

No. 722,735.

PATENTED MAR. 17, 1903.

P. MEDART.
BELT PULLEY.

APPLICATION FILED DEC. 8, 1902.

NO MODEL.

Fig. 1.

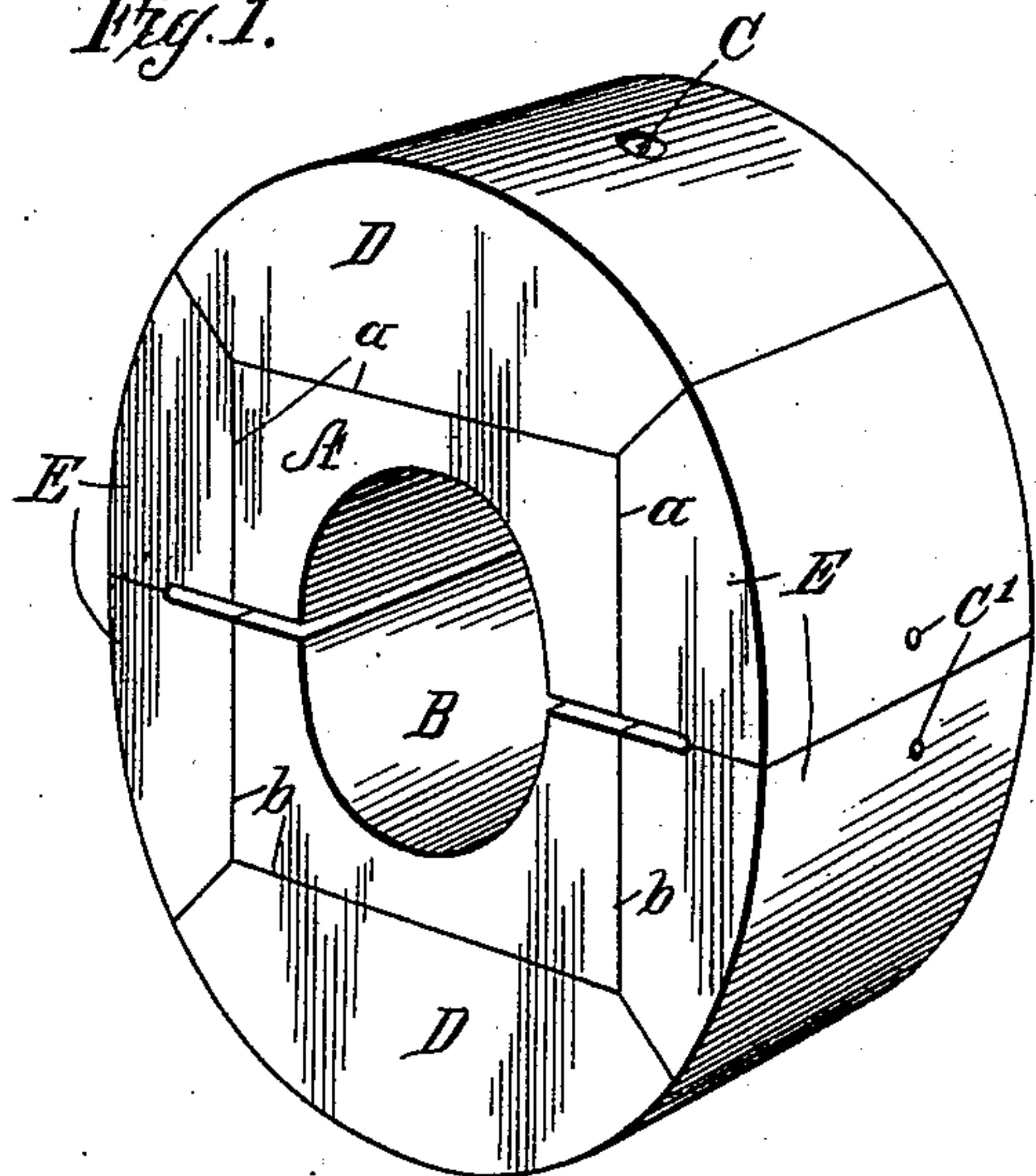


Fig. 2.

