

No. 705,129.

Patented July 22, 1902.

W. E. PENN.

PULLEY.

(Application filed Oct. 19, 1901.)

(No Model.)

Fig. 1.

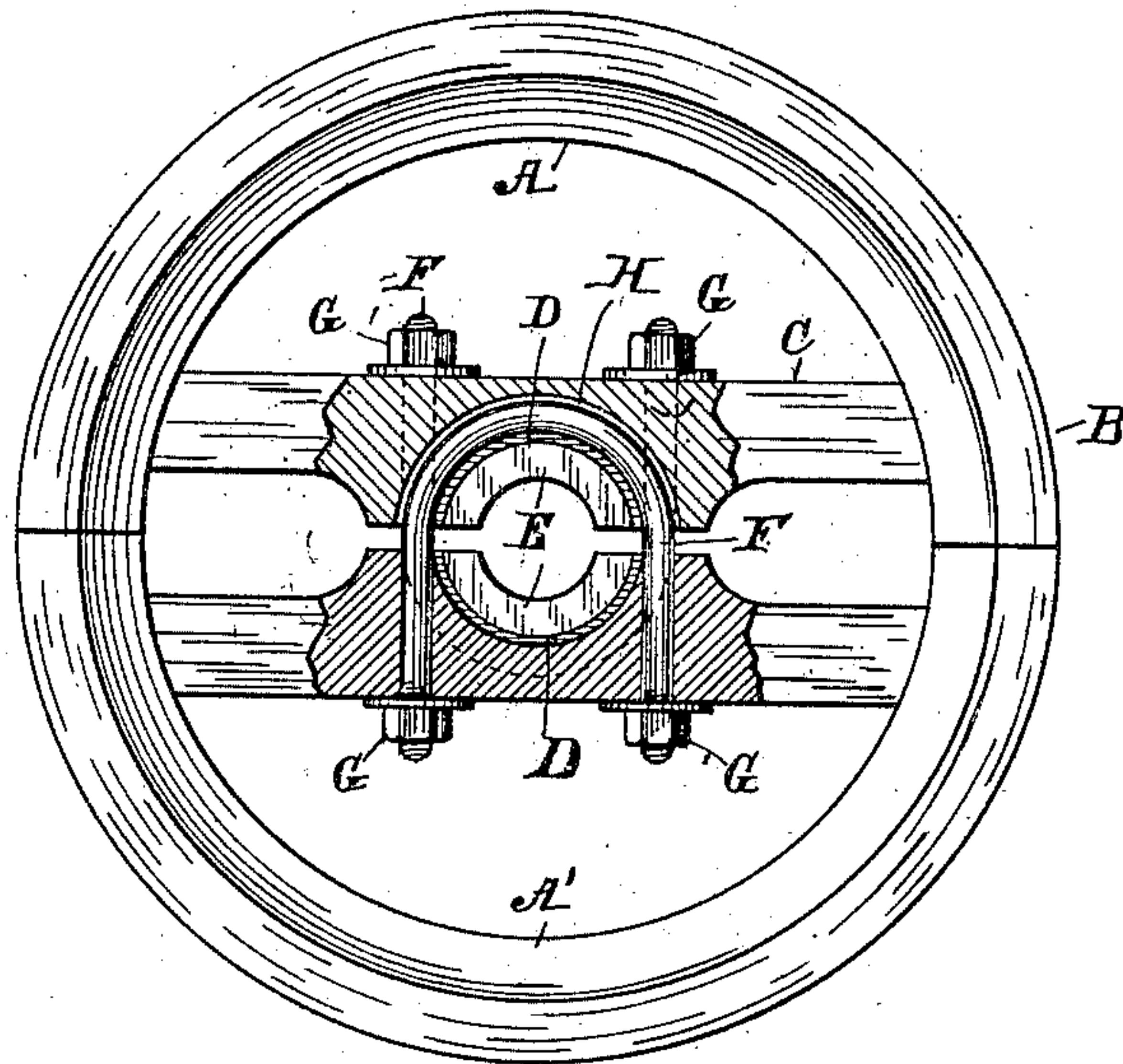


Fig. 2.

