No. 722,734. PATENTED MAR. 17, 1903.

P. MEDART.

BELT PULLEY.

APPLICATION FILED DEC. 8, 1902.

NO MODEL.

Fig. 1.

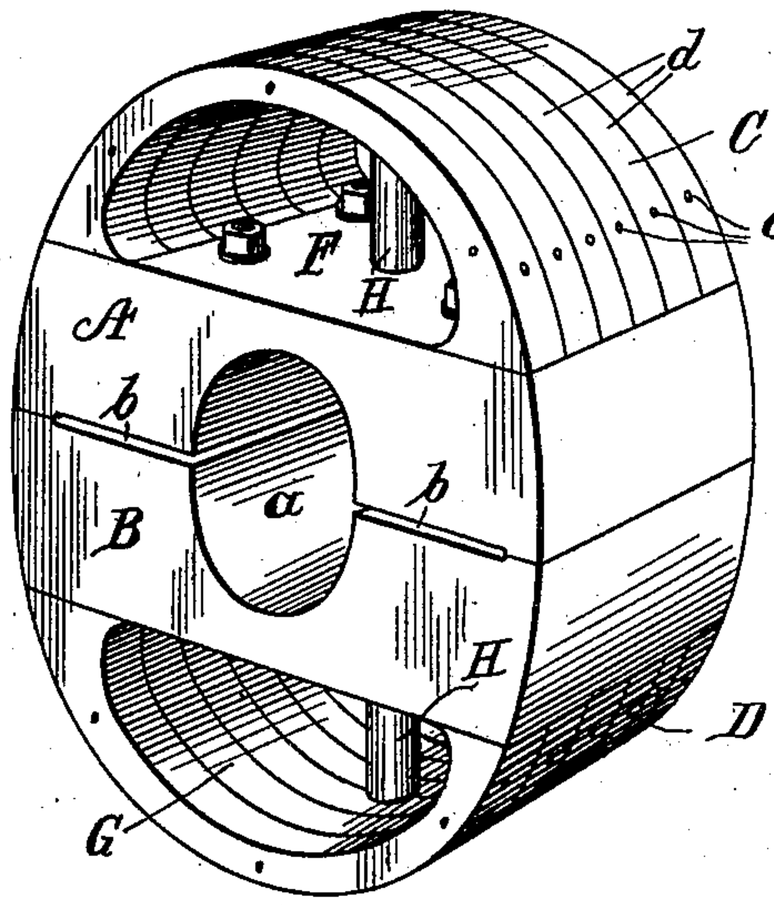


Fig. 2.

