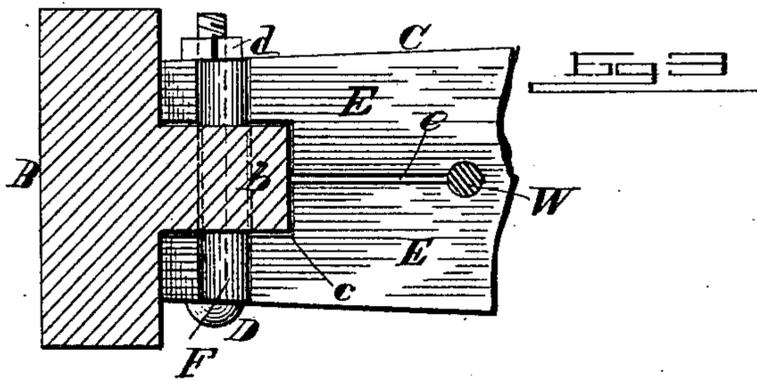
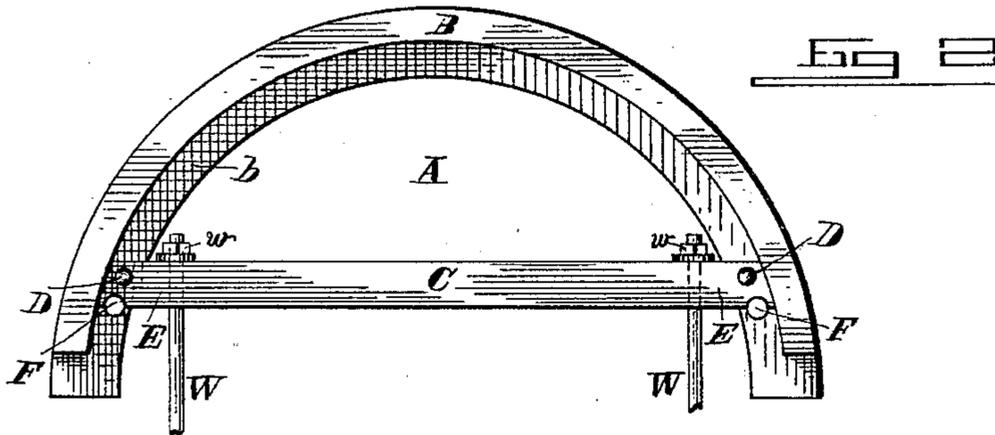
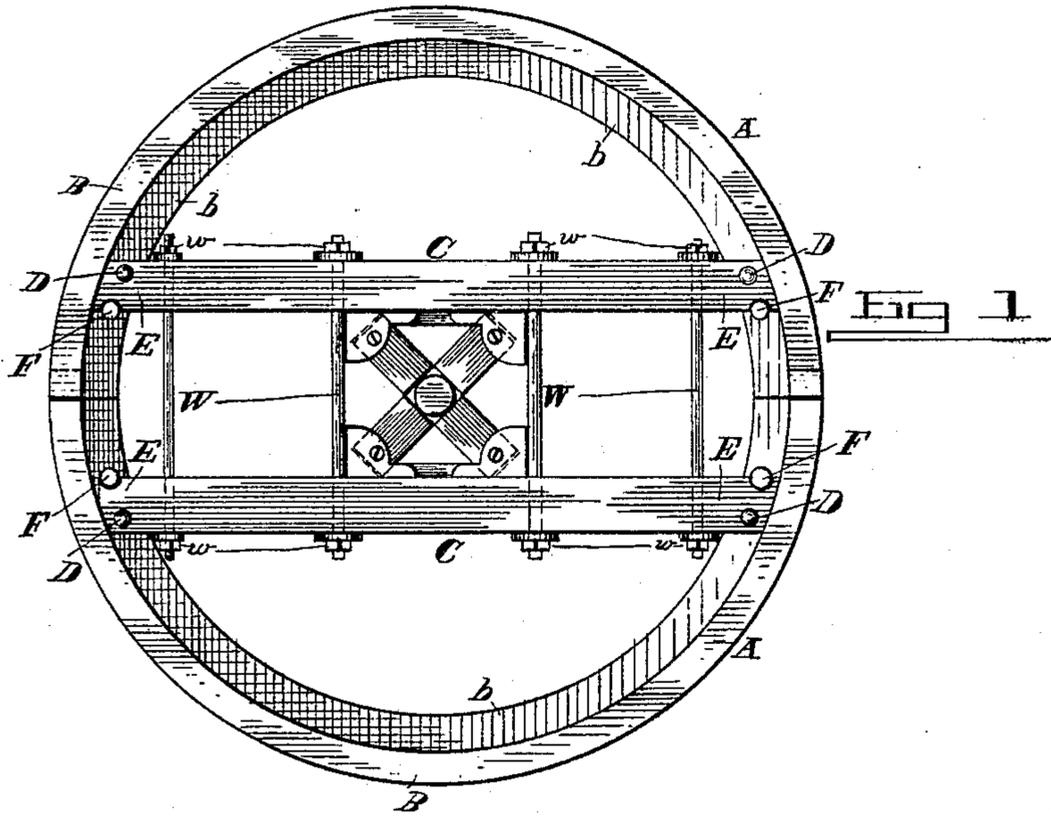


(No Model.)

