

(No Model.)

E. B. MARTINDALE.  
BELT PULLEY OR WHEEL.

No. 286,320.

Patented Oct. 9, 1883.

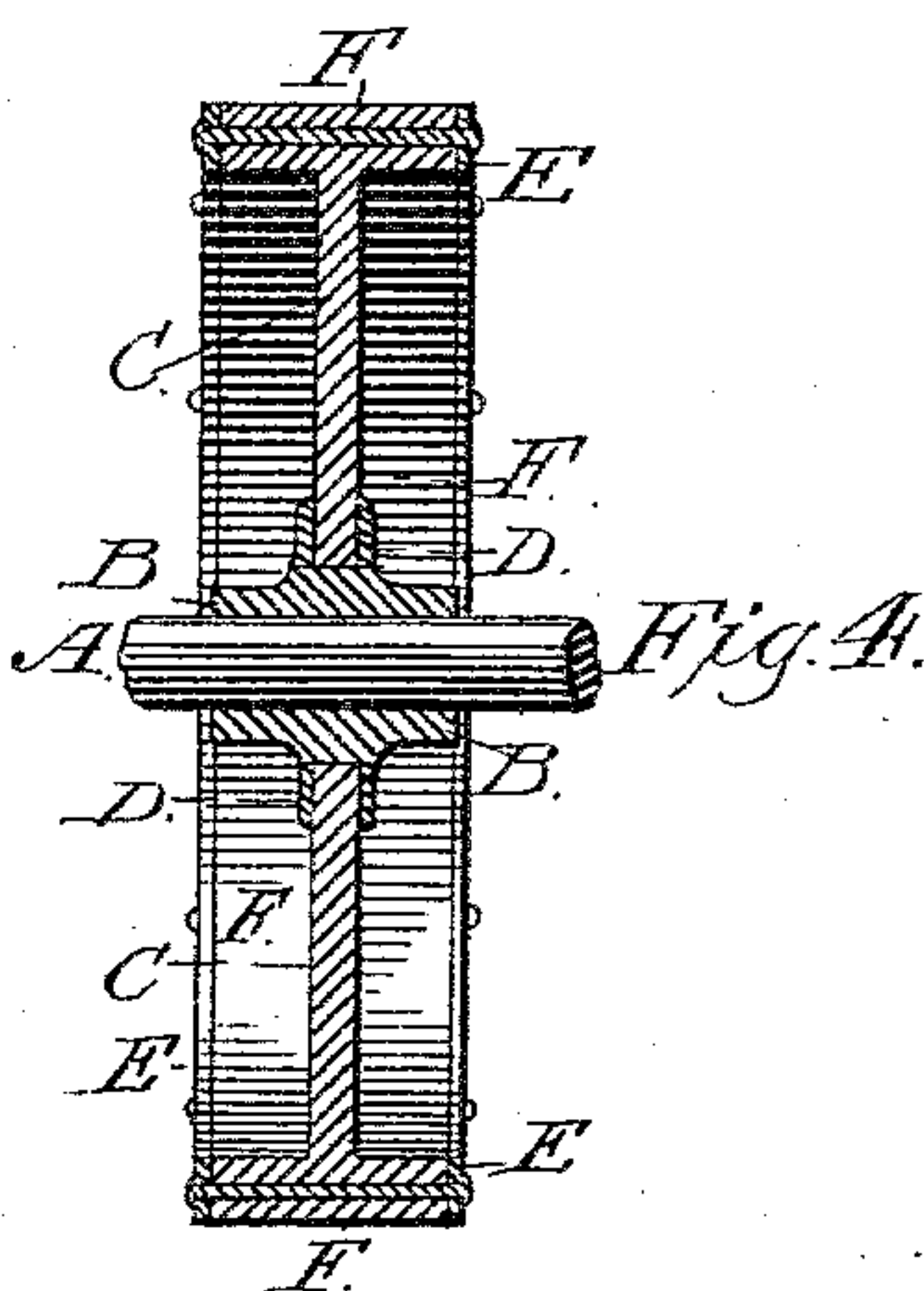
