

(No Model.)

S. RITTY.
WHEEL.

No. 407,613.

Patented July 23, 1889.

Fig. 1.

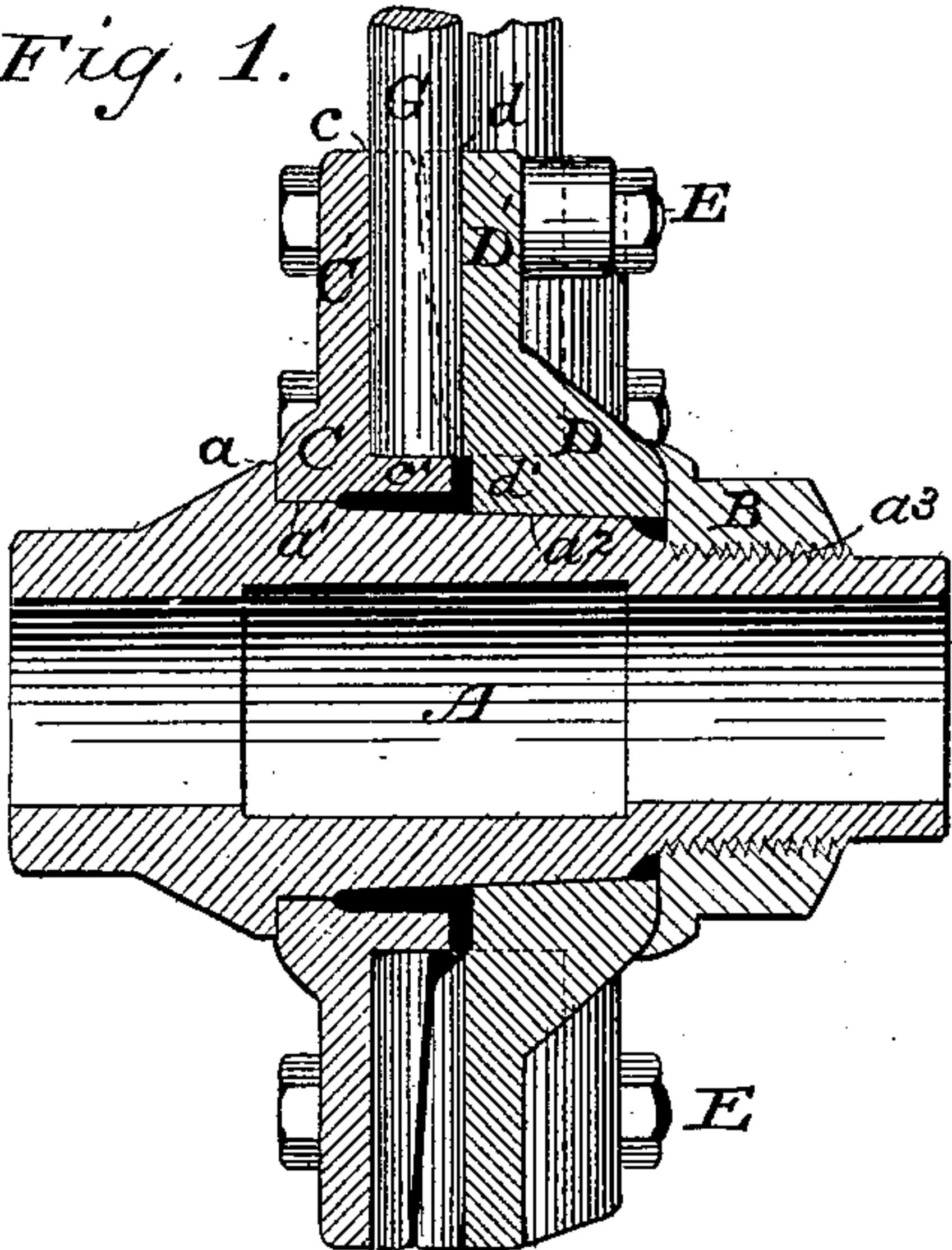


Fig. 2.

