

(No Model.)

W. A. WOODWARD.
PULLEY.

No. 407,388.

Patented July 23, 1889.

Fig. 1.

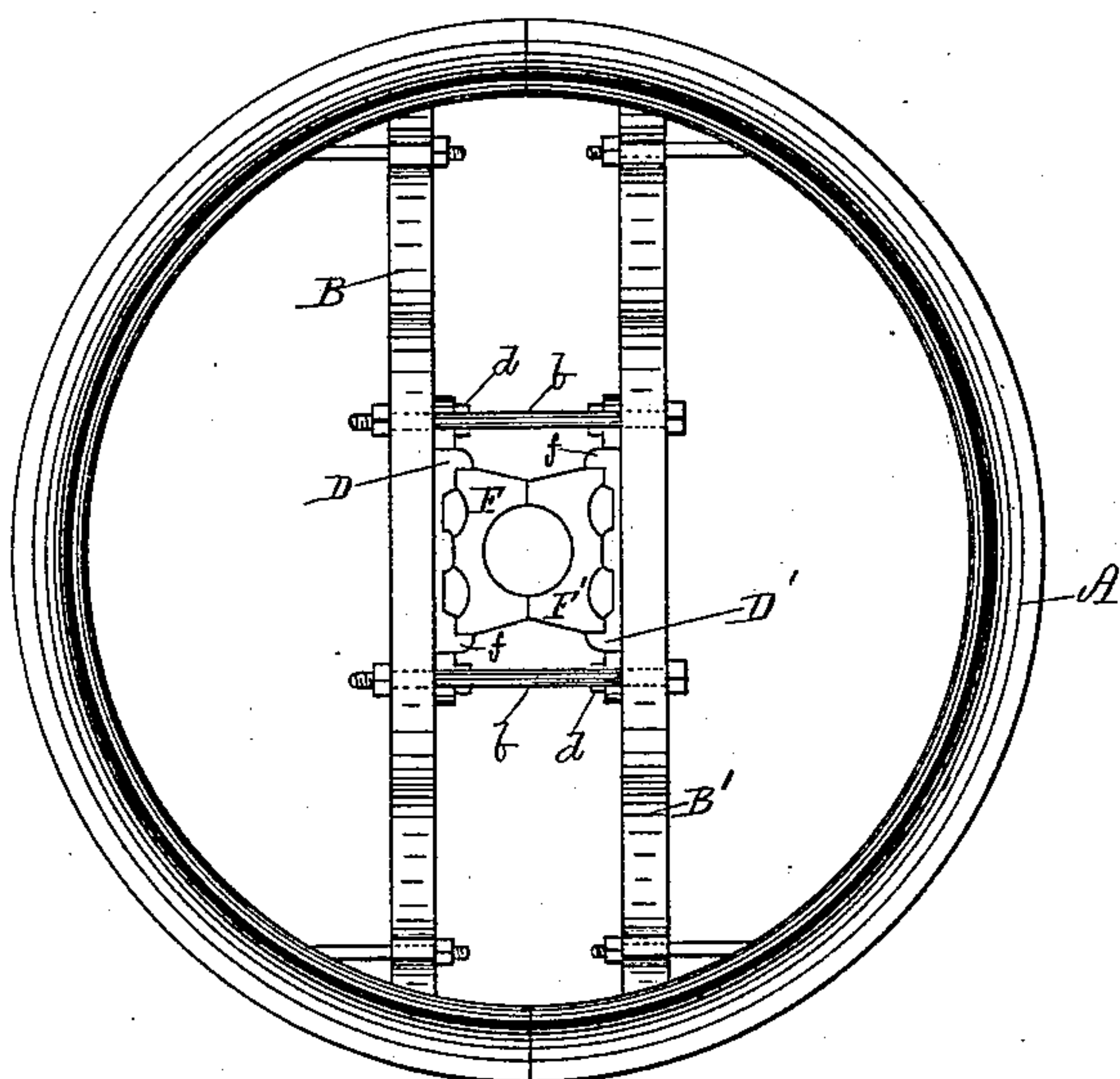


Fig. 2.

