

J. R. GOLDEN.

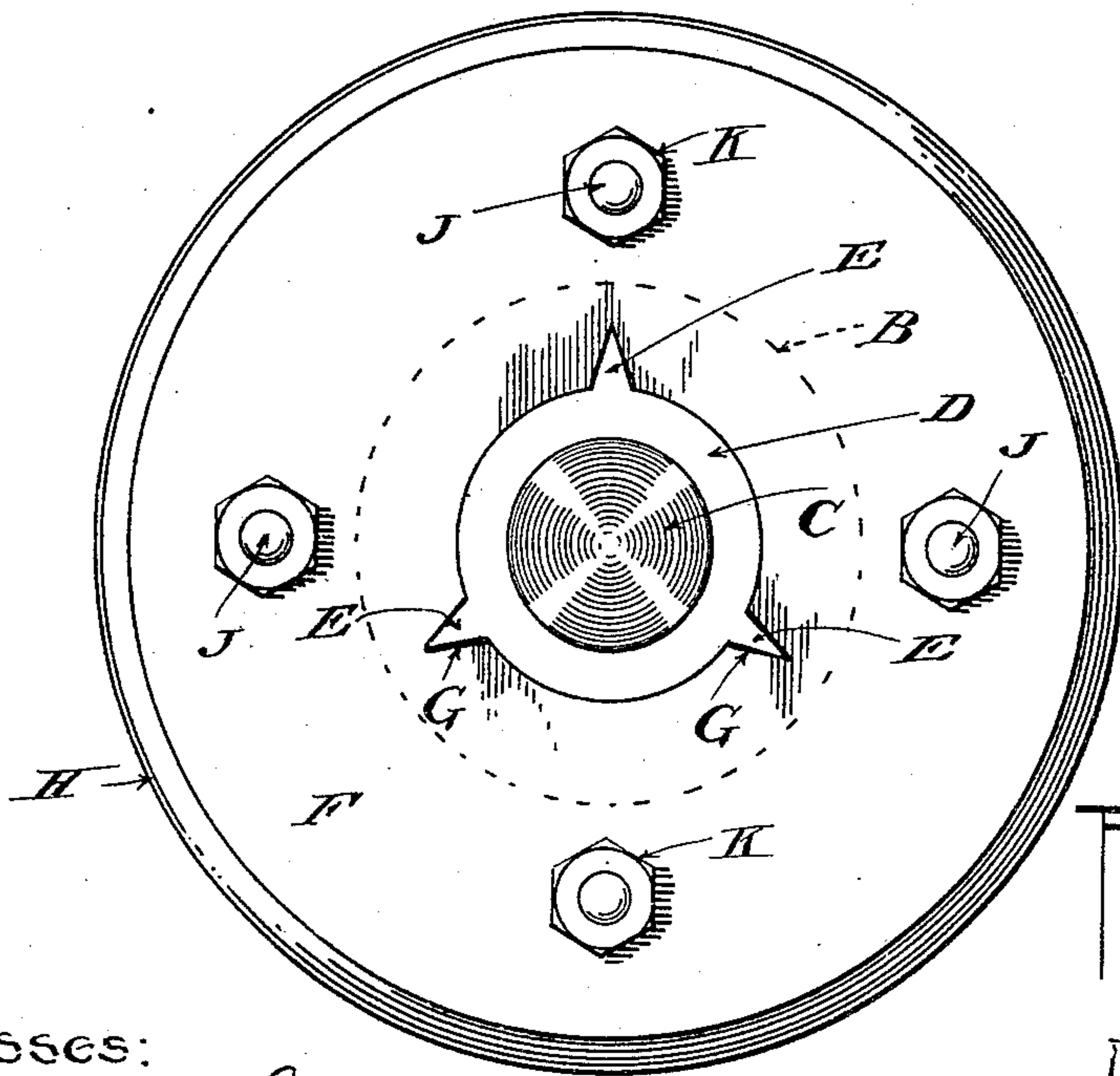
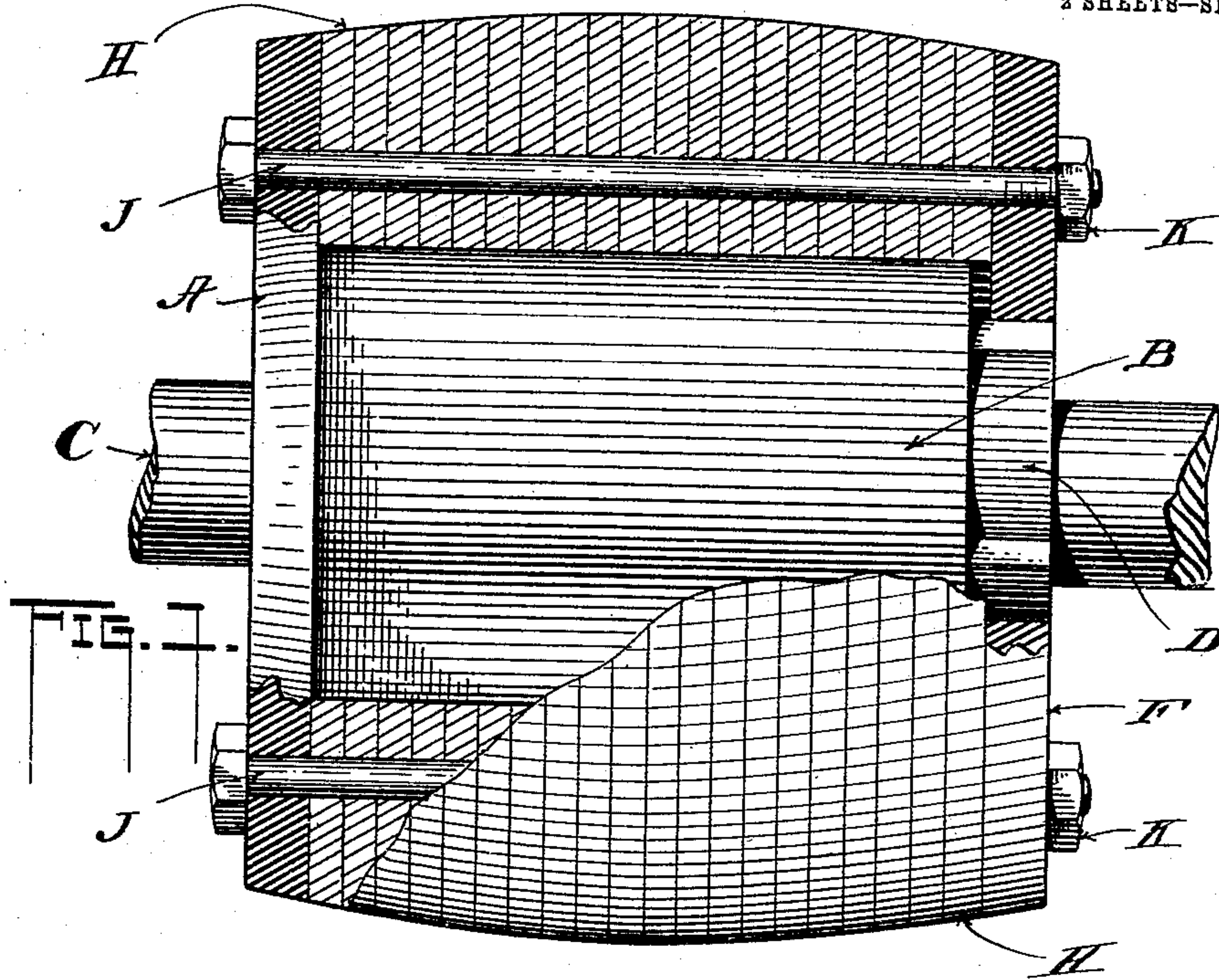
PULLEY.

