

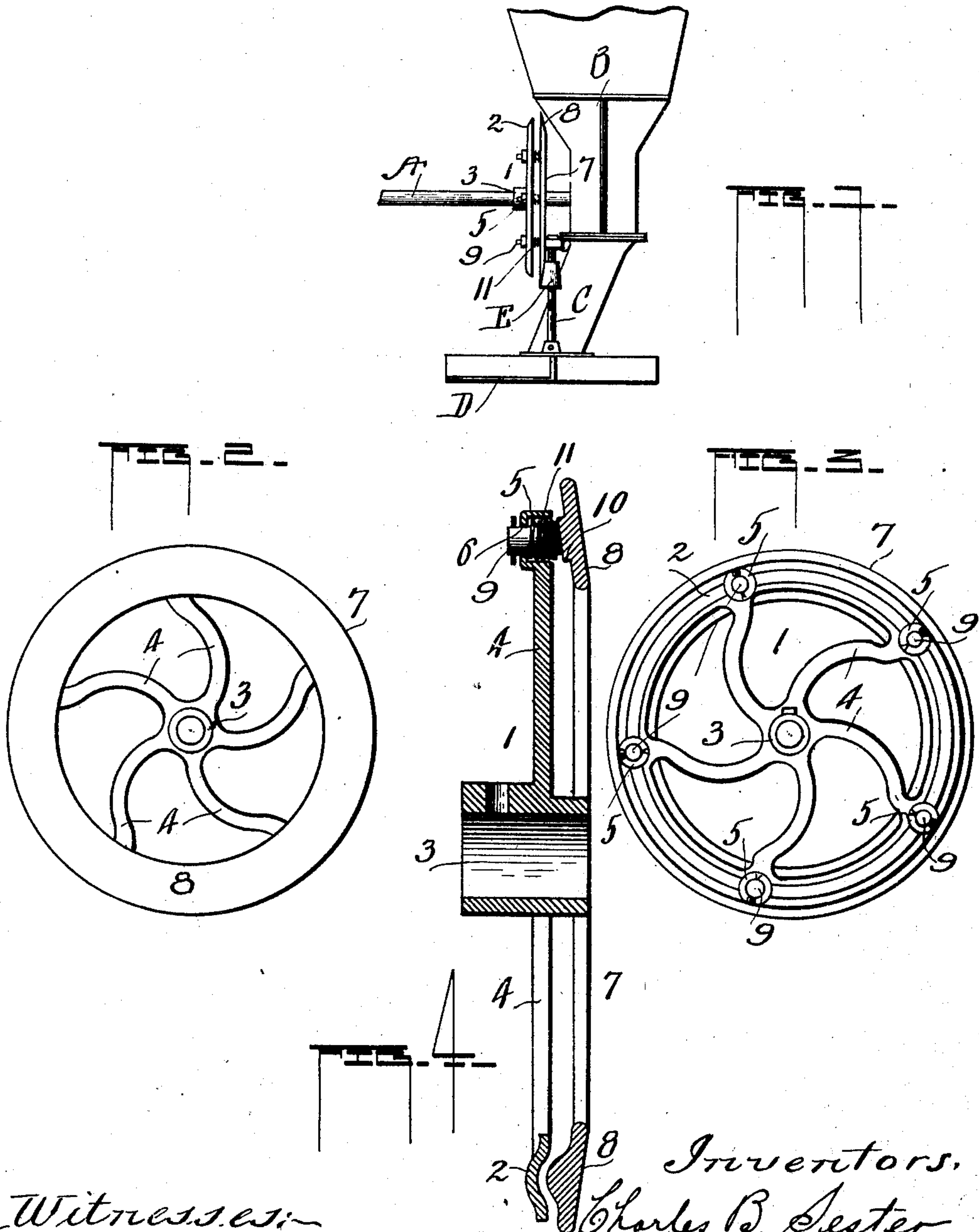
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YIELDING DRIVING MECHANISM.

APPLICATION FILED FEB. 24, 1902.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

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## YIELDING DRIVING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 719,619, dated February 3, 1903.

Application filed February 24, 1902. Serial No. 95,215. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES P. SESTER and FERDINAND J. FELDT, citizens of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Yielding Driving Mechanism; and we 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 has reference to a frictional drive, the object being to provide a frictional gear comprising a body supported by a shaft and a ring held away from said body under spring-pressure.

More particularly the invention relates to a frictional gear arranged to be carried by and rotated by a power-shaft for imparting momentum to the fan-shaft of a seeder or other and various devices by frictional contact with a friction-pinion. The gear comprises a bevel-ring, said bevel-ring having a yielding relation with said wheel and by means of suitable springs caused to impinge the surface of a driven pinion with which it is designed to coact.

The invention consists in certain peculiarities of construction and combination of parts to be hereinafter described with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 is an elevation showing our improvement as applied for driving the fan-shaft of a seeder. Fig. 2 is a face view of the ring. Fig. 3 is a face view of the body or wheel supporting the ring. Fig. 4 is a cross-section through the ring and its support.