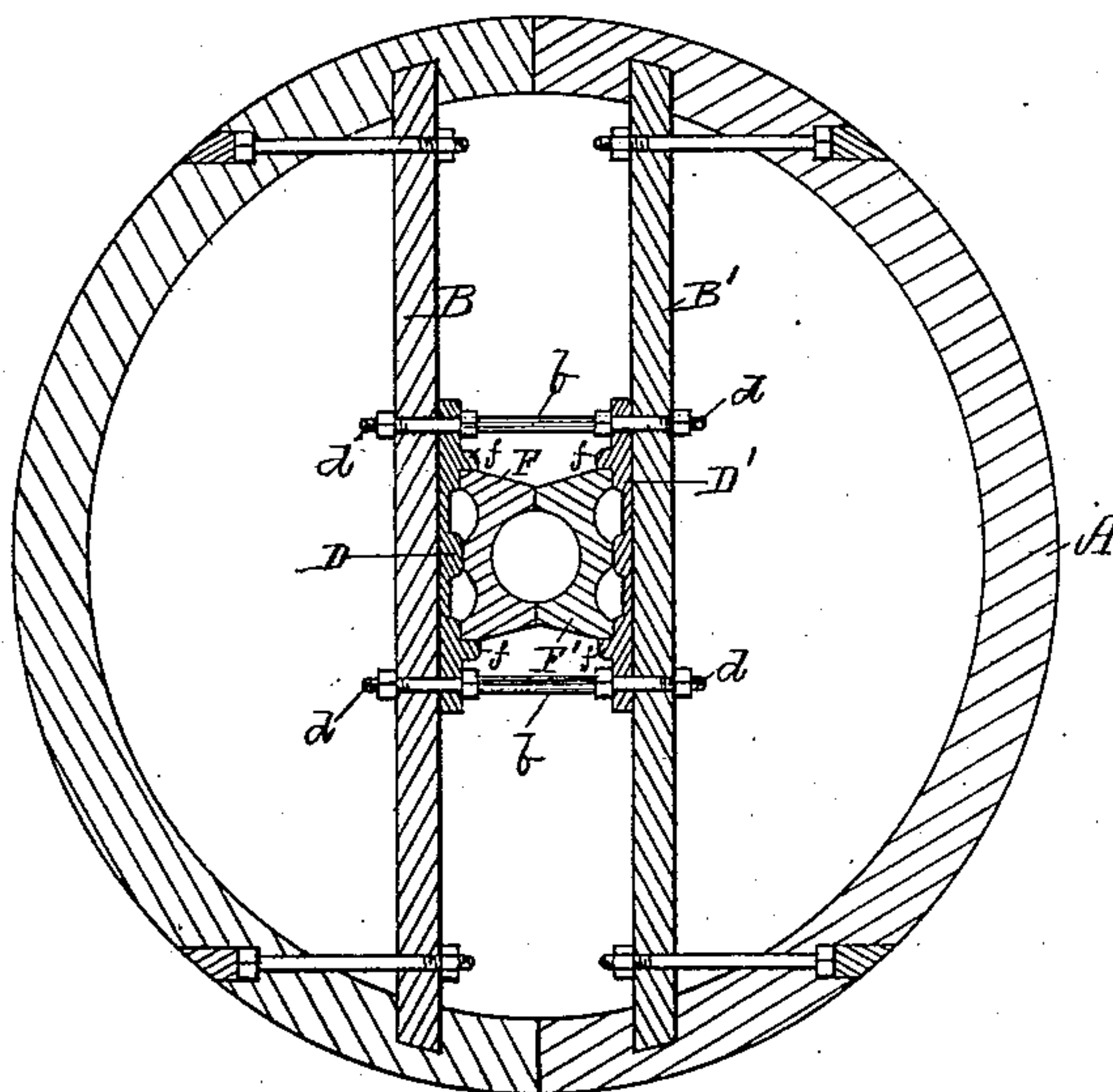
