

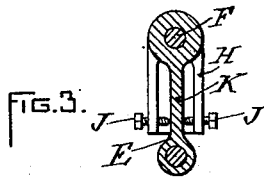
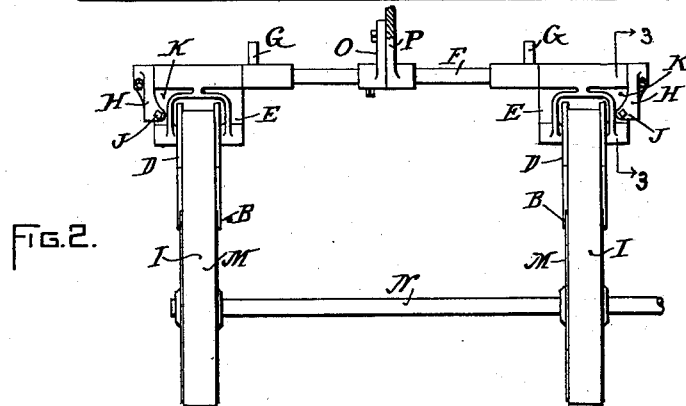
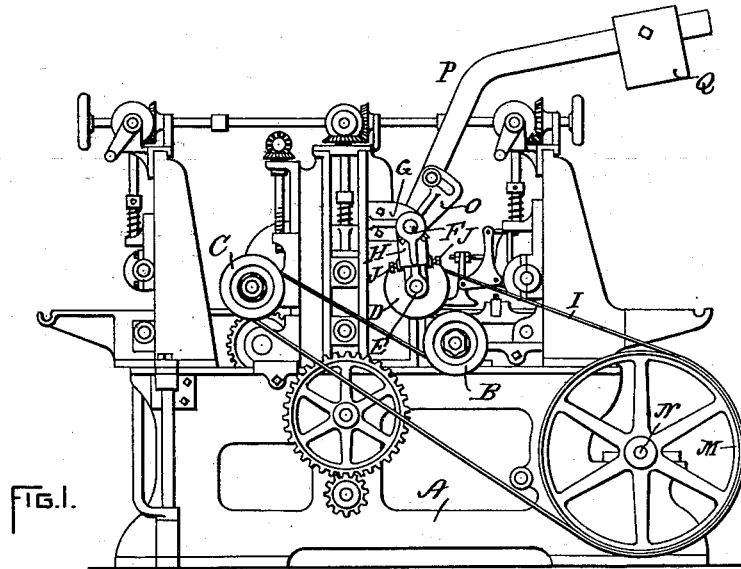
No. 650,131.

Patented May 22, 1900.

B. G. LUTHER.
BELT TIGHTENER.

(Application filed Oct. 30, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

BENJAMIN G. LUTHER, OF WORCESTER, MASSACHUSETTS.

BELT-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 650,131, dated May 22, 1900.

Original application filed September 17, 1898, Serial No. 691,235. Divided and this application filed October 30, 1899. Serial No. 735,292. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN G. LUTHER, a citizen of the United States, residing at Worcester, in the State of Massachusetts, have invented a new and useful Improvement in Belt-Tighteners, of which the following is a specification.

The object of my invention is to provide suitable means whereby the driving-belts employed at opposite sides of a wood-planing machine for driving the cutter-cylinders may be maintained at the proper degree of tension from the same belt-tightening means; and it consists in improved means for adjusting the opposite belt-tightening rollers relatively to each other from the same rock-shaft, as hereinafter fully set forth.

In the accompanying drawings, Figure 1 represents a side elevation of a wood-planing machine provided with my improvement. Fig. 2 represents a detail front view showing the driving-shaft and the driving-belt, the holding-yokes for the belt-tightening rollers, and the adjusting means. Fig. 3 represents an enlarged section taken in the line 3 3 of Fig. 2.

In the drawings, Fig. 1, A represents the frame of the planing-machine; B, the driving-pulley of the lower knife-cylinder; C, the driving-pulley of the upper knife-cylinder, and D D the belt-tightening rollers, the said tightening-rollers being held in the yokes E E, loosely held at the opposite ends of the rock-shaft F, the said rock-shaft being held in the bearing-brackets G G, which are bolted to the sides of the frame A. To the extreme outer ends of the rock-shaft F are rigidly secured the adjusting-arms H H, by means of which the angular position of the roller-yokes E E may be varied, so that the belts I I, although of different and varying lengths, may be tightened from the weighted rock-shaft F, the angular position of either of the roller-yokes E E being made adjustable by means of the opposite adjusting-screws J J, which at their points bear against the side of the web K of the roller-yoke. The driving-belts I I at opposite sides of the machine pass from the driving-pulleys M M upon the driving-shaft N, over the tightening-rollers D D, thence

around the pulley B of the lower knife-cylinder, thence around the pulley C of the upper knife-cylinder, and thence back to the driving-pulleys M M. To the middle portion of the rock-shaft F is secured the slotted arm O, and to the said slotted arm is bolted the lever-arm P, upon which is placed the adjustable weight Q, and by means of the slot connection between the slotted arm O and the lever-arm P the position of the said lever may be regulated for any required change in the position of the tightening-rollers D D, owing to the gradual stretching of the belts I I in use.

It is evident that one of the roller-yokes may be rigidly secured to the rock-shaft, while the other is made adjustable; but I prefer to arrange both roller-yokes for like adjustment, and my improved belt-tightening device constitutes a desirable improvement when employed in connection with similar driving-belts at opposite sides of the machine.

I claim as my invention—

1. In a belt-tightening device, adapted for operation upon similar belts at opposite sides of a machine, the combination of the driving-belts with the weighted rock-shaft, the belt-tightening rollers, the loose roller-yoke upon the rock-shaft, a fixed arm adjacent thereto upon the rock-shaft, and means for adjusting the angular position of the loose roller-yoke relatively to the fixed arm, to cause the proper tightening of the belts at opposite sides of the machine, substantially as described.

2. In a belt-tightening device adapted for operation upon similar belts at opposite sides of the machine, the combination of the driving-belts, with the weighted rock-shaft, the belt-tightening rollers, a roller-yoke loose upon the rock-shaft, a fixed arm adjacent thereto upon the rock-shaft, means for adjusting the angular position of the loose roller-yoke relatively to the fixed arm, the slotted arm secured to the rock-shaft, and the weighted lever secured to the slotted arm, substantially as described.

BENJAMIN G. LUTHER.

Witnesses.

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