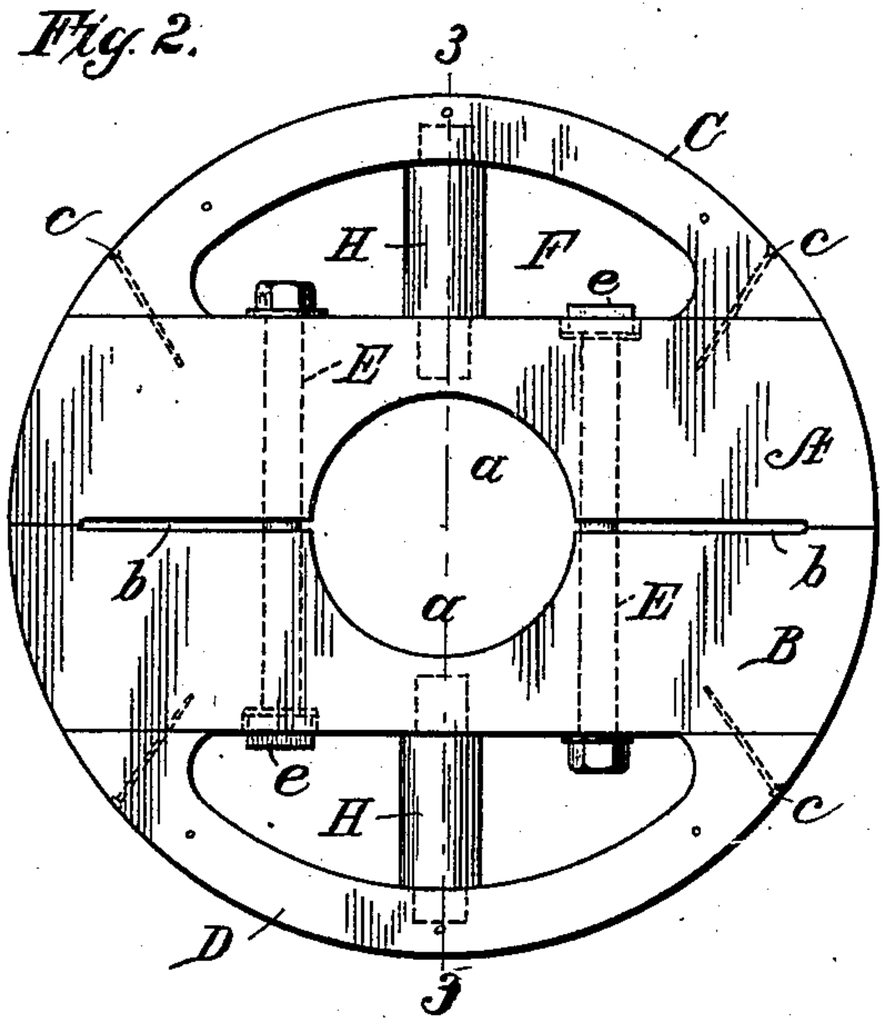
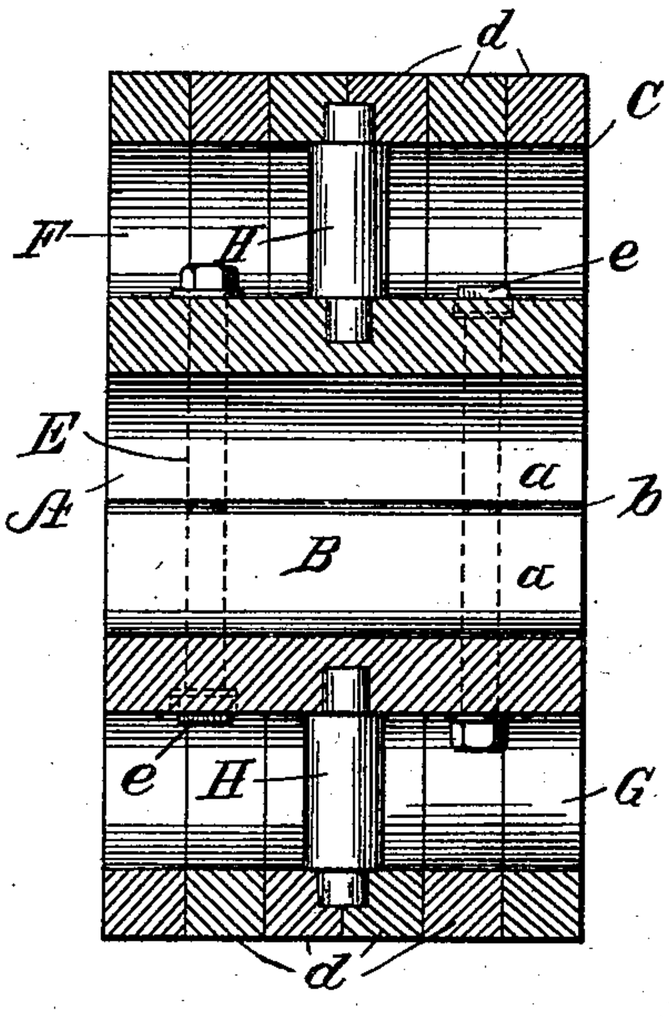


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

PHILIP MEDART, OF ST. LOUIS, MISSOURI.

BELT-PULLEY.

SPECIFICATION forming part of Letters Patent No. 722,734, dated March 17, 1903.

Application filed December 8, 1902. Serial No. 134,400. (No model.)

To all whom it may concern:

Be it known that I, PHILIP MEDART, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Belt-Pulleys, of which the following is a specification.

My invention relates to split wood pulleys of the class in which solid blocks or segments are employed in the construction of the whole or a large portion of the pulley. Such pulleys are usually made of small diameter and commonly a large number of them are placed close together on a line-shaft. It is desirable that in such pulleys the sides shall be straight and flat, so that the pulleys may have their peripheries close together, and that the clamping-bolts shall be readily accessible. For this reason the pulleys should have no laterally-projecting hub portions carrying clamping-bolts, but these latter should be arranged within the body of the pulley.

