

(No Model.)

W. R. FEE.
BELT REST.

No. 426,638.

Patented Apr. 29, 1890.

FIG. 1.

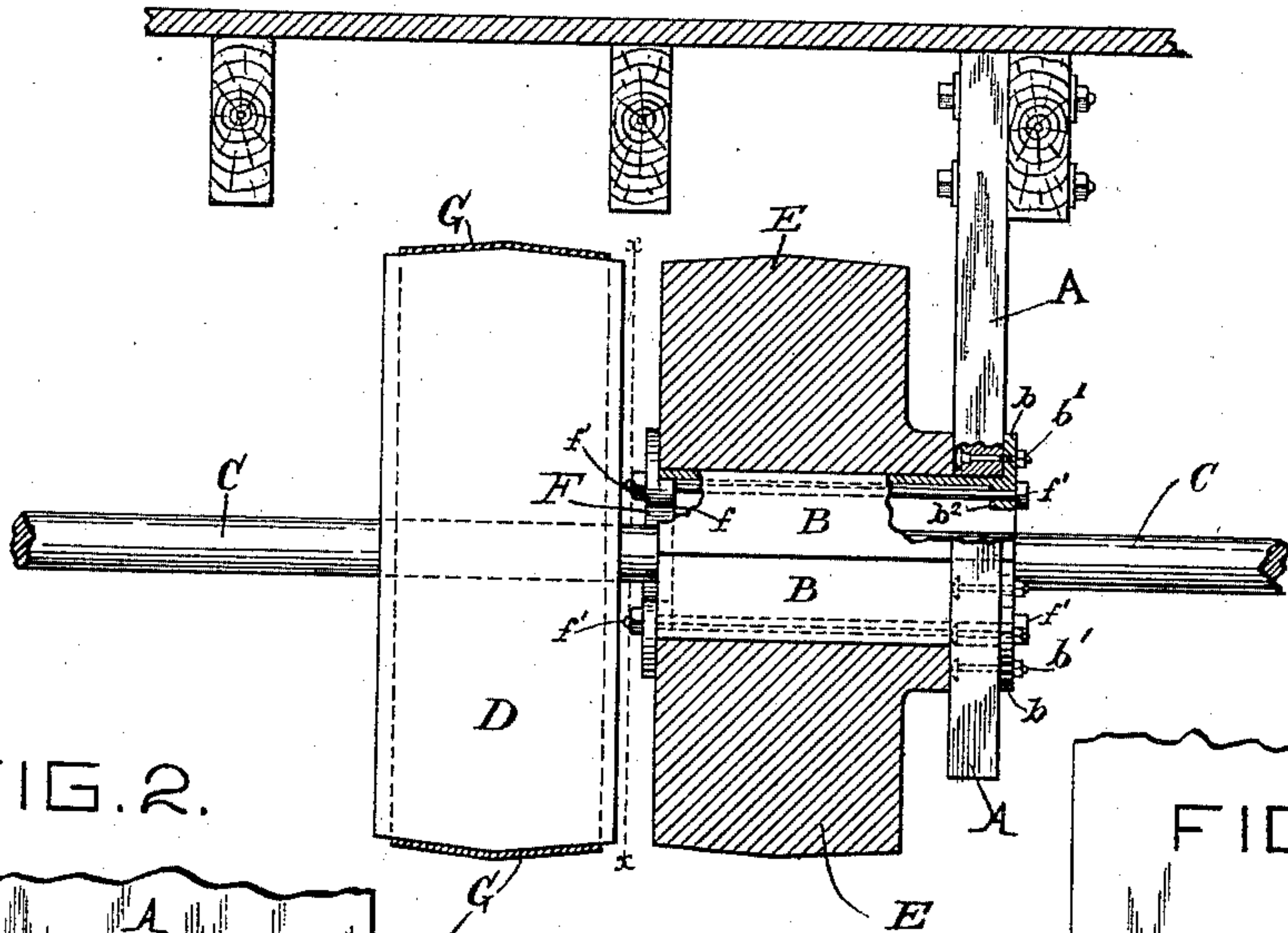


FIG. 2.

