

(No Model.)

T. JAMES & J. JACKSON.

CONSTRUCTION OF PULLEYS OR DRUMS.

No. 246,394.

Patented Aug. 30, 1881.

Fig. 1.

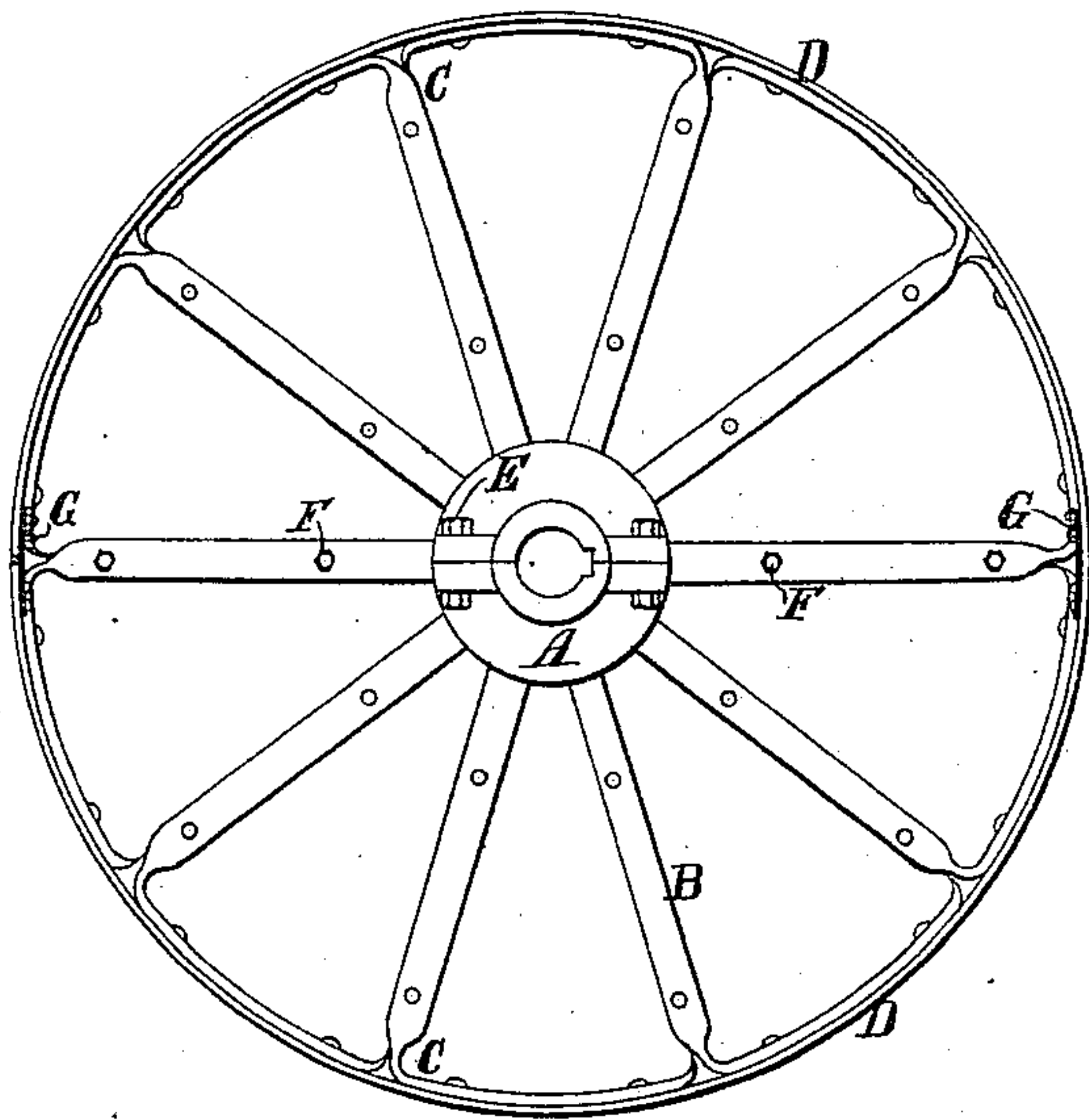


Fig. 2.