APPLICATION FILED SEPT. 23, 1907.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 1.

907,781.



Witnesses:

F. O. Cunningham

Inventor,
John R. Golden,
By *L. M. Thurston*
Att'y.

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FIG. 3.

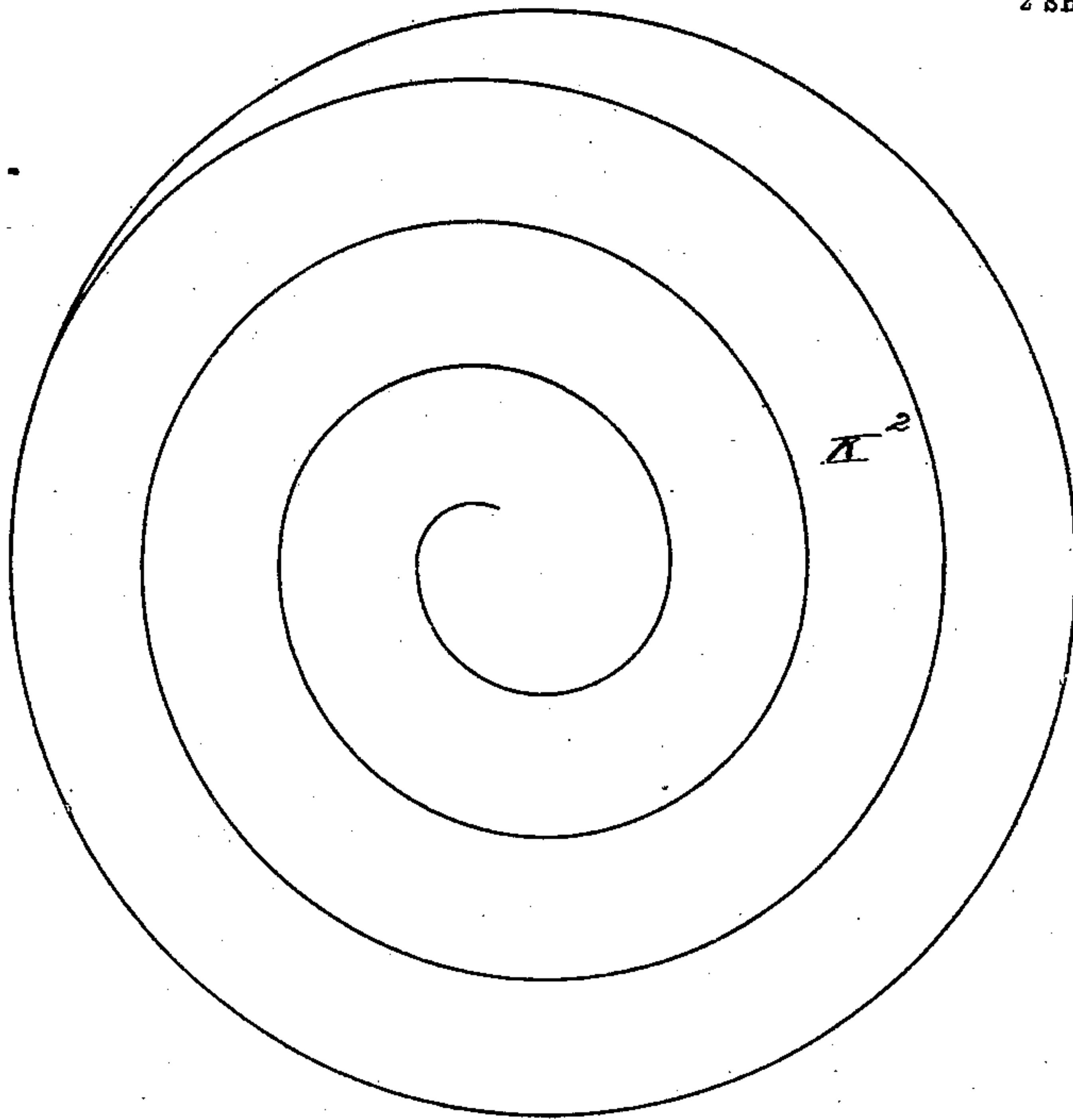
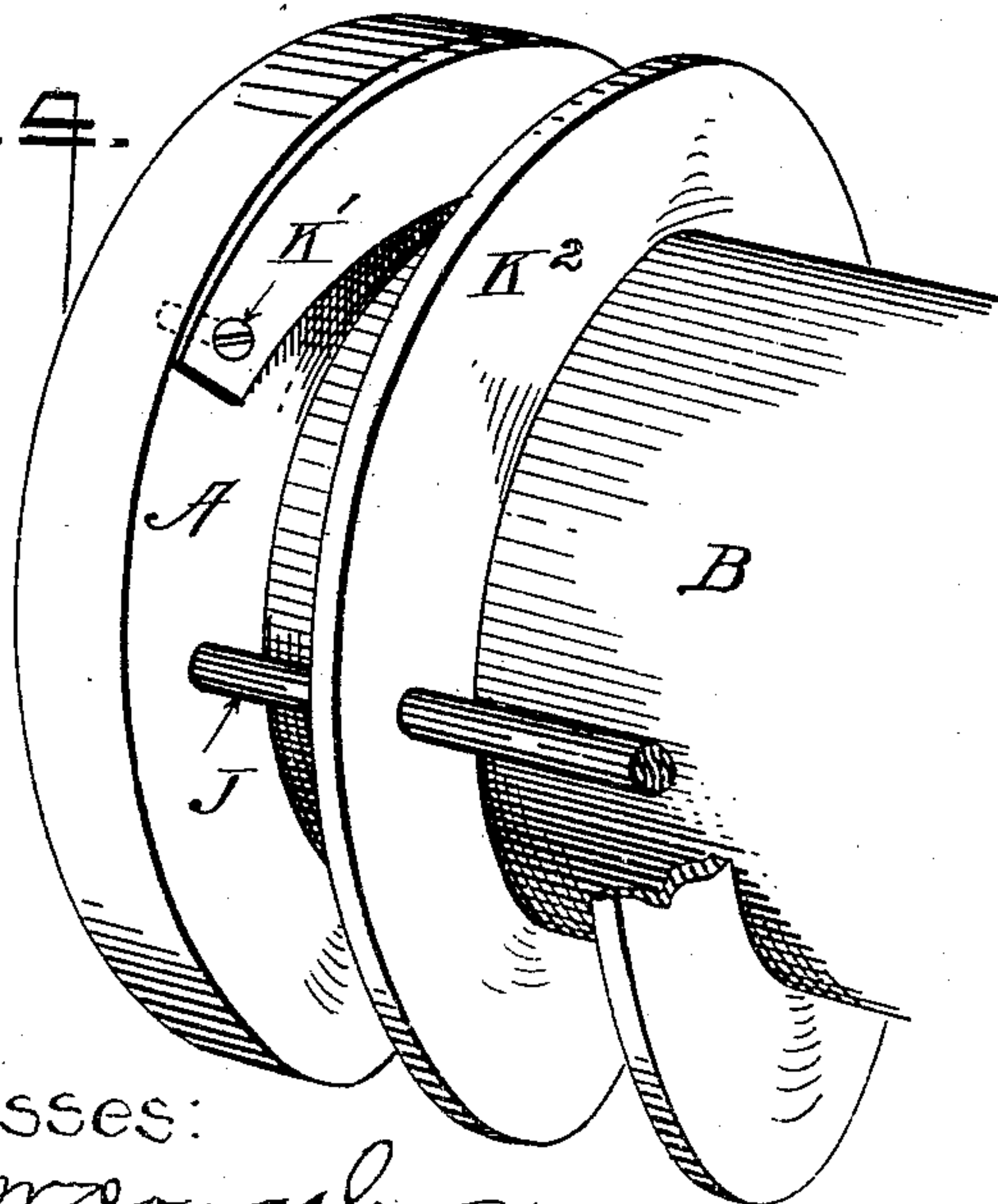


