No. 715,634. Patented Dec. 9, 1902.

J. W. BERRY.

SPLIT PULLEY.

(Application filed June 19, 1902.)

(No Model.)

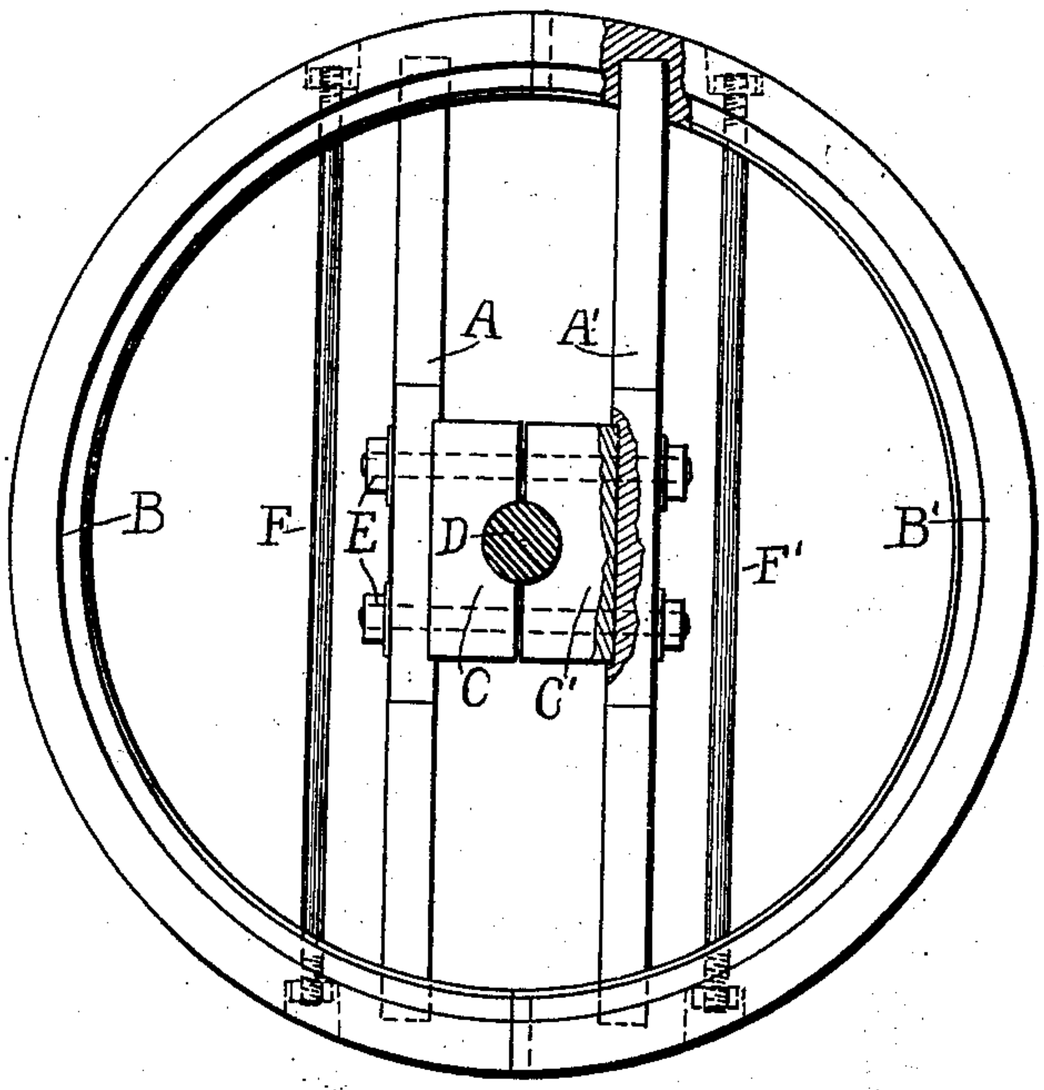

Fig. 1.