The object of my invention is to provide a pulley of this class which shall possess the desirable features above mentioned and which shall be strong, durable, and easily manufactured.

In carrying out my invention I make the pulley in four main sections. The two outer sections are of the same size and shape, and the two inner sections, which are also of the same size and shape, complete the cylindrical formation of the pulley. The inner sections are formed with recesses composing the bore, and they are secured together by bolts, the heads and nuts of which are located inside the outer sections some distance from the periphery. The outer sections are secured to the inner sections by nails or other similar devices, and these sections are hollowed out or formed with recesses extending from end to end of the pulley and affording convenient access to the bolts. Sometimes, especially when the pulley is of relatively large diameter, I brace the recessed portions of the outer sections by radial bars, though this construction is not always necessary.

In the accompanying drawings, Figure 1 is a perspective view of a split wood pulley constructed in accordance with my invention. Fig. 2 shows a front elevation thereof, and Fig. 3 shows a longitudinal central section on the line 3 3 of Fig. 2 with the braces in elevation.

The inner or middle portions A B are of the same size and shape, being segments of a cylinder made on opposite sides of the diameter and within the chords of the outer sections C and D, which are of the same size and shape, being segments of a circle with their chords in line with the outer sides of the segments A and B. Each segment A B is made from a solid piece of hard wood with the grain running lengthwise or parallel with the diameter of the circle. They are recessed at *a* to form the bore or shaft-opening, and radial kerfs *b* are made on opposite sides of the bore to permit the segments to yield sufficiently when being clamped to or released from the shaft.

A suitable number of bolts E (four being shown) are employed to connect the segments A and B together and to clamp them on the shaft. The heads *e* of the bolts are preferably countersunk, so that they are prevented from turning when the nuts are being adjusted. Each outer section C D is shown as being composed of a series of segments or arc-shaped pieces *d*, each of which is attached to the segments A or B by nails or other securing devices *c*, and they are secured to each other by glue, nails, or the like, as in other pulleys of this class.

While I have shown each segment C D as being composed of a series of segments, I may make each of a single piece. The segments C D are so formed as to provide recesses F G within their peripheries, that extend from one side of the pulley to the other, leaving the bolt-heads and nuts exposed and readily accessible. It will be observed that the bolts are arranged wholly within the body of the pulley, there being no laterally-projecting hub portions, and therefore a number of such pulleys may be placed side by side on a shaft with their peripheries close together, so that a belt may be easily slipped from one pulley to the other. Each outer segment is permanently secured to an inner segment, while the inner segments are separable along the diametrical line which divides them.

It is within the scope of my invention to form the pulley in two parts instead of four, so long as recesses F G are provided to obtain

access to the bolts. These bolts, which clamp the pulley to the shaft, may be gotten at without removing any part from the pulley, and thus a pulley or a number of them may be easily loosened and slid along the shaft without taking it apart, and when desired, after the nuts have been removed, the two halves of the pulley may be separated and removed laterally from the shaft.

I sometimes employ braces H for supporting the outer segments C D within their recessed portions. These braces consist of bars arranged radially and bearing against the outer sides of the segments A B and the inner sides of the recessed portions of the segments C D. Each brace has reduced bosses or studs fitting sockets in the segments.

All parts of the pulley except the bolts and nails may be made of wood, the grain of which should be transverse to the axis of the clamping-bolts and transverse to the direction in which the securing devices are driven.

The construction which I have described is a thoroughly practical one. The parts may be quickly turned out by machinery and may be easily assembled and secured together, while the facility with which the clamping devices may be reached and the pulley may be merely moved on the shaft or removed therefrom renders the construction most desirable in practical use.

I claim as my invention—

A belt-pulley comprising two solid inner segments, each extending from one side of the pulley to the other and from end to end thereof, and each having a recess for a portion of a shaft, clamping-bolts arranged close to the shaft-opening for uniting the two segments and clamping them on the shaft, and two outer segments each having a recess open at the ends of the pulley and exposing the ends of the bolts, and each having its opposite ends terminating at and secured to the outer face of one of the inner segments.

In testimony whereof I have hereunto subscribed my name.

PHILIP MEDART.

Witnesses:

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