(No Model.)

# D. ARGERBRIGHT.

## SPLIT PULLEY.

No. 414,480. Patented Nov. 5, 1889.

*Fig. 1.*

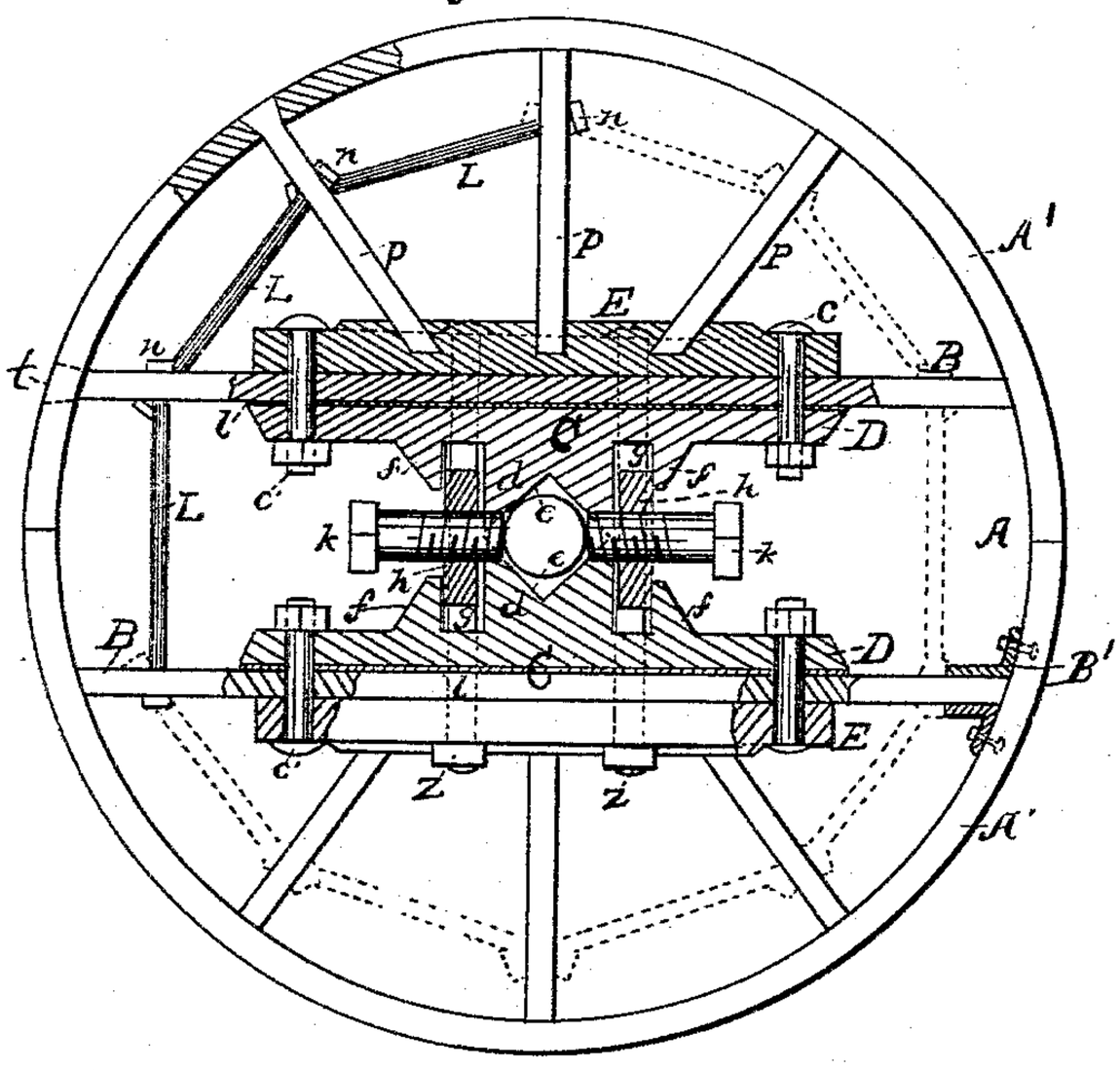



*Fig. 2.*

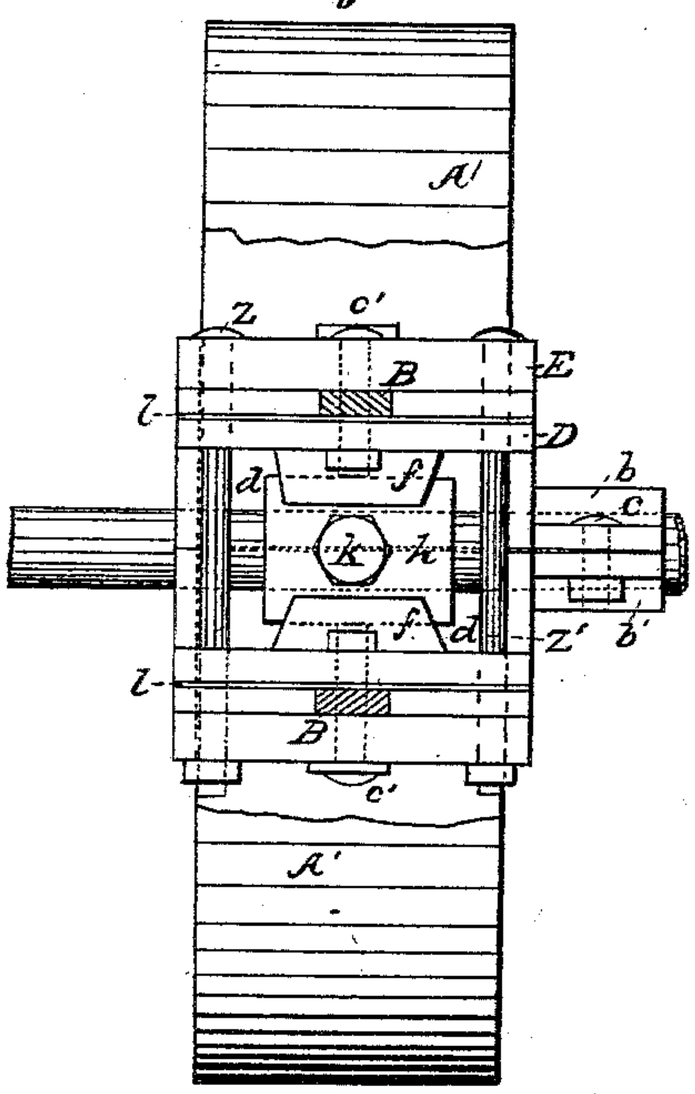
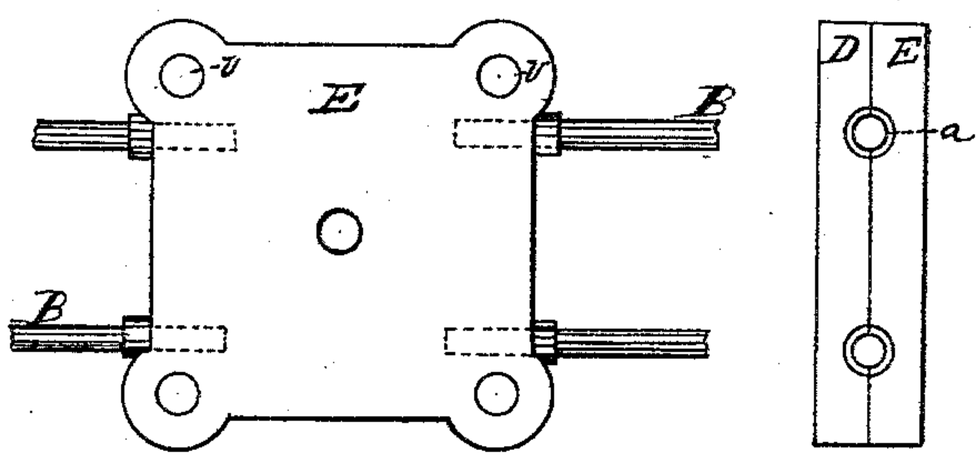



*Fig 3.*

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# UNITED STATES PATENT OFFICE.

DANIEL ARGERBRIGHT, OF TROY, OHIO.

## SPLIT PULLEY.

SPECIFICATION forming part of Letters Patent No. 414,480, dated November 5, 1889.

Application filed January 26, 1889. Serial No. 297,679. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL ARGERBRIGHT, a citizen of the United States, and a resident of Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Divided 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a partial vertical sectional view of the pulley. Fig. 2 is an edge view. Fig. 3 illustrates a detail view of a hub-section.

