(No Model.)

P. MEDART.

BELT PULLEY.

No. 458,634. Patented Sept. 1, 1891.

FIG. 1.

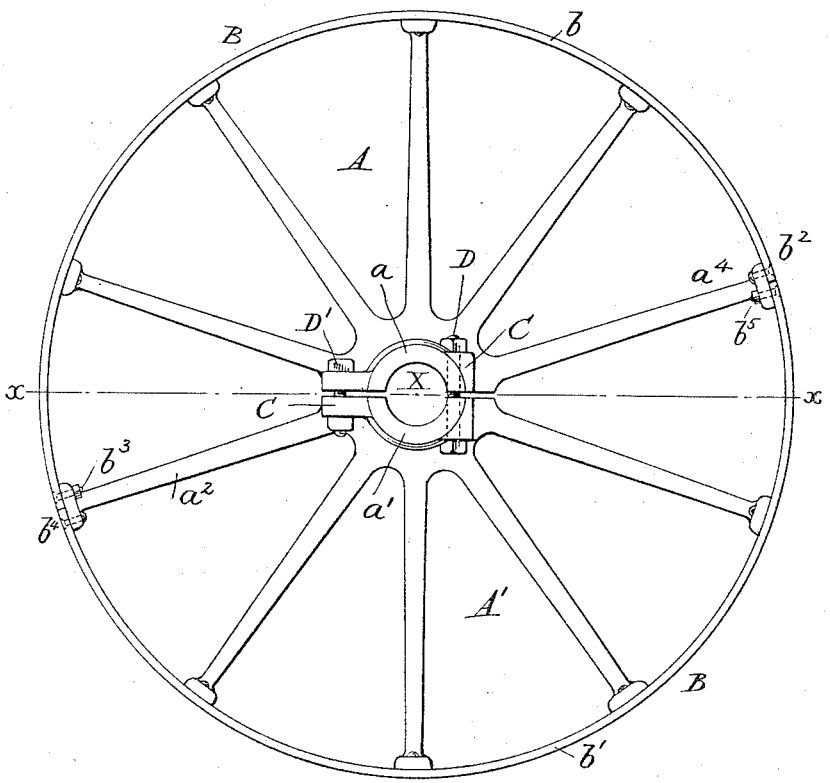
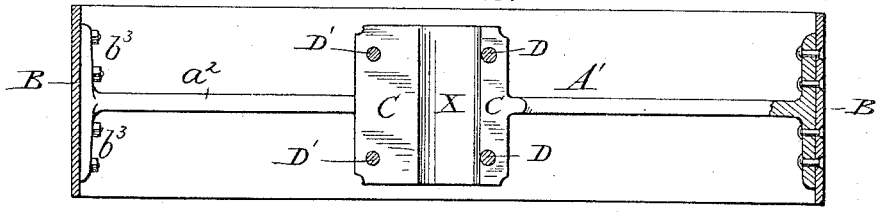


FIG. 2.



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UNITED STATES PATENT OFFICE.

PHILIP MEDART, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO WILLIAM MEDART, OF SAME PLACE.

BELT-PULLEY.

SPECIFICATION forming part of Letters Patent No. 458,634, dated September 1, 1891.

Application filed April 24, 1891. Serial No. 390,299. (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, in the State of Missouri, have invented certain new and useful Improvements in Belt-Pulleys, of which the following is a specification.

My invention more especially relates to that class of pulleys having divided spiders, sectional rims, and devices for uniting the spider and rim sections and securing them on a shaft.

The object of my invention is to secure a durable, efficient, and light but strong belt-pulley which may readily and securely be fastened on a shaft without using keys or set-screws impinging thereon. These ends I attain by the novel construction and organization of instrumentalities hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a belt-pulley embodying my improvements, and Fig. 2 a central cross-section therethrough on the line $x\,x$ of Fig. 1.

Unless otherwise indicated the parts are of usual approved construction and material. The spider is shown as formed of diametrical sections A A′, consisting of hub-sections $a\,a'$, with arms radiating therefrom. The arms of the spider radiate from the hub and are arranged symmetrically. They are not secured together between the hub and the rim, their outer ends being arranged at equal distances from each other. A rim B is shown as composed of sections $b\ b'$, secured to lugs on the ends of the spider-arms. The spider, it will be observed, is divided on a line not intersecting its arms, which consequently lie on each side of this dividing-line, which line is, however, crossed by the rim-sections. One end b^3 of the part b of the rim, it will be observed, is secured to the arm a^4 of spider-section A, while the opposite end of this section of the rim is detachably secured by bolts b^3 to the arm a^2 of the spider-section A′. The opposite section b' of the rim is in like manner secured at b^4 to the arm a^2 of spider-section A′, while its opposite end is detachably secured at b^5 to the arm a^4 of spider-section A. By this construction the rims are caused to overlap or cross the dividing-line of the spider-sections and aid in holding them together, while the removal of the bolts $b^3\ b^5$ will leave the spider-sections, if not otherwise connected, free to separate, a section of the rim being removed with each spider-section, which permits of the ready removal and replacement of the pulley from or upon the shaft.

Each section of the hub is provided with a flange or lug C, both hub and flange projecting on each side of the spider-arms. These flanges are close to and parallel with the dividing-line between the spider-sections and are provided with transverse openings for clamping-bolts D D′ on each side of the arms. The bolts D pass through their lugs close to the shaft-opening X in the hub, while the bolts D′ are farther removed therefrom. Under this organization the bolts D constitute a fulcrum close to the shaft, while the bolts D′, being farther removed therefrom, afford additional power of compression of the hub on the shaft by the additional leverage thus obtained. Under the organization shown the bolts pass through the flanges and not through the arms, which is cheap, simple, and efficient for the purposes desired.

The spider-sections are preferably composed of cast-iron, the hub, flanges, and arms of each section being cast in one piece, the rim-sections being preferably composed of wrought-iron.

Having thus fully described the construction, organization, and operation of my improved belt-pulley, what I claim therein as new and as of my own invention is—

1. A hub divided into two sections, flanges of different widths on opposite sides thereof, and clamping-bolts passing therethrough, those of one set of flanges being at a greater distance from the shaft-opening of the hub than those of the other to afford greater clamping-power, as set forth.

2. The sectional belt-pulley herein described, consisting of the combination of a hub formed in two sections, flanges thereon parallel with the division-line of the sections,

spider-arms diverging relatively to said line disconnected from each other except at the hub and having their outer ends arranged at equal distances apart, clamping-bolts passing through the flanges on opposite sides of the shaft-opening, those of one set being farther away from the shaft-opening than those of the other set, and rim-sections secured to the arms, substantially as hereinbefore set forth.

In testimony whereof I have hereunto subscribed my name.

PHILIP MEDART.

Witnesses:
B. W. MILLER,
LLOYD B. WIGHT.