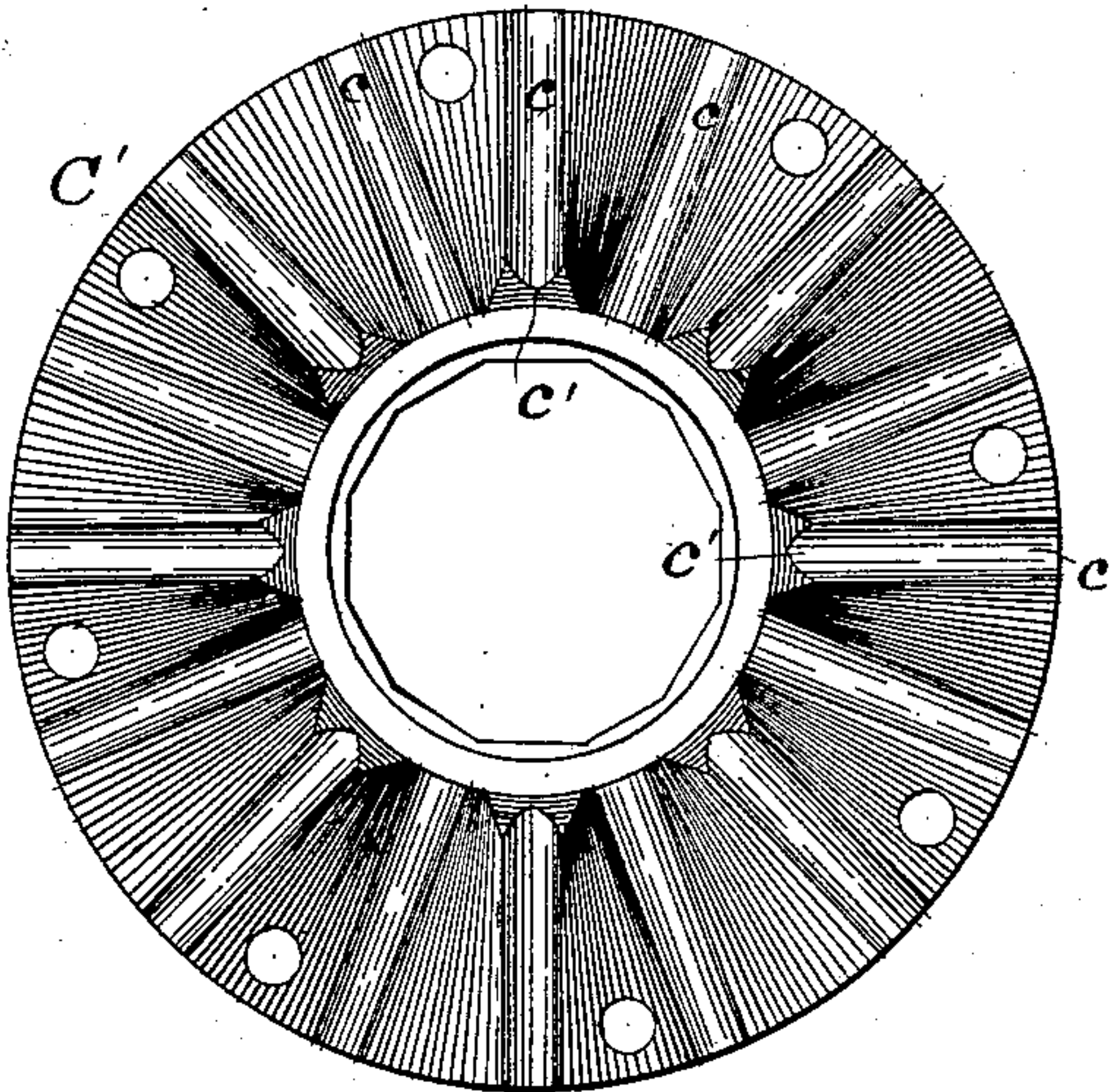


Fig. 5.

