(No Model.)

J. H. CROMIE.

BELT GEARING FOR MACHINERY.

No. 298,291. Patented May 6, 1884.

FIG. 2

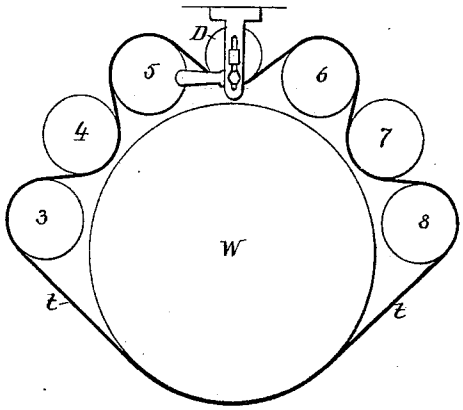


FIG. 1.

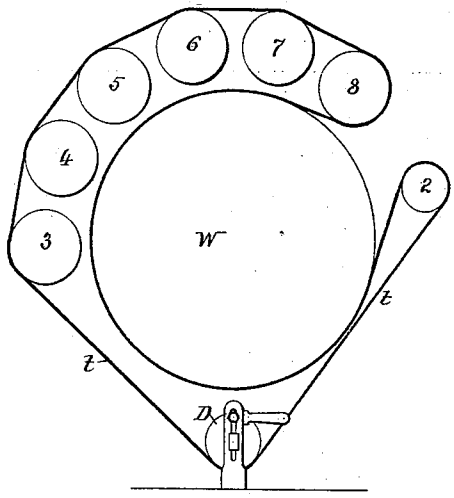


FIG. 3.

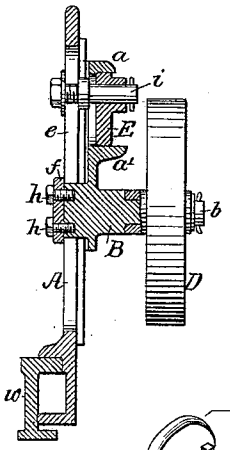


FIG. 4.

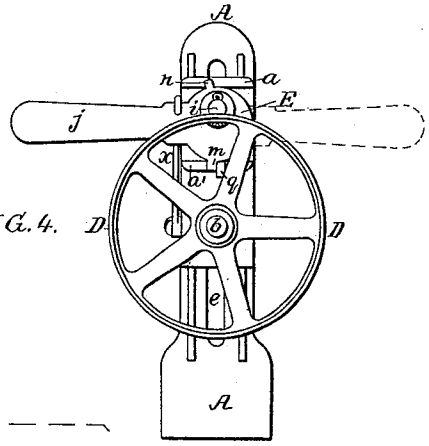


FIG. 5.

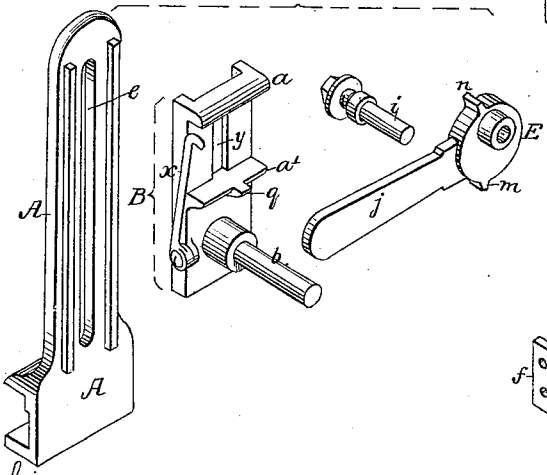
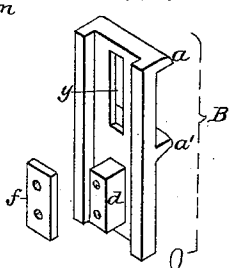


FIG. 6.



Witnesses—
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John M. Clayton.

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by his Attys
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UNITED STATES PATENT OFFICE.

JOHN H. CROMIE, OF CAMDEN, NEW JERSEY, ASSIGNOR TO MERRILL A. FURBUSH AND CHARLES A. FURBUSH, BOTH OF PHILADELPHIA, PA.

BELT-GEARING FOR MACHINERY.

