

(No Model.)

W. C. COTTRELL.
TROLLEY WHEEL.

No. 563,749.

Patented July 14, 1896.

Fig. 1.

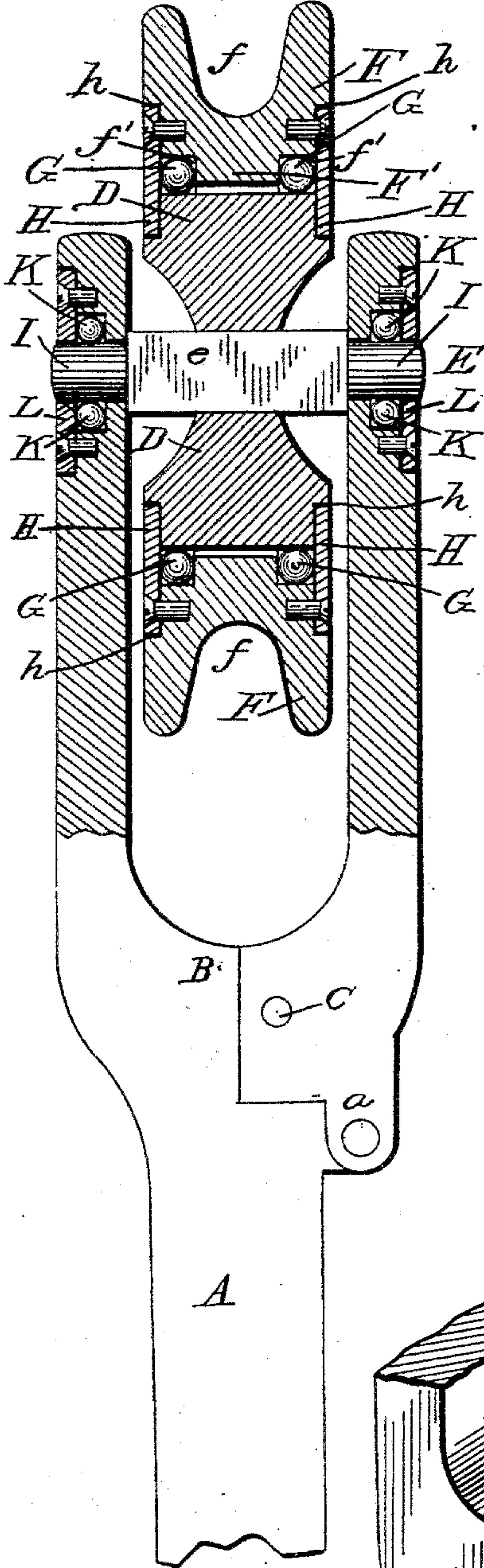


Fig. 2.

