

(No Model.)

G. H. GRIGGS.

BRAKE PAWL FOR RAILROAD CARS.

No. 353,259.

Patented Nov. 23, 1886.

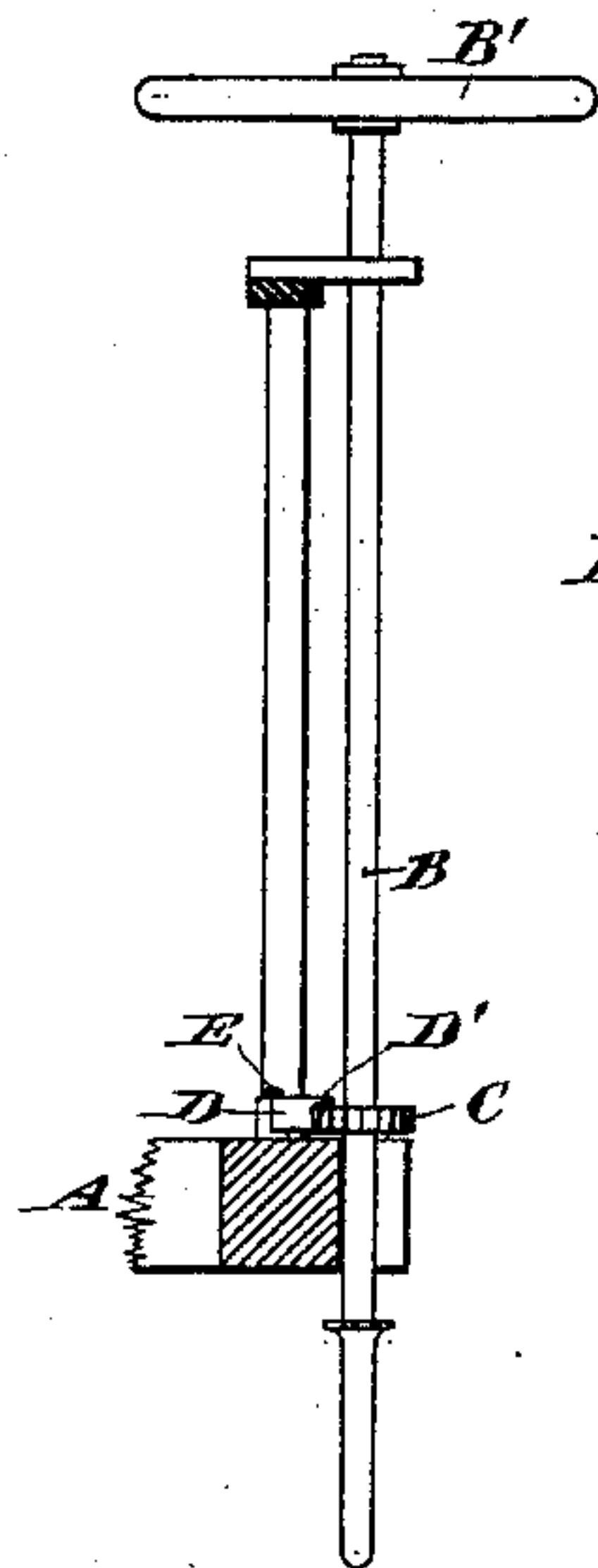


Fig. 1.

