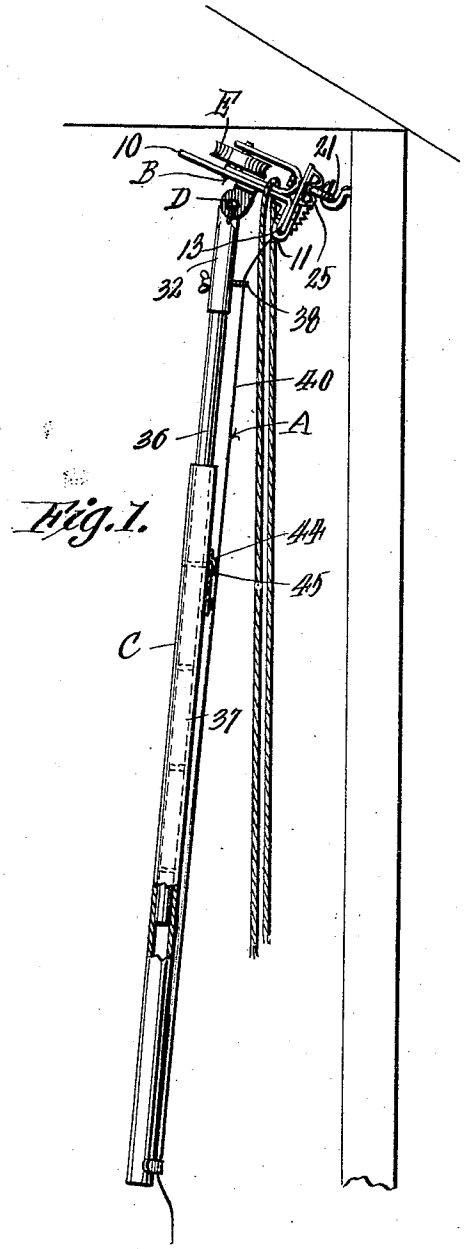


Fig. 1.

Fig. 2.

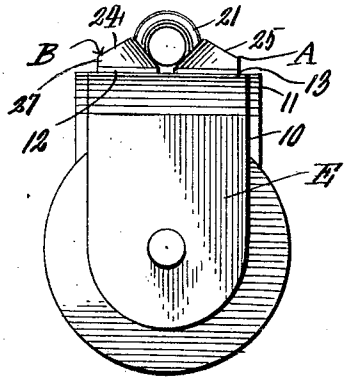
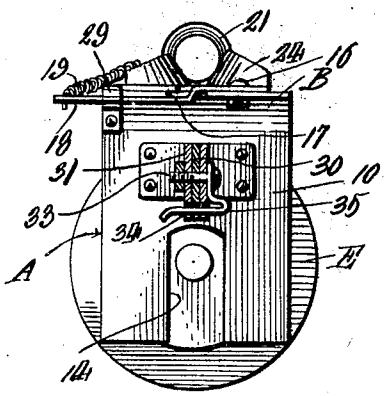


Fig. 3.



WITNESSES

Guy M. Spring

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2 Sheets-Sheet 2

Fig. 4.

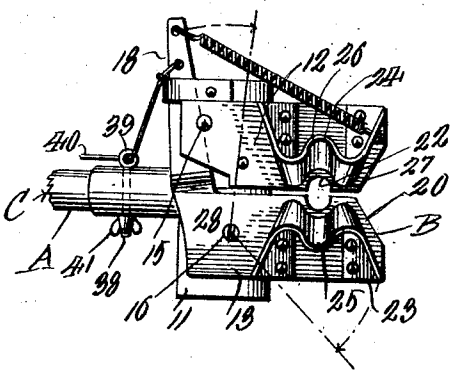


Fig. 5.

