

C. A. BROWN.
ATTACHMENT FOR PULLEYS.
APPLICATION FILED FEB. 2, 1920.

1,359,321.

Patented Nov. 16, 1920.

FIG. 1

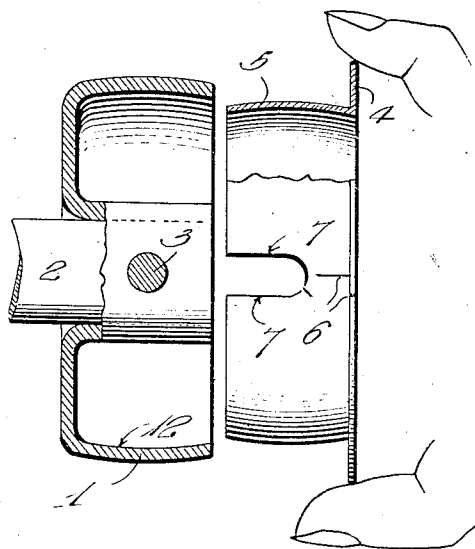


FIG. 2

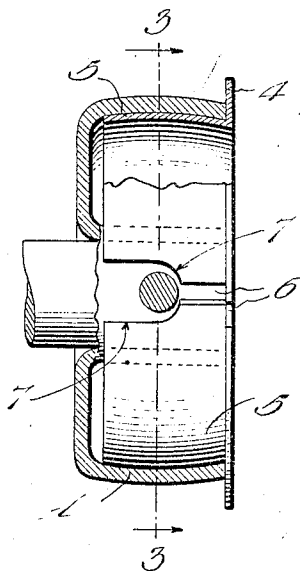


FIG. 3

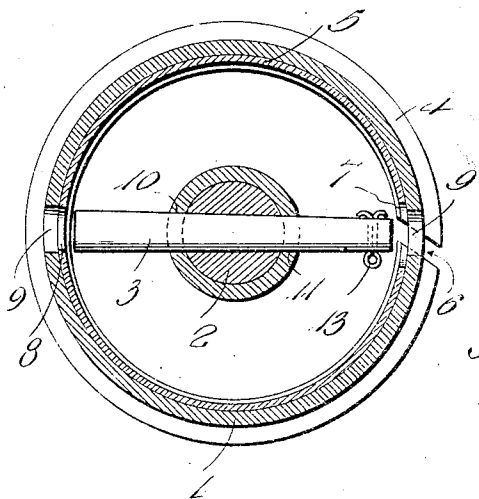
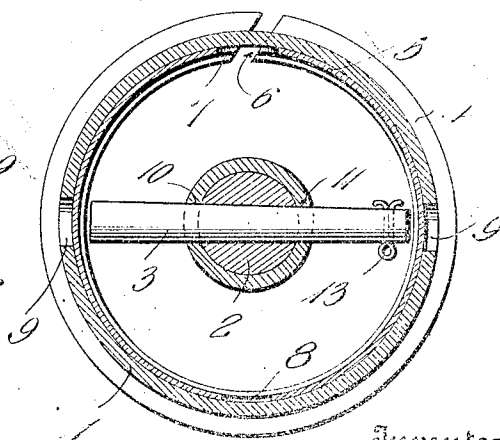


FIG. 4



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ATTACHMENT FOR PULLEYS.

1,359,321.

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To all whom it may concern:

Be it known that I, CHARLES A. BROWN, a citizen of the United States, residing at 106 S. Western Parkway, Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Attachments for Pulleys; 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.

This invention relates to attachments for pulleys, and more specifically to a combined belt-driving flange and key-stop for attachment to a pulley having a laterally concaved inner periphery.

One object of this invention is to provide a belt-driving attachment of this character which is self-securing, that is, it needs no extraneous means to secure it to the pulley; and which is of one-piece construction and can be manufactured at a comparatively slight cost.

Other objects and advantages will be pointed out or implied in the following details of description in connection with the accompanying drawings in which:

Figure 1 is a view, partly in central section, of a pulley and one of my improved attachments compressed and in the position to be moved axially into the hollow pulley, only a small fragment of the upper portion of the attachment being removed.

Fig. 2 is a view of the parts shown in Fig. 1, but the attachment being in place, that is, having its laterally convexed surface fitted in the laterally concaved surface of the wheel or pulley.