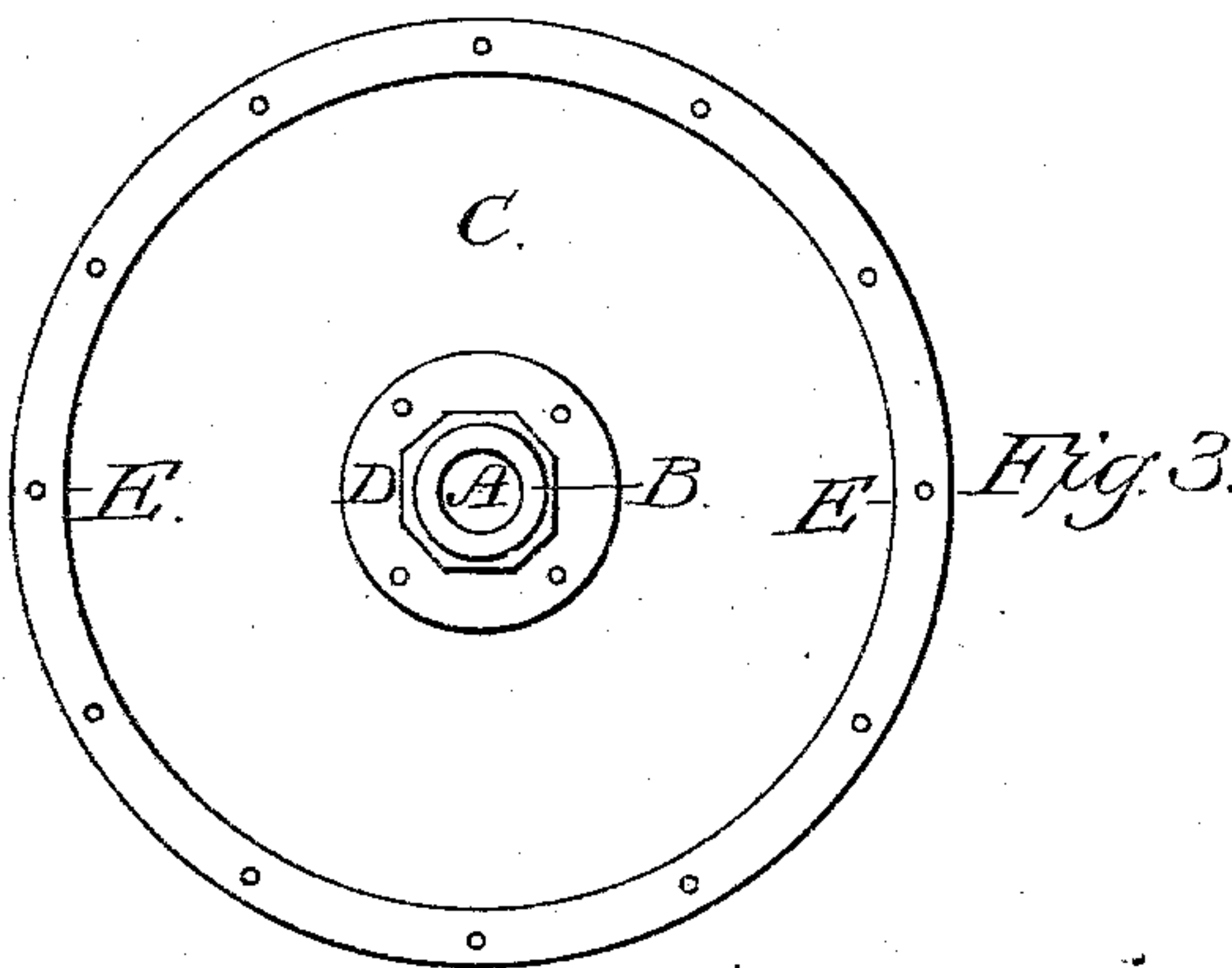