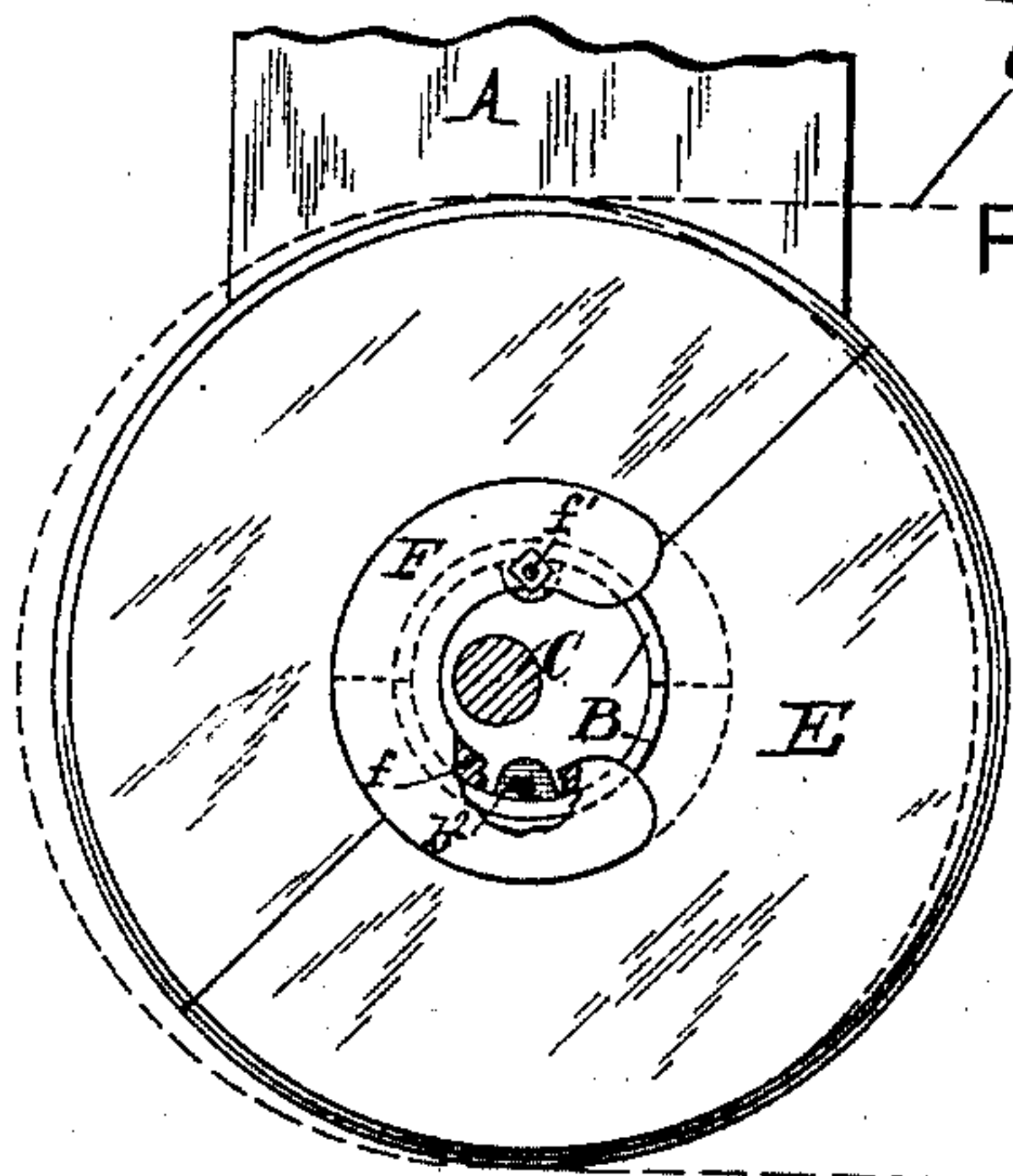


FIG. 4.

