P. MEDART.
Belt-Pulley.

No. 199,848. Patented Jan. 29, 1878.

Fig. 1.

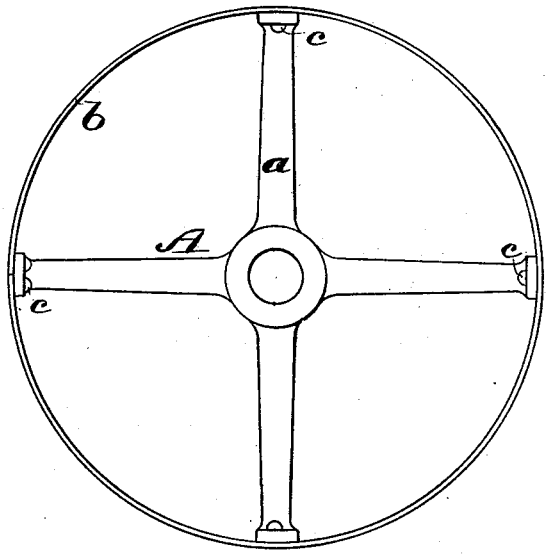
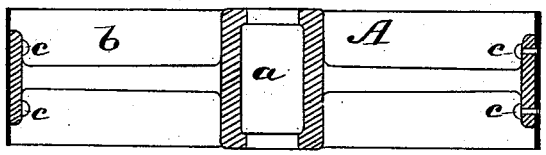


Fig. 2.



Witnesses:
Chas F. Wharf
Saml. S. Boyd

Inventor:
Philip Medart
by Chas. D. Moody
atty:

UNITED STATES PATENT OFFICE.

PHILIP MEDART, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-THIRD HIS RIGHT TO GEORGE W. FISHER, OF SAME PLACE.

IMPROVEMENT IN BELT-PULLEYS.

Specification forming part of Letters Patent No. **199,848**, dated January 29, 1878; application filed December 26, 1877.

To all whom it may concern:

Be it known that I, PHILIP MEDART, a resident of St. Louis, Missouri, have made a new and useful Improvement in Belt-Pulleys, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a cross-section, of my improved pulley.

Similar letters refer to similar parts.

Several objections exist to the present mode of forming belt-pulleys of a single piece of cast-iron, and to making the rim of the pulley of cast-iron. It is difficult to cast the pulley so that the rim will be perfectly balanced. Further, as the casting cools the rim chills in advance of the center, causing the latter to be strained and weakened, and the rim itself, from the nature of its material, is liable to yield to a centrifugal strain. It is also objectionable making the center—that is, the hub and spokes of the pulley—in separate parts; for, aside from the expense of properly securing the spokes in the hub, the fastenings used add to the weight of the pulley. I overcome these difficulties by making the rim of the pulley of wrought-iron, and the center, including the hub and spokes, of a single piece of cast-iron, and then fastening the parts together.

In the accompanying drawing, A represents a belt-pulley constructed upon my plan. The central portion *a*, including the hub and arms, is made of a single piece of cast-iron, and the rim *b* is of wrought rolled iron. The rim and center are fastened together preferably by the rivets *c c*. By this method all the parts of the pulley can be readily and accurately made and fitted together. The rim can be attached to the center, not only without straining it, but, from the character of its material, be made to greatly strengthen it. The pulley can be made much lighter, weighing but about one-third of what it would if made of cast-iron throughout, and with much less expense. Not only the rim is materially lightened, but the spokes also. The method further enables the spokes to be readily cast straight, a shape not easily obtained when the spokes and rim are in one casting. The centers can be made in quantities, and kept in stock, and any desired width of rim attached thereto, for the center of a belt-pulley is made in regular sizes; but the face of the pulley is liable to vary in each case. Sometimes the face is of such width as to require a double set of arms and an elongated hub. Such a construction can be readily provided by my method by using two or more of the centers, placed side by side, and having a single rim of the desired width fastened to them.

I am aware that wrought-iron pulleys having the hub, spokes, and rim made separately have heretofore been made.

I claim—

The combination, in a belt-pulley wheel, of a hub and arms made in one piece of cast-iron, and a rim of wrought-iron, as and for the purpose shown and specified.

PHILIP MEDART.

Witnesses:

SAML. S. BOYD,

CHAS. D. MOODY.