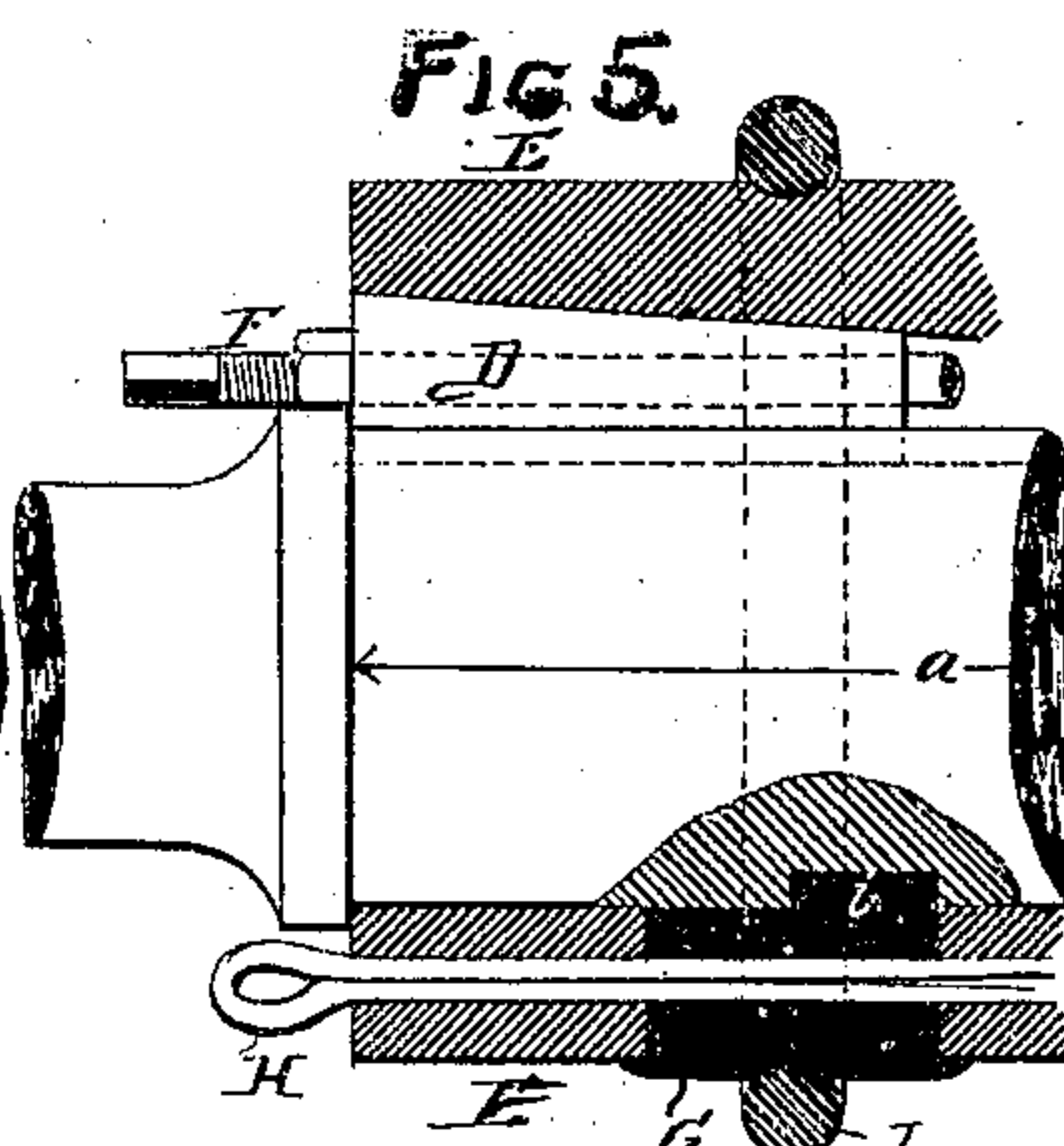