FIG. 4.



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F. O. Cunningham
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Att'y.

UNITED STATES PATENT OFFICE.

JOHN R. GOLDEN, OF MANITO, ILLINOIS.

PULLEY.

No. 907,781.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed September 23, 1907. Serial No. 394,237.

To all whom it may concern:

Be it known that I, JOHN R. GOLDEN, citizen of the United States, residing at Manito, in the county of Mason and State of Illinois, have invented certain new and useful Improvements in Pulleys; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention pertains to improvements in pulleys.

The invention has for its object to provide a pulley having a leather face to form a better grip for the belt.

The invention has for a further object to provide a pulley with a filling of leather which will be practically indestructible.

The invention relates further to a method of making pulleys by the use of leather and the peculiar application of the same to said pulleys.

Heretofore, at least in so far as my knowledge extends, it has been customary as the only other use of leather on pulleys, to wrap the leather upon the face of the pulley and rivet or otherwise attach it thereto. By this method the leather facing lasts but a very short time and must be renewed, therefore, every few days. In view of this I have devised a pulley and method of constructing the same that has been found to give perfect satisfaction in the matter of long life and efficiency in other respects.

To the end that the invention may be understood I have provided the accompanying drawings in which,

Figure 1 is a part longitudinal section of a pulley as I construct it. Fig. 2 is an end elevation of the same. Fig. 3 is a diagram of the manner or method by which the leather is cut for placing upon a pulley. Fig. 4 is a perspective view of a part of the pulley shown in Fig. 1 showing the manner of applying the leather and wrapping it.

A represents a flange of the pulley which is preferably a casting, and which is provided with a hub B as the body. The flange and hub are bored as usual to receive the shaft C to which the pulley may be suitably keyed or otherwise secured.

The end of the hub B is reduced in size as indicated in Figs. 1 and 2 at D and is preferably provided with one or more peripheral lugs or projections E. A flange similar to the flange A is provided and indicated by the

letter F which is bored centrally and provided with recesses G to correspond with and receive the said projections E above described, the said bore in the flange receiving the reduced end D of the hub.