J. B. CORNWALL.
SPLIT PULLEY.

No. 451,426.

Patented Apr. 28, 1891.



Witnesses:

M. Seville
A. E. Lowell

Inventor:
John B. Cornwall
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UNITED STATES PATENT OFFICE.

JOHN B. CORNWALL, OF MOLINE, ILLINOIS.

SPLIT PULLEY.

SPECIFICATION forming part of Letters Patent No. 451,426, dated April 28, 1891.

Application filed September 5, 1889. Serial No. 323,033. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CORNWALL, of Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Split Pulleys; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a face view of my improved split pulley. Fig. 2 is a view of one-half thereof, showing the spoke-bars and the manner of attaching the same to the rim. Fig. 3 is a detail view of such fastening.

This invention is an improvement in split pulleys, especially wooden pulleys, and its object is to improve the fastenings of the rim-sections to the spoke-bars or spokes and to strengthen the rim thereof; and it consists in the novel construction of the rim, spoke-bars, and means for uniting the same, as will be clearly understood from the following description and claims.

Referring to the drawings, Figure 1 shows a pulley similar to the pulley shown and described in Letters Patent No. 409,140, of August 13, 1889, issued to J. B. Cornwall and H. A. Barnard, for an improved split pulley. The pulley is in two halves A A, each having a semicircular rim portion B, united by a transverse arm or bar C, the arms or bars C C, when the halves of the pulley are fitted together, lying parallel with each other and with the diametrical line of parting of the pulley, and are united by tie-bolts W and nuts *w*, as shown in said patent. The adjustable hub or device for mounting the pulley on the shaft, which is shown and claimed in the patent referred to, is secured between said bars. Instead of building these bars C C into the rim-sections, they are secured thereto as follows: The rim-sections B B are each constructed with a central inwardly-projecting rib *b* on its inner face. This rib strengthens the rim and enables the outer portions thereof to be made lighter or thinner without impairing the durability of the pulley. The arms or bars C C have slots *c c* in their ends corresponding in width and depth to the cross-section of rib *b*, and by this means the

ends of the arms or bars can be partially slipped over the ends of the ribs of the rim-sections, as shown, and be secured thereto by means of bolts D and nuts *d*. The bars C C are slitted or split, as at *e e*, said slits extending inwardly a short distance from the center of slots *c* and dividing the ends of the bars into two arms E E, that embrace the ribs *b* at opposite sides, as shown, and these slots allow a degree of lateral play to arms E E, so that by means of bolts D they can be drawn together to tightly bind the rib between them, as is evident, so that if the arms or ribs should shrink and the joint become loose the arms can be drawn closer together and tight joints maintained.

In order to relieve the bolts D of lateral strain when the opposite halves of the pulley are bound together by bolts W, as described, I employ pins F F, which are passed laterally through ribs *b b* at the inner or adjoining faces of bars C C, the arms E E being notched so as to partly receive said pins. By locating these pins with only a part of their thickness in the arms they assist in fastening the arms to the ribs against centrifugal strain without materially reducing the strength of the arms and also assist in holding the bars in place against the strain of the clamping-bolts W, that fasten the pulley-sections together on the shaft.

By constructing the pulley in the manner described it can be trued in a lathe over the entire surface of its rim and its perfect balance insured. The arms can be readily removed or replaced at will and others substituted should one arm become loose or injured.

I am aware that it is not broadly new to construct a pulley with an inner flange on its rim and with spokes or bars bolted to said flange, and therefore

What I claim as new is—

1. A pulley comprising a removable rim having inwardly-extending projections or ribs, and spokes provided with recessed and split ends adapted to fit over and be secured upon said projections, substantially as herein specified.

2. The combination of the opposite rim-sections having inwardly-standing ribs on their inner faces with the spoke-bars C C, having

both ends slotted and slitted and respectively embracing the ribs of opposite sections near the ends thereof, and the bolts and nuts clamping the ends of said bars to the ribs, 5 and the uniting bolts and nuts for securing said sections together, all substantially as set forth.

3. The combination of the pulley-rim sections having central inwardly-projecting ribs 10 on their inner faces with the bars C C, having their ends slotted and slitted to form opposite arms E E, said arms embracing the ribs of opposite sections near the ends thereof, and the clamping-bolts and nuts and pins F 15 F, all constructed and arranged as specified.

4. In a split pulley, the combination of the opposite halves A A, each consisting of a rim-section B, having an inwardly-standing rib *b*

on its inner face, a transverse bar C, having slots *c* and slits *e* in its ends, forming oppo- 20 site arms E E, said arms embracing the rib *b* near its opposite extremities, the bolts D and nuts *d*, clamping said arms to the rib, and the pins F F, passing through said ribs 25 to the inner side of the bars and resting partly in notches in arms E E, and the clamping-bolts and nuts for binding the opposite halves together, all substantially as specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two 30 witnesses.

JOHN B. CORNWALL.

Witnesses:

J. S. LEAS,

O. H. SEIFFERT.