As the invention is applicable for various uses in imparting power, and especially when it is necessary to retain a yielding engagement of two gear-wheels, we do not wish to be confined to the use herein shown nor to the details of construction, as from the description it will be apparent that details may be resorted to, and even gear-teeth employed on the ring, without departing from the principle herein.

Referring to the figures, the gear consists of a wheel or similar device 1, of a rim 2, a hub 3 for attaching or affixing the same on a power-shaft A, and spider-arms 4, connecting the rim and the hub. The shaft A forms part of a seeding device having a hopper B, in which are arranged suitable seeding devices, a fan-shaft C, carrying a fan D, and a frictional pinion E.

Arranged at suitable points in the rim 2 of the wheel 1 is provided a series of hollowed-out bodies 5 with reduced openings 6.

7 is a ring having the bevel-face 8, and extending out from the rear face thereof is arranged a series of short studs 9 and the shoulders 10, equal in number to the hollowed-out bodies 5 of the wheel.

When assembled to form a complete gear, the studs 9 are passed through the bodies 5 and the openings 6 and a cotter-pin passed through a perforation in the studs to hold them in proper relation with the wheel. Springs 11 are provided bearing around the studs and pressing against the shoulders 10 and the walls of the bodies 5. When placing the gear on a power-shaft, the wheel is fixed in position relative to the pinion on the coacting shaft so that the impingement of the two gears will contract the springs 11. This enables the bearing-surface of the bevel-ring to be firmly impinged against the face of the pinion on the driven shaft, as the springs will continuously force the rim of the bevel-ring away from the face of the wheel. When it is desired to readjust the frictional gear by reason of wear of the bevel-faces of either the ring or pinion, the wheel is loosened and moved accordingly on the power-shaft.

By the arrangement of a ring held in yielding contact with the wheel, which said wheel is fixed to the power-shaft when adjusting the device for imparting power, it will be seen that the device itself neither moves on the power-shaft nor does it require the power-shaft to be moved to retain a frictional contact between the yielding ring and its driven pinion. In devices of this and in similar machines where a friction-drive is employed the



friction-drive itself has been movably supported on and driven by a power-shaft and the same held in yielding contact with a driven pinion in such a manner that to insure a frictional relation between the gears the driving-gear is caused to slide on the power-shaft to compensate for wear and irregular movements, and in some machines the yielding pressure is applied in such a manner that the drive and driving-shaft are moved together; but in our device we show a driving-ring supported by a body which is fixed to the power-shaft and adjustable thereon, and the manner of driving the ring is through a series of studs having connection with the body carried with the power-shaft, and the ring may have an irregular concentric movement while imparting movement to a driven pinion without a cramping movement, as is the case in a device where the driver has a bearing on a shaft and is movable upon or with the same.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. The herein-described gear, comprising a wheel, a shaft to which said wheel is secured, an annular ring having an acting face, driving and supporting connections between the rim of the wheel and the ring, said connections being located to the rear of the point of contact with the ring, and springs bearing around the connections and in hollowed-out portions of the rim of the wheel, substantially as described.

2. A frictional gear, comprising a wheel, a shaft, an annular ring having an acting face and extended members bearing approximately at right angles to and from the rear of its acting face, and means for attaching the members to the wheel for supporting and driving said ring, substantially as described.

3. A frictional gear, comprising a wheel, a shaft, the said wheel provided with suitable openings in its rim, and combined therewith an annular ring having an acting face, studs extending from the rear of the ring in line with its acting face and coinciding with the

openings of the rim of the wheel, the arrangement of the openings in the rim of the wheel and studs of the ring providing a driving and supporting device for the ring, substantially as described.

4. A frictional gear, comprising a wheel having a series of hollowed-out portions in its rim, a shaft, an annular ring having a beveled face and designed to be supported in juxtaposition to the rim of the wheel, a series of projections extending from the ring disposed circumferentially with the bevel-face thereof and passing through the hollowed-out portions of the rim of the wheel, and means for yieldingly holding the annular ring from the wheel, disposed in the hollowed-out portions of the wheel and bearing against the annular ring, as and for the purposes set forth.

5. In combination with a driving-shaft, a driven shaft and a frictional pinion on the driven shaft, a wheel secured to and driven by the driving-shaft, an annular ring having an acting face coacting with the aforesaid pinion and supported and driven by contact with the rim of the wheel, and a series of yielding devices bearing between the ring and rim of the wheel and in such a manner that as they rotate with the wheel they bear in a line through the point of contact of the ring with the pinion, substantially in the manner and for the purposes set forth.

6. In a gear, the combination with a shaft and a driving-wheel mounted to rotate therewith, of an annular ring having an acting face, connections between the ring and rim of the wheel for supporting and driving said ring, and pressure devices disposed between the wheel and ring, designed to bear against the ring in a line with the point of contact of its acting face, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

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FERDINAND J. FELDT.

Witnesses:

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