(No Model.)

P. D. HARTON.

BELT TIGHTENER AND SHIFTER.

No. 594,622. Patented Nov. 30, 1897.

Fig. 2.

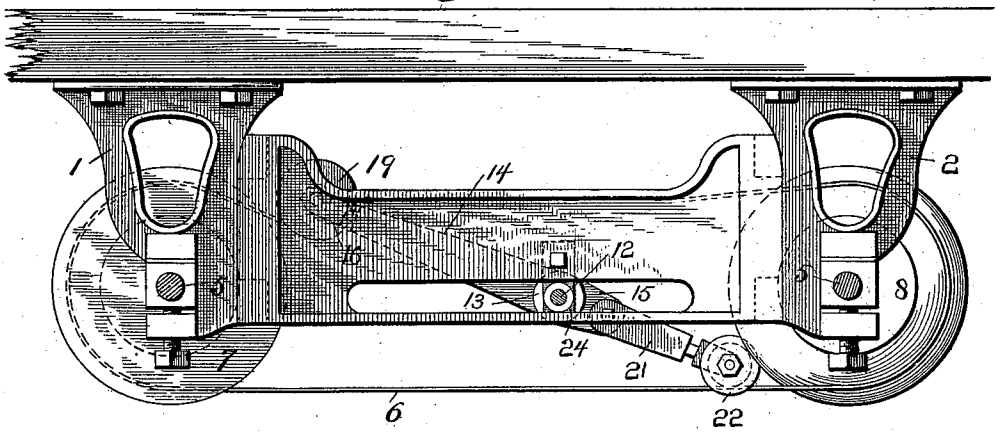
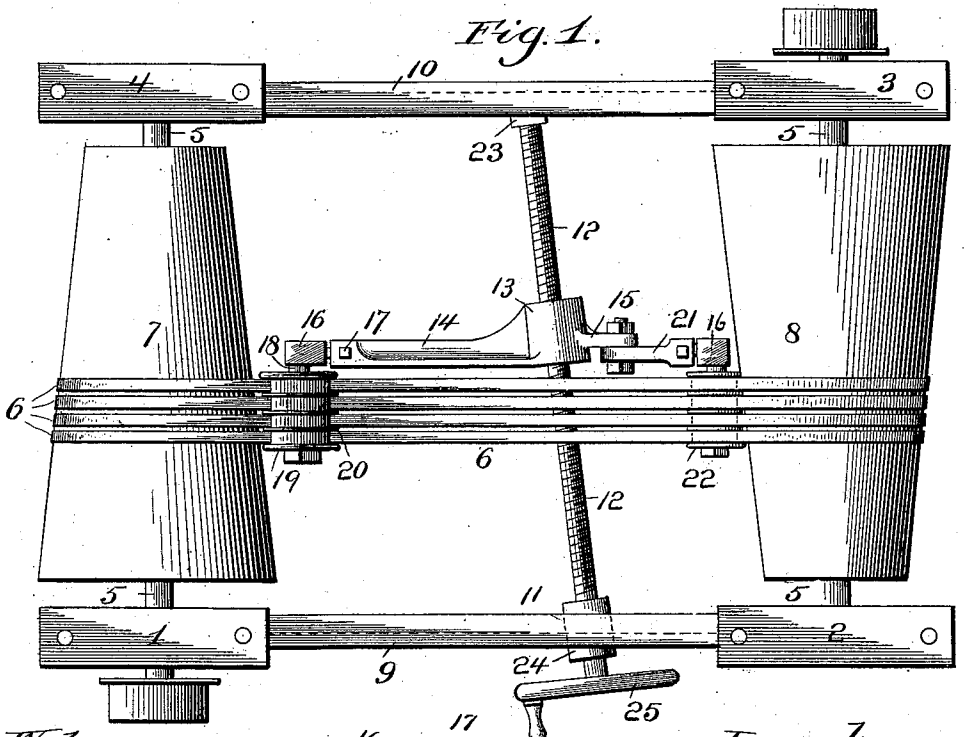


Fig. 1.