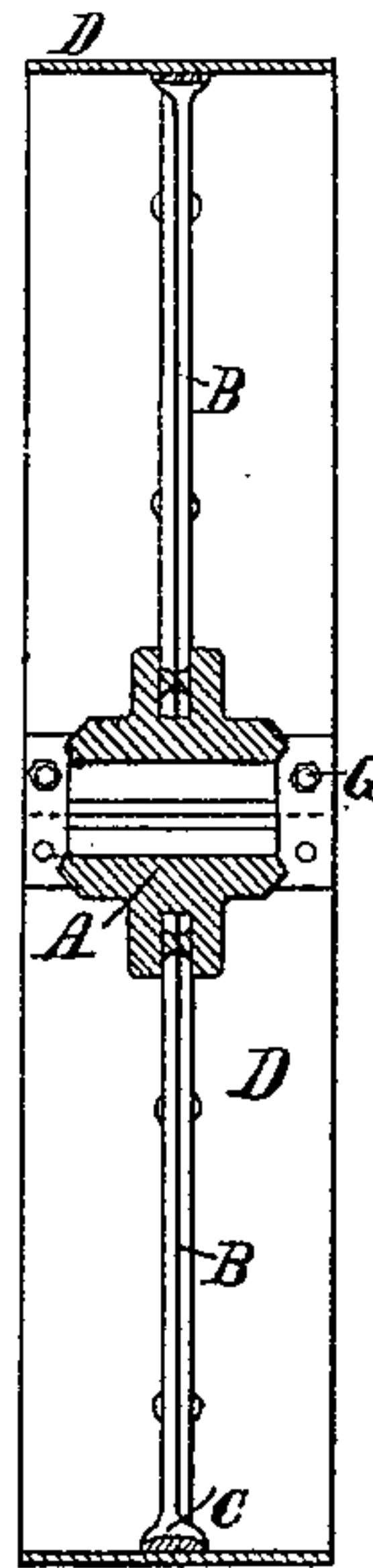
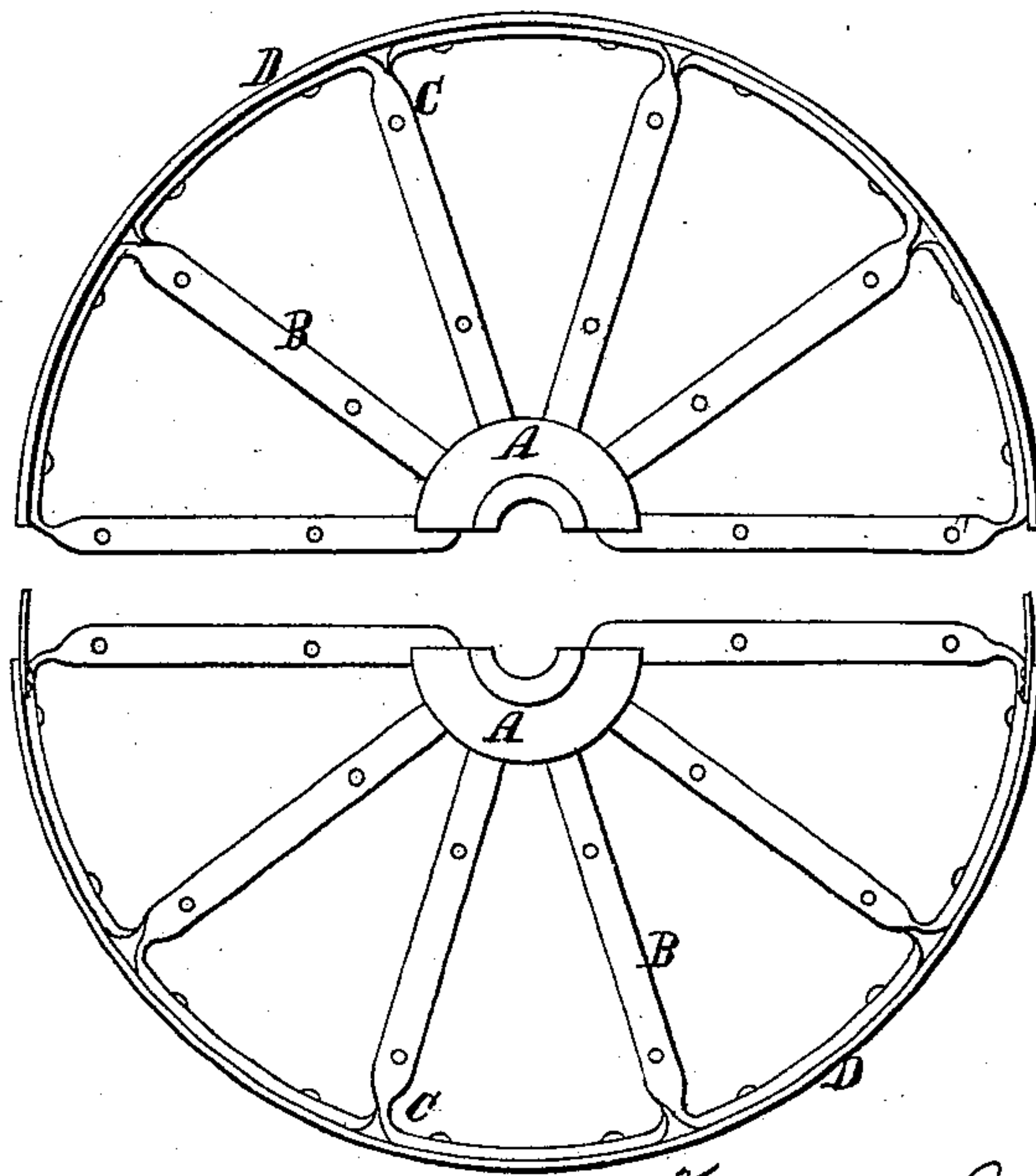