Upon the hub B may be strung a series of leather rings or washers H to entirely fill the space between the flanges after which a series of holes are bored through the pulley parallel to the axis thereof to receive bolts J these passing through the washers and both flanges substantially as shown. Nuts K serve to tighten the bolts and for drawing the flanges up tightly to firmly hold and clamp the leather washers as will be understood. The lugs or projections E and the recesses in the flange F serve to prevent the pulley "racking" or twisting about the shaft due to the pull of the belt as will be understood.

While I have stated that washers of leather may be used as a filling for the pulley it is my preference to wrap the leather in a strip spirally upon the hub B as is indicated in Fig. 4. This is a matter of economy as well as a quite simple method of constructing the pulley and being at the same time all that is desired as regards length of service. In Fig. 3 I have illustrated the manner of cutting a piece of leather. The leather is cut spirally as shown and one end is secured as by means of a screw K', or other good means, to the flange A it being reduced in thickness at that end so that the next convolution will lie smoothly against it and the flange. After the pulley is fully wound the flange F is placed in position and the end of the leather secured thereto also by a screw or other means. The holes for the bolts are then bored and the bolts put in place and firmly held by means of the nuts. It is desirable, of course, to use a piece of leather large enough to produce a length of strip that will reach from end to end of the pulley or entirely fill it although shorter lengths may be used which would of course necessitate the ends being properly joined to complete the needed amount. After having been completed the pulley is then turned off to the proper form and it is ready for use.

It is quite evident that in constructing a pulley as described, by winding the leather tightly upon the hub, the finished pulley is more to be preferred than one using the washers since it is more solid and rigid. In the matter of cheapness, also, the spirally

cut leather is to be preferred, it being evident that much more material would be necessary if washers were cut than by the method described.

5 It is not my purpose to be confined to any stated way of constructing my pulley since it is my desire to protect myself broadly in combining leather, or its equivalent, with a pulley body substantially in the manner
10 described and shown so as to produce a finished pulley that will have long life and be thoroughly efficient.

Having thus described my invention, I claim:

15 1. A belt pulley comprising a substantially cylindrical hub of substantially uniform diameter throughout its length but having a portion at one end reduced in diameter to provide a shoulder, the said reduced
20 portion having projections extending radially therefrom substantially in the manner shown, the said hub having at its opposite end a fixed flange provided with perforations, a series of layers of leather placed upon
25 the hub and themselves provided with perforations to register with those of the flange, a plate having a central opening to fit upon the reduced hub portion, said opening being recessed to receive the projections of said
30 reduced portion and provided with perforations to register with those of leather and the fixed flange, and means extending through the flange, the leather and the plate to clamp the parts firmly together.

35 2. A belt pulley comprising a substantially cylindrical hub of substantially uniform diameter throughout its length but having a portion at one end reduced in diameter to provide a shoulder, the said reduced portion
40 having lugs integral therewith and radiating therefrom, the said hub having at its opposite end a fixed flange provided with perforations, a series of layers of leather placed upon the hub and themselves provided with per-
45 forations to register with those of the flange, a plate having a central opening to fit upon the reduced hub portion and having recesses

therein to receive the radial lugs of the reduced portion of the hub, said plate being provided with perforations to register with 50 those of the leather and the flange, and clamping bolts extending through the flange, the leather and the plate and provided with nuts to clamp the parts firmly together.

3. A belt pulley comprising a substan- 55 tially cylindrical hub of substantially uniform diameter throughout, and having a flange at one end, integral therewith, the hub being reduced in diameter at its other end, and having radial lugs extending therefrom, 60 a plate having an opening adapted to fit upon the reduced portion of the hub and having recesses to receive the lugs, and a winding of leather for the hub for filling the space between the plate and the flange, the layers of 65 the leather lying perpendicular to the axis of the pulley, and a series of bolts extending through the flange, the layers of leather and the plate for securing the whole firmly together. 70

4. A belt pulley comprising a substantially cylindrical hub of substantially a uniform diameter throughout its length and having an extension at one end reduced in diameter to provide a shoulder, there being 75 radiating projections on said reduced portion, a plate provided with a bore to fit said reduced portion and provided also with recesses to receive the projections of said reduced portion, said hub having a flange 80 formed integral therewith at the opposite end thereof, a spirally wound leather strip encircling the hub and filling the space between the flanges and plate, its terminals being beveled to lie flat against the plate and 85 flange, and a series of bolts extending through the flange, the plate and the leather substantially as set forth.

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

JOHN R. GOLDEN.

Witnesses:

E. J. ABERSOL,
L. M. THURLOW.