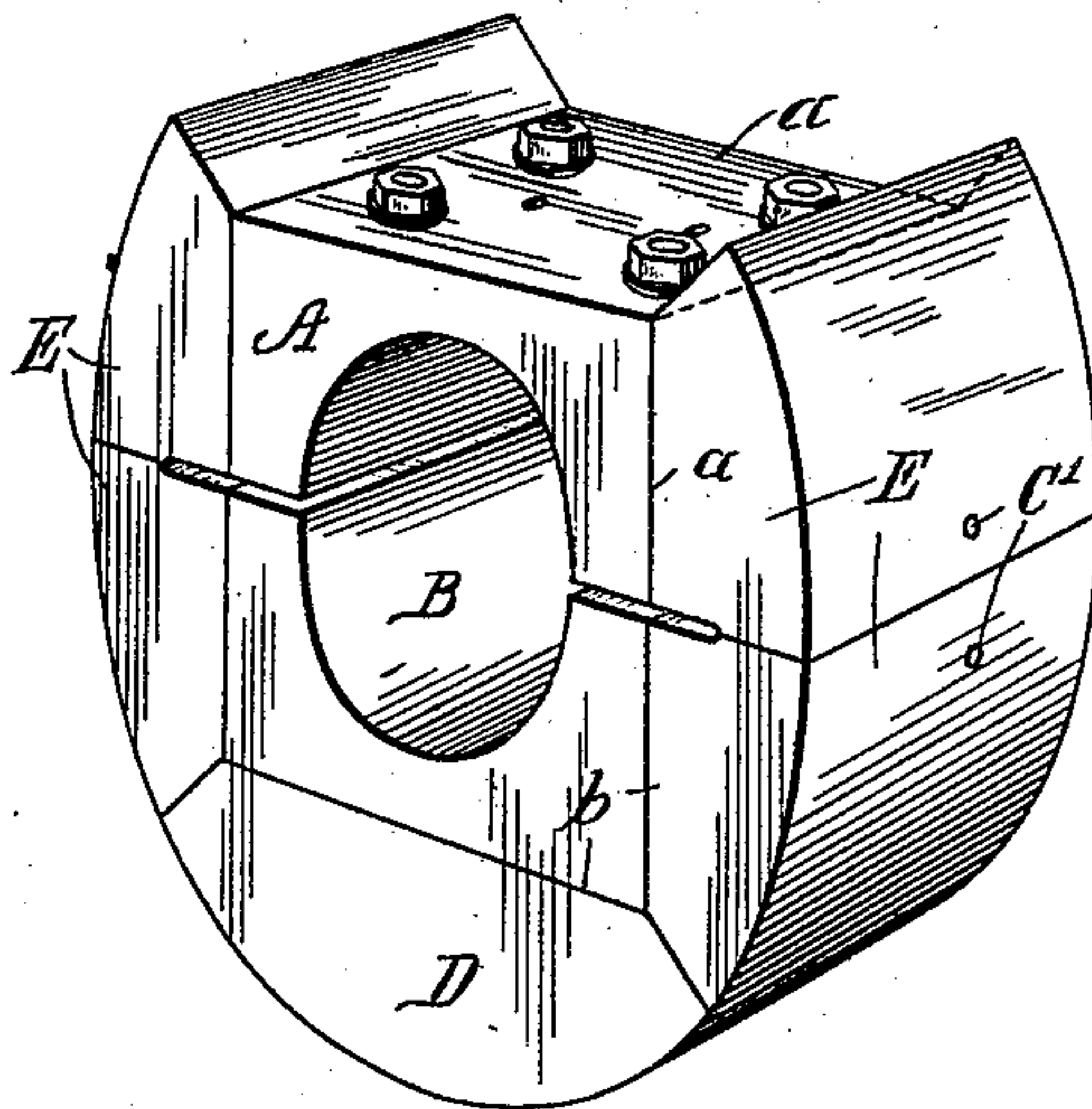


Fig. 3.

