

(No Model.)

M. O. REEVES.
WOODEN PULLEY.

No. 409,426.

Patented Aug. 20, 1889.

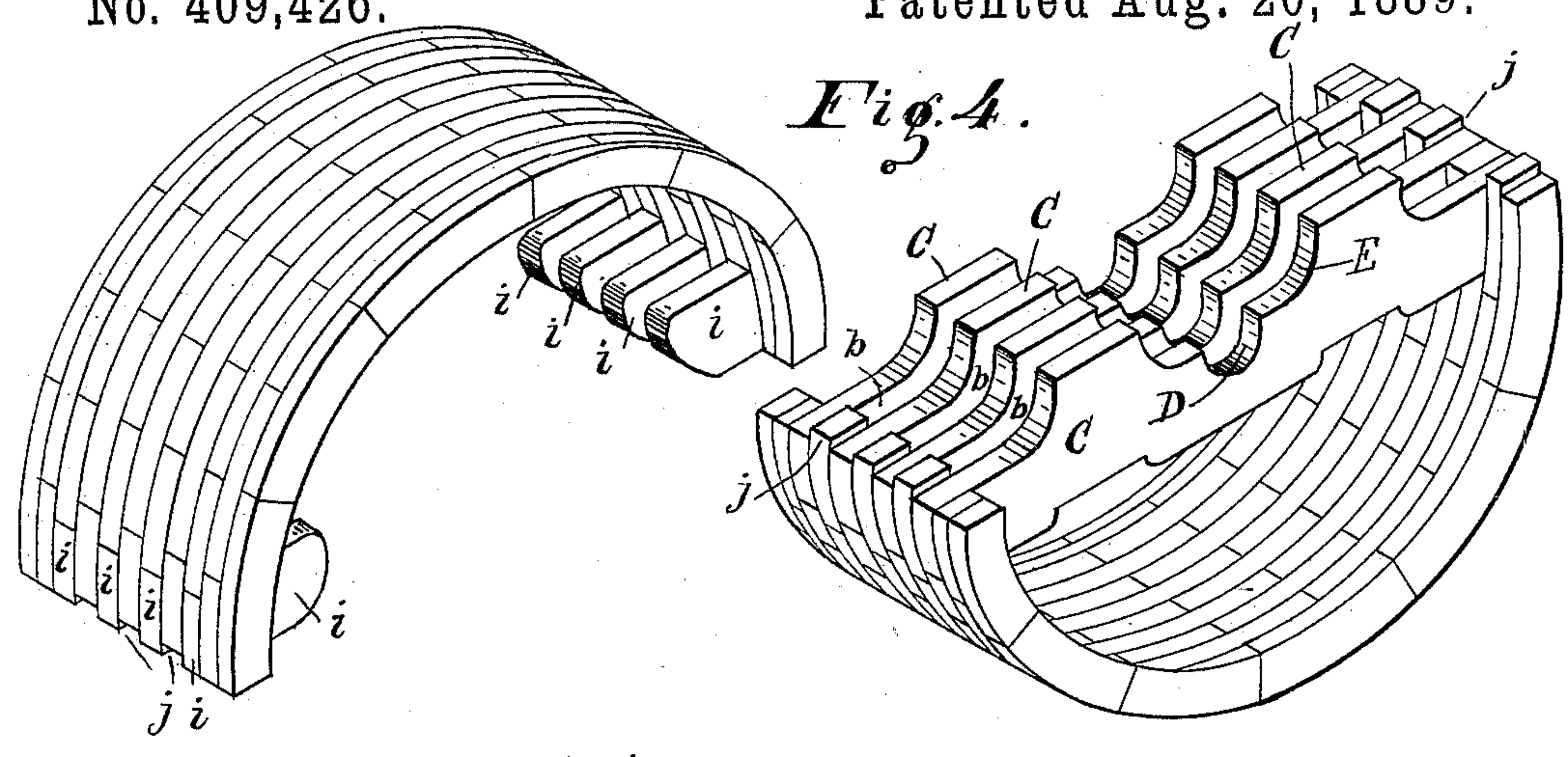


Fig. 4.