Witnesses:

J. W. Travis

William Goodacre

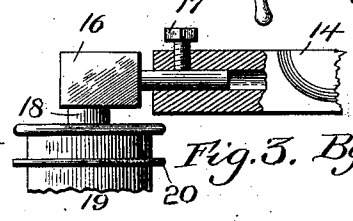


Fig. 3.

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BELT TIGHTENER AND SHIFTER.

SPECIFICATION forming part of Letters Patent No. 594,622, dated November 30, 1897.

Application filed June 22, 1897. Serial No. 641,835. (No model.)

To all whom it may concern:

Be it known that I, PEMBROKE D. HARTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Belt Tighteners and Shifters; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of inventions that have for their object the shifting, tightening, and holding of belts in place on cone-pulleys.

My invention consists in interposing between the two cone-pulleys a screw-threaded shaft which is held in position by any suitable means in the sides of the machine, and on this shaft is located a nut carrying one rigid and one jointed arm, the two having adjustable ends that carry the rollers, the latter having webs between which the belt or strands are kept in alinement. The screw-shaft has means whereby the nut carrying the arms and rollers moves the belting back and forth over the face of the cone-pulleys, so that any desired speed may be attained.

I now proceed to give a description of the invention in such a way that it may be made and constructed by those skilled therein and its construction and mode of operation fully understood.

I have carefully and clearly illustrated the invention in the accompanying drawings, which form a part of this application, wherein—

Figure 1 is a top view of two cone-pulleys with my improvement applied thereto. Fig. 2 is a side view of the same; Fig. 3, a detail end view of the adjustable roller-arm.

Like numerals designate the same parts throughout the several figures of the drawings.

The cone-pulleys 7 8 are suitably supported on shafts 5 in brackets 1, 2, 3, and 4, said brackets 1 2 and 3 4 being respectively connected together by side castings 9 10, each of which has an elongated opening 11 on its lower side for the mounting and securing of a screw-threaded shaft 12, said shaft being held in position by boxes 23 24, that are adjustably secured in said openings.

Between the sides 9 10 on the threaded shaft 12 is a nut 13, having two outwardly-extending arms 14 15, the latter having swiveled thereto an extended part 21, each of the arms having an adjustable end 16, which is held secure to the arm by means of a bolt, as at 17. The adjustable ends 16 carry the rollers 19 22, which have their faces separated by webs 20 into as many parts as strands to be used.

It will be seen from the drawings that the roller 22 acts on the inside of the belt or belts close to the cone 8, while the roller 19 lies on the top of the belting close to the cone 7. This arrangement always insures the belting 6 moving true over the face of each of the said cones, and by the turning of the hand-wheel 25 to the right or left the rollers 19 22 will cause the belting to move to one end or the other of the cones. The rollers prevent the non-slipping of the belting.

This construction I have found to be advantageous in machines where changeable speed is required, and with my device the speed of any machine can be changed by the operator without leaving his position.

I have illustrated that form of device that I think best; but I do not wish to be limited to the precise construction herein shown, as such changes as the substitution of a number of separate rollers could be used to advantage instead of the one large one shown. Again, there could be a guide with webs on its under face that would also accomplish the same result.

What I claim is—

1. In a belt tightener and shifter for cone-pulleys, the combination of a threaded shaft adjustably secured to the sides of the machine with means for operating the same, a nut on said shaft having two arms each provided with an adjustable end and with a roller, all substantially as and for the purposes set forth.

2. In a belt tightener and shifter for cone-pulleys, the combination of an adjustable threaded shaft interposed between the cone-pulleys, a nut on said shaft having two arms

one of which is swiveled, each provided with an adjustable end carrying a roller or guide with two or more webs, all substantially as described.

3. In a belt tightener and shifter, the combination with the cone-pulleys and adjustable threaded shaft arranged at an angle to the shafts of the pulleys, of a nut on said shaft carrying two arms each provided with a roller or guide, substantially as described.

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

PEMBROKE D. HARTON.

Witnesses:

FRANCIS J. SCANLAN,

JOHN J. MINNICK.