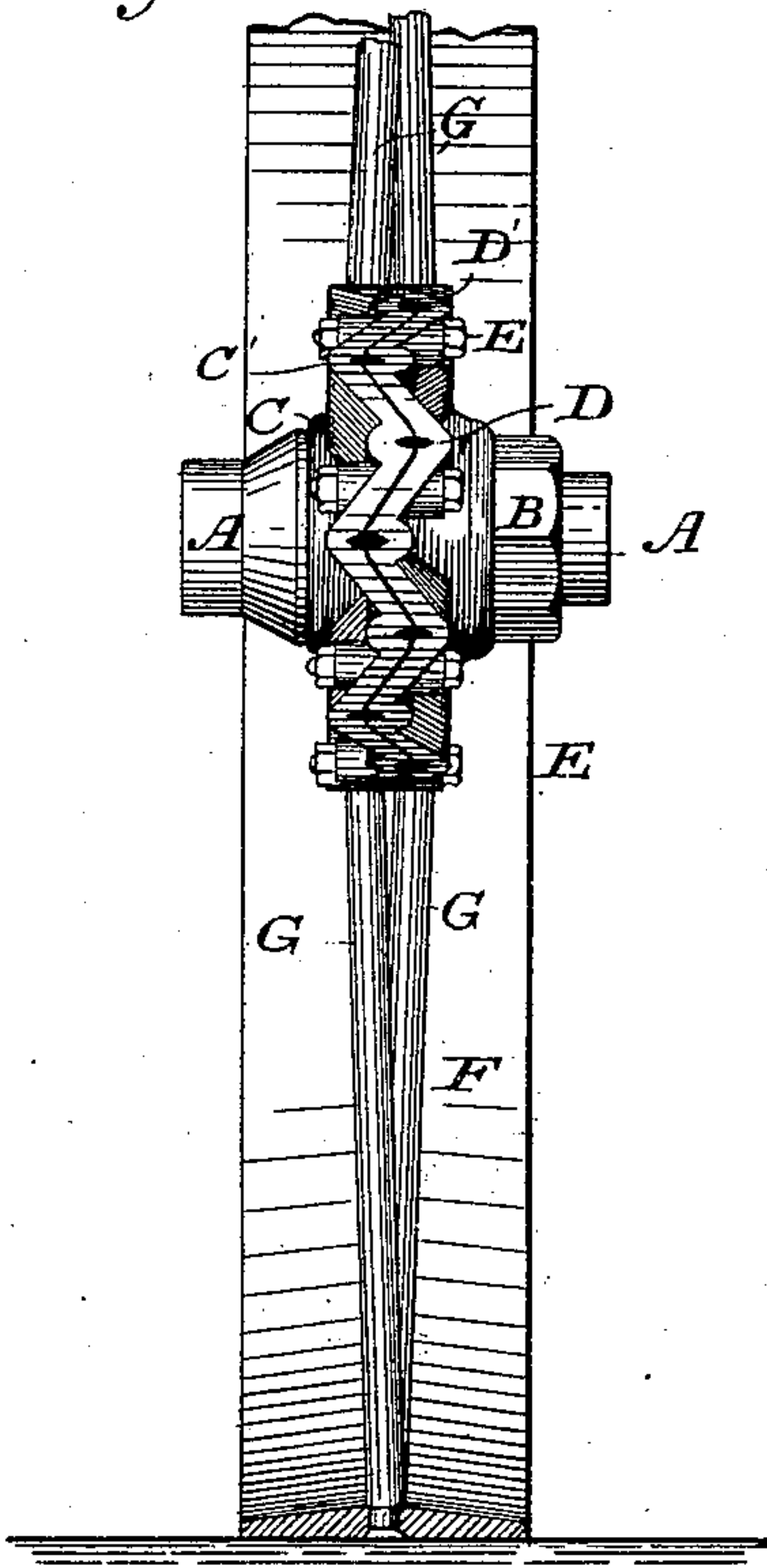


Fig. 3.