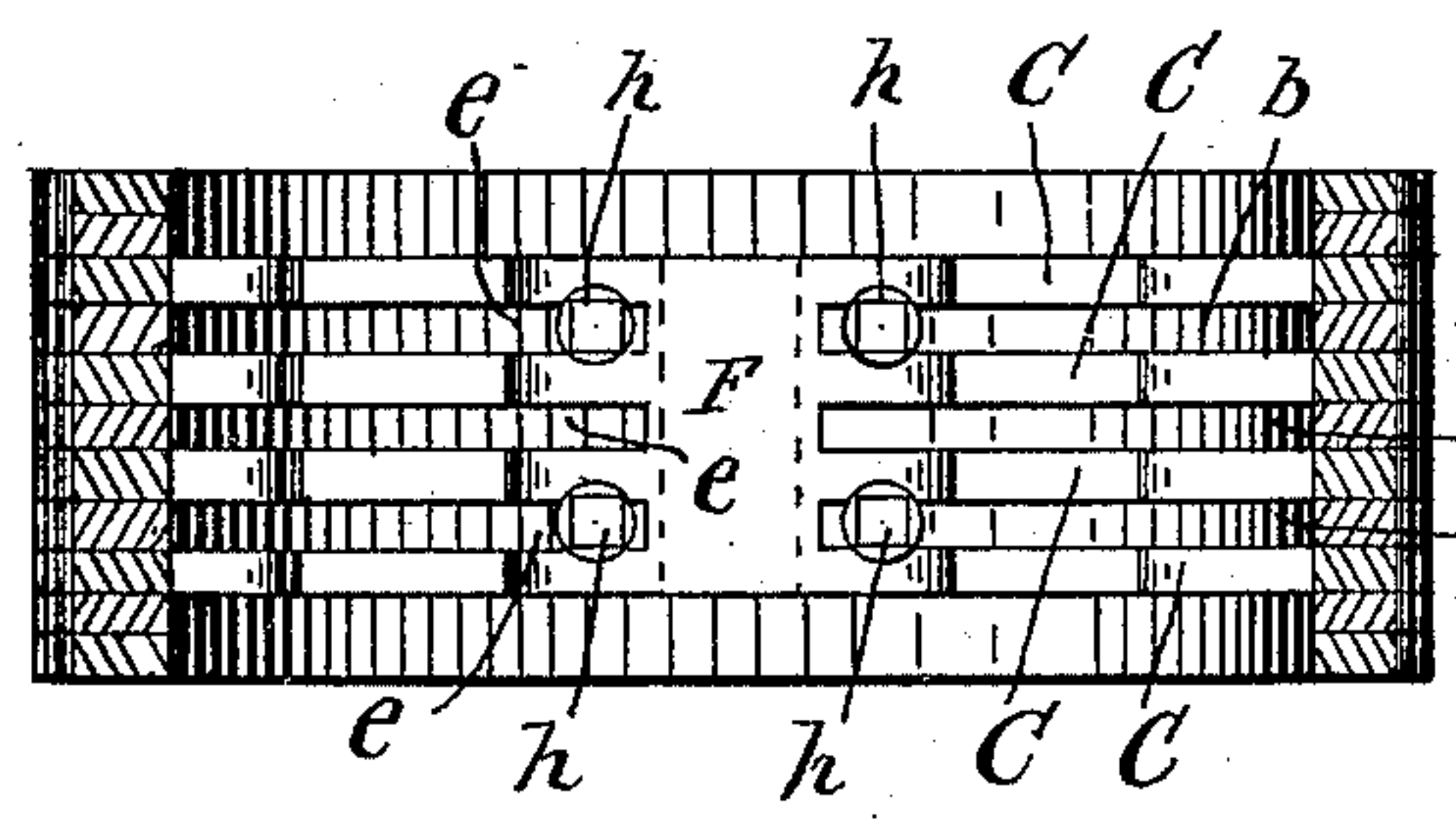


Fig. 2.