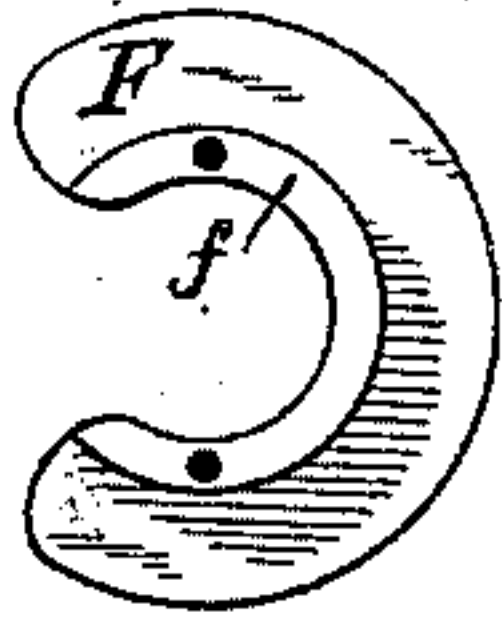


FIG. 3.

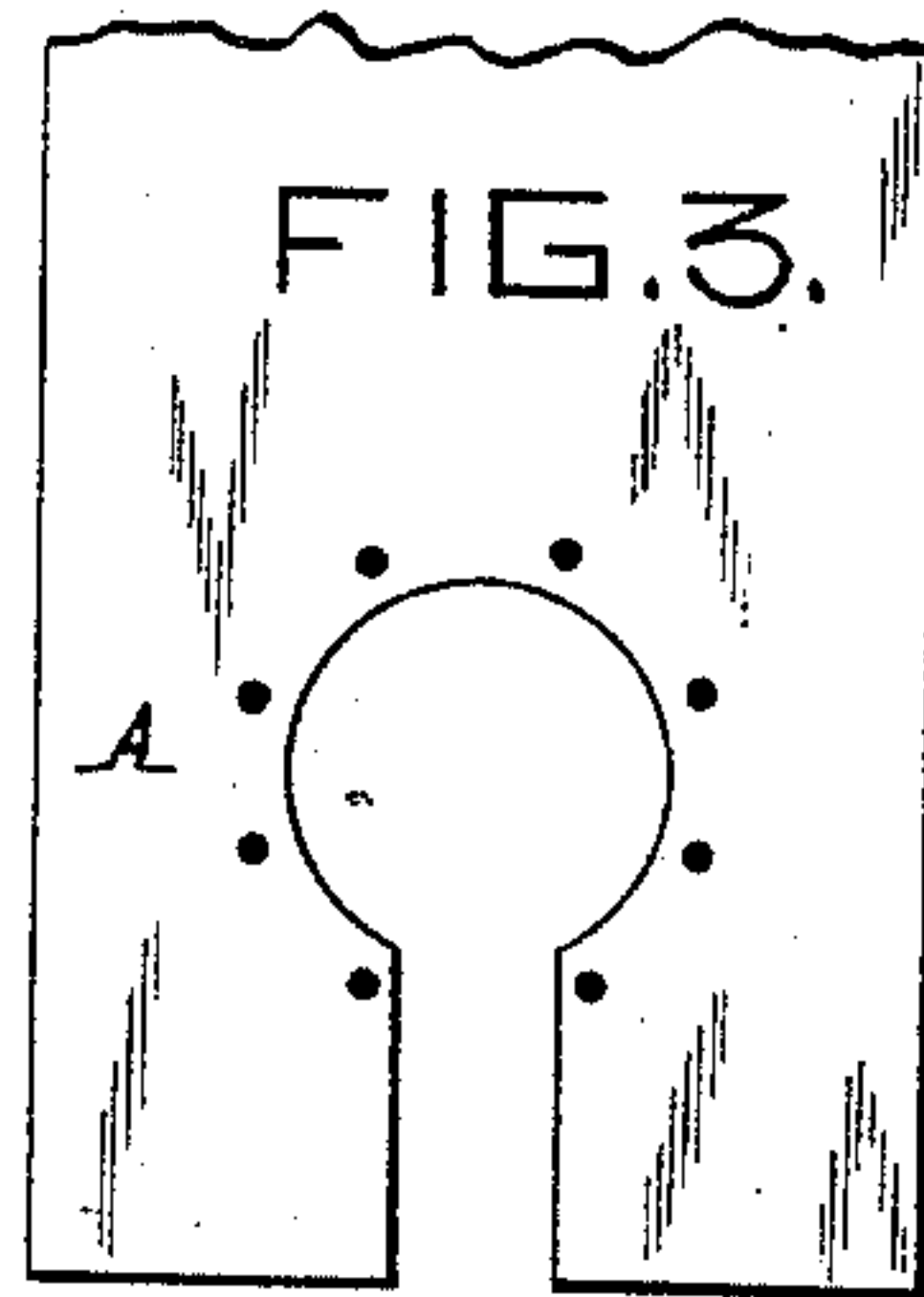