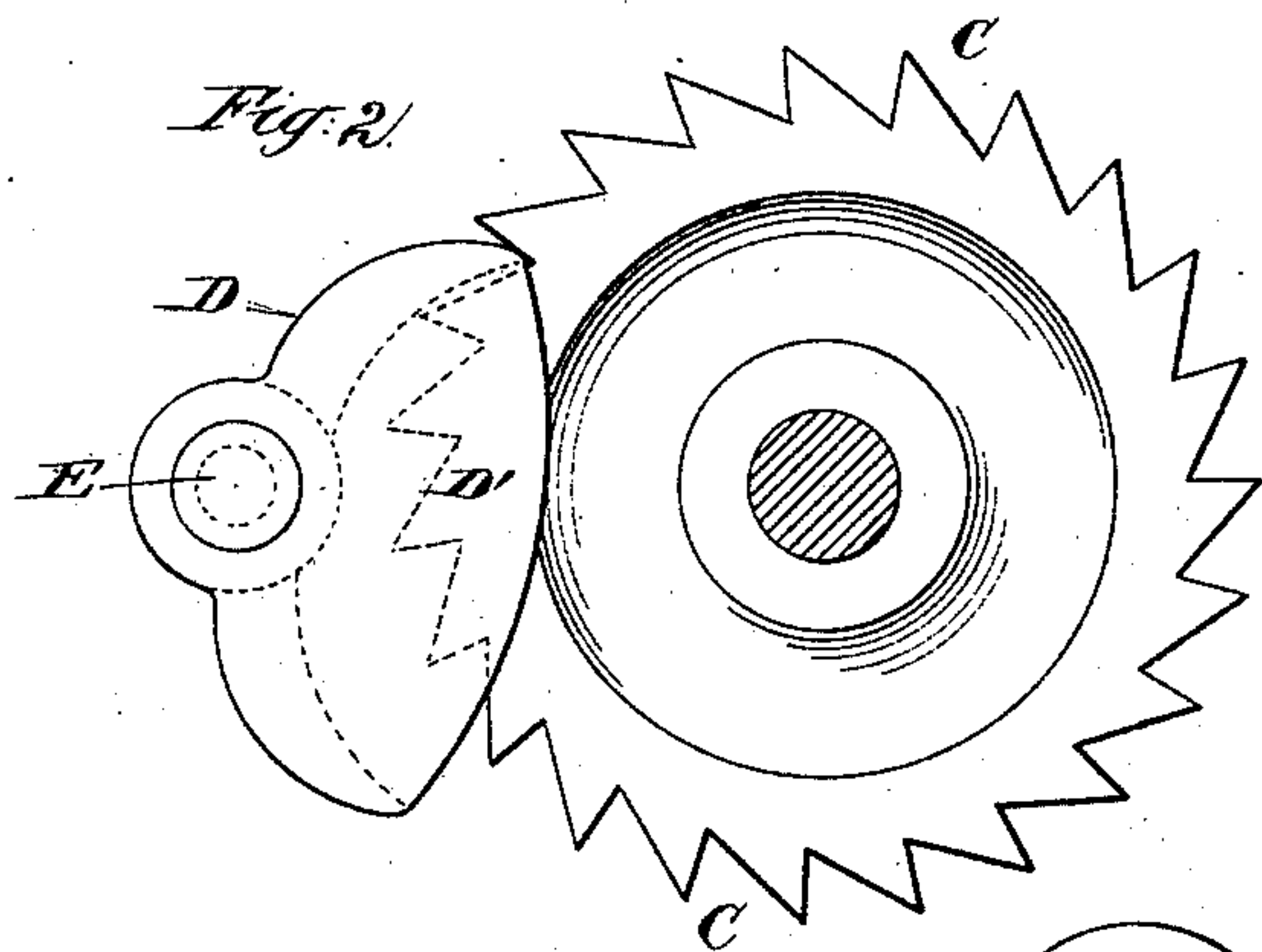


Fig. 2.