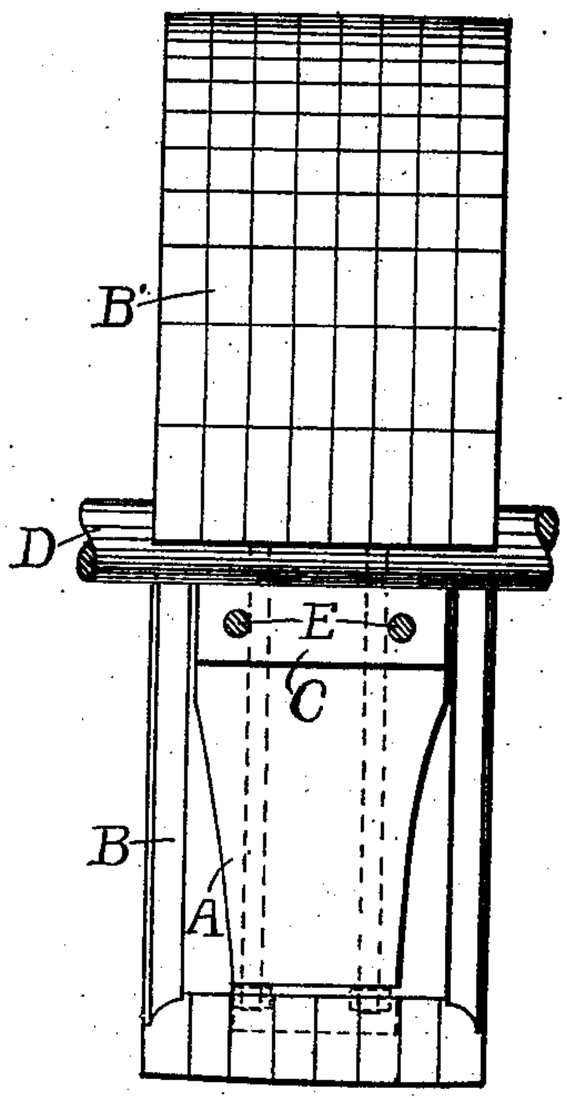

Fig. 2.

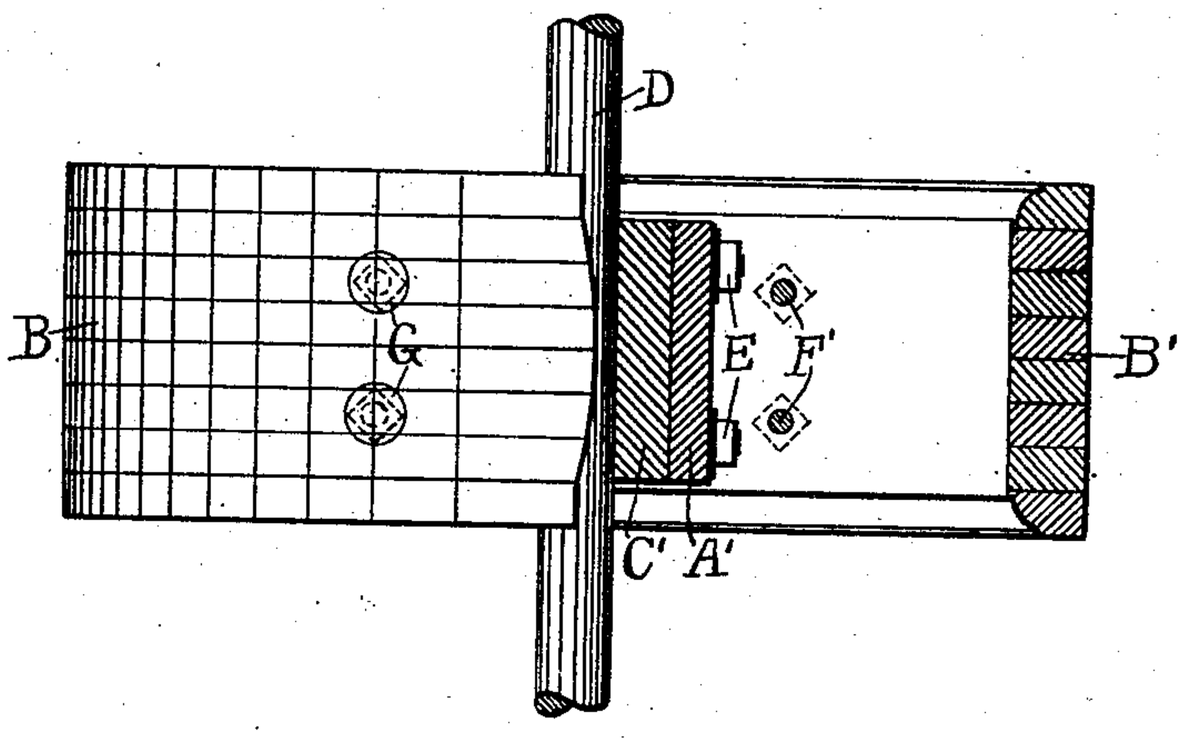

Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN WILLIAM BERRY, OF TACOMA, WASHINGTON.