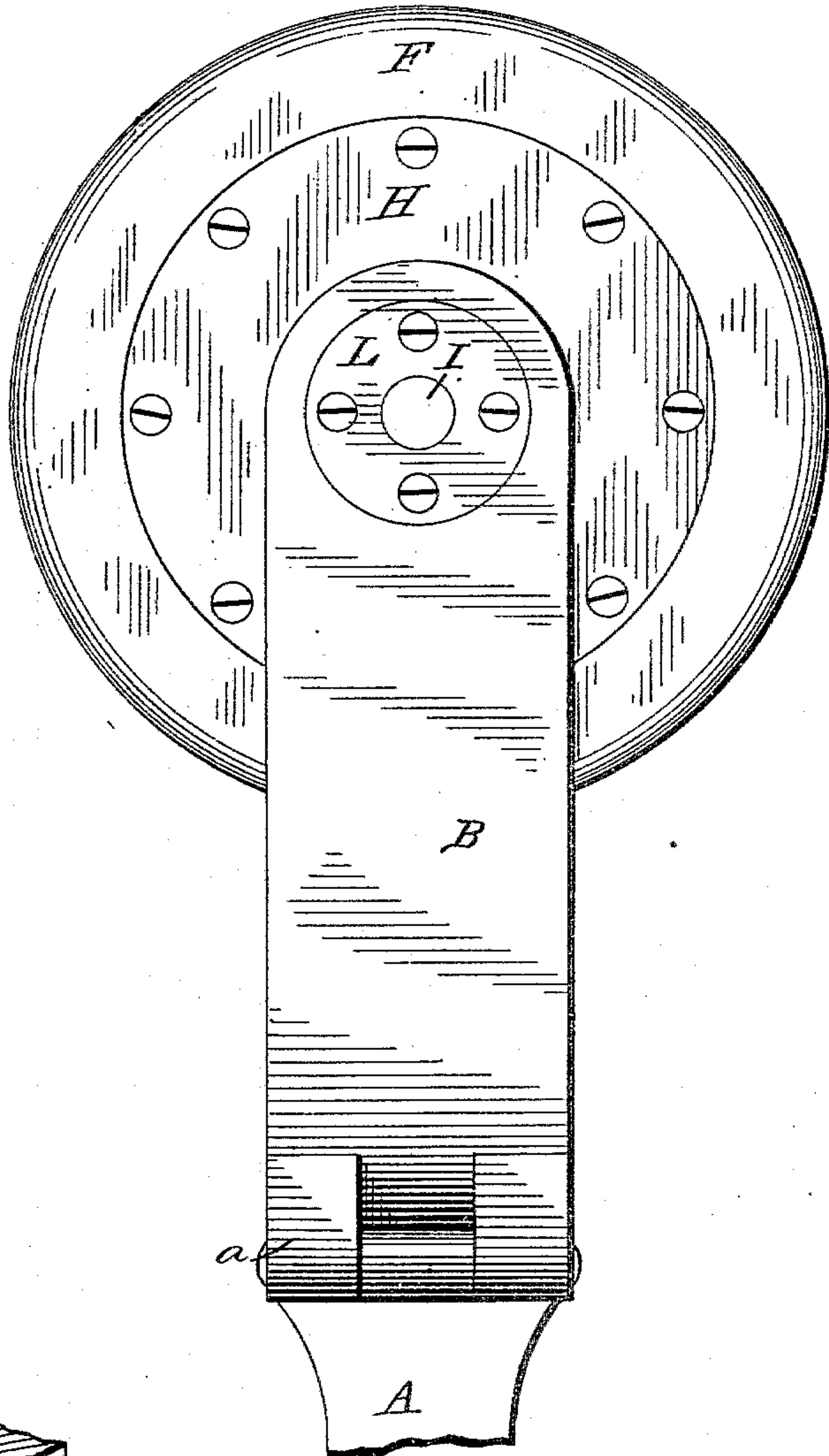
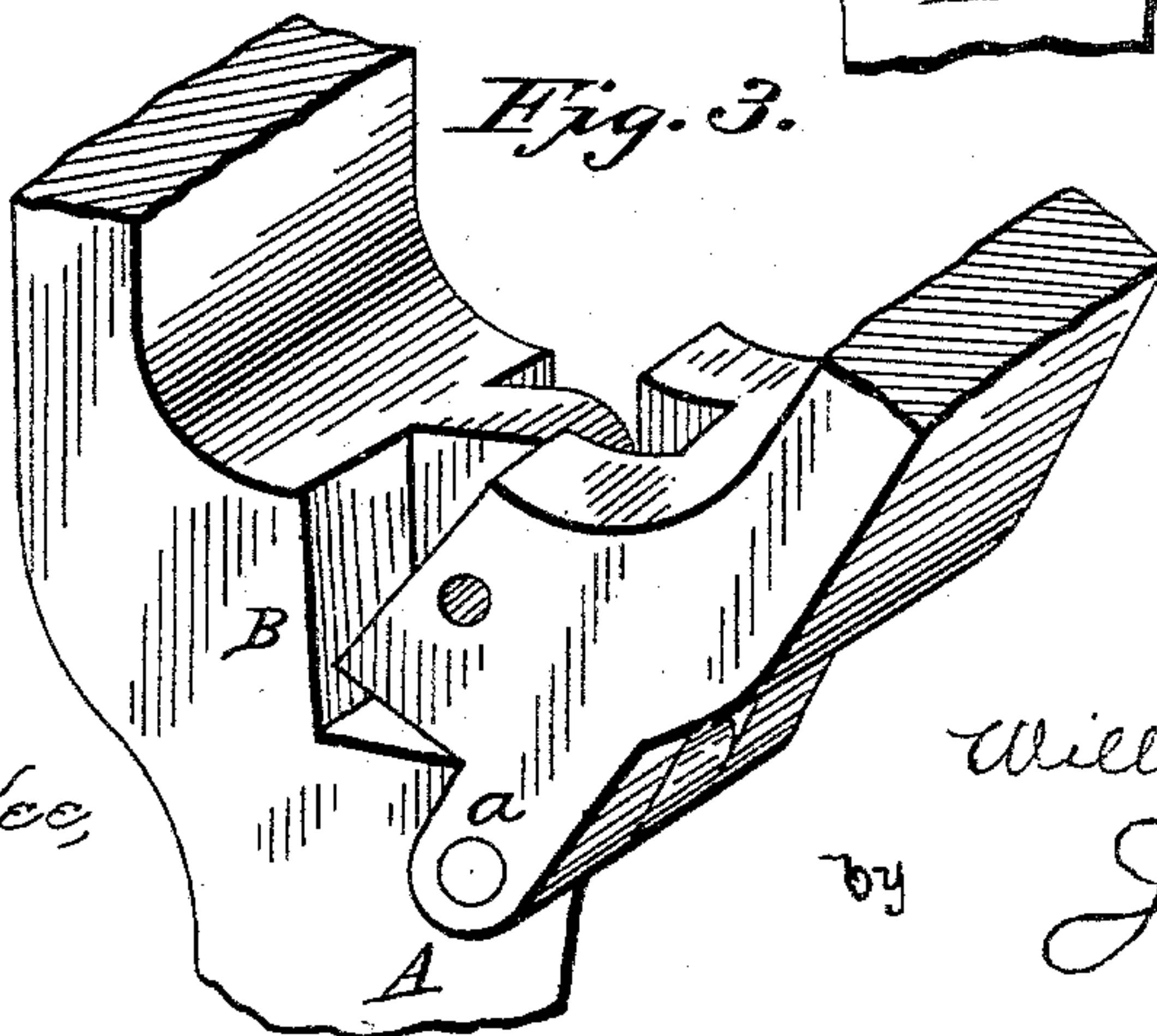