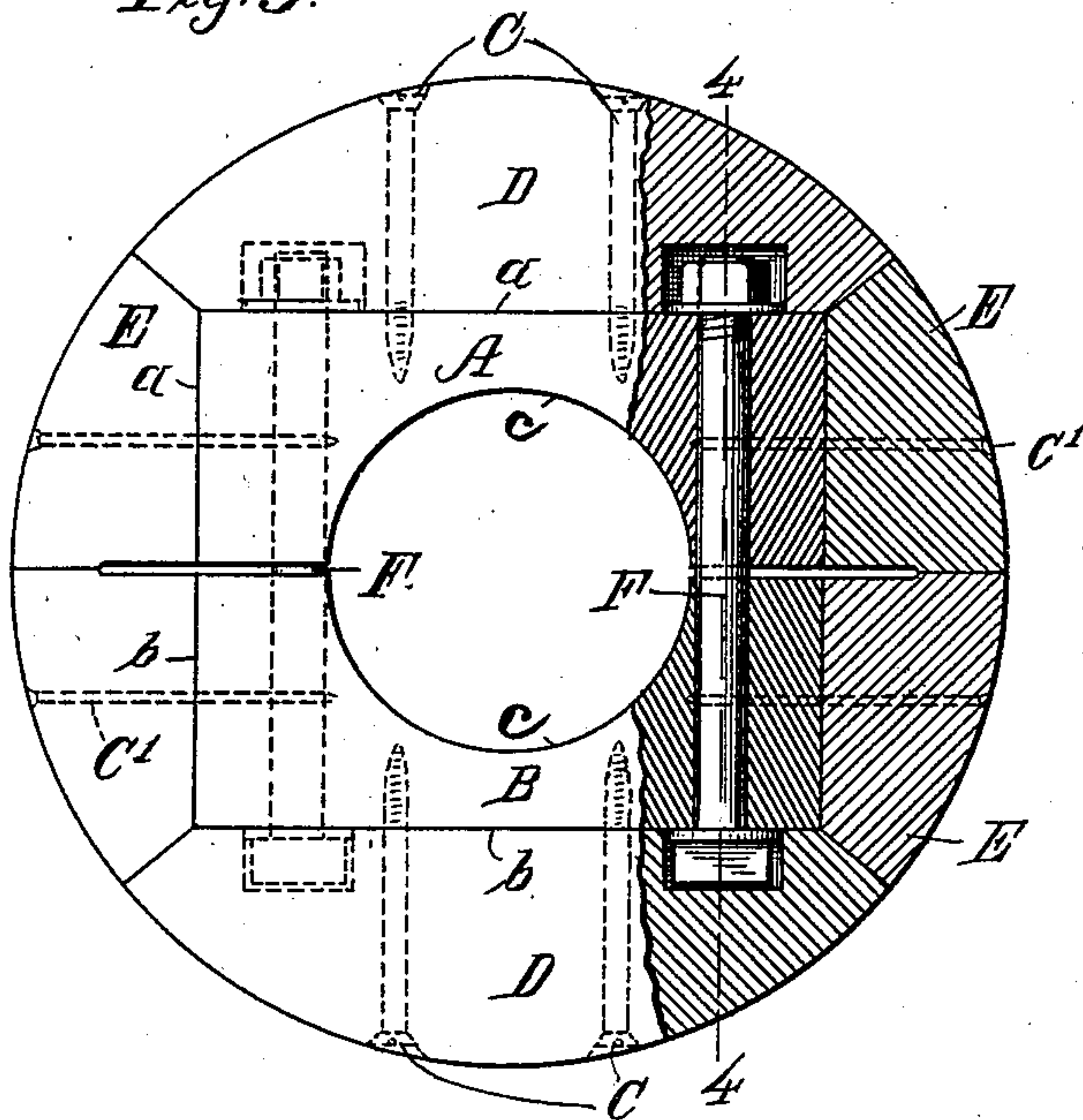