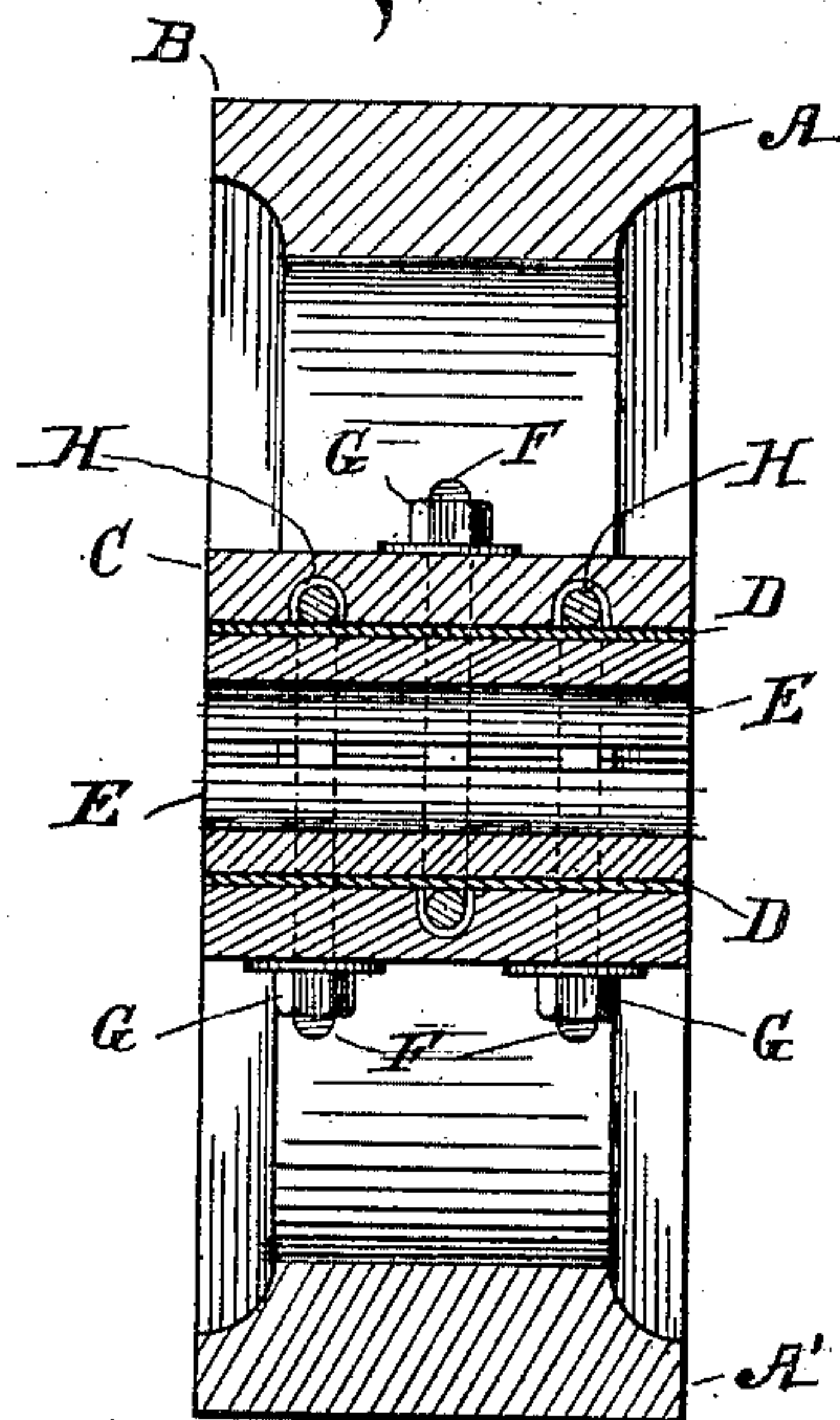


Fig. 3.

