Jan. 26, 1926. 1,570,607

G. S. BASHLINE

PULLING DEVICE

Filed Feb. 3, 1925

Fig. 1.

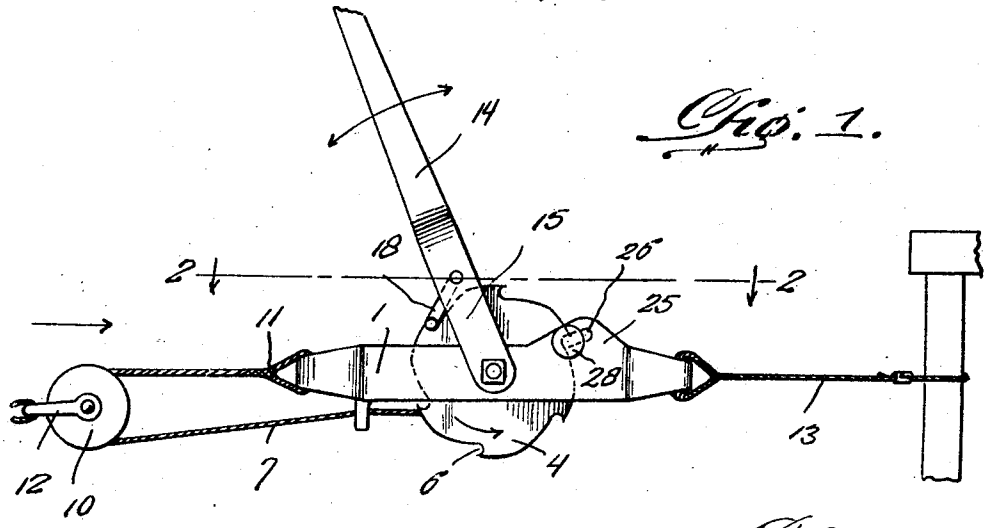


Fig. 2.

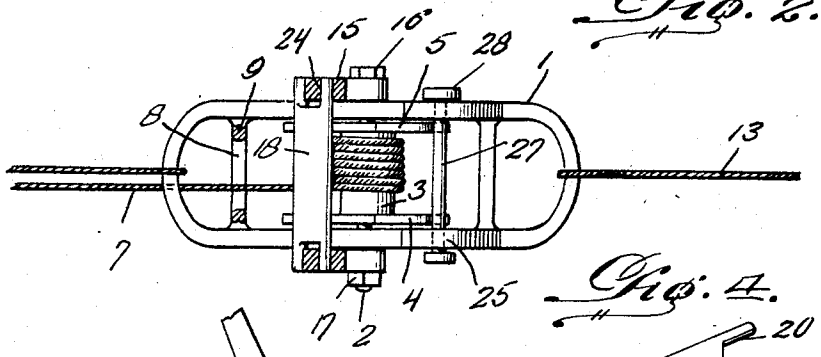


Fig. 4.

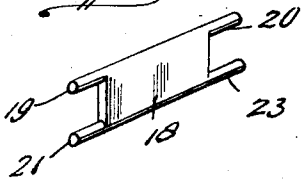
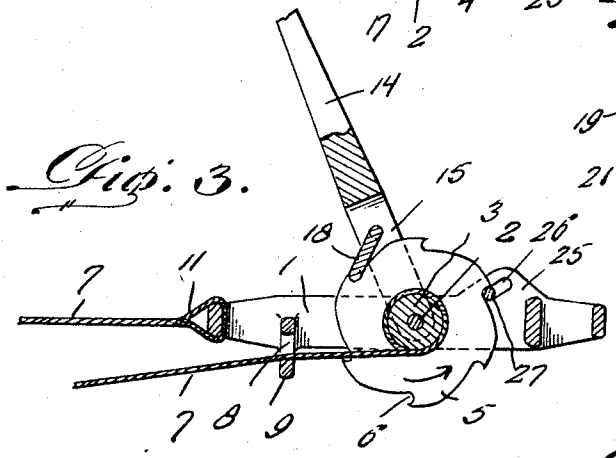


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE S. BASHLINE, OF WYNONA, OKLAHOMA.

PULLING DEVICE.

Application filed February 3, 1925. Serial No. 6,563.

To all whom it may concern:

Be it known that I, GEORGE S. BASHLINE, a citizen of the United States, residing at Wynona, in the county of Osage and State of Oklahoma, have invented certain new and useful Improvements in a Pulling Device, of which the following is a specification.

This invention relates to improvements in pulling devices and has for its object to provide a simple and efficient device which may be readily and easily set up in position for use for various purposes such as assisting in the moving of heavy pieces of machinery or the like.

Another important object of the invention is to provide a pulling device of the above mentioned character, which includes a cable and a winding drum therefor, a pawl and ratchet mechanism being associated with the drum for rotating the same, in one direction, means being further provided for preventing the rotation of the drum in the opposite direction when the pawls are out of engagement with the ratchet mechanism.

A further object is to provide a pulling device of the above mentioned character, which is simple in construction, inexpensive, strong and durable and further well adapted for the purposes for which it is designated.

Other objects and advantages of this invention will become apparent during the course of the following description.

In the accompanying drawing forming part of this specification and in which like numerals designate like parts throughout the same:

Figure 1 is a side elevation of the pulling device embodying my invention showing the same in use.

Figure 2 is a sectional view taken approximately on line 2—2 of Figure 1.