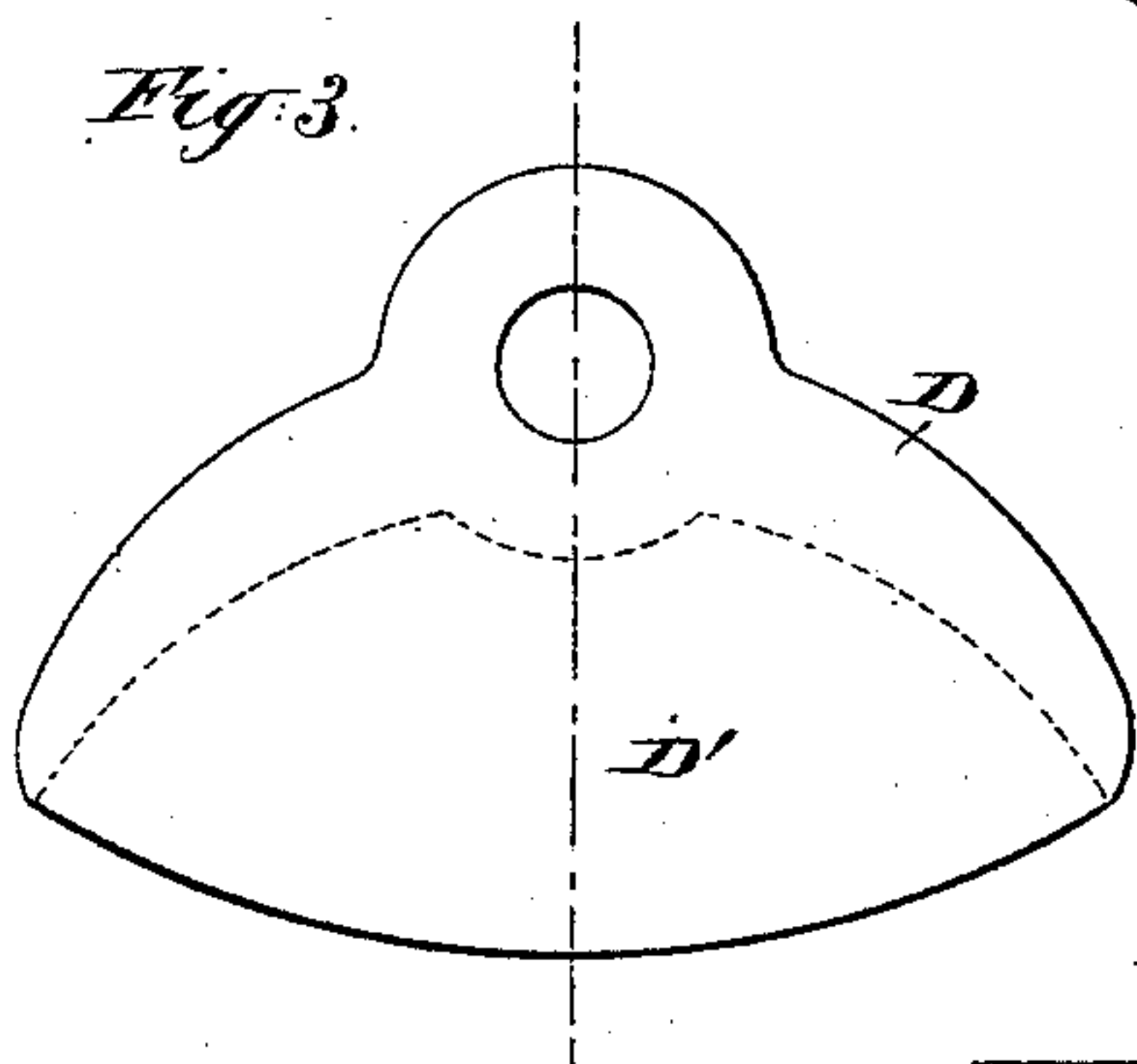


Fig. 3.

