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No. 805,359. PATENTED NOV. 21, 1905.

J. M. GREIST.

BELT COUPLING.

APPLICATION FILED JAN. 14, 1905.

Fig. 1.

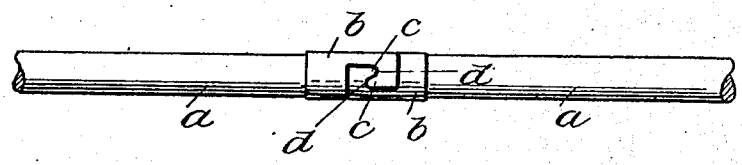



Fig. 2.

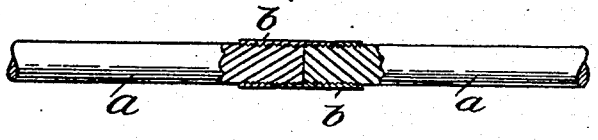



Fig. 3.




Fig. 5.

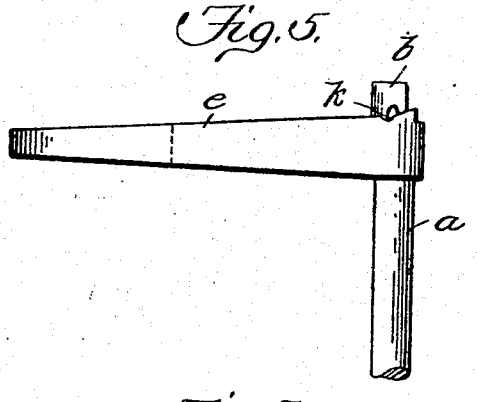



Fig. 4.

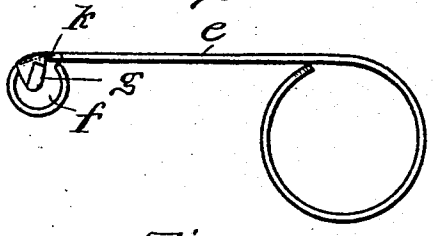



Fig. 6.

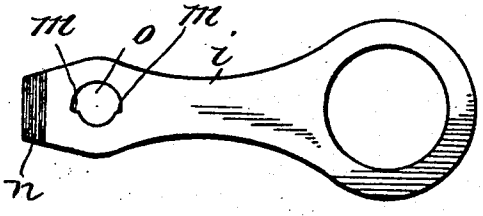
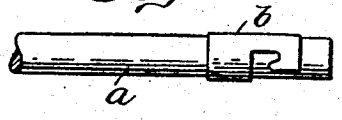



Fig. 7.




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# UNITED STATES PATENT OFFICE.

JOHN M. GREIST, OF NEW HAVEN, CONNECTICUT.

## BELT-COUPLING.

No. 805,359. Specification of Letters Patent. Patented Nov. 21, 1905.

Application filed January 14, 1905. Serial No. 241,143.

*To all whom it may concern:*

Be it known that I, JOHN M. GREIST, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented or discovered certain new and useful Improvements in Belt-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a belt-coupling more especially adapted for use with round leather belts, such as are largely used for driving sewing-machines, lathes, and other light machines; and the invention has for its object to provide a coupling device of such a character that it may be readily adjusted and a belt be shortened simultaneously with such adjustment when it is desired to shorten a belt for the purpose of taking up slack or for giving the belt a proper tension.

To this end the improved coupling comprises two members, both of which preferably consist of internally-threaded sleeves adapted to be screwed onto the ends of a belt and which are preferably partly cut away or recessed in such a manner as to be halved together to provide two interlocking hooks by which the two coupling members may be detachably connected with each other and so that either of said sleeves is adapted to receive a wrench by which it may be screwed or turned inward from an end of the belt when it is desired to shorten the latter, said wrench being preferably provided with a blade or cutter so that simultaneously with such screwing or turning movement of the sleeve the surplus material of the belt will be pared away so as to properly shorten the belt. As the combined wrench and cutter of the present invention is an instrument which is separate from or independent of a coupling member, it may be used with any desired number of such couplings, so that the same wrench and cutter may be used, for example, in a factory for the purpose of adjusting the couplings of the belts of a large number of machines. Moreover, the independent wrench and cutter of the present invention is of such a construction that when the knife or cutter thereof becomes dulled by use it may be readily sharpened so that it will efficiently perform its proper function.

In the accompanying drawings, Figure 1 illustrates a belt-coupling embodying the present invention with the two members thereof joined together. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail end view of one of the coupling members. Figs. 4 and 5 are plan and side views, respectively, of a combined wrench and cutter by which one of the coupling members may be turned, Fig. 5 showing the relation of this tool to a coupling member when in use. Fig 6 is a plan view of another form of wrench and cutter which may be used with the improved coupling, and Fig. 7 is a view to illustrate the use of the tool shown in Fig. 6.