Figure 3 is a longitudinal sectional view through the device, and

Figure 4 is a detail perspective view of the pawl mechanism.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates the substantially rectangular frame, the ends thereof being rounded as clearly illustrated in Figure 2. Extending transversely through the opposed sides of the frame at the intermediate portion thereof is the shaft 2. The ends of said shaft extending outwardly of the respective sides of the frame for the purposes hereinafter to be more fully described. A drum 3 is loosely mounted on the shaft 2 and is provided at its respective ends with the ratchet wheels or discs 4 and 5 respectively. The discs are disposed adjacent the inner opposed faces of the respective sides of the frame. The ratchet is formed by providing suitable notches 6 in spaced relation in each disc in its peripheral edge. The notches in the discs are arranged in alignment with each other so as to provide cooperating pairs.

A pulling cable 7 has one end thereof secured to said drum, said cable extending rearwardly through a guide opening 8 provided in the cross member 9 which is disposed transversely between the sides of the frame adjacent the rear end thereof, the cable being further disposed over a suitable pulley 10 and then secured at its opposite end to the rear end of the frame as illustrated at 11. A clevis of any well known construction and illustrated by the numeral 12 supports the pulley 10 and is adapted to be attached to the object to be pulled when the device is in use. An additional cable is secured at one end to the forward end of the frame, the opposite end being detachably connected to a stationary object or support as clearly illustrated in Figure 1.

An operating lever is shown at 14, the lower end thereof being provided with a yoke portion 15. The yoke portion 15 is adapted to straddle the frame 1 and the lower free ends of the arms of the yoke portion are provided with registering openings whereby the same may be supported on the outer end of the shaft 2. The shaft 2 may be in the form of a bolt, the head 16 thereof and the removable nut 17 which is threaded on the threaded end of the bolt cooperating to secure the yoke portion of the lever against accidental disengagement from the shaft.

The pawl which cooperates with the ratchet wheels or discs is in the form of a rectangular plate 18. Projecting from the respective ends of the plate 18 are the pins 19 and 20 and 21 and 23 respectively. This construction is clearly illustrated in Figure 4. The pins 19 and 20 are disposed adjacent one of the longitudinal edges of the plate while the pins 21 and 23 are disposed adjacent the opposite longitudinal edge. The provision of these pins enables the pawl to be pivotally supported between the upper portions of the arms of the yoke portion 15,

suitable sockets 24 being provided in the arm of the yoke portion for receiving the pins 19 and 20 or the pins 21 and 23 depending which pair are used. The construction of the plate 18 of the character above described enables the pawl to be reversed with respect to the yoke portion of the operating lever, the lower portion of the plate which extends transversely between the arms of the yoke portion will cooperate with the notches 6 formed in the periphery of each of the discs of the drum.

When the lever 14 is operated, the pawl 18 will engage the notches 6 formed in the peripheries of the discs and as a result, the drum 3 will be rotated to wind the cable 7 therearound and thus moving the object which is attached to the clevis 12 in the direction of the arrow. It is of course to be understood that the cable 13 is initially attached to a stationary object which is disposed forwardly of the device to be pulled. For the purpose of preventing the rotation of the drum in the reverse direction when the pawl 18 is disengaged from one of the notches 6 in order to move the pawl into engagement with the next notch, I have provided a locking means, the construction of which will be more fully described in the following paragraph.

A pair of upstanding ears 25 are formed on the upper edges of the sides of the frame adjacent the forward end thereof, the ears being provided with upwardly inclined aligning slots 26. A pin 27 is disposed transversely across the forward portion of the frame and the ends thereof extend through the inclined slots 26 in the upstanding ear 25. The head 28 is provided for each end of the pin to prevent the lateral displacement of the same from the slots. The weight of the pin normally causes the same to be disposed in the lower portions of the aligning slots so that the intermediate portion of the pin will engage the adjacent aligning notches in the discs of the drum and hold the same in such direction as will prevent the cable 7 being unwound from the drum during the movement of the pawl 18 from one pair of notches to another.

It will thus be seen from the foregoing description, that a pulling device has been provided which may be readily and easily set up in position for use, and will at all times be positive and efficient in carrying out the purposes for which it is designated.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention and the scope of the appended claim.

Having thus described the invention, what I claim is:—

A pulling device of the class described comprising a frame, upstanding ears formed on the upper edges of the sides of the forward portion of the frame, said ears having angularly disposed aligning slots formed therein, a shaft extending transversely through the sides of the frame at the intermediate portion thereof, a drum loosely mounted on said shaft, a pair of discs at the respective ends of the drum, said discs being provided with a series of aligning notches in the peripheral edges thereof, means for securing the forward end of the frame to a stationary object, a pulling cable secured at one end to said drum and adapted to be wound therearound, an operating lever, a yoke portion formed on the lower end thereof and straddling said frame, the lower free ends of the arms of said yoke portion being supported on the respective ends of said shaft, a plate, means for pivotally supporting the same between the upper ends of the arms of the yoke portion, said means comprising pins projecting from the respective ends of the plate and adapted to be disposed in sockets provided therefor in the upper portions of the arms of the yoke portion, the lower edge of the plate being adapted for engagement with the aligning notches formed in the peripheral edges of the discs for rotating the drum in one direction, means for preventing the rotation of the drum in the opposite direction during the movement of said plate from one pair of aligning notches to another, said last mentioned means comprising a transverse locking pin having its ends disposed within the aligned angularly disposed slots formed in said upstanding ears and adapted for engagement with one pair of aligning notches by gravity.

In testimony whereof I affix my signature.

GEORGE S. BASHLINE.