

G. L. WALLACE & R. DOW.
BELT TIGHTENER.

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934,248.

Patented Sept. 14, 1909.

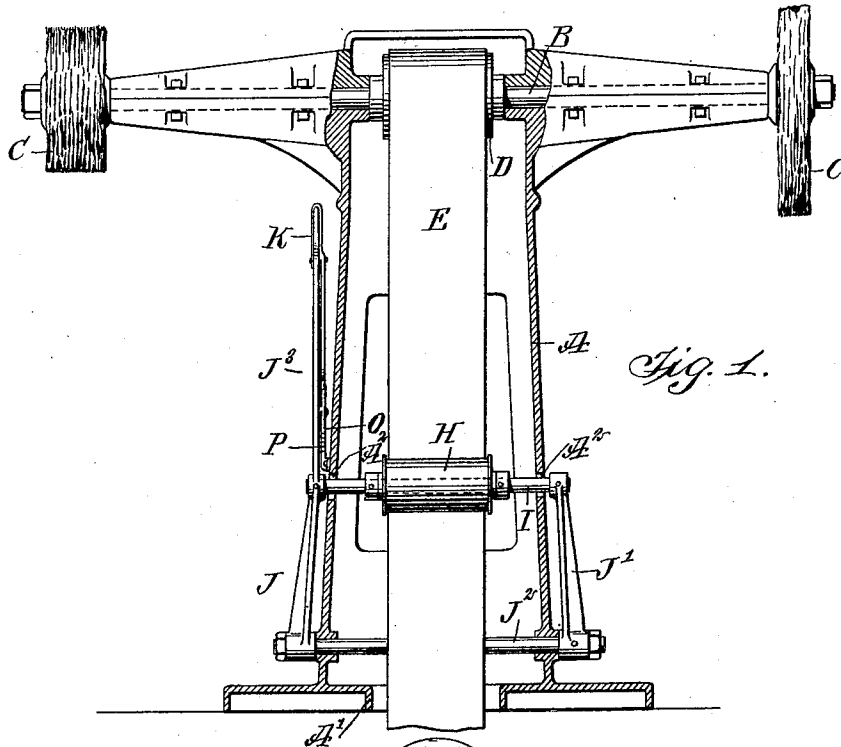


Fig. 1.

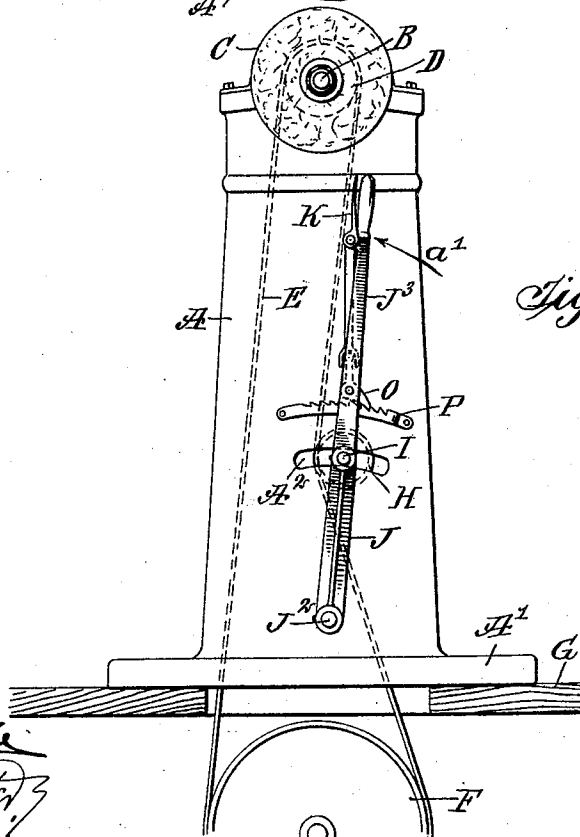


Fig. 2.

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UNITED STATES PATENT OFFICE.

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BELT-TIGHTENER.

934,248.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed March 15, 1909. Serial No. 483,481.