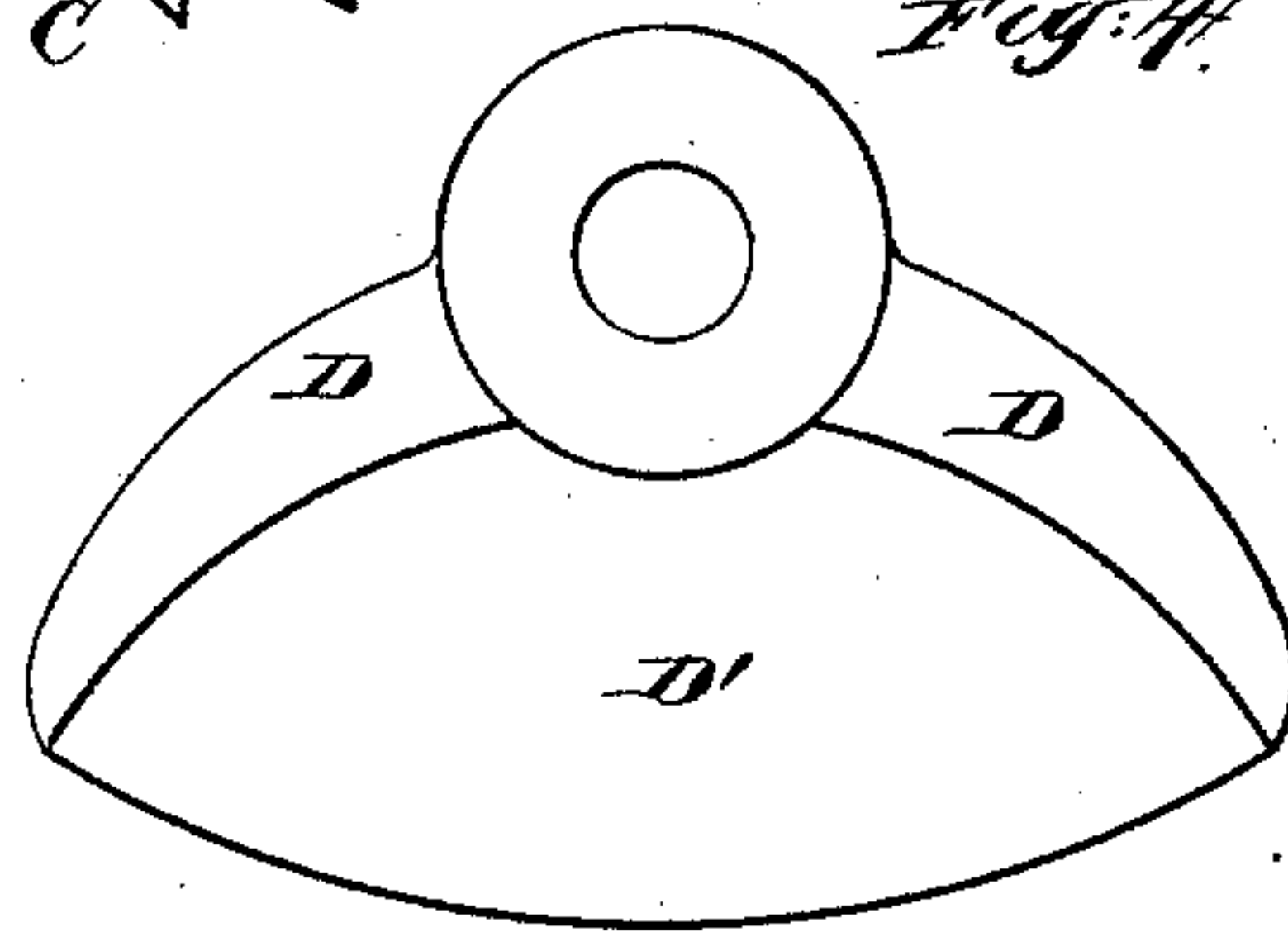


Fig. 4.

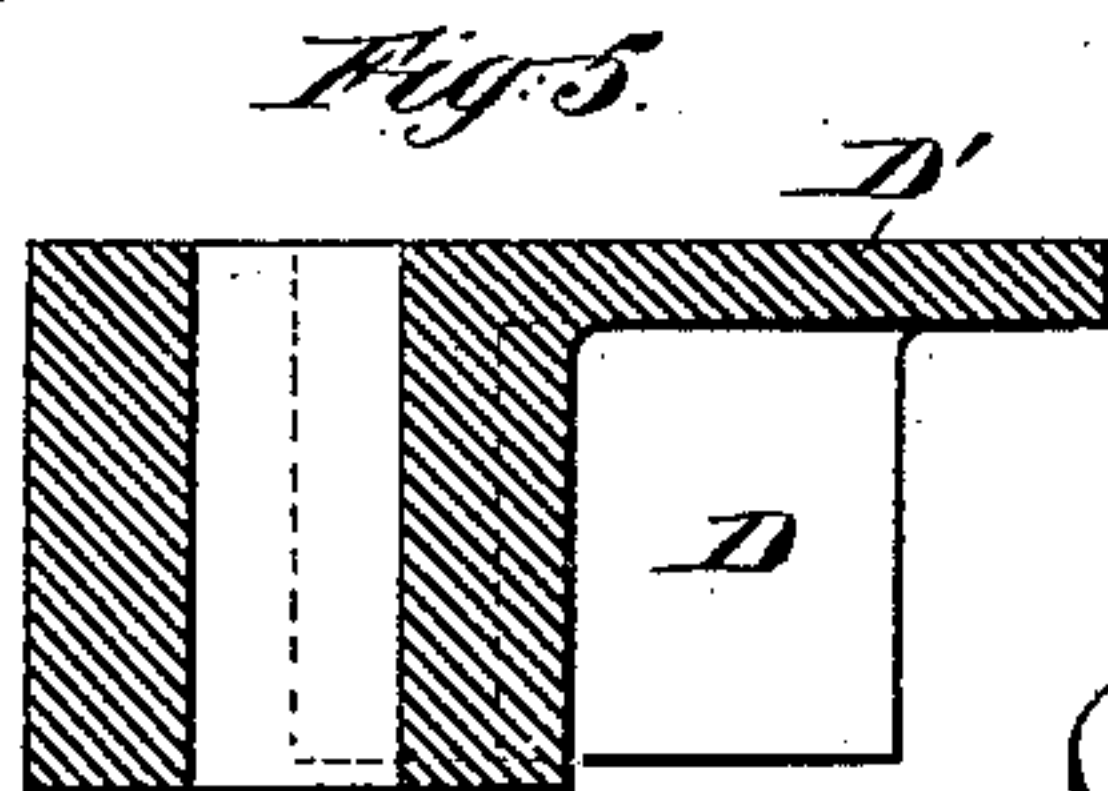


Fig. 5.