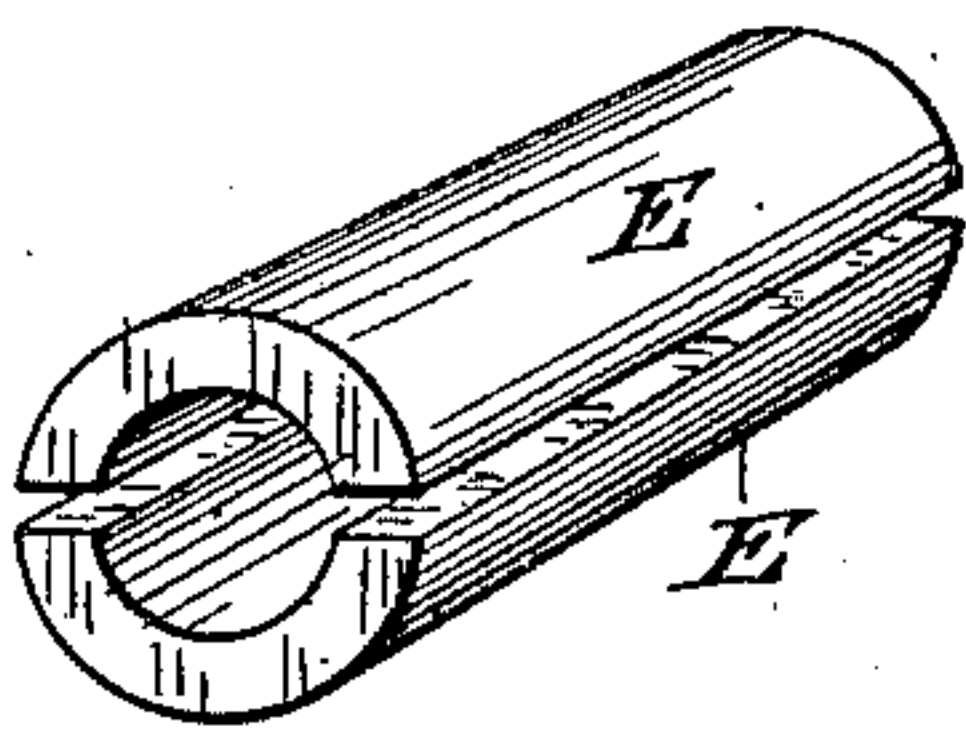
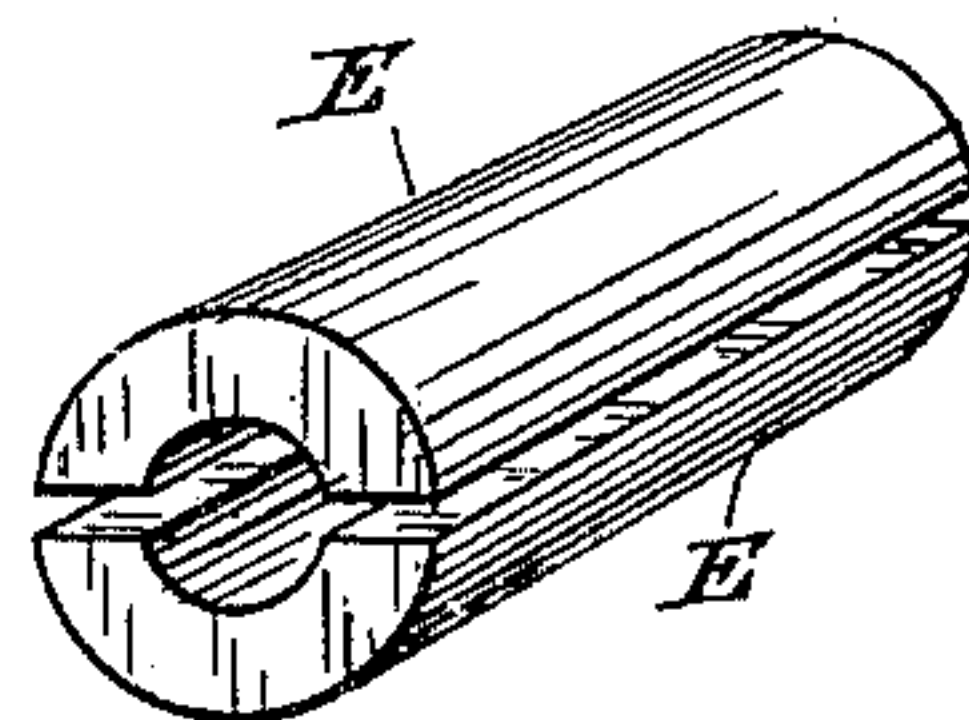


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM E. PENN, OF LAKEMILLS, WISCONSIN, ASSIGNOR TO F. B. FARGO AND COMPANY, OF LAKEMILLS, WISCONSIN, A CORPORATION OF WISCONSIN.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 705,129, dated July 22, 1902.

Application filed October 19, 1901. Serial No. 79,202. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. PENN, residing at Lakemills, in the county of Jefferson and State of Wisconsin, have invented a new and useful Improvement in Pulleys, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The object of my invention is to provide an improved construction adapted for readily and securely fastening pulleys to shafts or arbors.

The invention is especially adapted to be employed with those pulleys that are prepared and sold on the market to be put on a shaft or arbor by a farmer or dairyman at a distance from any accessible machine-shop or where tools are not convenient except such as are ordinarily found with a farmer's outfit.

The invention consists of the devices and their combinations as herein described and claimed or the equivalents thereof.