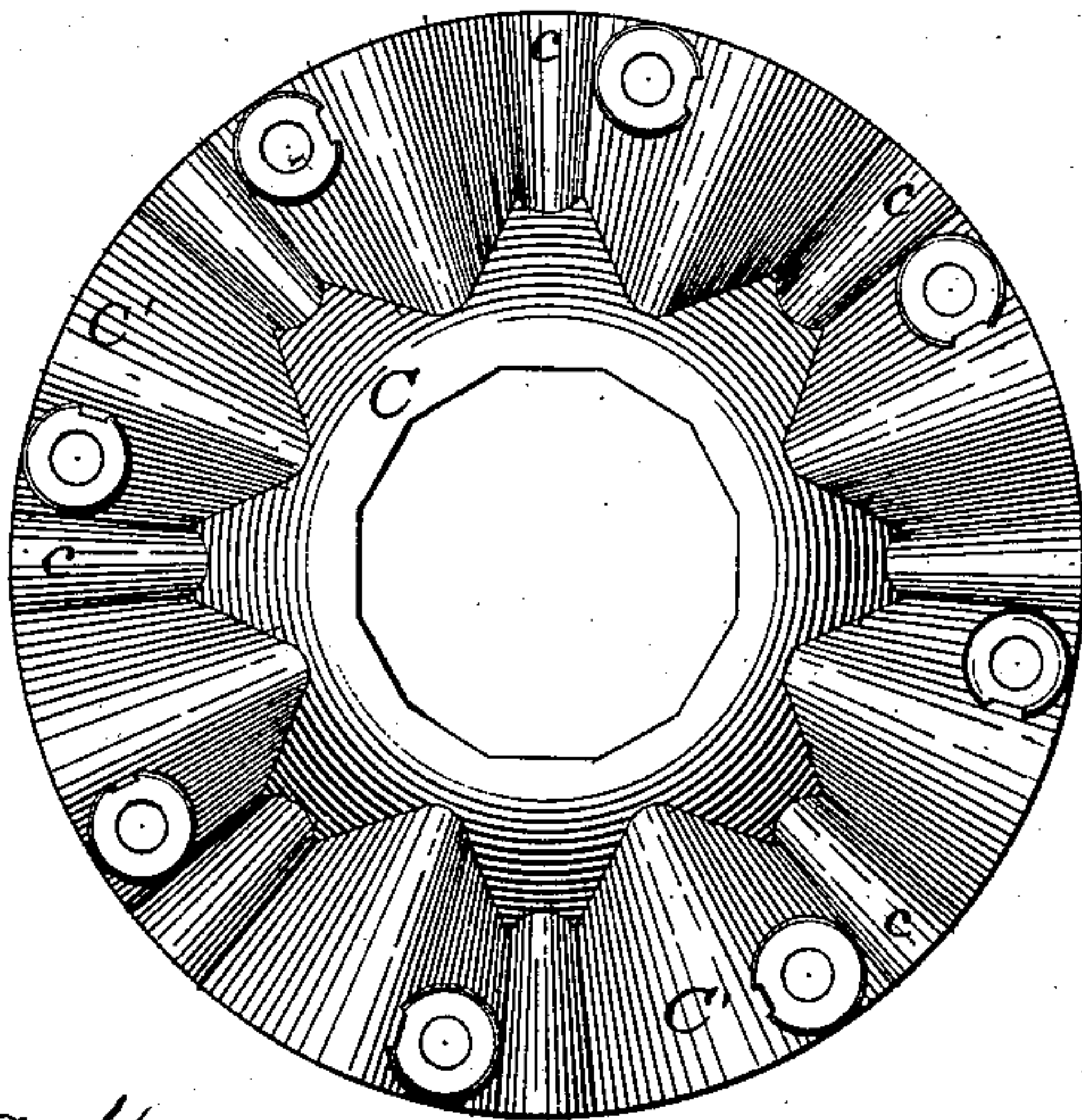
