(No Model.)

H. COMSTOCK.

SPLIT PULLEY.

No. 475,204. Patented May 17, 1892.

Fig. 1.

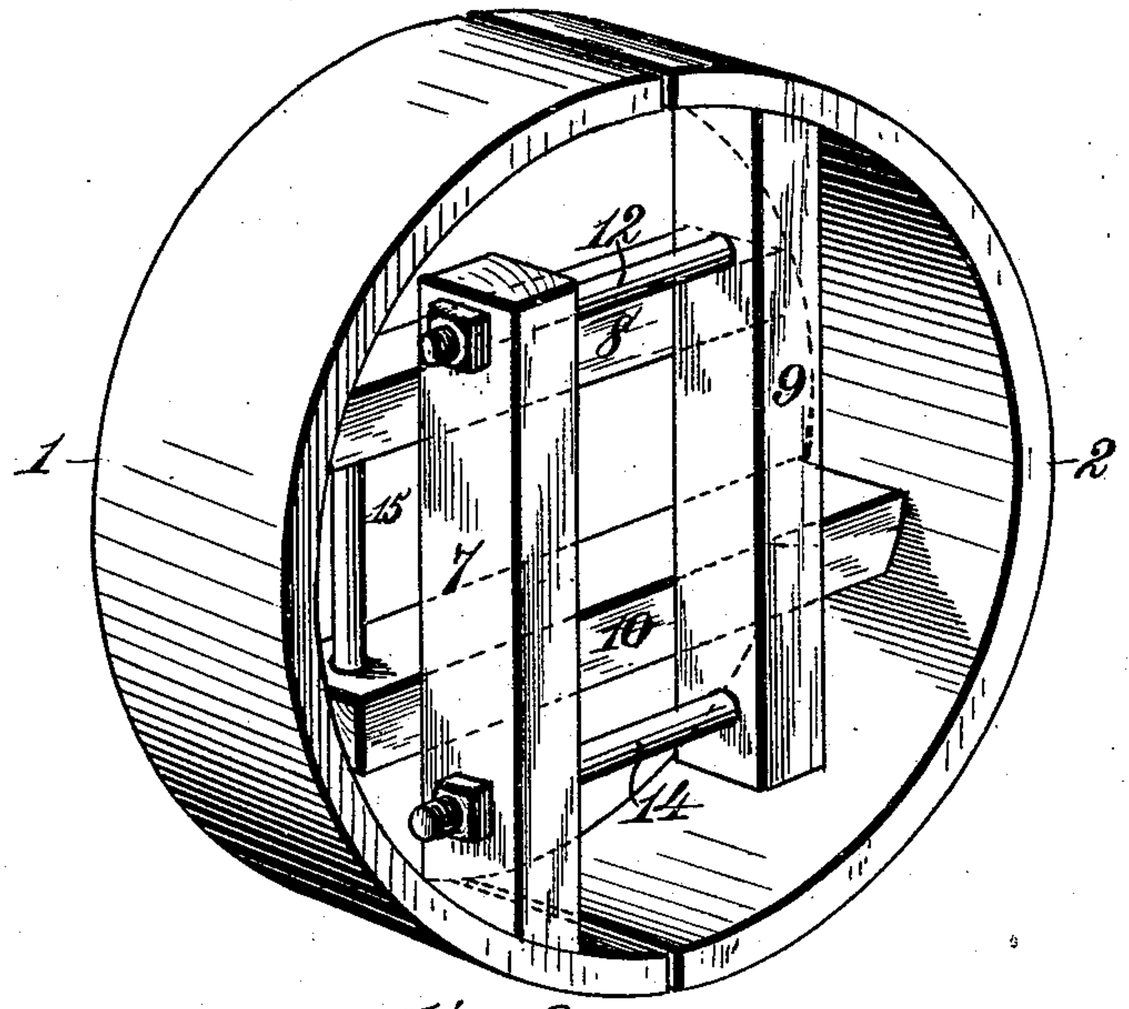
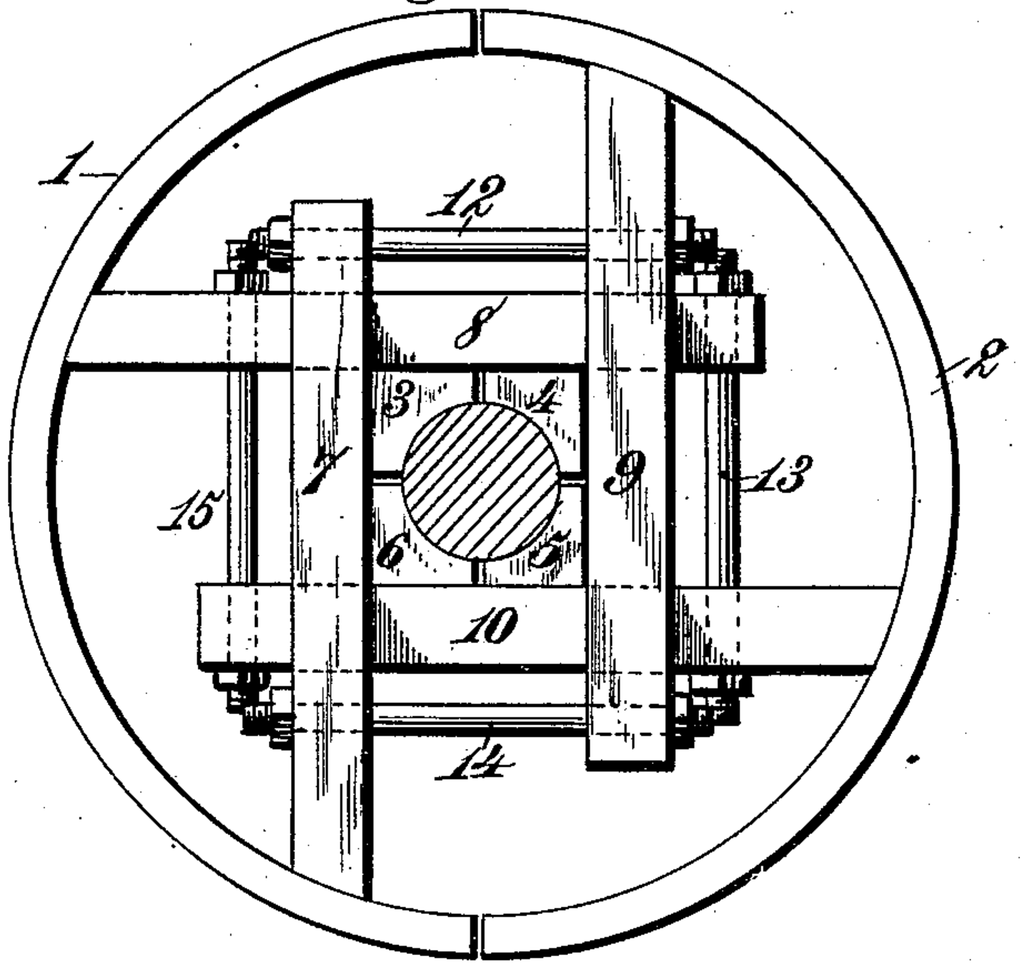