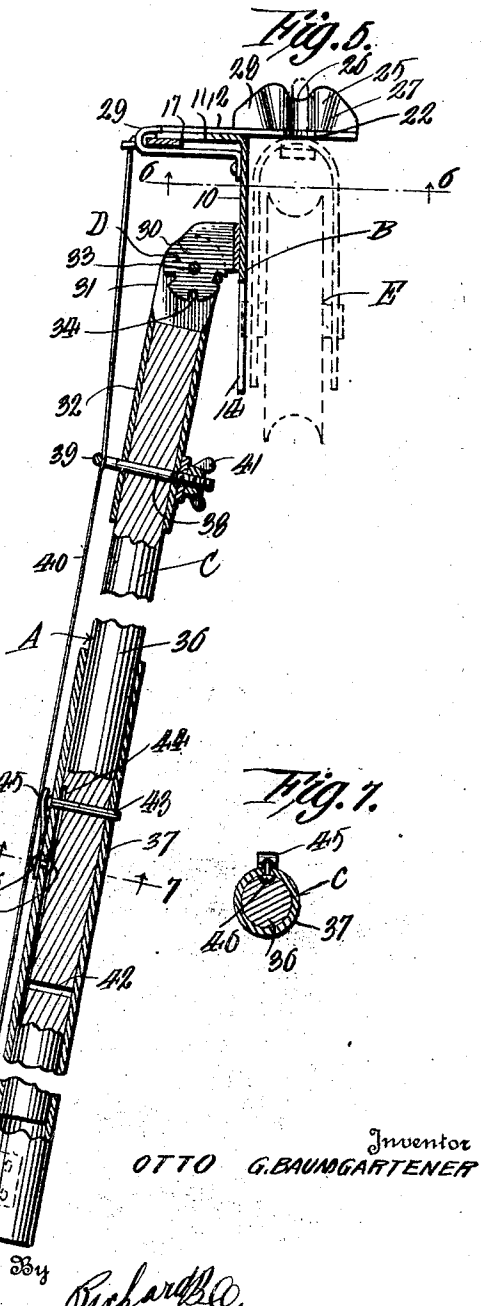


Fig. 6.

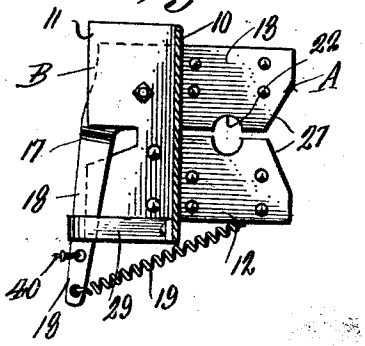
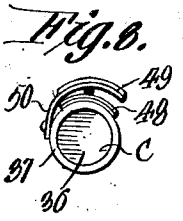


Fig. 7.

Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE.

OTTO G. BAUMGARTENER, OF WRIGHTSTOWN, WISCONSIN.

PULLEY HANDLER AND ROPE CATCHER.

Application filed August 23, 1924. Serial No. 733,845.

To all whom it may concern:

Be it known that I, OTTO G. BAUMGARTENER, a citizen of the United States, residing at Wrightstown, in the county of Brown and State of Wisconsin, have invented certain new and useful Improvements in Pulley Handlers and Rope Catchers, of which the following is a specification.

This invention appertains to a novel appliance for hanging up pulleys in barns incident to the handling of hay and the primary object of the present invention is to provide novel means for detachably holding a pulley for permitting the lifting and hanging up thereof on its supporting hook, and novel means for releasing the pulley when the same is placed in position, the device also permitting the removal of the pulley from off of the hook when desired.

A further object of the invention is to provide novel clamping means for engaging the supporting eye of the pulley, novel means for guiding the eye of the pulley in place between the engaging means, and novel means for guiding the supporting hook of the pulley in place through the eye, when the pulley is raised to an elevated position.

A further object of the invention is to provide novel means for permitting the device to be used for catching ropes and the like, incident to the hoisting of hay, when the rope slips beyond the reach of the operator of the hoisting equipment.

A still further object of the invention is to provide a novel pulley handling device of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture, and one which can be placed on the market at a small cost.

With these and other objects in view, the invention consists in the novel construction, arrangement, and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which drawings:

Figure 1 is a side elevation of the improved pulley handling mechanism showing the same in use,

Figure 2 is a top plan of the device showing a pulley associated with the device,

Figure 3 is a bottom plane of the pulley handling device showing the adjustable handle connection in section,

Figure 4 is a side view of the improved device illustrating the gripping jaws for engaging the eye of the pulley,

Figure 5 is a longitudinal section through the improved device illustrating the construction of the handle carrying the operating jaws, the head being turned so as to lie substantially in a vertical plane,

Figure 6 is a horizontal section taken on the line 6—6 of Figure 5 looking in the direction of the arrows.

Figure 7 is a detailed transverse section through the handle taken on the line 7—7 of Figure 5 illustrating the means for holding the telescopic handle in one of its adjusted positions, and

Figure 8 is a bottom plan view of the handle showing the means for gripping the pull cable of the device.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates the improved handling and rope catching device, which comprises the head B, the telescopic handle C, and the means D for connecting the head B with the forward end of the handle C.