Fig. 3.



WITNESSES
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UNITED STATES PATENT OFFICE.

THOMAS JAMES AND JOHN JACKSON, OF READING, COUNTY OF BERKS,
ENGLAND.

CONSTRUCTION OF PULLEYS OR DRUMS.

SPECIFICATION forming part of Letters Patent No. 246,394, dated August 30, 1881.

Application filed July 30, 1881. (No model.) Patented in England November 25, 1879.

To all whom it may concern:

Be it known that we, THOMAS JAMES and JOHN JACKSON, subjects of the Queen of Great Britain, both residing at Reading, in the county of Berks, England, have invented certain new and useful Improvements in the Construction of Pulleys or Drums, (for which we have received Letters Patent in England No. 4,822, dated November 25, 1879,) of which the following is a specification.

This invention relates to improvements in the construction of pulleys or drums for driving machinery and for other purposes, whether such pulleys or drums be made in halves or whole or partly spring open. For this purpose, in carrying out our improvements we make the rim of wrought-iron in two parts or halves, the boss being made of cast-iron in two parts or halves. The boss and the rim are connected together by wrought-iron arms cast into the boss and riveted or bolted to the rim; and one part of our improvements consists in forming the arms of pulleys or drums (whether made in halves or whole or to spring open) of half-round iron, bent or twisted near the rim, in such a form that the flat part of the iron comes against the rim to which it is attached, and the edge or thin part of the arm or spoke stands in the direction of motion of the pulley, the two flat parts coming together and being riveted or bolted to each other, so that two thicknesses combined form the arm or spoke of the pulley or drum and run in thin oval shape in the same direction as the pulley or drum when in motion, so as to offer as little resistance to the air as possible in the revolution of the pulley. The two parts of the rim and boss, when placed on a shaft or axis, are securely bolted together. The arms or spokes may be made of iron, steel, or other metal, of any shape beside that specified. By this means we construct pulleys or drums of this character of comparative lightness and great strength, so that when in motion the resistance caused by the atmosphere is very slight.

In order that our improvements may be clearly understood and readily carried into

practice, we will proceed to describe the drawings hereto annexed.

In the drawings, Figure 1 is an elevation. 50 Fig. 2 is a cross-section, and Fig. 3 is an elevation showing a pulley or drum when divided in two separate parts.

The following letters are used to indicate the various parts, and are the same in all the views. 55

A is the boss. B is an arm, constructed of two pieces of half-round or other convenient section of iron or other metal, and bolted or riveted together. This dual arm is twisted at 60 the point C, where it joins the rim D, and bent so that the flat portion of the arm fits onto the said rim conveniently for riveting or bolting to the same.

E F G are the bolts by which the two parts 65 of the pulley or drum, if made in halves, are bolted or fixed together.

The rim D may be made of wrought-iron, steel, or other suitable metal.

Having thus described the nature of our improvements and the manner of performing or carrying the same into practice, we do not claim any of the parts separately, which are well known and in common use; but 70

What we claim is— 75

The improved pulleys or drums having arms B twisted so as to make the long axis of the section of the arm stand in the direction of motion and of strain, and yet to obtain the benefit of having the wide and flat portion of 80 the arm in contact with the rim at D, for the purposes of connecting the same thereto, and so as to impart the greatest transverse support to the rim, substantially in the manner and for the purposes hereinbefore fully described, 85 and represented in the drawings hereto annexed.

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JOHN JACKSON.

Witnesses:

A. CAMPBELL,
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