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM C. COTTRELL, OF ASBURY PARK, NEW JERSEY.

TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 563,749, dated July 14, 1896.

Application filed August 23, 1895. Serial No. 560,723. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. COTTRELL, a citizen of the United States, residing at Asbury Park, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Trolley-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in trolley-wheels, and it has for its objects among others to provide a simple and cheap wheel which will run easier and require less care than the old forms.

I construct the wheel of a larger and a smaller wheel with ball-bearings between the two, the inner wheel being carried by a polygonal axle the ends of which have ball-bearings in the yoke on the pole. The end or yoke of the pole has one side hinged so that it may be moved to take out the wheel without removing the axle from the wheel.

The device is composed of few parts and those readily assembled, not liable to injury or to get out of order, and durable and efficient in operation.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claim.

The invention in this instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a substantially central section through my improved wheel and the yoke by which it is carried. Fig. 2 is a view at right angles to Fig. 1. Fig. 3 is an enlarged perspective detail.

Like letters of reference indicate like parts in all the views.

Referring now to the details of the drawings by letter, A designates the trolley-pole and B

the yoke carried at the upper end thereof. One arm or bifurcation of this yoke is made separate from the other and is hinged thereto, as shown at *a*, the said part being designed to be locked in its proper position in any suitable manner, as by the pin C, which is passed through the one part into the other, as shown, and which may be quickly removed when it is desired to turn down the hinged part to allow of the removal of the wheel without removing it from its axle.

The wheel consists of the inner disk D, which is mounted upon the square portion *e* of the axle E, and the outer wheel F, which has the grooved periphery, as shown at *f*, to receive the trolley-wire in the usual manner. The inner face of the outer wheel is provided with the annular channels *f'* upon opposite sides of its central annular rib F', and in these channels are arranged the balls G of suitable size and construction. These balls are retained in position by the removable plates H, which are secured in a groove *h* in the outer faces of the two wheels, as shown in Fig. 1, and which serve as guides for the one portion of the wheel upon the other.

The journals I of the axle are mounted in suitable ball-bearings K in the arms of the yoke, as shown, and these balls are retained within their chambers or grooves by the removably secured plates L, as shown.

The operation is simple and will be readily understood from the foregoing description when taken in connection with the annexed drawings, and a further detailed description thereof is not deemed necessary.

What is claimed as new is—

The combination with the yoke and the axle having its ends journaled therein in ball-bearings, and having a square portion between its ends, of the inner portion of the wheel carried on the square part of said axle, the outer portion of the wheel and the balls arranged between the two, substantially as specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM C. COTTRELL.

Witnesses:

BLANCHE S. DEY,
GEO. W. PITTINGER.