The head B comprises a face plate 10, which can be formed of sheet metal of the desired gauge. The forward edge of the plate 10 is provided with a right angularly disposed supporting flange 11, on which are mounted the pivoted and stationary jaws 12 and 13. The face plate 10 is adapted to receive the pulley indicated by the reference character E, which is to be raised or lowered into or out of position and the plate is provided with a longitudinally extending slot 14 for the reception of the pulley shaft. The stationary jaw 12 is in the nature of a flat plate having its lower end riveted or otherwise secured to the supporting flange 11, as at 14, and as clearly shown in Figure 4 of the drawings the said plate extends upwardly from the flange 11 in order to define a rest for the pulley. The movable jaw 13 is also in the nature of a flat plate and is pivoted at its lower end upon a suitable pivot pin or the like 16 and this jaw plate extends upwardly from the flange 11 in spaced parallel relation to the jaw 12. The inner edges of these jaws terminate at the longitudinal center of the device. As clearly shown in Figure 6 of the drawings, the flange 11 is provided with a central slot 17 and the inner edge of the movable jaw 13 at the rear end thereof is provided with an actuating lever 18 which is offset to extend

through the slot 17. A contractile coil spring 19 is secured to the outer end of the lever and to the stationary jaw and normally tends to move the swinging jaw 13 away from the stationary jaw. The extreme forward edges of the jaws 12 and 13 are provided with inclined faces 20 for guiding the shank of the eye 21 on the pulley E between the said jaws and the meeting edges of the jaws 12 and 13 are provided with companion semi-circular notches 22 for receiving the said shank of the eye 21. The upper faces of the jaws 12 and 13 have riveted or otherwise secured thereto as at 23 gripping members 24 and 25 for the eye of the pulley and as shown these gripping members 24 and 25 include body portions 26 arranged around the notches 22 and these body portions are curved in cross section and incline in opposite directions for engaging and holding the eye of the pulley.

The opposite sides of the bodies 26 of the gripping members 24 and 25 are provided with inclined guide faces 27 and 28. The inclined guide faces 27 of the gripping member 24 and 25 form means for guiding the eye in position, while the inclined faces 28 form means for guiding the supporting hook into the pulley eye, when it is endeavored to place the eye over the hook. A guide strap 29 is provided for the lever 18 in order to limit the swinging movement thereof. The inner face of the supporting face plate 10 is provided with a pivot lug 30, which is adapted to be received between the pivot ears 31 of a cylindrical sleeve or socket 32. The pivot ears 31 and the pivot lugs 30 are provided with aligned openings for receiving the pivot bolt or pin 33. By this construction it is obvious that the head B can be swung to any desired angular position in relation to the socket 32. In order to hold the head B in an adjusted position on the socket 32 notches 34 are formed in the edge of the pivot lug and the pivot ears carry suitable spring latches 35 for springing in any one of said notches. This constitutes the means D for connecting the head adjustably in place.

The socket 32 is adapted to receive the upper end of the handle C, which will now be described.

The handle C can be of any preferred character, but it is preferred to make the same of a telescopic nature in order to permit the lengthening and shortening thereof, as may be desired. As shown the handle C includes the upper solid section 36 and the lower hollow cylindrical section 37 for receiving the solid section 36. The upper end of the solid section is placed in the sleeve or socket 32 and held in position by means of a bolt 38 which extends diametrically therethrough. The bolt 38 is provided at one end with an eye 39 for forming means for guiding the pull cable 40, the upper end of which is attached to the free end of the operating lever 18. The opposite end of the bolt 38 and the eye 39 is threaded for the reception of a suitable winged nut or the like 41.

In order to hold the telescopic handle C in any preferred length, the solid section 36 is provided with a plurality of diametrically extending openings 42 any one of which are adapted to align with an opening 43 formed in the cylindrical section 37 of the handle. A removable pin 44 is adapted to be inserted through the opening 43 and into anyone of the openings 42. In order to prevent loss of the pin 43 a leaf spring 45 is provided for covering the head thereof as clearly shown in Figures 5 and 7. One end of the leaf spring is riveted or otherwise secured as at 46 to the cylindrical portion 37 of the handle.

I also prefer to provide means on the lower end of the handle for gripping the pull cable 40 in order to hold the same in an adjusted position and as shown this gripping means embodies a stationary jaw 48 riveted to the portion 37 of the handle C and a movable jaw 49. This jaw 49 is normally urged toward the jaw 48 by means of a leaf spring 50 which is secured to the handle. As shown the jaws 48 and 49 are provided with mating grooves for biting into the pull cable.