Referring to the drawings, *a* denotes portions of a round leather belt, onto the ends of which are screwed internally-threaded open-ended sleeves *b*, the outer parts of which are cut away or recessed so as to be halved together to provide interlocking hooks *c* and recesses *d* on each side of each of said sleeves which are both just alike. Each of these sleeves is adapted to be turned or screwed onto an end of a belt by means of a wrench *e* having a circular portion *f*, adapted to fit over a sleeve, and extending inward on the portion *f* is a knife or cutter *g*, at the end or base of which is a small shoul adapted to come in contact with a wa recess *d* for the purpose of screwing the onto the belt, and in so doing the knife cutter *g*, which extends inward to or slightly beyond the center of the belt, will pare away the end thereof in a thin shaving, so that the coupling member will be adjusted and the belt simultaneously shortened for the purpose of taking up slack or giving the belt any sired tension. The recess *d* intersects belt-receiving chamber of the coupling-sleeve so that the knife or cutter *g* extends into said chamber to engage the end of the belt. As the two coupling members of this form of the invention are just alike, the wrench and cutter may be applied to either when it is desired to shorten the belt, the two members of the coupling being of course unhooked or detached from each other when a coupling member is thus to be adjusted on the belt. This construction affords a flexible coupling which reliably holds together when in use, as the material of the belt, the ends of which are preferably abutted when the coupling members are joined, (see Fig. 2,) serves as a supporting-core which prevents the members from being accidentally uncoupled by holding the hooks in engagement with each other.

Instead of using the wrench and cutte

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nown in Figs. 4 and 5 the tool *i* (shown in Fig. 6) may be used. This tool is provided with an opening *o* of proper shape to closely receive the partly-cut-away end of a sleeve *b*, said opening having small shoulders *m*, against which the end walls of the recessed end portion of the sleeve will abut when the wrench is fitted to the sleeve to screw or turn the latter farther inward on an end of a belt when such belt is to be shortened. As the sleeves herein shown are open or unobstructed at their outer ends, a sleeve may by this tool be screwed or turned inward on an end of a belt until the latter projects through and beyond the sleeve, as shown in Fig. 7. The projecting end of the belt may then be cut off, either by the blade *n*, with which the tool *i* is preferably provided, or by another knife or cutting instrument, and the shortened belt may then be again hooked together for use. In this case where the severed end of the belt is left flush with the outer end of a coupling member the end of the belt in the other coupling member will be so adjusted that the two ends will practically abut to form the proper core for the coupling to hold the hooked coupling members in engagement with each other, so that they will not become accidentally uncoupled when the belt is slackened or is off the pulleys.

I do not claim, broadly, in this application a belt-coupling member comprising an internally-threaded sleeve adapted to be screwed onto an end of a belt, said member being pro- ed between its ends with a recess or open- intersecting the belt-receiving chamber e said sleeve and adapted to receive a bined wrench and cutter by which the member may be screwed on an end of a elt and the material of the belt be simulta- eously pared away for the purpose of short- ing the belt, this subject-matter being claimed in my copending application, Serial No. 241,142, filed simultaneously with the present application, the coupling members of the present application being of equal diameters throughout their entire lengths and having unobstructed open adjacent ends through which the belts may be caused to protrude, as shown in Fig. 7 of the drawings of this application, if desired.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a belt-coupling, a coupling member consisting of an internally-threaded, unobstructed open-ended sleeve of equal diameter throughout its length and provided, between the ends of its belt-receiving chamber, with a recess intersecting said chamber, whereby said sleeve is adapted to be engaged by a combined wrench and cutter a part of which will abut against a wall of said recess, while the cutter will enter the belt-receiving chamber at said recess, so that when said sleeve is turned by the said combined wrench and cutter it may be screwed inward from the end of the belt and the latter be simultaneously pared away.

2. A belt-coupling comprising two internally-threaded unobstructed open-ended, tubular members which are both recessed or partly cut away at their adjacent ends to form interlocking hooks by which said members may be detachably joined together.

3. A belt-coupling comprising two internally-threaded unobstructed open-ended, tubular members which are of equal diameters throughout their lengths and which are both recessed or partly cut away at their adjacent ends, to form interlocking hooks by which said members may be detachably joined together, said tubular members having recesses between the ends of their belt-receiving chambers to adapt the said sleeves to be engaged by a combined wrench and cutter by which either of said sleeves may be screwed inward from an end of a belt, said recesses intersecting the belt-receiving chambers of said sleeves so that the cutter may enter a chamber to pare away the belt when a sleeve is turned inward on the end of a belt.

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

JOHN M. GREIST.

Witnesses:

HENRY CALVER,

C. M. SWEENEY.