Witnesses:

Charles R. Searle,
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Inventor:

George H. Griggs
by his attorney
Thomas D. Stetson

UNITED STATES PATENT OFFICE.

GEORGE H. GRIGGS, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO CHARLES W. SHERBURNE, OF BOSTON, MASSACHUSETTS.

BRAKE-PAWL FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 353,259, dated November 23, 1886.

Application filed August 19, 1886. Serial No. 211,248. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. GRIGGS, of the city and county of Providence, in the State of Rhode Island, have invented a certain new and useful Improvement in Brake-Pawls for Railroad-Cars, of which the following is a specification.

The invention applies to hand-brakes of all ordinary styles. Such brakes are usually operated by upright shafts provided at the top with a large hand-wheel and at a lower point with a ratchet-wheel which is engaged by a pawl, by which, when the brake is applied by turning the shaft, the latter is held or released at the pleasure of the attendant.

I have devised an addition to the pawl which overcomes an important difficulty. The ordinary construction is liable, from imperfect workmanship or wear, to allow the brake-shaft with its ratchet-wheel to rise above the pawl and thus become detached therefrom, and allowed to turn violently backward by the unwinding of the brake-chain. (Not shown.) Such accident is liable, among other difficulties, to throw the brakeman off the car by the force with which the chain unwinds.

I make the pawl of an approximately crescent form, with the axis engaged near the mid-length, and cover the upper face with a guard or shield, which extends over so as to stand above the adjacent portion of the ratchet-wheel. When, through looseness or other cause, the ratchet-wheel rises, it strikes the shield and carries the pawl with it. The pawl is certain to remain engaged until the attendant intentionally liberates it.

I prefer to make the pawl of cast-iron, with the top shield cast in one therewith; but other material and constructions may serve. The shield may be made separately, of wrought-iron or other metal, and bolted or riveted to the pawl.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a vertical section through the adjacent portion of a car-platform, showing the brake-shaft and pawl in elevation. The remaining figures are on a larger scale. Fig.

2 is a plan view of the ratchet-wheel and pawl. Figs. 3, 4, and 5 show the pawl detached. Fig. 3 is a top view; Fig. 4, a bottom view, and Fig. 5 a central vertical cross-section.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

A is the framing of the car; B, the brake-shaft operated by a hand-wheel, B'; and C, a ratchet-wheel, which may be of the ordinary form and size, rigidly fixed on B.

D is a crescent-shaped pawl having a stout boss in its mid-length, by which it is pivoted on a stout upright pin, E, fixed in the framing A in the ordinary position. The upper side of the pawl D is formed with a shield, D', cast in one with D and lying over the adjacent portion of the wheel C. This shield D' performs the two functions of strongly connecting and bracing the ends of D, and also of covering a portion of the wheel C, so that when the wheel C rises it shall be certain to carry the pawl with it. This latter function is especially important when the brake mechanism has considerable play, through wear or other cause. It insures that the pawl shall remain engaged with the wheel until the attendant chooses to disengage it by pressing with his foot or otherwise against the rear end, so as to lift the working end out of engagement with the teeth of C.

My improved pawl is operated in the same manner as the ordinary pawl.

One advantage of my invention, additional to that of preventing the brake from becoming detached accidentally, is the immunity it affords against the attaching of ladies' dresses in getting on or off the car. The shield D', formed as shown, not only covers a portion of the ratchet-wheel, but also guards the end of the pawl from presenting any angle to engage the dress.

I do not confine the invention to the crescent form of the pawl. Other forms may be used; but I prefer the crescent as being equally efficient as the means for receiving the pressure of the foot to engage and disengage, and also as allowing the shield to efficiently brace and strengthen the pawl.

I can make the shield of a separate piece of

steel or iron, and bolt or rivet it or otherwise secure it upon the pawl.

My invention can be applied with some success to the brake-pawls already in use by simply riveting or otherwise affixing the shield D' thereon.

I claim as my invention—

1. The brake-pawl D, in combination with the top shield, D', adapted to serve substantially as herein described.

2. In a railroad-car brake, the pawl D, in combination with the shield D', ratchet-wheel

C, and brake-shaft B, and operating means B', arranged for joint operation, substantially as herein specified.

In testimony whereof I have hereunto set my hand, at Providence, Rhode Island, this 13th day of August, 1886, in the presence of two subscribing witnesses.

GEO. H. GRIGGS.

Witnesses:

HORATIO ROGERS,
J. D. BOSWORTH.