SPECIFICATION forming part of Letters Patent No. 298,291, dated May 6, 1884.

Application filed March 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. CROMIE, a citizen of the United States, residing in Camden, Camden county, New Jersey, have invented certain Improvements in Belt-Gearing for Machinery, of which the following is a specification.

My invention relates to machinery in which a number of pulleys are driven by one belt, the object of my invention being to permit the ready removal of the belt from the pulleys when necessary.

In the accompanying drawings, Figure 1 is a diagram illustrating one application of my invention; Fig. 2, a diagram illustrating another application of the same; Fig. 3, a vertical section of a belt-tightener which I prefer to use in carrying out my invention; Fig. 4, a front view of the same, and Figs. 5 and 6 detached perspective views of parts of the same.

In many machines—such as carding-machines, bronzing-machines, carpet-sweepers, &c.—a series of pulleys are driven by one belt, the removal of which is frequently necessary.

The main feature of my invention consists in using, in connection with the pulleys and belt, a device whereby said belt can be slackened when it becomes necessary to throw it off, and tightened when it has been reapplied, thus permitting the removal of the belt without the exertion required to throw off a tight-fitting belt.

In the diagram Fig. 1 the belt *t* passes around a large central pulley, W, round a small pulley, 2, and over pulleys 3, 4, 5, 6, 7, and 8, arranged around the large pulley. The belt also passes round a pulley, D, which is carried by an adjustable stud, so that it may be moved up and down to slacken or tighten the belt. In Fig. 2 the tightener is reversed, and the arrangement of the belt and pulleys is somewhat different from that shown in Fig. 1.

Various devices may be used for adjusting the pulley D; but the device which I prefer to use for this purpose is shown in Figs. 3, 4, 5, and 6, in which A is a plate, preferably of cast-iron, and constructed, in the present instance, for attachment to a bar, *w*, constituting a portion of the frame-work of the machine; but this portion of the plate may be constructed in different ways, as the character of the object to which it has to be secured may suggest.

A pulley-carrier, B, is adapted to guides on the plate A, the carrier consisting of a plate having in front two transverse ribs, *a a'*, and a pin, *b*, on which the pulley D is arranged to revolve freely, the back of the plate having a projection, *d*, Fig. 6, which enters the elongated slot *e* of the plate A. A small plate, *f*, and set-screws *h* serve to confine the carrier to the plate A. A pin, *i*, passing freely through an elongated slot, *y*, in the carrier, is bolted to the plate A, and fitting loosely on this pin is an eccentric, E, of which the lever *j* forms a part. This eccentric fits snugly between the two transverse ribs *a a'* of the carrier, so that the position of the latter will be changed as the lever *j* is operated. When the eccentric-lever has been moved from the position shown by plain lines to that shown by dotted lines in Fig. 4, the pulley D will be in the position indicated by the dotted circle. In order to limit the movement of the eccentric, I provide the periphery of the same with two projections, *m* and *n*, one projection, *m*, coming in contact with a stop, *q*, on the rib *a'* of the carrier when the eccentric-lever is in the position shown by plain lines in Fig. 4, and the other projection, *n*, coming in contact with the said stop when the lever is in the position indicated by dotted lines. In order to retain the eccentric-lever in the position indicated by plain lines in Fig. 4, I pivot to the carrier a hook, *x*, the end of which projects over the upper edge of the eccentric-lever. Other devices for retaining the lever will, however, readily suggest themselves.

I claim as my invention—

1. The combination of a belt, *t*, and a series of pulleys to which the belt is adapted, with means, substantially as described, whereby said belt may be slackened when it is desired to remove the same from the pulleys, as set forth.

2. The combination of the belt *t* and pulleys, the pulley D, the slotted plate A, the pulley-carrier B, guided thereon, and having two transverse ribs, *a a'*, and the eccentric E, hung to a fixed pin on the said plate A, substantially as set forth.

3. The combination of the belt *t* and pulleys, the pulley D, the plate A, the pulley-carrier B, having ribs *a a'* and stop *q*, and the eccentric E, having two projections, *m n*, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. CROMIE.

Witnesses:
JOHN SPARHAWK, Jr.,
HENRY HOWSON, Jr.