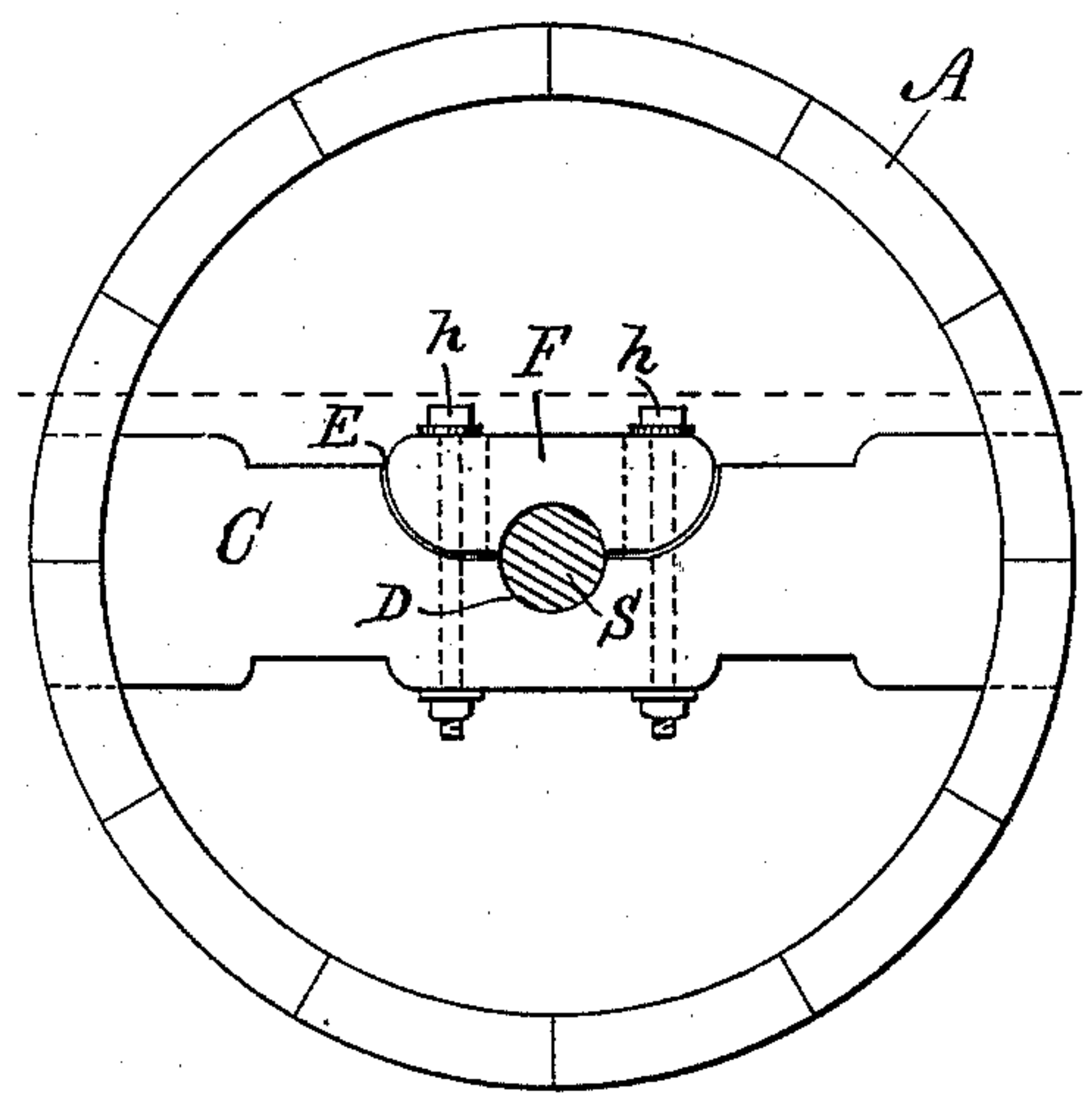


Fig. 1.