In the drawings, Figure 1 is an end view of a pulley having my improved construction, parts being broken away to show interior arrangement. Fig. 2 is a transverse section centrally across its two members. Fig. 3 is a detail of a bushing employed in my improved construction. Fig. 4 is a detail of a wood bushing that may be employed with my improved construction, the bushing in Fig. 4 being adapted to be employed with a shaft or arbor of a smaller size than the shaft or arbor with which the bushing shown in Fig. 3 would be used.

My improved pulley is constructed in two semicircular members A A', each consisting of a rim B and a cross-piece C, the cross-piece being secured to the rim at both its ends and near to the two extremities of the semicircular rim. The construction of the cross-pieces and the rim is such that when the two members of the pulley are placed opposite each other in such manner as to make a complete pulley in form and substantially as shown in Fig. 1 the cross-pieces will be opposite and adjacent to each other when the ends of the rim approach very closely to or abut against each other. The two cross-pieces are hollowed out in semicircular form opposite each other about the axis of the pulley, and semi-

cylindrical metal bushings D D are provided, which fit into the longitudinal axial recesses or channels in the cross-pieces C and form metal walls in the cross-pieces about a central axial aperture adapted to receive the shaft or arbor therethrough on which the pulley is to be secured. These semicylindrical metal bushings are prepared of a common and constant size adapted to receive therein, with more or less intervening space, the shaft or arbor. The amount of this space between the shaft or arbor and the interior surface of the metal bushing will of course depend on the size of the shaft or arbor, these varying with the different mechanism with which the pulley is to be used. For use within the semicylindrical metal bushings D D and about the shaft or arbor on which the pulley is to be fixed I provide semicylindrical wood bushings E E, having an exterior surface adapted to fit closely and accurately in the semicylindrical metal bushings D D. The thickness of these wood bushings, and consequently the size or diameter of the interior space inclosed by these wood bushings when they are in position in the pulley and the members of the pulley are clamped together, so as to form a complete pulley, must be such as to fill the entire space between the metal bushings and the shaft or arbor on which the pulley is to be fixed. For this purpose I purpose to provide wood bushings of different thicknesses, and consequently having axial or shaft apertures of varying sizes, so as to adapt them to fill the space between the varying sizes of the shaft and the metal bushings, and thus be adapted to assist properly in holding the pulley securely and properly in place. These bushings are made of wood, because of the yielding character of the material under pressure and because of its capability to adhere firmly to whatever it is pressed against, whereby such a bushing is especially well adapted to securely fasten the pulley to the shaft or arbor.

For clamping the two members of the pulley and their metal and wood bushings securely to a shaft or arbor I provide U-shaped clips F F, advisably made of round steel rod and having screw-threaded ends on which are nuts G G. These clips are so bent as to fit

5 closely on and about the semicylindrical metal bushings D D, and their legs pass in apertures therefor through a cross-piece of one member of the pulley, and the nuts G G are adapted to turn on the legs of the clips against the cross-piece.

10 In use a wood bushing E is placed on a shaft, for which purpose a wood bushing is selected that has a concave groove of the proper size to approximately fit the shaft, and a metal bushing D is then placed on and about the wood bushing, and around this is placed one or more of the clips F, the legs of which are then inserted through the cross-piece of one member of the pulley, placed on the opposite side of the shaft from the bend or yoke of the clip, the proper metal bushing and wood bushing having been previously placed in the cross-piece about the shaft. Thereupon the nuts 15 are turned down against the cross-piece, and thereby the thus-fastened member of the pulley is held securely in place on the shaft. The other member of the pulley is placed in position on the shaft, the legs of a clip around 25 the bushings in the first-secured member being inserted through the cross-piece of this second member and the member being secured in place by turning the nuts down on the legs

of the clip or clips. It will be noted that suitable semi-annular grooves or recesses H H 30 are provided in the concave inner surface of the cross-pieces for the reception therein of the clips F F.

What I claim as my invention is—

A pulley, comprising two semicircular complementary members each composed of a rim, 35 a cross-piece substantially diametrical of the rim and connecting the extremities of the rim the cross-piece having a concave axial recess, a metal semicylindrical bushing of un- 40 varying size fitting into the axial recess of the cross-piece, and a wood semicylindrical bushing fitting into the metal bushing, and also U-shaped clips let into the cross-piece of one member about its metal and wood 45 bushings, the legs of the clips extending through the cross-piece of the complementary member, and nuts on the legs of the clips adapted to turn against the cross-piece of the complementary member. 50

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. PENN.

Witnesses:

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