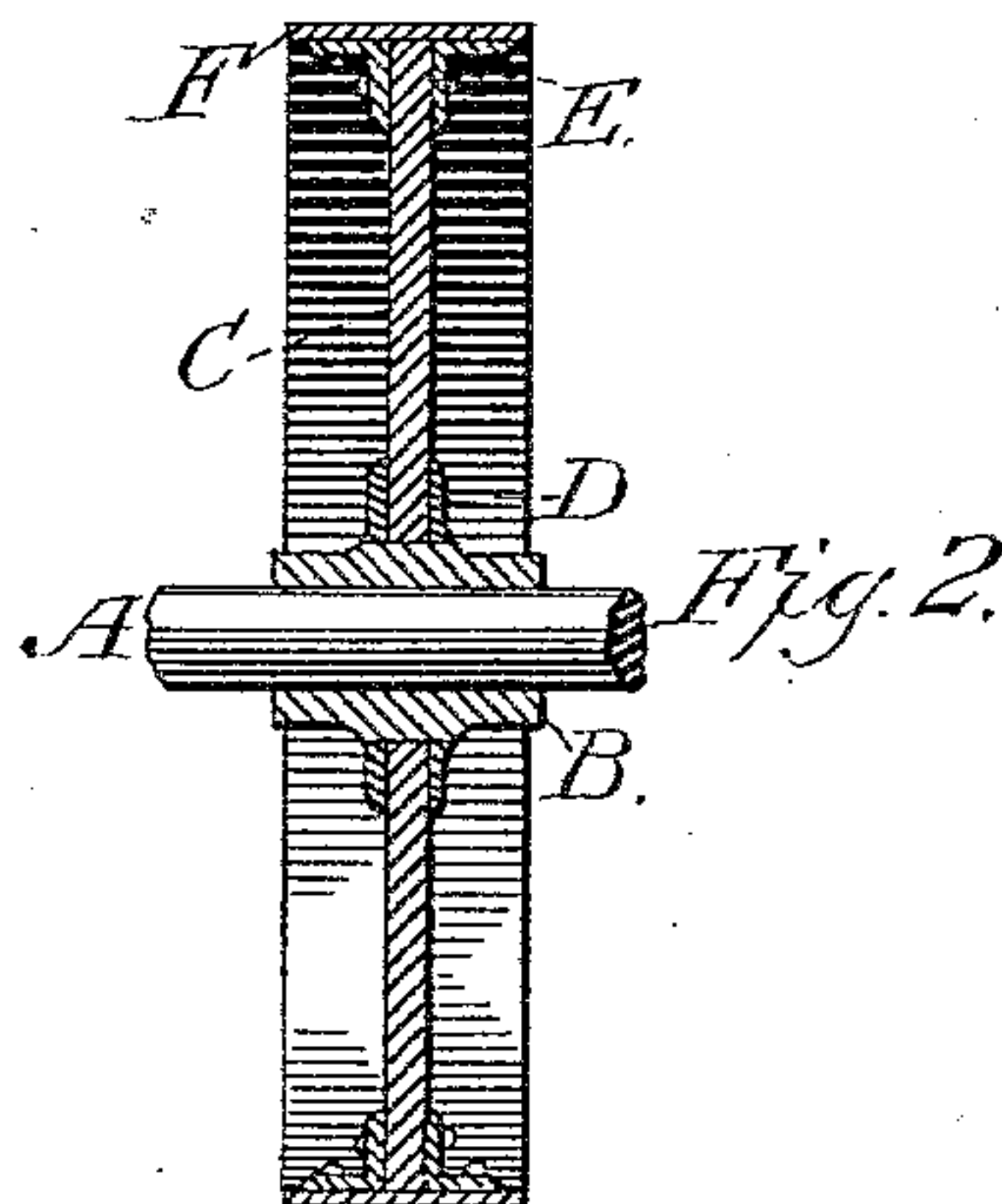
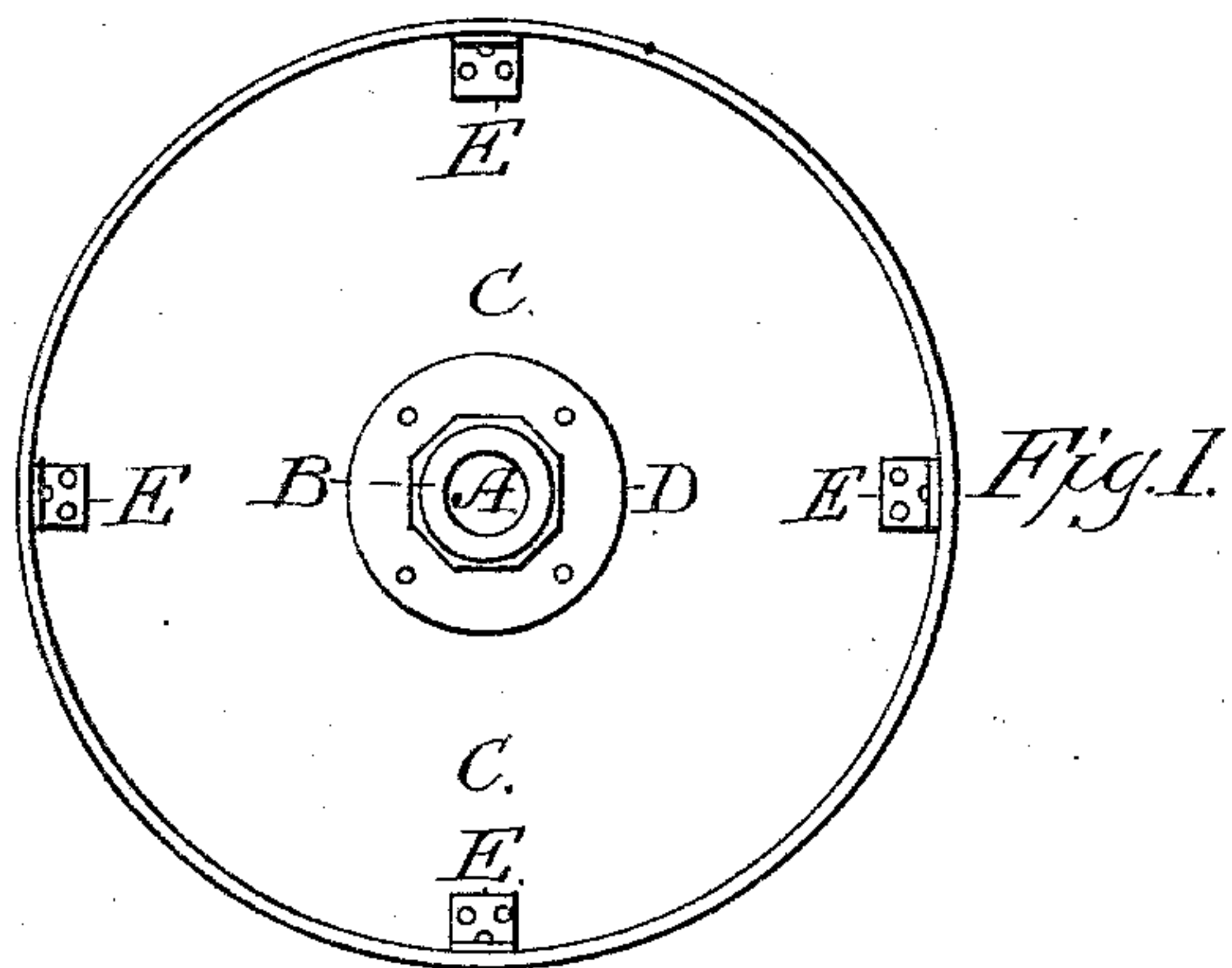