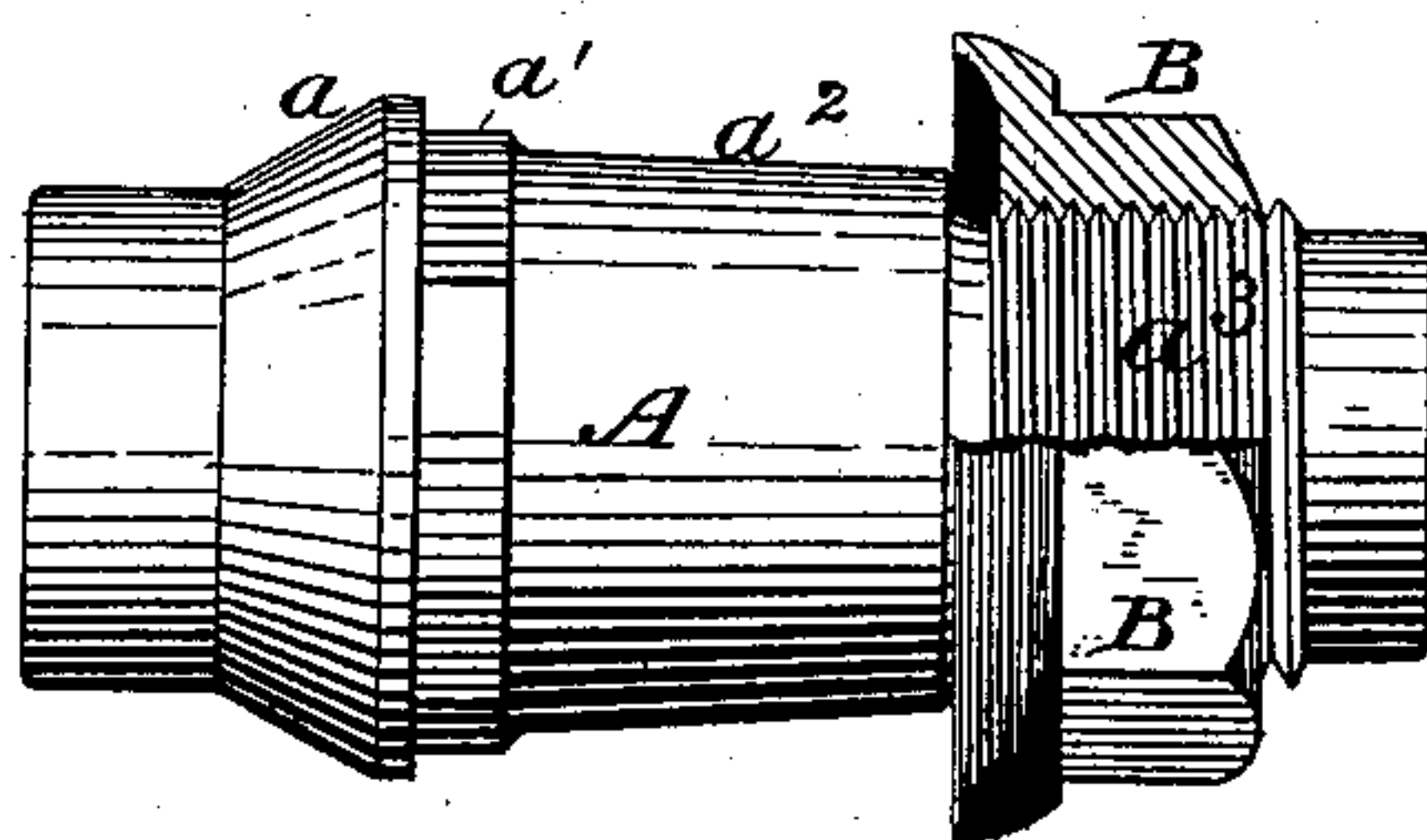