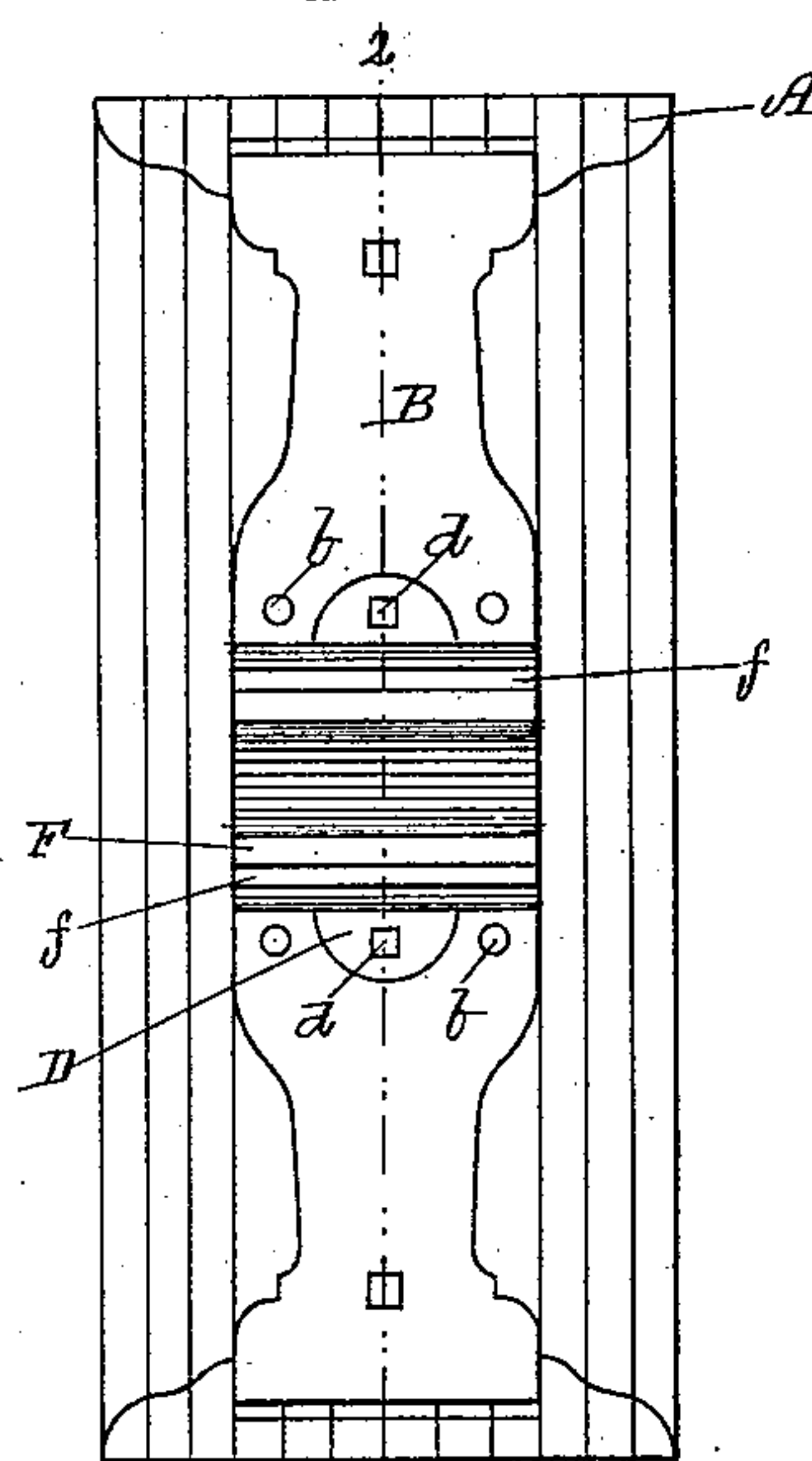