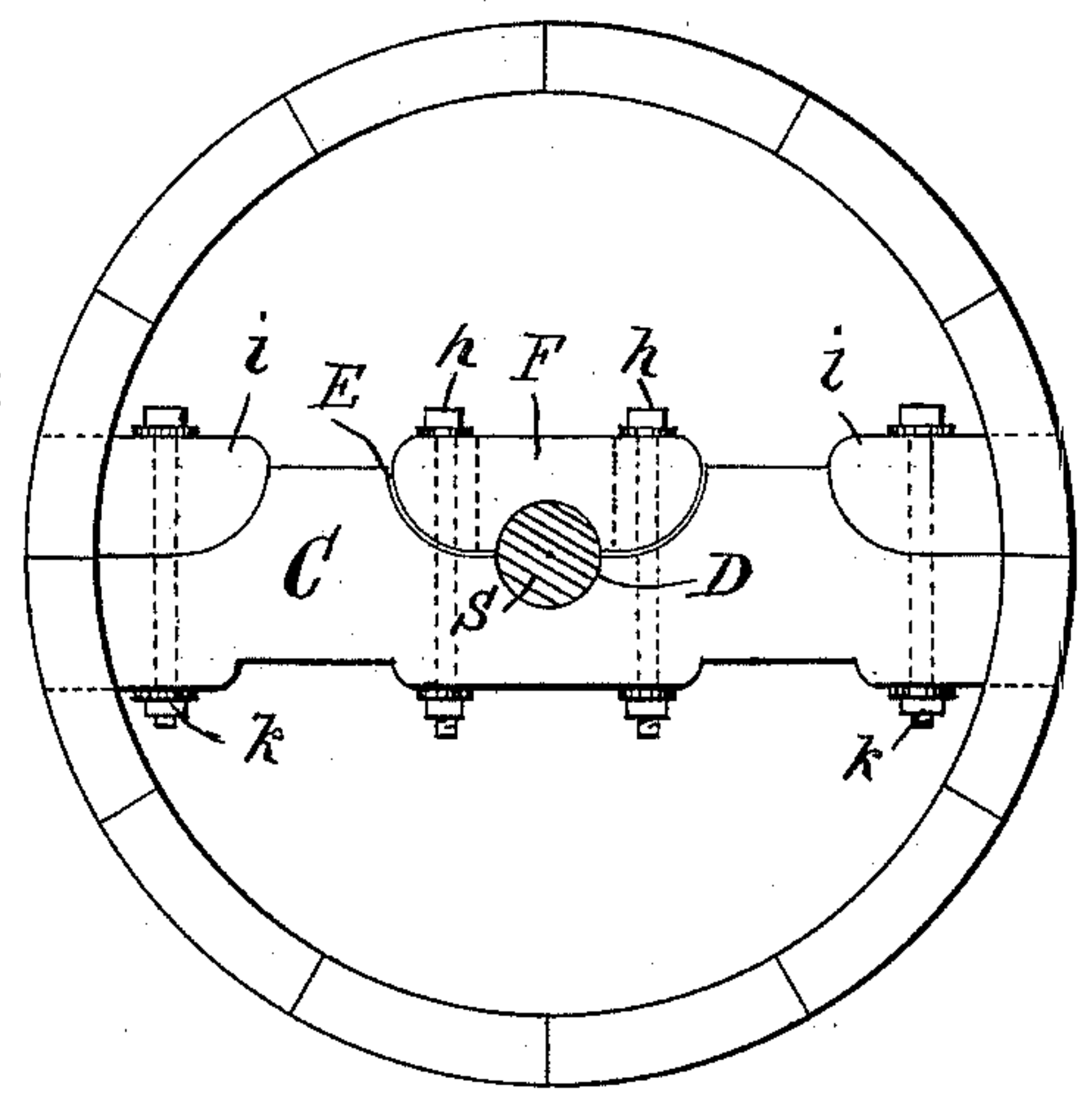


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

MILTON O. REEVES, OF COLUMBUS, INDIANA, ASSIGNOR TO THE REEVES PULLEY COMPANY, OF SAME PLACE.

WOODEN PULLEY.

SPECIFICATION forming part of Letters Patent No. 409,426, dated August 20, 1889.

Application filed May 23, 1889. Serial No. 311,887. (No model.)

To all whom it may concern:

Be it known that I, MILTON O. REEVES, a citizen of the United States, residing at Columbus, in the county of Bartholomew and State of Indiana, have invented a new and useful Improvement in Wooden Pulleys, of which the following is a specification.

My invention relates to an improvement in wooden pulleys.

The objects of my improvement are to provide a wooden pulley having a light rim and a strong diametrical cross-bar adapted to receive a shaft, said rim and cross-bar being so constructed that the other portion of the pulley may be easily and strongly clamped to the shaft when one-half of the rim has been removed, and may be made either whole or separable without material change in its construction, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 represents a side elevation of a whole or non-separable pulley constructed after my improved plan. Fig. 2 represents a section of the same at *a*, Fig. 1. Fig. 3 represents a side elevation of a separable pulley constructed on the same plan. Fig. 4 is a view in perspective showing the two sections of the separable pulley separated.

The rim *A* is built up of a series of annular wooden segments, several thicknesses being secured one upon the other to form the width of face required in the usual well-known manner.

C C C C are a series of thin wide cross-bars of like contour having their ends built into the rim *A* and forming a part thereof in such a manner that there are a series of spaces *b b* parallel with the plane of the pulley between the several cross-bars. A central hole *D*, adapted to receive the shaft *S*, either with or without a bushing, is bored transversely through the combined cross-bars *C*.

