(No Model.)

A. J. BRILL.

WHEEL FOR TRANSMITTING POWER.

No. 251,024. Patented Dec. 20, 1881.

Fig. 3.

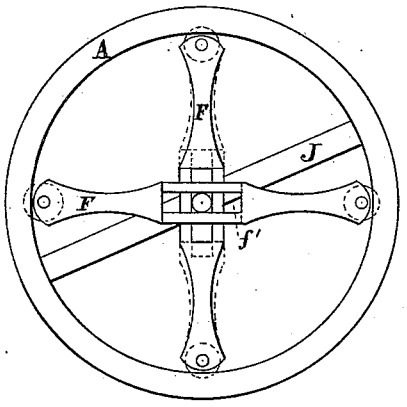


Fig. 1.

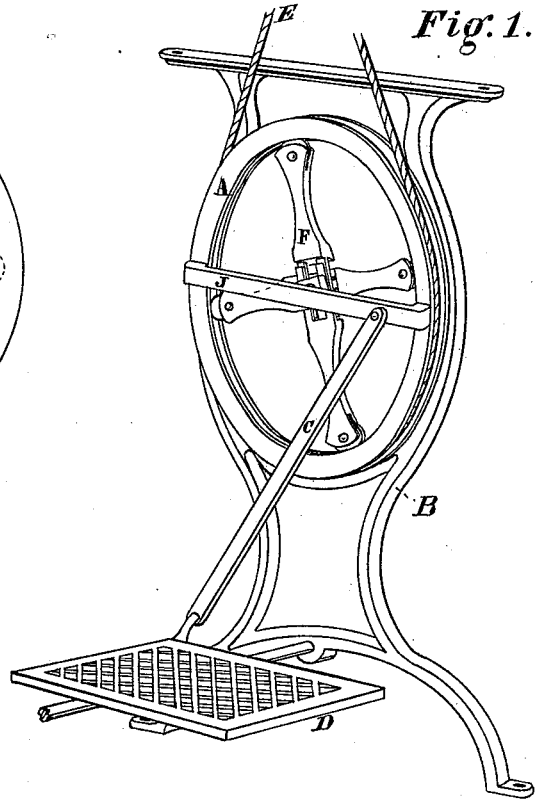


Fig. 5.

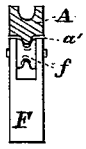


Fig. 2.

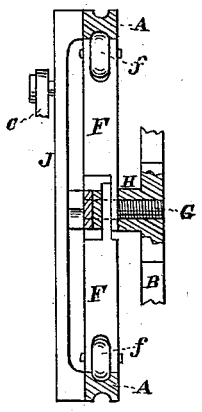
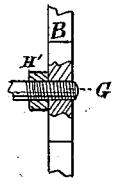


Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

ANDREW J. BRILL, OF CINCINNATI, OHIO.

WHEEL FOR TRANSMITTING POWER.

SPECIFICATION forming part of Letters Patent No. 251,024, dated December 20, 1881.

Application filed May 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. BRILL, of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Wheels for Transmitting Power, of which the following is a specification.

My invention relates to that class of wheels whose shafts have but one journal-bearing; and the object of my improvements is to provide against the shaking or lateral motion—that is, a motion at an angle to the plane of revolution—which eventually results from the wear of the journal and shaft, my improvements being of such a nature as to prevent the occurrence of said shaking or lateral motion.

Figure 1 is a perspective view of my invention, showing it in position for operation. Fig. 2 is a sectional elevation. Fig. 3 is a front elevation. Fig. 4 is a sectional elevation of the modified mode of attachment to the leg. Fig. 5 is a sectional elevation of a modification of the invention.

Similar parts are designated by similar letters.

A is the wheel, or my invention proper, preferably a grooved pulley, as shown in Fig. 1, attached to the side leg, B, of a sewing-machine or lathe, power being preferably transmitted by the pitman C and treadle D, constructed in the usual manner, the belt E carrying the motion or power to the working mechanism.