SPLIT PULLEY.

SPECIFICATION forming part of Letters Patent No. 715,634, dated December 9, 1902.

Application filed June 19, 1902. Serial No. 112,386. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAM BERRY, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Split 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in split pulleys; and it relates more particularly to that class of pulleys the sections of which are constructed of hard wood; and the invention has for its object, among others, the provision of means whereby the pulley may be at all times retained in form.

It is well known that split pulleys as ordinarily constructed have been found to be defective by reason of the fact that the great strain imparted to the pulley from the belt frequently causes the rim of the pulley to become loosened and the semicircular rims to spread, thus causing the wheel to become flattened and out of circle, which is a serious defect for pulleys, as the strain upon the arms under these conditions becomes very severe and the pulley is liable to go to pieces.

The essential object of the present invention resides in the provision of strengthening-arms arranged in parallel relationship upon opposite sides of the clutch-block encircling and engaging the shaft, whereby the semicircular rims of the pulley are stayed, and the extreme ends of each half of the pulley are securely tied and caused to maintain a rigid and true semicircle.

To these ends and to such others as the invention may pertain the some consists in the peculiar construction and in the novel combination, arrangement, and adaptation of parts, as will be more fully described hereinafter, shown in the accompanying drawings, and then specifically defined in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings—

Figure 1 is a side view of a split pulley constructed in accordance with my invention. Fig. 2 is an edge view of the pulley with one-fourth of the wheel removed and showing the interior arm and rim in elevation; and Fig. 3 is an edge view of the pulley, a portion of the wheel being shown in section.

Reference now being had to the details of the drawings by letter, B and B′ represent the two sections of the pulley-rim, and A and A′ the arms, each being framed into its respective semicircular half-rim B and B′, and serve to anchor or secure the ends of said sectional rims. These arms are recessed or notched to receive the clutch-blocks C and C′, which engage the shaft D. The two parts or halves of the split pulley are bolted together and to the shaft by means of bolts E. The pulley is fixed on the shaft and prevented from turning thereon by means of any of the common forms of keys or set-screws; but any other means suited to the purpose may be substituted therefor, these features forming no part of the present invention. The construction of the pulley as heretofore described is the construction common in split pulleys heretofore used.

The present invention resides in the provision, in connection with the pulley, of one or more segmental tie-rods F and F′, said rods connecting the semicircular rims at points adjacent to their connecting ends, where they serve to tie securely together the extreme ends of each half of the pulley and cause the same to maintain a rigid and true semicircle. These tie-rods, it will be observed, will serve to relieve the arms A and A′ from all tensile strain and at the same time to bind the outer ends of each semicircular rim firmly to its respective arm. By this construction I am enabled to make a useful split pulley that will keep the form of a true semicircle without imparting tensile strain to the arms of the pulley, and thus to prevent the possibility of the pulley-sections flying to pieces.

It will be observed that the nuts on the

ends of the tie-rods are set in sockets in the face of the pulley-rims and that such sockets are smoothly filled with plugs, as shown at G in Fig. 3 of the drawings, and it will also be seen that the nuts upon the opposite ends of each rod are cut with right and left threads, respectively. Should the rods at any time become loose, they may be readily tightened by the use of an ordinary pipe-wrench.

By the construction described the arms A and A′ will at all times be free from strain, except, of course, the rotary strain of the shaft and pulley, and should it be necessary at any time in tightening the rims B and B′ to spring the arms A and A′ out of line the strength or form of the pulley will not be affected thereby, as it would be were it not for the presence of the stay-rods.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

A split pulley comprising two semicylindrical sections, cross-arms A and A′ having their ends seated in said sections, stay-rods having their ends mounted in apertures in the rims of said sections, nuts mounted on the ends of said rods and countersunken in recesses in the circumference of the pulley, clutch-blocks seated in recesses in the adjacent faces of said arms, and bolts passing through the cross-arms and blocks, as set forth.

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

JOHN WILLIAM BERRY.

Witnesses:
EDWARD A. SPAULDING,
ASABEL NORTON FITCH.