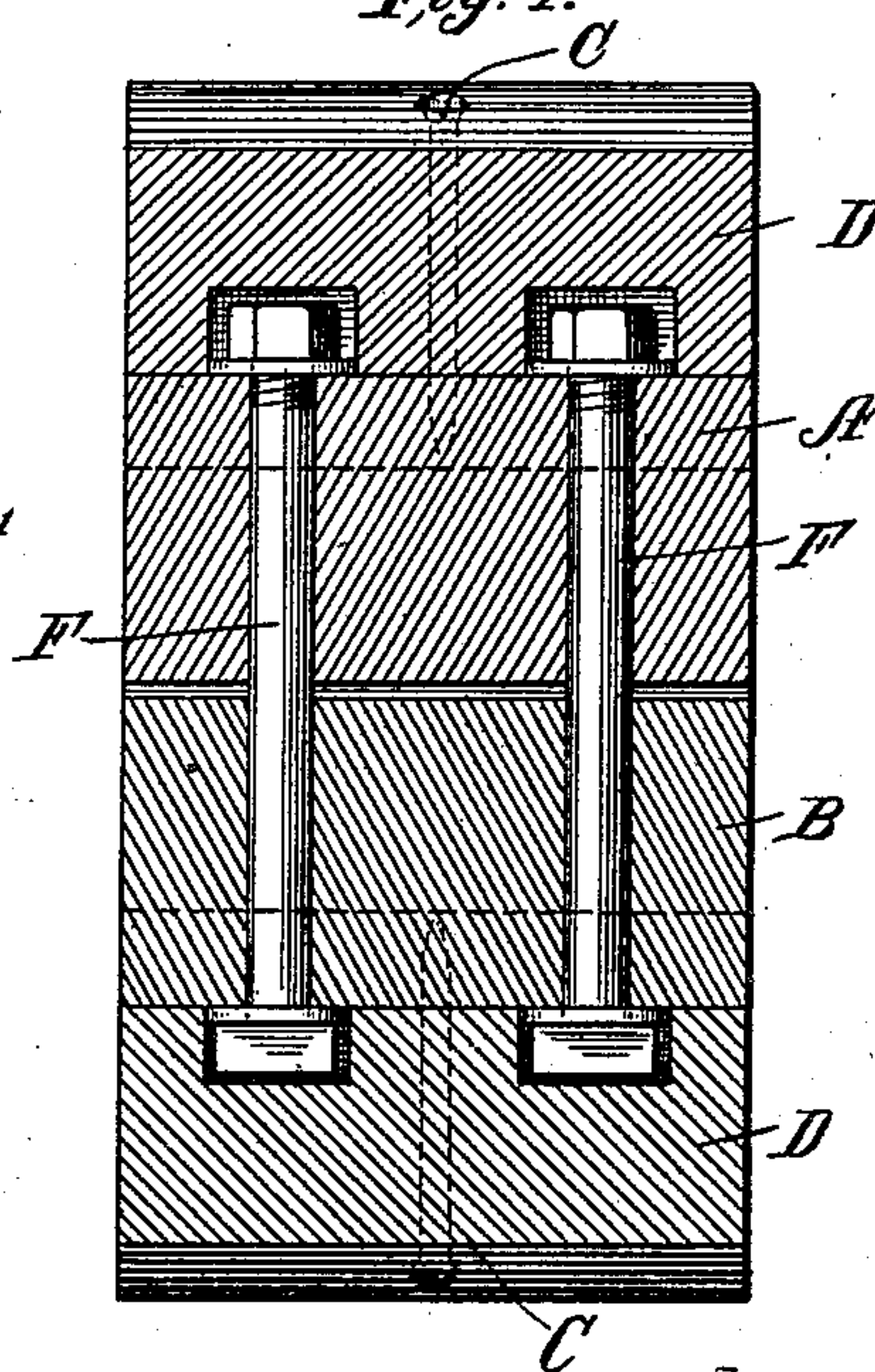