Fig. 4.



Witnesses

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SEBASTIAN RITTY, OF DAYTON, OHIO.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 407,613, dated July 23, 1889.

Application filed September 15, 1888. Serial No. 285,481. (No model.)

To all whom it may concern:

Be it known that I, SEBASTIAN RITTY, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Wheels, of which the following is a specification.

My invention relates to iron wheels for agricultural implements and vehicles; and it consists, primarily, in forming the hub of four parts—that is to say, of a central bearing-sleeve, two rings fitting thereover and having intermeshing waves or zigzag flanges with spoke-sockets at the successive angles suitably oblique to the axis to allow for the stagger, metal spokes and tire, and a collar or nut confining the hub-rims upon the hub-sleeve or center box, all as will hereinafter appear.

In the drawings, Figure 1 is a vertical section longitudinally of the hub through a wheel embodying my invention, the spokes and tire being broken away. Fig. 2 is an outer elevation of the inner hub-rim, and Fig. 3 an inside elevation of the same rim and flange. Fig. 4 is a side elevation of the center box or hub-sleeve with the confining-nut thereon, but the latter being broken away to show the screw-thread beneath; and Fig. 5 is a front elevation, partly in section, of a finished wheel.

A represents a suitable center box or hub-sleeve formed with an annular shoulder a , and with a polygonal seat a' next to that shoulder to receive the first or inner flanged hub-rim and confine it against escape and against turning. Beyond this the exterior of the center box advisably converges, as at a^2 , for a distance, then becomes cylindrical, and is screw-threaded, as at a^3 , to receive the confining-nut B, whereby the inner hub-rim is forced against the shoulder on the box and the outer hub-rim forced upon the inclined surface.

C is the inner hub-rim, formed with a polygonal central aperture grooved to fit over and bind upon the polygonal seat on the center box, and having a radial waved or zigzag flange C' , provided both at the re-entrant and salient angles with grooves, channels, or sockets c , traced radially from the inner shoulders

c' upon said rim, said sockets being slightly oblique and of about one-half the thickness of one of the spokes to be embraced. This inner rim when in position rests against the shoulder upon the center box as well as upon the polygonal seat thereon.

D is the outer hub-rim having also a diagonal projecting zigzag flange D' , intermeshing with the flange C' of the inner rim, so that when the two are together there is practically but a single zigzag flange, of double thickness, the whole circumference of the hub. This outer flange like the former has grooves, channels, sockets, or seats d for the spokes at both the re-entrant and salient angles directed from the shoulders d' , formed upon the hub-rim near to the center box, and against which shoulders the ends of the spokes rest, and they are also slightly oblique, to correspond with the stagger in the opposing rim and flange.

Bolts E, passing through the two flanges at suitable intervals, serve to bind rims and flanges together and against the spokes, and also to impart to the wheel itself a suitable dish by the general trend of the sockets and the pressure of one of the flanges on the other and against the spoke end.

Before assembling the wheel the wheel rim, tread, or tire F is first punched and then welded the proper length, and next the outer ends of the spokes G are riveted to the tire, whereupon the wheel in that condition is laid upon a center table, first the center box, next the inner hub-rim and flange, then the inner ends of the spokes directed into the sockets in the latter, and then the outer hub-rim and flange laid thereon and pressed thereagainst by screwing up the nut until the two hub-rims are close enough together to be united by the bolts, which latter will usually compress them so that the nut can be turned up still farther. I have found by this construction that I obtain a sufficient amount of dish in the wheel and a suitable amount of suspension-power in the tire, besides making a solid wheel with dish and moderate stagger to the spokes and one that any blacksmith can easily repair.

I claim—

1. The combination, substantially as hereinbefore set forth, of the tire, the spokes, the

shouldered center box having polygonal seat, the inner hub-rim having waved flange with sockets, the outer hub-rim having correspondingly-waved flange and sockets, and the confining-nut.

2. The combination, substantially as here-
inbefore set forth, of the tire, the spokes, the
shouldered center box having polygonal seats,
the inner hub-rim having waved flange with
10 sockets and re-entrant and salient angles, the
outer hub-rim having correspondingly-waved
flange and sockets, the fastening-bolts pass-
ing through said flanges, and the confining-
nut.

3. The combination, substantially as here- 15
inbefore set forth, of the tire, the spokes, the
shouldered center box having polygonal seats,
the inner hub-rim having waved flange with
sockets at re-entrant and salient angles, and
shoulders at the inner ends of said sockets, 20
the outer hub - rim having corresponding
waved flange, sockets, and shoulders, the fast-
ening-bolts passing through said flanges, and
the confining-nut.

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Witnesses:

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