FIG. 5.

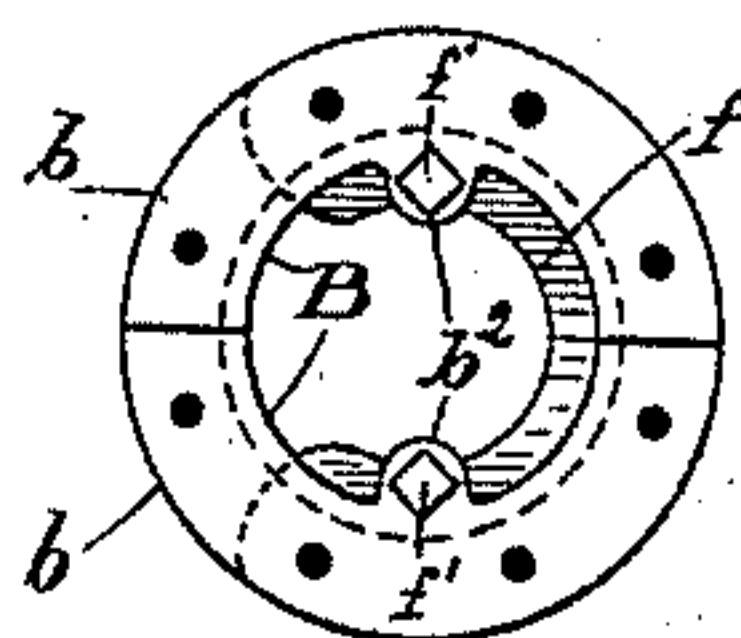
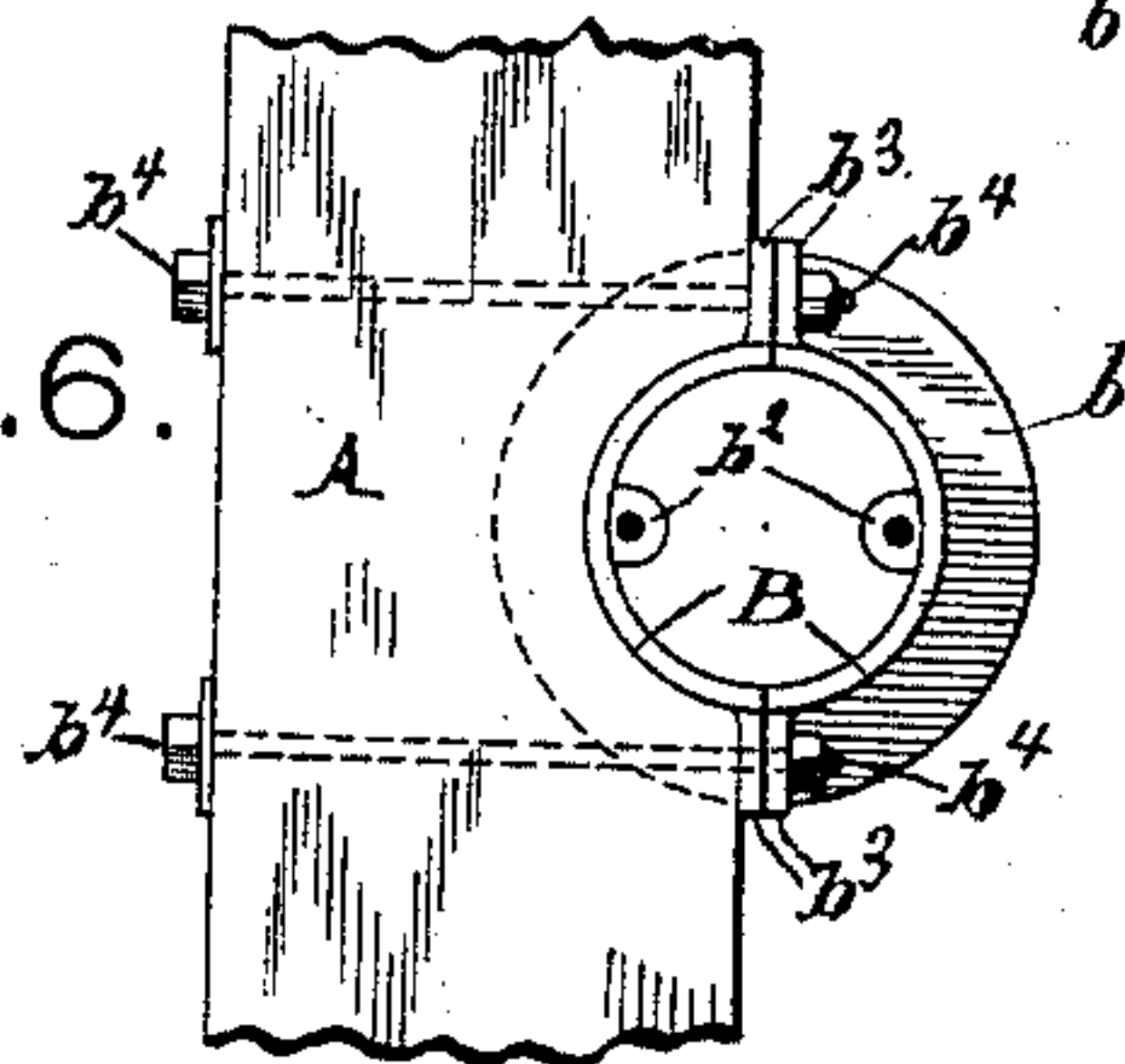