Fig. 3 is a sectional view along the line 3-3 of Fig. 2.

Fig. 4 is a sectional view similar to Fig. 3 except that the attachment is in the position for closing the outer diametral openings of the pulley.

Referring to these drawings in detail, in which similar reference characters correspond with similar parts throughout the several views, and in which the pulley 1, shaft 2 and key or pin 3 are of previously known construction, the invention consists in the construction and arrangement of parts hereinafter specifically described as follows:

My improved attachment comprises an annular belt-driving flange 4 and an annular flange or rim 5 which is arcuate or

curved both circumferentially and axially or laterally. The elements 4 and 5 are formed integrally or of a single piece of springy metal, and both of these elements 4 and 5 are split laterally as indicated at 6. Moreover, the lateral split or space 6 is widened as indicated at 7. Diametrically opposite to the portion 7 is an opening or space 8 which is adapted to be alined with a seat or alined openings 9, 10 and 11 of the pulley, for permitting the pin or key 3 to be passed through the openings 10 and 11 of the pulley and through a registering opening of the shaft 3.

The pulley 1 is laterally concaved, as illustrated at 12 in Fig. 1, that is, it is curved in the direction of the axis of the pulley, and its curvature coincides with that of the external surface of the flange or rim 5 when the latter is fitted therein, as illustrated in Fig. 2, and expanded by its inherent spring action so that it not only fits in the concaved portion 12, but presses thereagainst so as to frictionally engage with the surface 12 and resist axial and rotary movements of the attachment relative to the pulley. However, this spring action and friction may be overcome by manual force, so that the attachment can be removed with comparative ease from the pulley, and can be rotated while engaged with the inner periphery of the pulley. By rotating the attachment to the position shown in Fig. 4, it serves not only to hold the flange 4 in its belt-guiding position, but also serves as means to close the diametrical openings 9 and prevents the key 3 from moving outward through these apertures or openings 9. However, when the attachment is rotated to the position shown in Fig. 3, a punch may be inserted through one of the apertures 9 for forcing the pin outward through the other aperture 9.

The split key 13 is not a part of this invention, and may be omitted, although it may be useful for extreme caution in preventing the pin 3 from becoming displaced.

This invention is not limited to the exact details of construction and arrangement described, but changes may be made within the scope of the inventive ideas as implied and claimed.

What I claim as my invention is:

1. The combination with a pulley, of an attachment comprising an annular belt-guiding flange, and an attaching element engaged with the interior portion of the pul-

ley for receiving the flange in its belt-guiding position on the pulley.

2. The combination with a pulley, of a one-piece attachment comprising an annular belt-guiding flange and an annular rim, this rim being insertible in and engageable with the inner portion of the pulley's rim in a manner to secure said flange in its belt-guiding position on said pulley.

3. The combination with a pulley having a laterally concaved inner periphery, of a one-piece attachment comprising an annular belt-guiding flange and an annular laterally convexed spring attaching rim, said attaching rim being split laterally for permitting it to be contracted and expanded, the convexed rim being conformable to the concaved inner periphery of said pulley and adapted to be held expanded in this concavity by its inherent spring action.

4. The combination with a pulley having a laterally concaved inner periphery and provided with diametrically alined apertures to receive a pin for securing it to a shaft, of an attachment comprising a belt-guiding flange and spaced segmental attaching portions, these segmental portions being insertible in and engageable with the inner periphery of the pulley in a manner to se-

cure said flange in its belt-guiding position, said attachment being rotatable while thus engaged with the pulley, for causing said segmental portions to alternately cover and uncover said diametrically alined apertures of the pulley thereby alternately permitting and preventing removal of the pin through said apertures.

5. An annular member of springy material including a rim having a convexed outer peripheral surface adapted to be fitted within the concaved inner periphery of a pulley and held expanded therein by its inherent spring action, said member also including an annular flange extending radially outward and adapted to fit against one edge of said rim and to project radially outward beyond this edge of the rim, said annular member being split laterally through its rim and flange to permit it to be circumferentially expanded and contracted.

6. The structure defined by claim 5, and said rim being provided with substantially diametrically opposite openings to permit a pin to be passed diametrically therethrough.

In testimony whereof I have hereunto set my hand.

CHARLES ANDREW BROWN.