To all whom it may concern:

Be it known that we, GEORGE L. WALLACE and RALPH DOW, both citizens of the United States, and residents, respectively, of Bridgeport, in the county of Fairfield and State of Connecticut, and of Mansfield, in the county of Richland and State of Ohio, have invented a new and Improved Belt-tightener, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved belt tightener, more especially designed for use on polishing, buffing and like machines, having the driving belt arranged within the column or hollow stand of the machine, the arrangement being such that the tightening pulley is located within the column or hollow stand and the actuating and setting device for the pulley is arranged outside of the column or stand to be within convenient reach of the operator, to enable the latter to tighten the belt more or less as desired.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a sectional side elevation of a polishing machine provided with the improvement; and Fig. 2 is an end view of the same.

In the upper portion of the hollow stand or column A of the polishing machine shown in the drawings is mounted a shaft B carrying the polishing or buffing wheels C, C, and on the said shaft B is secured a pulley D, over which passes a belt E extending down through the hollow stand A and through the apertured base A' thereof, to pass over a pulley F journaled below the floor G or other foundation, on which the stand A is set. The pulley F has its shaft connected with suitable machinery for imparting a rotary motion to the pulley F to drive the pulley D, the shaft B and wheels C.

One of the runs of the belt E is engaged by a tightening pulley H, arranged within the stand A and mounted on a shaft I, extending through elongated slots A² formed in the sides of the hollow stand A. The outer ends of the shaft I are supported in vertical arms J, J' of the swing frame, having the shaft J² journaled in the lower por-

tion of the stand A, and on which the arms J, J' are secured. The arm J is provided with an integral upwardly-extending handle J³ under the control of the operator, to impart a swinging motion to the swing frame, so as to move the tightening pulley H into contact with the corresponding run of the belt E, to tighten the same to a desired degree for the proper transmission of the power to the pulley D and the shaft B. On moving the pulley H away from the run of the belt E, the latter can be loosened to such an extent as to stop the rotation of the pulley D and the shaft B.

In order to lock the pulley H in the desired adjusted position, the following locking device is provided: On the upper end of the handle J³ is fulcrumed a hand lever K connected with a dog O, fulcrumed on the hand lever K and engaging a notched or toothed segment P secured to one side of the stand A. Now when the operator swings the handle J³ from the right to the left in the direction of the arrow a', then the tightening pulley H tightens the belt E and the dog O moving with the handle J³ locks the latter against return movement by the dog O engaging a corresponding tooth on the segment P. When it is desired to move the tightening pulley H outward, the operator having hold of the upper end of the handle J³ also takes hold of the hand lever K and presses the same, so as to swing the dog O upward out of engagement with the notched segment P, thus allowing the operator to swing the handle J³ in the inverse direction of the arrow a', thereby moving the tightening pulley H into position for slackening the belt E. When the operator subsequently releases the hand lever K and the handle J³ then the latter is again locked in place by the dog O engaging a corresponding tooth of the segment P.

By the arrangement described, the tightening device for the belt E is arranged within the hollow stand A and hence is completely out of the way of the operator, and the actuating device for the tightening device is arranged outside of the stand, so as to be within convenient reach of the operator.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A belt tightener for a machine hav-

- ing a hollow stand, a main shaft journaled in the said stand, a pulley on the said shaft within the said hollow stand, a driving belt passing over the said pulley and extending within the said hollow stand and passing through the open base thereof, a tightening pulley engaging one of the runs of the said belt, a pulley shaft carrying the said pulley and extending through elongated slots in the sides of the said stand, a swing frame mounted on the said stand and supporting the outer ends of the said pulley shaft, and means arranged externally of the said stand for operating said swing frame.
2. A belt tightener for a machine having a hollow stand, a main shaft journaled in the said stand, a pulley on the said shaft within the said hollow stand, a driving belt passing over the said pulley and extending within the said hollow stand and passing through the open base thereof, a tightening pulley engaging one of the runs of the said belt, a pulley shaft carrying the said pulley and extending through elongated slots in the sides of the said stand, a swing frame mounted on the said stand and supporting the outer ends of the said pulley shaft, a

handle on the said swing frame, and a locking device for holding the handle in an adjusted position.

3. In a belt tightener, a stand having curved slots in its sides, a shaft mounted in the stand below the slots thereof, arms secured to the ends of the shaft, one of the arms being extended to form a handle, a second shaft having its ends extending through the slots of the stand and mounted in the arms of the first shaft, a pulley mounted on the second shaft within the stand, and a locking device for holding the handle in adjusted position.

In witness whereof we have signed our names to this specification in the presence of subscribing witnesses.

GEORGE L. WALLACE.
RALPH DOW.

Witnesses to the signature of George L. Wallace:

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