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

HARRY COMSTOCK, OF FULTON, NEW YORK.

SPLIT PULLEY.

SPECIFICATION forming part of Letters Patent No. 475,204, dated May 17, 1892.

Application filed March 8, 1892. Serial No. 424,171. (No model.)

To all whom it may concern:

Be it known that I, HARRY COMSTOCK, a citizen of the United States, residing at Fulton, in the county of Oswego and State of New York, have invented new and useful Improvements in Split Pulleys, of which the following is a specification.

This invention relates to that type of wooden pulleys having split or divided rims connected by arms with sections of a box or bushing for the purpose of applying the pulley to line-shafting where additional belting is to be introduced.

The objects of the invention are to improve the prior constructions; to avoid mortising the arms together; to render the arms independent, so that no strain can come on any one of them to draw it out of a true line, and to provide novel, simple, efficient, and economical means whereby the arms and sections of the box can be adjusted at will to compensate for shrinkage of the wood and maintain the pulley tight on the shaft.

To accomplish these objects my invention involves the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of a pulley constructed in accordance with my invention, the box or bushing being omitted; and Fig. 2 is a side elevation showing the pulley in position on a shaft, the latter being in section.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numerals 1 and 2 indicate the two semicircular sections which compose the rim of the pulley, and 3, 4, 5, and 6 indicate the sections which compose the box or bushing to fit the shaft whereon the pulley is to be secured. The section 1 of the pulley-rim is provided in juxtaposition to one edge with an arm 7 and in juxtaposition to the opposite edge with an arm 8, which extends at right angles to the arm 7. The semicircular section 2 of the pulley-rim is provided in juxtaposition to one edge with an arm 9 and in juxtaposition to the opposite edge with an arm 10, so that when the two rim-sections are placed in proper position to complete the pulley-rim the arms 7 and 9 stand at right angles to the arms 8 and 10 and the free end of the arm 7 extends past the arm 8, the free end of the arm 8 extends past the arm 9, the free end of the arm 9 extends past the arm 10, and the free end of the latter extends past the arm 7. The extremity of each arm is disconnected or free from attachment to the arm past which it extends and the several arms bear against the sides of the box or bushing. The unattached extremity of the arm 7 is connected with the arm 9 in juxtaposition to the pulley-rim section 2 through the medium of a screw-bolt 12, the unattached extremity of the arm 8 is connected with the arm 10 in juxtaposition to the pulley-rim section 2 by means of a screw-bolt 13, the unattached extremity of the arm 9 is connected with the arm 7 in juxtaposition to the pulley-rim section 1 by means of a screw-bolt 14, and likewise the unattached extremity of the arm 10 is connected with the arm 8 in juxtaposition to the pulley-rim section 1 by a screw-bolt 15. The screw-bolts are preferably constructed with a nut at each end, so that the free end portions of the several arms can be pressed upon the box or bushing for securing the latter to a shaft and for compensating for shrinkage of the wood of which the pulley is composed. The wooden material of a pulley will shrink, especially in warm places, and consequently the pulley becomes loose; but in my invention the several arms are independent and can be tightened up by the tension-bolts to compensate for shrinkage and to tighten the box-sections on the shaft. The arms of the rim-sections are elastic at their free extremities, and their spring action tends to tighten up the pulley, while by the independent arrangement of the arms no strain can come on either one of them alone to draw or pull it out of a true line. The pulley is exactly alike at each side and the arms cross each other and are adapted to slide on the sides of the box or bushing. It will be observed that in my construction the arms are not mortised or similarly connected to each other where they cross, and consequently the free extremities of each arm are adapted to move along the length of the arm which it crosses and against which it rests in such manner that by simply tightening the

tension-bolts the extremities of the arms are sprung inward and cause the box or bushing sections to press closely against the shaft and at the same time compensate for shrinkage, which may result from the use of the pulley in warm localities.

By constructing the box or bushing of four similar sections and adapting the free end portion of each arm to slide along the length of the arm which it crosses I am enabled to uniformly press all four sections of the box or bushing against the shaft, which is a material advantage over those split pulleys having a box or bushing composed of two sections only.

Having thus described my invention, what I claim is—

The combination, with the split or divided rim and the box or bush composed of four similar sections, of two pairs of arms secured, respectively, to the rim-sections bearing against the box or bush sections and each arm having its free extremity crossing another arm and adapted to move along the length thereof, and a tension-bolt connecting the free extremity of each arm with the base of another arm in juxtaposition to one of the pulley-rim sections, so that by tightening the tension-bolts the free end portion of each arm is moved along the length of the arm which it crosses to compensate for shrinkage and uniformly press the four box or bush sections upon a shaft, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

HARRY COMSTOCK. [L. S.]

Witnesses:

CLARENCE TEN EYCK,

AMOS YOUMANS.