This invention has relation to improvements in divided pulleys; and it consists in the novel construction and combination of parts, all as hereinafter set forth.

In the accompanying drawings, the letter A designates the wooden rim of the pulley, consisting of the semicircular sections A′ A′. In connection with each section is provided a chord-brace B, or each section may have two such chord-braces arranged side by side and parallel to each other. These chord-braces serve to sustain the ends of the rim-sections and hold said sections to their form, and they also serve to hold the hub-sections C in proper position. Each hub-section consists of the casting D and the cap-plate E. In some cases, especially when gas-pipe is employed in providing the chord-braces the casting D is grooved on its outer face to receive the braces, as indicated at *a*, and the cap-plate may also be correspondingly grooved. In large pulleys it may be advisable to provide lateral extensions *b b′* of the hub-casting and cap-plate to provide additional bearing-surface for the shaft, said extensions being formed with perforations to receive the fastening-bolts *c*. In small pulleys the hub-sections and cap-plates can be secured together by bolts *c′*, passing through openings in the middle portions of said hub-sections and cap-plates, as shown. Each hub-section is cast with a projection *d*, extending toward the other hub-section and formed with a channel-bearing *e*, adapted to form one half of the entire bearing for the shaft, the channel-bearing in the other hub-section forming the other half.

Z′ Z indicate the hub-bolts, which extend through bearings *v* in the hub-sections and secure the latter together.

Parallel to the plane sides of the projections *d* are the lug-flanges *f*, which extend from the hub-casting and are placed sufficiently distant from the projections *d* to provide the intervals *g* for the reception of the setting-plates *h*, in which are formed threaded perforations for the set-screws *k*, which pass between the hub-sections, or in the plane of division of the sectional pulley, as shown. When the set-screws are worked up against the shaft, the setting-plates are pressed back against the lug-flanges *f*, so that the clamping-bolts which hold the hub-sections together are not additionally strained on account of this fastening and there is no tendency to force the bearings from the shaft. The lugs *f* are made long enough to engage the ends of the setting-plates when the hub sections or boxes are adjusted on the largest shafting, so in that way enough is provided for said setting-plates when the sections are to be secured to shafts of smaller diameter. The hub-sections are also adjustable by means of interposed layers or plates *l* between the hub-sections and chord-bars, so that they may be brought in true relation to the axis of the shafting. Instead of using adjusting-layers on the outer surface of the hub-sections, bushing-layers may be provided in the hub-sections in any convenient way; but I prefer to glue layers of sand-paper upon each other in the hub-sections until the opening between said sections is reduced to the proper size.

The ends of the chord-braces are preferably dovetailed, as at *t*, into the wood of the rim-sections, so as to prevent them from being displaced; or they may be fastened to flanged socket-plates B′, which have a curvature corresponding to that of the rim-sections, and which are secured to said rim-sections by screw-bolts. These flanged socket-plates are especially useful in supporting the rims of broad pulleys. The rim-sections of these pulleys are usually built up of narrow curved arc pieces of wood, which are glued to each other until a belt-surface of the proper breadth

is provided, and in order to strengthen the rim-sections and to prevent the pulley from separating under high speed tie-rods are provided, which are preferably so arranged that a continuous tie is formed around the pulley. These tie-rods L pass through the chord-braces and through additional braces P, to which they are secured by means of nuts *n*.

When the pulleys are large or have very broad bearing-rims, it is designed to double the construction, providing double hub-sections and chord-braces, or using two single sets of hub-sections and chord-braces connected to one rim portion. In large pulleys the cap-plates are formed with additional brace-sockets, as stated, such pulleys requiring more spoke-bearing than pulleys of small diameter. Usually it is preferred to make the mortise-sockets of the rim-sections of the form shown, and when the ends of the braces are seated therein to secure the latter by splitting the ends and inserting wedges, which may be fastened by glue.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a divided pulley, the combination, with the hub-sections and the bolt-connections, of the setting-plates and set-screws extending in the plane of division of the pulley-sections, substantially as specified.

2. A divided wood pulley consisting of two semicircular rim-sections having chord-braces supporting hub-sections and cap-plates clamped thereon, tie-rods connecting the chord-braces, bolts connecting the hub-sections, the setting-plates, and the set-screws extending through said plates in the plane of division between the sections, substantially as specified.

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

DANIEL ARGERBRIGHT.

Witnesses:

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