A recess *E* is cut in one side of the combined cross-bars, so as to communicate with the central opening *D*, and into this recess a cap *F* is fitted, thus restoring the contour of the cross-bars. The central portion of cap *F* is solid and is grooved transversely on its inner face, so as to correspond with and complete the outline of the central circular hole

D; but the outer ends of the cap are slotted, as at *e*, so as to register with the spaces *b* between the cross-bars, the purpose of such slots being to receive the bolts *h h*, which are arranged in the spaces *b*, and which clamp the cap to the cross-bar, thus securing the pulley to a shaft. By this construction a light and strong compound cross-bar having a long bearing on the shaft is formed, and it becomes necessary to withdraw the bolts when the cap is to be removed, as the nuts are simply loosened and the bolts are then slipped along the spaces *b* out of engagement with the cap.

In making the pulley separable, for convenience in putting it onto shafts on which there are other pulleys, short narrow sections *i i* are cut from the cross-bar *C* at each end on that side in which the recess *E* is cut. Said sections *i* are then replaced in the cross-bars and the ends of the bars are built into the rim, the ends of the segments composing the rim being arranged near the line of separation between the sections and the cross-bars, so as to slightly overlap the joints, so that the rim will separate on a broken line, as at *j*, into two parts, one of said parts having the main portions of the cross-bars and the other part having the sections *i i*, which project inward and form lugs by which the two parts may be secured together by means of bolts *k k*, which are arranged in the spaces *b* between the cross-bars, so as to engage the cross-bars and the lugs and clamp them together.

The rim of the pulley being separable, as above described, into two nearly equal portions, one of which is provided with all the parts necessary for securing it to the shaft, is a feature which is believed to distinguish this from all other separable pulleys, and is of great importance in mounting large pulleys, one portion being first secured to the shaft and the other portion being fastened to the first.

In operation, the shaft being of sufficient diameter to closely fill the central hole *D*, or being provided with the usual well-known split bushing, if of smaller diameter, the pulley is secured to the shaft by clamping the shaft between the cap *F* and the cross-bars *C*.

I claim as my invention—

1. A pulley consisting of a rim, a series of central bars secured to and extending diametrically from side to side of said rim, arranged side by side, and having open spaces
5 between them parallel with the circumferential plane of the pulley, said central bars having a central hole passing transversely through them, and an open recess in one edge communicating with said central hole, a cap fitted
10 in said edge opening, and clamping-bolts passing through said cap and between said bars, whereby said cap and bars may be drawn together and the pulley secured to a shaft, all combined substantially as set forth.

15 2. A pulley having a rim composed of several layers of wooden segments, a series of central bars extending diametrically from side to side of said rim and having their ends built into and forming a part of the rim, said bars
20 having spaces between them parallel with the circumferential plane of the pulley, a central hole passing transversely through said bars, an open recess formed in one edge of the bars and communicating with the central hole, a
25 cap fitted in said edge opening, and clamping-bolts passing through said cap and between said bars, all combined substantially as set forth.

3. In a pulley, the combination of the segmental rim and the series of thin flat bars extending from side to side of the rim, with open spaces between them parallel with the circumferential plane of the pulley, and having their ends secured in the rim and forming
30 therefor a compound diametrical cross-bar, as set forth.

4. In a wooden pulley, the combination, with the compound diametrical cross-bar consisting of a series of flat bars having their
40 ends secured in the rim of the pulley and arranged side by side, with open spaces between them parallel with the circumferential plane of the pulley, and having a central hole

adapted to receive a shaft, of the cap having a solid central portion provided with a groove
45 adapted to co-operate with the hole in the cross-bar to receive a shaft, and provided at its ends with open slots which register with the spaces between the bars of the cross-bar, substantially as and for the purpose set forth. 50

5. In a separable pulley, the combination of a rim consisting of two substantially-equal diametrically-separable sections, means for securing said sections together, a cross-bar connecting the ends of one of said rim-sections, and having a central hole passing transversely through the cross-bar, and a recess in one edge communicating with said central hole, a cap fitted in said recess, and clamping-bolts arranged to draw said cap and cross-
60 bar together, whereby one section of the rim may be first secured to a shaft and the other section of the rim afterward secured to the first, substantially as specified.

6. In a separable pulley, the combination
65 of the rim consisting of two substantially-equal diametrically-separable sections, the compound cross-bar consisting of a series of thin flat bars having their ends secured to one of said rim-sections and arranged side by side,
70 with open spaces between them parallel with the circumferential plane of the pulley, the series of short sections *i i*, secured to and projecting inward from the ends of the other rim-section, said sections *i i* having open
75 spaces between them arranged to register with the open spaces in the cross-bar, and the bolts arranged in said open spaces and adapted to engage the cross-bar and the sections *i* and to clamp the two rim-sections together, all
80 substantially as specified.

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Witnesses:

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