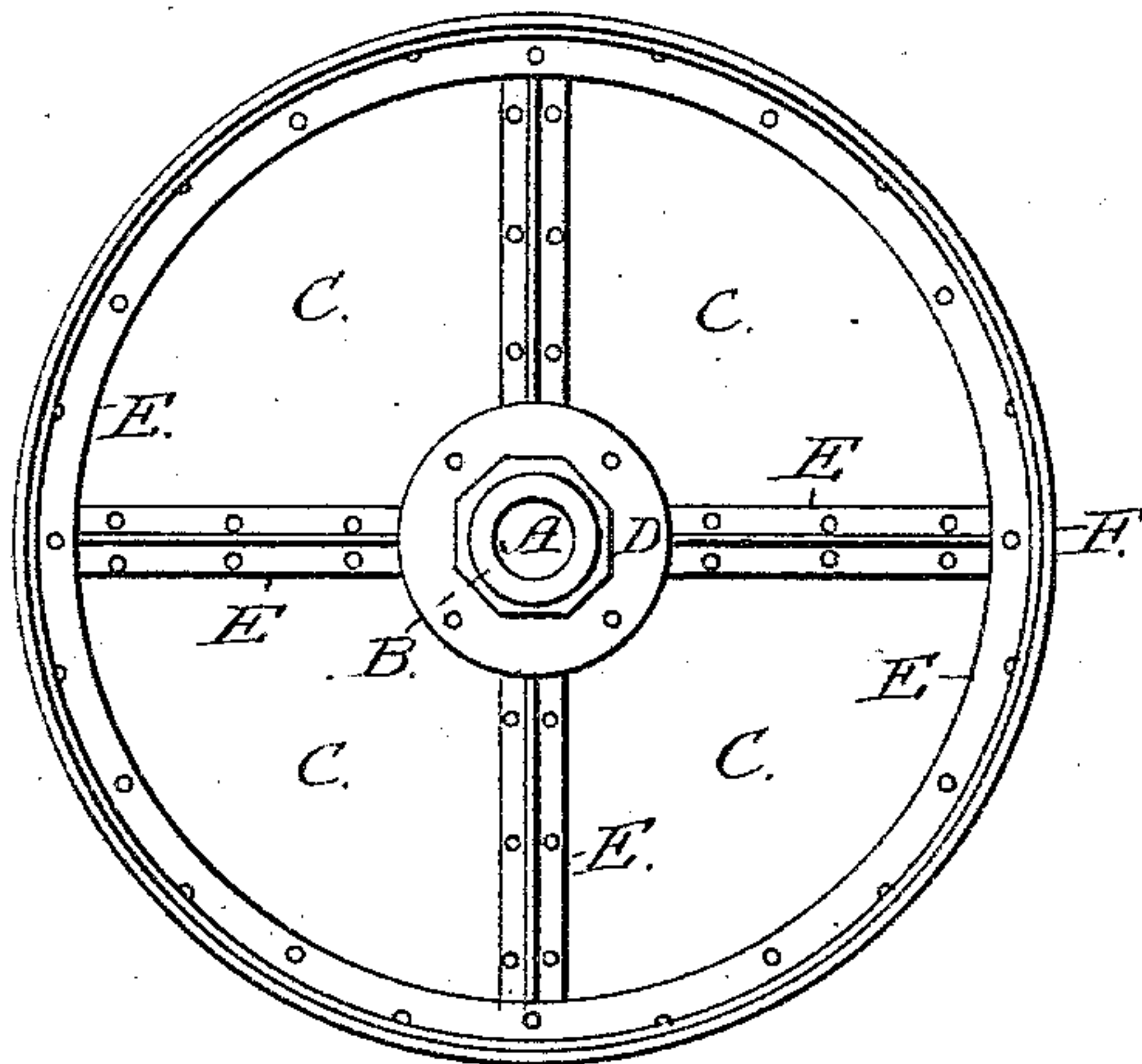


