

(No Model.)

A. STREIT.
LOOSE PULLEY.

No. 472,083.

Patented Apr. 5, 1892.

FIG. 1.

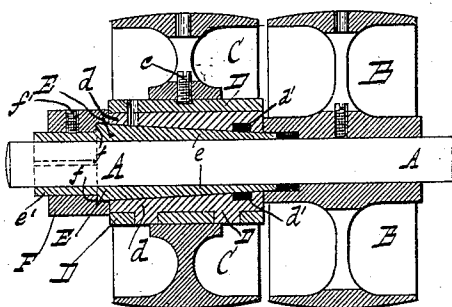


FIG. 2.

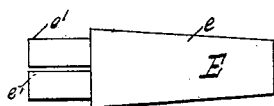


FIG. 3.

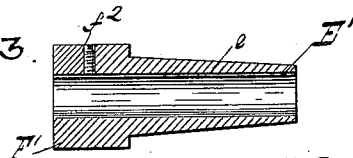


FIG. 4.

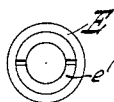


FIG. 5.

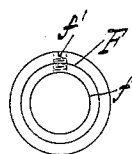


FIG. 7.

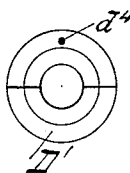


FIG. 6.

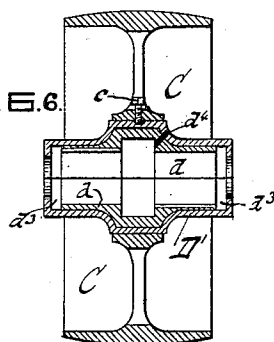
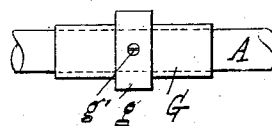


FIG. 8.



Witnesses

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LOOSE PULLEY.

SPECIFICATION forming part of Letters Patent No. 472,083, dated April 5, 1892.

Application filed January 30, 1892. Serial No. 419,777. (No model.)

To all whom it may concern:

Be it known that I, ANTON STREIT, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Loose Pulleys, of which the following is a specification.

My invention relates to loose pulleys; and its object is to provide an improved adjustable journal, whereby a perfect fitting journal, which prevents loose-motion wasting of the lubricant and consequent cutting of the boxes, is secured, and also means to readily adjust the journal to take up wear. These objects I attain by the means illustrated in the accompanying drawings, in connection with which the invention will be first fully described, and then particularly referred to and pointed out in the claims.

Referring to the drawings, in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a diametrical sectional view of a pair of pulleys embodying my invention and properly mounted upon a shaft. Fig. 2 is a side elevation of my preferred form of journal. Fig. 3 is a diametrical sectional view of a modification of the journal. Fig. 4 is an end elevation of the journal, shown in Fig. 2. Fig. 5 is an inside edge elevation of the adjusting collar, shown in Fig. 1. Fig. 6 is a diametrical sectional view of a loose pulley and its box, illustrating a modified form of my invention. Fig. 7 is an edge view of the box. Fig. 8 is a longitudinal elevation of the pulley-journal and a part of the shaft upon which it is secured.

Referring to the parts, particularly those shown in Figs. 1 to 5, inclusive, A is a portion of a shaft; B, the fixed pulley, and C the loose pulley, which is axially fitted with a removable hub D. The shell of the hub, which is preferably of brass, is provided with an anti-friction lining *d*, which is provided with an annular channel *d'*, forming an oil-chamber. The hub is detachably secured to the pulley by a set-screw *c*.

The preferred form of journal (shown in Figs. 1, 2, and 4) is a sleeve E, arranged to fit snugly upon the shaft. The exterior journal portion *e* is cone-shaped to fit the funnel-shaped opening in the hub D *d*. The reduced

end *e'* is split or longitudinally slotted from the end into the base of the cone-shaped body.