Fig. 3.



Witnesses.

H. C. Young.
John R. Brown.

Inventor

William A. Woodward
by his attorney
J. E. Maynard

UNITED STATES PATENT OFFICE.

WILLIAM ALBERT WOODWARD, OF LOWELL, ASSIGNOR TO THE WOODWARD MANUFACTURING COMPANY, OF HUDSON, MASSACHUSETTS.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 407,388, dated July 23, 1889.

Application filed January 24, 1889. Serial No. 297,410. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ALBERT WOODWARD, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pulleys, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a pulley embodying my invention. Fig. 2 is a section on line 2 2 of Fig. 3. Fig. 3 is an inner view of one-half of the split pulley shown in the other figures.

In the manufacture of wood pulleys it has long been common to construct the rim and the cross-pieces as shown in the drawings; and my invention relates to the construction of the hub and its connection with the cross-pieces; and it consists in the combination, with the cross-pieces, of a bed-piece and a half-hub, the bed-piece being securely fastened to the cross-piece and a half-hub being fitted to the bed-piece by projections and depressions, which bring the two into and hold them in proper relation.

In the drawings, A is the rim; B B', the two cross-pieces, made as usual, as will be well understood by all skilled in the art without further description. The bed-pieces D D' are firmly connected to the cross-pieces B B', and the half-hubs F F' are fitted to the bed-pieces D D', the contiguous faces of the bed-pieces D D' to the half-hubs F F' being so shaped that when brought together the half-hubs will have their axis in the center of the rim A. In practice I prefer to make projections *f* upon the bed-pieces D D'; but it will be obvious that the projections may be on the half-hubs F F' instead, the essential point being that the half-hubs F F' should be so fitted to the bed-pieces D D' as to bring and hold them in proper relation with each other, and thereby bring the axis of the hubs F F' into proper relation with the rim A. The half-hubs F F', after being fitted to the bed-pieces D D', are clamped together in a special chuck and are bored, a number of half-hubs F F' being made all precisely alike except as to diameter of bore, and any pair of these half-hubs fitting the same bed-piece, so that an order for a pulley having a certain-sized

bore can be fitted by selecting the proper half-hubs.

In practice it is not essential that the half-hubs F F' be prevented from endwise movement on the bed-pieces D D', except by friction; but lugs and recesses are in some cases desirable for preventing such endwise movement, as will be clear without further description. The great advantage of my improvement is that a single size of bed-piece will answer for a wide range of size and style of pulleys, and consequently such pulleys can be kept in stock and fitted in a moment to fill any order, no matter what may be the size of the hub ordered.

In pulleys of extra width I do not ordinarily increase the length of the half-hub, but, instead, use two or more pairs of arms B B' and two or more pairs of bed-pieces D D' and two or more pairs of half-hubs F F', and in this way I can use the same size and style of bed-pieces and half-hubs that I use for narrower pulleys.

In practice it is customary to make the rim in two parts, as shown in the drawings; but my invention is of course applicable, whether the rim be in two parts or not. The half-hubs and bed-pieces are clamped together by the bolts *b* in the usual way. These bolts *b* may of course pass through the bed-pieces, and thereby hold them to the cross-pieces B B'; but as it is important to have the bed-pieces D D' adjusted exactly upon the cross-pieces B B', I prefer to use separate bolts *d* to hold the bed-pieces D D' in place upon the cross-pieces B B'.

In most pulleys of this class the cross-pieces B B' are abundantly strong without bracing; but in special cases they must of course be braced, as will be clear to all skilled in the art.

What I claim is—

The improved pulley above described, consisting of the rim A, cross-pieces B B', bed-pieces D D', half-hubs F F', and means for securing the half-hubs together, combined and operating substantially as described.

WILLIAM ALBERT WOODWARD.

Witnesses:

GEORGE W. POORE,
HENRY O. BROOKS.