Fig. 5.



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# UNITED STATES PATENT OFFICE.

ELIJAH B. MARTINDALE, OF INDIANAPOLIS, INDIANA.

## BELT PULLEY OR WHEEL.

SPECIFICATION forming part of Letters Patent No. 286,320, dated October 9, 1882.

Application filed December 22, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, ELIJAH B. MARTINDALE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Belt Pulleys and Wheels, of which the following is a specification.

My invention consists in certain improvements in pulleys or wheels, whereby the advantages of wood and iron are combined in their construction, as hereinafter more particularly set forth.

Referring to the accompanying drawings, which are hereby made a part hereof, and on which similar letters refer to similar parts, Figure 1 is a side elevation of a pulley embodying my said invention, and Fig. 2 is a central vertical section of the same. Fig. 3 is a side elevation of a wooden-faced pulley, as hereinafter more particularly described; and Fig. 4 is a central vertical section of the same. Fig. 5 is a side elevation of a larger pulley than that shown in the other figures, and wherein the construction is modified by the use of strengthening-bars and flanges, which run around the periphery of the pulley inside the rim, either or both of which strengthening-bars and flanges may be used when required to give additional strength to the pulley.

In said drawings, the portions marked A represent the shaft upon which the pulley is mounted; B, the hub of the pulley; C, the wooden body or web; D, the iron flanges by which the web or body C is secured to the hub B; E, the bracket-flanges or circular flanges and strengthening-bars by which the rim F is secured to the body or web C; F, the rim or face of the pulley.

In Figs. 3 and 4 the portions marked E represent the circular ring of iron placed on the outside of the wooden rings forming the face of the pulley, to strengthen the same.

The hub B is made of cast-iron, and is cast square in the center, where the web or body C bears upon it, and is fitted exactly and nicely to it, and is cast octagonal where the flange D bears upon it, and is nicely fitted upon it. Thus the web C is prevented from turning or working upon the hub B by the square bearing, and also by the flanges D, which, having

an octagonal bearing on the hub B, are also riveted or bolted through the web C.

The flanges D, which are riveted or bolted on both sides of the web C, and have octagonal bearings on the hub B, may be made of any hard and elastic metal, malleable iron being preferable.

The body or web C is constructed of wood by cutting the same into thin boards or veneers, joining the same together with some adhesive substance, and subjecting them to heavy pressure, the boards or veneers being so laid together that the grain of the wood in each board shall cross the grain of the wood in the board next to it, and thus the web or body being built up to the thickness required to give it strength, after which it may be sawed or turned to a perfect circle of the required size, and the hub inserted and secured as hereinbefore described.

The rim F may be made of either cast or wrought iron, and may be secured to the web C by single bracket-flanges, as shown in Figs. 1 and 2, or by circular flanges and strengthening-bars, or either, as shown in Fig. 5, being bolted or riveted through the web C and riveted to the rim F. If the rim is made of cast-iron, the same may be cast with a flange on the inner circle of said rim, and the body or web C may be bolted or riveted to the same. The wrought-iron rim may be crimped as it is bent, to form a crown-faced pulley. This pulley, when completed, will be similar to and possess many of the advantages of the pulley patented to me on the 31st day of October, 1882, under Patent No. 266,707, differing, mainly, in the fact that the body is made of wood instead of paper, pasteboard, or other like material; and I hereby expressly disclaim any interference or infringement of said Patent No. 266,707. The face of said pulley may also be made by gluing and pressing to the web or body C rings of wood, the outside circumference of which is the same as the circumference of the web, said rings being joined and built up the same as said web is made, until a rim or face of the required width is obtained, after which an iron ring may be placed on each edge of the rim, and the whole bolted or riveted together, as shown in Figs. 3 and 4, the face of the pulley being turned flat or



crowned, as desired, said pulley being similar to the pulley patented to me by Letters Patent No. 266,709, dated October 31, 1882, except that the material used is wood instead  
5 of paper, pasteboard, or other like material; and I hereby expressly disclaim any interference or infringement upon said patent.

Having fully described my said invention, what I claim, and desire to secure by Letters  
10 Patent, is—

1. A combination wheel or pulley consisting of a cast-iron hub, a solid wood body, a cast or wrought iron rim, and the means for securing the said several parts together, substantially as set forth.  
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2. The combination, in a wheel or pulley, of a hub made of cast-iron, the flanges securing the same made of cast, wrought, or malleable iron, the web or body made by gluing and pressing  
20 thin boards or veneers of wood together and crossing the grain of the wood in the same,

the rim made of cast or wrought iron with flat or crowned face, and the flanges, rivets, or bolts securing said several parts together, substantially as set forth.

3. A combination wheel or pulley made of  
25 cast-iron hub, a solid wood body, and wrought or cast iron rim, substantially as set forth.

4. A wheel or pulley with a hub of cast-iron, a body made of wood, cut into thin boards, or  
30 veneers, glued and pressed together, with the grain of the wood in each board crossed with the grain of the wood in the board next to it, and a rim of wood made by gluing and pressing  
35 rings of wood, cut into thin sheets, boards, or veneers, to the body, securing the same with rivets or bolts, and turning the face smooth, substantially as set forth.

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Witnesses:

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