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

PHILIP MEDART, OF ST. LOUIS, MISSOURI.

BELT-PULLEY.

SPECIFICATION forming part of Letters Patent No. 722,735, dated March 17, 1903.

Application filed December 8, 1902. Serial No. 134,401. (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 the pulley is composed of blocks or segments of wood. 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 should be straight and flat, so that the peripheries of the pulleys may lie close together and that the clamping-bolts shall be readily accessible. For these reasons such pulleys should have no laterally-projecting hub portions carrying clamping-bolts; but these bolts should be arranged within the body of the pulley. It is also desirable that the sections of the pulley should be so assembled as to cause the grain of the wood to be so disposed as to shrink equally and to avoid splitting.

The object of my invention is to provide a pulley possessing these desirable features, while at the same time being easily manufactured, readily attached to, adjusted on, or removed from a shaft, and which shall be strong and durable.

In the accompanying drawings, Figure 1 is a perspective view of a split wood pulley embodying my improvements. Fig. 2 is a perspective view of the same with the cap-section removed. Fig. 3 is a view, partly in side elevation and partly in section; and Fig. 4 shows a section on the line 4 4 of Fig. 3.

I preferably construct the pulley of eight separate pieces of wood. The two inner sections A B each consists of a hard piece of wood having three flat sides *a b* and a semicircular side *c*, the two semicircular sides or recesses in the two sections providing the bore or shaft opening of the pulley. To each of the wider sides of the sections A B is attached, by means of screws C, a wooden segment D, and to each end of each section A B is attached by nails C' a small segment E. The two segments D are of the same shape and size, and the four segments E are of like dimensions. The segments are so fitted together as to form a complete cylinder, as shown in Fig. 1. The segments D

and E join each other on radial lines, while the pulley is split transversely on a diametrical line passing between sections A B, and the two segments E on each side of the diameter. By causing the segments D and E to join each other on radial lines they are made to brace each other. Any tendency for either one of the segments to move sidewise is resisted by the segment which overlaps it. It is important that the grain of the wood in the several segments should be so disposed as to resist splitting and to enable the screws and nails to hold most securely, and also to provide for an equal shrinkage, should any occur. In my pulley the grain of the sections A B is lengthwise thereof—i. e., parallel with the line which divides the pulley. The grain of the segments D is parallel with that of the sections A B, and the grain of the segments E is at right angles to that of the segments A, B, and D. In this way the screws and nails may be properly driven and take firm hold without danger of splitting or loosening, and all the segments will shrink uniformly, and such shrinkage may be readily taken up by tightening the screws or nails. On the line which divides the pulley the sections A and B and a portion of the segments E are formed with kerfs, as usual, to allow the pulley to expand and contract under the influence of the clamping-bolts. The clamping-bolts F extend through sections A B in lines at right angles to the axis of the bore, and the heads and nuts are arranged in recesses in the segments D. I prefer that all of the bolt-heads should be arranged in recesses in one of the segments D and that these recesses should have their walls so disposed as to prevent the bolts from turning when the nuts are being adjusted. All the nuts are arranged in the recesses in the other segment D. By withdrawing the screws C in one of the segments—say the top segment D—this segment may be removed, as indicated in Fig. 2. When this is done, the nuts may be withdrawn from the bolts and the two sections of the pulley may be separated along their line of division and may thus be removed from the shaft. This may be done without disturbing any of the adjacent pulleys.

My improved pulley has many advantages. The parts may be readily made by machin-

ery and may be easily assembled and secured. There is little danger of splitting or shrinkage, any shrinkage being easily taken up, and the pulley may be easily attached to or
5 removed from a shaft without disturbing other pulleys thereon and without liability to injury by frequent adjustment.

I claim as my invention—

1. A pulley comprising two separable inner sections with a shaft-opening between them, two segments attached to the inner sections above and below the shaft-opening, four segments attached to the inner sections on opposite sides of the shaft-opening, means for
10 securing the outer segments to the inner sections, and bolts for securing the inner sections together and for clamping them on the shaft.

2. A belt-pulley comprising two separable
20 inner sections with a shaft-opening between them, two outer segments removably secured

to the inner sections above and below the shaft-opening, segments secured to the inner sections on opposite sides of the shaft-opening and joining the first-named segments on radial lines whereby the several segments overlap each other, for the purpose specified. 25

3. A pulley comprising two rectangular inner sections with a shaft-opening between them, a series of outer segments completely
30 inclosing the rectangular inner sections and joining each other on radial lines, clamping-bolts for uniting the two inner sections, and means for securing the outer segments to the inner sections. 35

In testimony whereof I have hereunto subscribed my name.

PHILIP MEDART.

Witnesses:

H. M. WELLS,

F. M. NIEMANN.