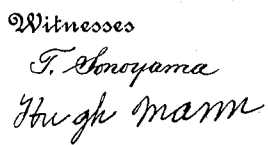


1,054,385.



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HARRY A. BARR, OF AUBURN, NEW YORK.

BELT-SHIFTER.

1,054,385.

Specification of Letters Patent.

Patented Feb. 25, 1913.

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To all whom it may concern:

Be it known that I, HARRY A. BARR, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Belt-Shifters, of which the following is a specification.

The present invention relates to belt shifters, and has for its purpose to provide a belt shifter embodying a simplified construction and operation of elements; wherein a shifting device is locked in either of its extreme positions through the complete pull of either of the actuating devices and may be released from such locked position only through the pulling of the other actuating device; and wherein an adjustable and resilient frictional means is provided which will effectively hold the shiftable member at any set position.

With these and other objects in view the invention consists in the arrangement and combinations of parts hereinafter claimed, and, while the invention is not restricted to the exact details shown and described, still, for the purpose of disclosure, reference is had to the accompanying drawing, in which like reference characters designate the same parts in the several views, and in which,

Figure 1 is a front elevational view illustrating the application of the invention; Fig. 2 is a top plan view thereof; Fig. 3 is a top plan sectional view of the same; and Fig. 4 is an end elevational view of the lever mechanism and its associated parts.

Referring to the construction in detail, 1 and 2 designate the members of an ordinary hanger suspended or otherwise supported from the beam A and which members are connected together by a part 3 which is formed integrally therewith. The lower ends of the members 1 and 2 are provided with shaft bearings 4 and 5 respectively within which is journaled the shaft 6 having the driving pulley 7 keyed thereon after the usual manner. At its opposite end, the shaft 6 has mounted thereon a fixed pulley 8 and a loose pulley 9, or vice versa, with which the present invention is concerned. An ordinary belt B is shown in position on the pulley 8 and is adapted to be shifted to and from the pulley 9, as will be understood.

The belt shifting mechanism consists of a laterally shiftable shaft 10 mounted in the bearings 11 and 12 that are formed integrally with the hanger bearings 4 and 5 re-

spectively. At one end the shaft 10 has secured thereon a fork 13 whose prongs are disposed to either side of the belt B and are adapted to frictionally engage therewith and move the belt laterally when the shaft 10 is actuated.

A two-armed lever 14 and 15 is pivotally mounted intermediate its ends on a head 16 or other support which is secured to, or preferably formed integrally with, the connecting cross piece 3 of the hanger. (See Figs. 3 and 4). A stud or bolt 17 provides the pivotal support for said lever and has screw-threaded engagement within a suitable recess formed within the head 16, and said lever is countersunk, as at 18, to receive the head of the pivot bolt 17. A projecting member 19 is secured intermediate the arms 14 and 15 on the lever, and is disposed at right angles thereto, as clearly illustrated in Fig. 1.

The shaft 10 is adapted to be shifted laterally through the actuation of the lever (14 and 15), to which end said shaft is provided with a vertically-disposed arm 20, having a shoulder 21 through which passes the shaft 10 that is secured thereto by the set screw 22. Said arm 20 has a slot 20^b that receives a screw bolt 20^a which is screw-threaded on the projecting member 19, as shown in Fig. 3. This pivotal connection between the member 19 and arm 20 is adapted to be made tight or loose through the medium of a spiral spring 23 which binds against a washer 24 that is mounted on the pivot bolt 20^a and has frictional contact with one face of said arm 20 and, in turn, causes said arm 20 to have more or less frictional engagement with the member 19 accordingly as the screw bolt 20^a is adjusted to exert tension on the spring 23. The adjusted position to which the screw bolt 20^a is set is adapted to be fixed through the medium of a locking bolt 21^a that is screwed onto the bolt 20^a and contacts with the rear face of the member 19. (See Figs. 2, 3 and 4).

The means for actuating the lever (14 and 15) consists of chains 25 secured respectively to the arms 14 and 15 of said lever and which are adapted to be alternately pulled for throwing the projecting member 19 to one side or the other of the pivot bolt 17 and thereby shift the shaft 10 for moving the belt B.

It will be noted that by reason of oppo-

sitely disposing the arms 14 and 15 that when one of the chains is pulled down as far as it will go it locks the shiftable shaft 10 in such a manner that it cannot be moved except through the pulling of the other chain, *i. e.*, the chain connecting with the lever arm which is uppermost, and, by reason of the frictional engagement between the connecting members 19 and 20 of the shaft and lever said shaft and lever are held with a certain degree of security when the shaft is set to any position.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of my invention, and therefore I do not wish to be limited to such features except as may be required by the claim.

Having thus described my invention, what I claim as new and desire to protect by U. S. Letters Patent, is:

A belt shifter comprising a suitable support, a lever having two oppositely disposed

arms pivotally mounted intermediate the ends thereof on said support and having a projecting member disposed between and at right angles to said oppositely disposed arms; a slidably mounted shaft; a device on said shaft adapted to engage with the belt; a slotted arm adjustably secured to said slidable shaft; a screw bolt secured to said lever projecting member and passing through said slotted arm; a spring mounted on said bolt and holding the slotted arm in tight frictional engagement with said lever projecting member whereby to hold said member and the slotted arm in relative set position; and chains secured respectively to the two opposed arms of said lever for actuating said lever, substantially as described.

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

HARRY A. BARR.

Witnesses:

C. W. STORKE,
GEORGE WRIGHT.