FIG. 6.



Witnesses

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WILLIAM R. FEE, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO
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BELT-REST.

SPECIFICATION forming part of Letters Patent No. 426,638, dated April 29, 1890.

Application filed December 20, 1889. Serial No. 334,419. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. FEE, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Belt-Rests, of which the following is a specification.

The object of my invention is to provide a cheap durable belt-rest which may be readily mounted alongside of any pulley and adjusted to the position of the belt without interfering with the shaft.

The invention consists in the novel construction, arrangements, and combination of the parts, which will be hereinafter fully described, and then particularly referred to and pointed out in the claims.

Referring to the accompanying drawings, in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a view, partly in elevation and partly in diametrical section, of my improved belt-rest mounted for use. Fig. 2 is an end elevation of the same, the view being taken through line *x x* of Fig. 1. Fig. 3 is a side elevation of the hanger. Fig. 4 is an inside elevation of the loose head for one end of the spool or sleeve upon which the loose pulley or rest is journaled. Fig. 5 is an end elevation of the sleeve or spool. Fig. 6 is a detail view of a modification.

The hanger A, which supports the belt-rest, is preferably a piece of hard wood, and is securely bolted to the timbers of the building or any fixed support. It is perforated to receive the semi-cylindrical shells B B and slotted from one edge into the perforation, so as to pass the shaft C, upon which is secured the driving-pulley D.

The semi-cylindrical shells B B have outwardly-projecting flanges *b b* at one end, which, when the two half-tubes are put together and pushed through the opening in hanger A, bear against the outer face of said hanger.