The wheel A consists simply of a ring or rim, made of any desired size, its periphery being either smooth, grooved, or provided with teeth or other devices for transmitting the power imparted to the wheel. The inner edge of this ring or rim has a groove, *a*, of a sufficient depth to permit the rim A to fit closely and snugly around the outer ends of the stationary spokes F F, which are rigidly secured to the side leg, B, in a manner hereinafter described. This inner groove, *a*, may be formed in the rim, or be formed by bolting flanges to the sides of the rim, and in the latter event both the exterior and interior grooves may be formed by means of such flanges. The outer ends of these spokes F are either slightly rounded, or, as shown in the drawings, they may be provided with the friction-rollers *f f*, or the spokes may be dispensed with, and a solid piece, or other equivalent device, be used instead, either with or without the friction-rollers *f*. The use of such rollers is preferable.

The groove *a* may be placed in the fixed portion represented by the spokes when no rollers *f* are employed, the rim A being provided with an annular tongue, *a'*, or rollers fitting into said groove, and when roller *f* is located in the end of the spokes, as hereinbefore mentioned, the tongue *a'* will fit therein. The rim A will thus in either case be kept in place while rotated. The spokes, or their equivalent device, are rigidly fastened to leg B by the bolt G, passing through the center or intersection of the spokes into the lug H upon the leg B. There not being, as a rule, any lug or equivalent on the leg of an old machine, it becomes necessary, in order to give a sufficient depth of bearing to the bolt G, to introduce the washer H' between the side of the wheel and the leg, as shown in Fig. 4.

Suitable means of taking up the wear, either in the inner groove, *a*, of the rim A or the ends of the spokes F, or friction-rollers *f*, are preferably provided. A desirable mode of taking up said wear is as follows: The spokes F are formed at their inner ends with slots *f'*, corresponding in width to the diameter of the bolt G, and of a sufficient length to allow for any amount of wear, the spokes being made of sufficient length to allow for any extension outward, and at the same time to leave sufficient material on each side of the bolt G. Each spoke is preferably cut away at the point where the slot *f'* begins sufficiently to allow the slotted end of its diametrically-opposite spoke to lie either under or above its own slotted end, and the slotted ends of each pair of spokes diametrically opposite are also still further cut away, so that the slotted ends of the pair crossing them lie either under or above their own slotted ends, as will be more fully understood by reference to Figs. 2 and 3.

When it is desired to adjust any of the spokes the bolt G is loosened, the spoke moved in or out as far as desired, and the bolt again tightened.

As a means of connecting the pitman C to the rim A, and thereby imparting motion, a yoke, J, in the present instance arched to avoid contact with the head of the bolt G, is pro-

vided, passing from one side of the rim A to a point diametrically opposite on the other side, and securely fastened to said rim, the yoke being raised sufficiently to enable it to clear the head of the bolt G, and the pitman C being connected to the yoke J at any suitable point and in any approved manner. The yoke J also serves to strengthen the rim A, and for this purpose more than one may be used, if necessary. The spokes, or their equivalent, being fastened rigidly to the side or leg B, and power being transmitted to the rim A, it revolves freely around the periphery of the stationary device, being kept in place by the inner groove, *a*, the bolt G firmly holding the spokes, or their equivalent, and preventing any lateral or shifting motion.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. The pulley-rim A, so constructed as to be retained upon and revolve around a fixed frame, substantially as herein described.

2. The combination of the rim A and spokes F, or equivalent device, constructed and operated as described.

3. The spokes F, rim A, and friction-rollers *f*, constructed and operating as herein set forth.

4. The slotted spokes F, rim A, and bolt G, as herein described, and for the purposes specified.

5. The rim A, in combination with the yoke J, or equivalent, constructed and operated as herein described.

6. The pulley-rim A, provided with groove *a*, so constructed as to be retained upon and revolve around a fixed frame, substantially as herein described.

7. The combination of the rim A, provided with groove *a*, and spokes F, or equivalent device, constructed and operated as described.

8. The spokes F, rim A, provided with groove *a*, and friction-rollers *f*, constructed and operating as herein set forth.

9. The slotted spokes F, rim A, provided with groove *a*, and bolt G, as herein described, and for the purposes specified.

10. The rim A, provided with groove *a*, in combination with the yoke J, or equivalent, constructed and operated as herein described.

11. The pulley-rim A, so constructed as to be retained upon and revolve around a fixed frame capable of adjustment toward and from the said rim, substantially as and for the purposes specified.

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