In use of the improved device, when it is desired to hang up a pulley in place, the pulley is placed in engagement with the face plate 10 and the shank of the supporting eye thereof is placed between the jaws 12 and 13 with the eye resting in the body portions 26 of the eye gripping members 24 and 25. The pull cable 40 is now pulled down in order to swing the jaws 12 and 13 toward one another and the pulley will be tightly held in place against displacement. The handle C can now be grasped and the pulley elevated to the desired hook. The guide surfaces 28 of the members 24 and 25 will tend to guide the bill of the hook through the supporting eye of the pulley, as the pulley is being placed in position. After the pulley is in place, it is merely necessary to release the cable 40 and the jaw 13 will be moved away from the jaw 12 by the spring 19. This will release the pulley and permit the disengagement of the lifting device from the pulley.

When it is desired to remove the pulley from the hook the handle is held in the hand of the operator and the cable is pulled slightly so as to move the jaw 13 toward the jaw 12 and the inclined faces 20 are moved toward the shank of the supporting eye of the pulley. When the shank is slid between the jaws and the eye rests in the body portions 26 of the members 24 and 25 the cable can be tightly pulled and the pulley lifted from off of the supporting hook.

The device can also be used for catching ropes, when the same have slipped above the heads of the operators of the pulley and it is obvious that the rope ends can be caught between the jaws 12 and 13.

From the foregoing description, it can be seen that I have provided an exceptionally simple and durable means for handling pulleys, which will facilitate the handling of pulleys incident to the loading and unloading of hay into a barn.

Changes in details may be made without departing from the spirit or the scope of this invention, but:—

What I claim as new is:

1. A device of the character described comprising a handle, a head adjustably carried by one end of the handle including a face plate, and a pair of jaws associated with the face plate and arranged at right angles thereto and projecting laterally therefrom, as and for the purpose specified.

2. A device for handling pulleys comprising a handle, a head carried by one end of the handle including a face plate against which the body of the pully is adapted to rest, a pair of jaws arranged to project beyond one face of the face plate arranged to grip the supporting eye of a pulley therebetween, and means for operating the jaws.

3. A device for handling pulleys comprising a supporting handle, a head carried by one end of the handle including a face plate against which the body of the pulley is adapted to rest, a pair of jaws arranged to protrude beyond one face of the plate and arranged to receive the supporting eye of the pulley therebetween, means for rigidly securing one of the jaws in place, means for pivotally securing the other jaw in place, spring means for normally urging the pivoted jaw away from the rigid jaw, and a pull cable operatively connected with the movable jaw for moving the same toward the rigid jaw against the tension of said spring means.

4. A pulley handling device comprising a handle, a head carried by the handle including a face plate against which the body of the pully is adapted to rest, a supporting flange formed on the upper edge of the face plate, a pair of jaws resting upon the flange arranged to project laterally from one face of the face plate, means for rigidly securing one of the jaws to the flange, means for pivotally securing the other jaw to the flange, the jaws terminating at the longitudinal center of the device, spring means for normally urging the pivoted jaw away from the rigid jaw, the forward edges of the jaws being provided with inwardly inclined meeting faces, the meeting edges of the jaws being provided with mating semi-circular notches for receiving the shank of the supporting eye of the pulley, eye gripping members carried by the upper faces of the jaws each including inclined gripping body portions and outwardly inclined guiding faces, and a pull cable operatively connected to the movable jaw for moving the same toward the rigid jaw against the tension of said spring means.

5. A pulley handling device comprising a handle, a head, means for adjustably securing the head to the handle for permitting the head to be held in different angular positions relative to the handle, a supporting face plate and flange forming a part of the head, jaw members secured to the head and projecting laterally from one face of the face plate, means for rigidly securing one jaw to the flange, means for pivotally securing the other jaw to the flange, a lever formed on the inner end of the pivoted jaw, a contractile coil spring connected to the lever and to the rigid jaw for normally urging the pivoted jaw away from the rigid jaw, gripping members secured to the upper faces of the jaws including oppositely inclined bodies arcuate shaped in cross section, and oppositely inclined guiding faces, a pull cable connected with the lever adjacent to the outer end thereof, guiding means carried by the handle for the cable, and jaws carried by the handle for engaging the pull cable to hold the same against movement.

6. In a pulley handling device, a telescopic handle, a head adjustably carried by the outer end of the handle including a pair of gripping jaws for engaging the pulley to be handled, means for operating the jaws, the telescopic handle including a solid section and a cylindrical section receiving the solid section, the solid section being provided with a plurality of spaced openings, the cylindrical section being provided with a single opening arranged to align with anyone of the openings in the solid section, and a pin arranged to extend through the aligned openings.

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

OTTO J. BAUMGARTENER.

Witnesses:

GEORGE RILEY,

WALTER B. BAUMGARTENER.