F is a collar, which is bored to fit over the reduced split end and partly counterbored at *f* from its inner edge to receive part of the base or larger end of the cone-journal E. A set-screw *f'* is tapped through the collar to clamp the end *e'* firmly upon the shaft. The hub of the fixed pulley B adjacent to the loose pulley C is counterbored to receive the reduced end of the cone-journal E. This, together with the overlapping end of the collar F, prevents waste of the lubricant and all dirt or foreign substances entering the journal. The removable hub of the loose pulley, it will be seen by reference to Fig. 1, is held between the collar F and the end of the fixed pulley-hub, so that all lateral motion of the loose pulley is prevented. The collar and the hub of the fixed pulley bear against the Babbitt metal or anti-friction lining *d* of the loose-pulley hub. Upon the first indication of wear between the loose-pulley hub and its journal the set-screw *f'* is loosened, the cone-sleeve pushed in until the parts fit closely, when the set-screw is again tightened, clamping the journal E upon the shaft.

In the modification shown in Fig. 3 the cone-journal E' and the collar F' are made in a single piece, and the set-screw *f*² secures the bearing upon the shaft. Many of the advantages would be attained by substituting this sleeve for my preferred form, (shown in Figs. 1, 2, and 4,) but I regard it as an inferior modification of my invention.

In the modification shown in Figs. 6, 7, and 8 the pulley and hub, in so far as its exterior shape is concerned, and the means for securing the two together are substantially the same as shown in the preceding figures; but in this case the removable hub must be made in two parts, while in the form shown in the other views it may be made in a single piece or in halves. The single-piece form is, however, preferable. The interior bore of the removable hub in the modified form is made counter to the sleeved journal G, Fig. 8, which is made to snugly fit the shaft, has a central integral collar *g*, and a set-screw *g'* to secure it upon the shaft A. The hub or shell D' has an anti-friction lining *d*, which stops short of each flanged end of the hub-shell D'. The

bore on the ends of the shell is the size of the shaft, so that oil-chambers d^3 are formed at each end of the box. An oil-hole d^4 is bored through the hub, which may be stopped with a plug in the usual manner. The end of the hub-lining of the loose pulley bears against the hub of the fixed pulley and the collar g prevents lateral motion. The wear in this case is taken up by facing off the meeting edges of the divided hub.

What I claim, and desire to secure by Letters Patent, is—

1. The pulley-body, the removable hub, means to connect and disconnect the hub and body, a sleeve adapted to be secured upon the shaft to furnish a journal for the loose pulley and hold it against the fixed pulley, combined and arranged substantially as shown and described.

2. The combination, substantially as hereinbefore set forth, of the pulley-body, the removable hub having cone-shaped axial bore, a journal-sleeve adapted to slide upon the shaft and cone shaped to exteriorly fit the bore of the pulley-hub and furnish a bearing for the pulley, and set-screws to secure the hub to the pulley and to adjust and hold the cone-shaped journal in position.

3. The combination, substantially as specified, of the loose pulley having its hub-bore

cone-shaped, the cone-shaped sleeve E to fit said bore and extend through it and having its outer end reduced and longitudinally slotted to form clamping-jaws, the collar F, adapted to fit over said reduced and slotted end and counterbored to pass over the base of the cone-journal, the screw tapped through said collar to clamp the journal upon the shaft, and a tight pulley having its hub counterbored to receive the reduced projecting end of the cone-journal.

4. The combination of the loose-pulley body B, the hub D, having anti-friction lining d , extending out flush with the ends of the hub and its bore cone-shaped, the cone-sleeve journal E, having reduced end e' , the collar F to fit over the said reduced end and counterbored to receive the base of the cone-journal, and the screw to secure the journal to the shaft and secure its adjustment thereon and confine the loose pulley against the hub of the fixed pulley, the inner edge of said collar and adjacent edge of the fixed pulley bearing against the lining d , substantially as shown and described.

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Witnesses:

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