The hanger A and flanges *b* are perforated to receive tightening-bolts *b'*, by which the tubular sleeve formed by the half-cylinders B B is firmly secured in place.

The loose pulley E, which is preferably a

wooden split pulley, or one having a removable part to enable it to be placed when the shaft is in position, is bored out to fit upon the sleeve B B, (the sleeve serving as its journal,) and is held in place by the segmental or crescent-shaped head F, Fig. 4. This head has an inwardly-projecting shoulder *f*, which enters the end of the sleeve B B. This head F is firmly clamped against the ends of the tubular bearing B B by bolts *f'*, which pass through inwardly-projecting perforated lugs *b²*, and through perforations in the segmental ring or shoulder *f*. The loose pulley E, being thus journaled upon the tube B B between the hanger A and head F, is held against endwise play, while permitted to revolve freely upon its tubular bearing when the belt is being thrown on or off.

The pulley E is of about the same diameter as the fixed pulley D, but its bearing is arranged eccentric to the line-shaft C, so that the belt is slackened when thrown onto the loose pulley. By this arrangement the peripheries of the loose and fixed pulleys are in substantially the same plane at the points where the belt G takes up and parts contact with the pulleys D E when shifted from one to the other. In other words, the straight portions of the belt upon opposite sides are tangential to the peripheries of both pulleys. It will thus be seen that the belt may be thrown from one pulley to the other by the ordinary shifter-lever as easily as it can be upon the ordinary loose pulley concentric with and of the same diameter as the fixed pulley. The wear upon the belt and "threshing" in shifting from one pulley to the other, which occurs in belt-rests when the loose pulley is of less diameter than the fixed pulley, or when the periphery of the loose pulley is not concentric with its bearing, is avoided.

As shown in Fig. 2, the belt G runs in horizontal planes and the tubular bearing of the loose pulley is set or shifted eccentrically to the line-shaft C and parallel to the run of the belt—that is, the shaft C is nearer to that portion of the line-shaft which is opposite to the driven shaft. (Not shown.) If the belt G were arranged vertically to drive a lower shaft, the line-shaft should be nearer to the top of

the sleeve B B, instead of to one side of it, as shown.

In the modification shown in Fig. 6 the sleeve is secured to one edge of the hanger A.

- 5 This arrangement would be more convenient should the line-shaft run parallel with the joists of the building, instead of crosswise, as shown. In this case the flanges b have outwardly-projecting lugs b^3 , through which
10 the fastening-bolts b' pass. The hanger A may represent a post or any fixed part of the building.

I claim—

1. In combination with the line-shaft and
15 fixed pulley, a tubular sleeve surrounding said shaft and arranged eccentrically thereto, a fixed support for said sleeve, and a loose pulley mounted upon said sleeve in such manner that the peripheries of said fixed pulley and
20 loose pulley coincide at the points where the belt takes up contact with said pulleys, substantially as shown and described.

2. The combination, in a belt-rest, of the line-shaft, the pulley D, fixed thereon, the
25 hanger A, secured to a fixed support, the sleeve B B, secured in said hanger, surrounding the line-shaft and eccentric to it, and the loose

pulley E, of the same diameter as the fixed pulley, mounted to revolve upon said sleeve alongside of the fixed pulley, substantially as hereinbefore set forth.

3. In a belt-rest, the combination, substantially as hereinbefore set forth, of the hanger A, perforated and slotted from one edge to the perforation, the two-part sleeve B B, adapted
35 to fit the perforation in the hanger and having flanges b to secure the sleeve to the hanger, the loose pulley mounted to revolve upon said sleeve, the crescent-shaped cap F f , and bolts
40 f' , to secure said cap upon the end of the sleeve and keep the loose pulley in place.

4. The combination of the semi-cylindrical shells B B, having outwardly-projecting
45 flanges b and inwardly-projecting lugs b^2 , the crescent-shaped cap F, having flange or ring f , and the bolts f' , for securing the parts together, the whole forming a journal for a loose pulley and adapted to be secured to a fixed support around a line-shaft, substantially as hereinbefore set forth.

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