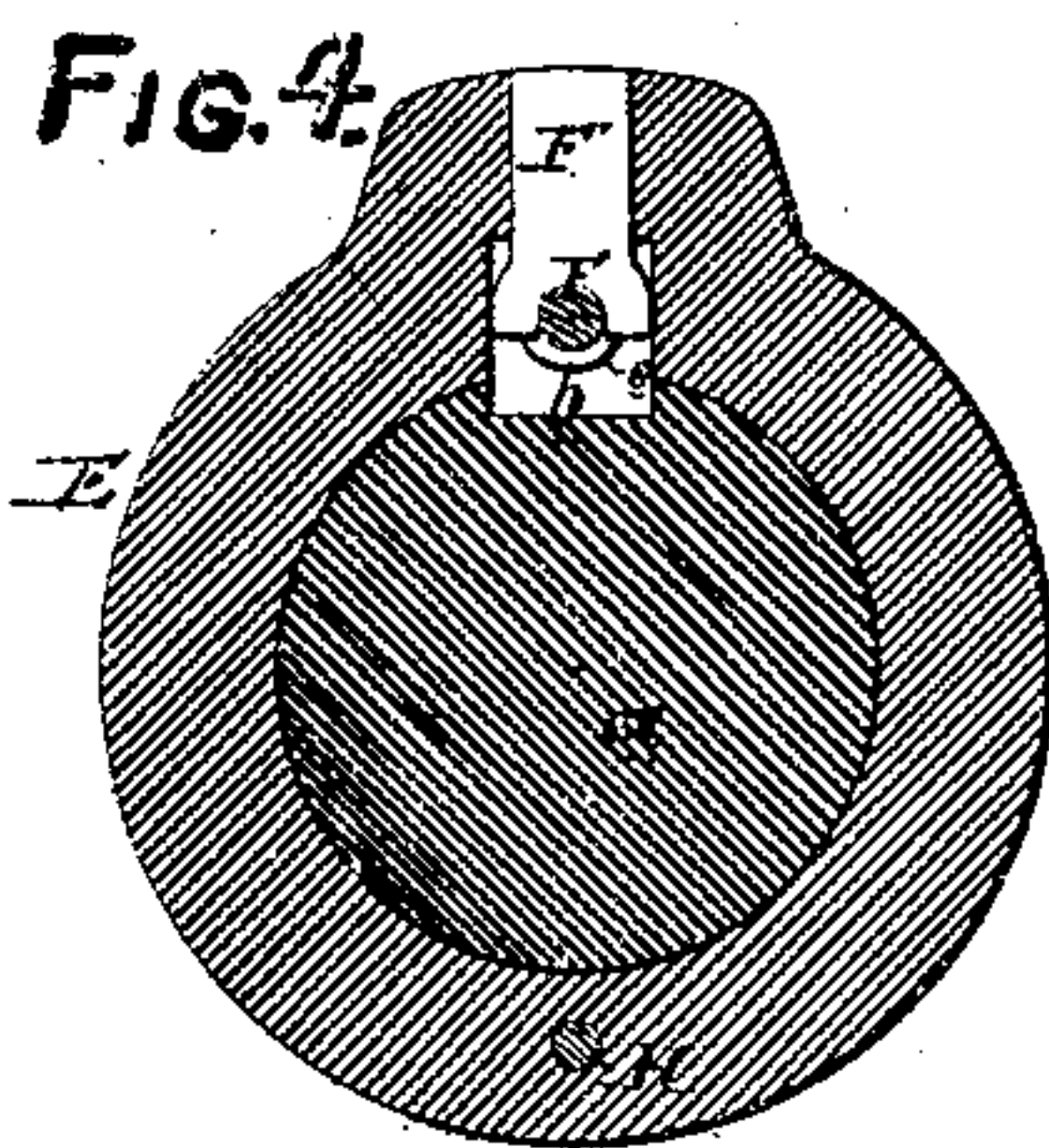
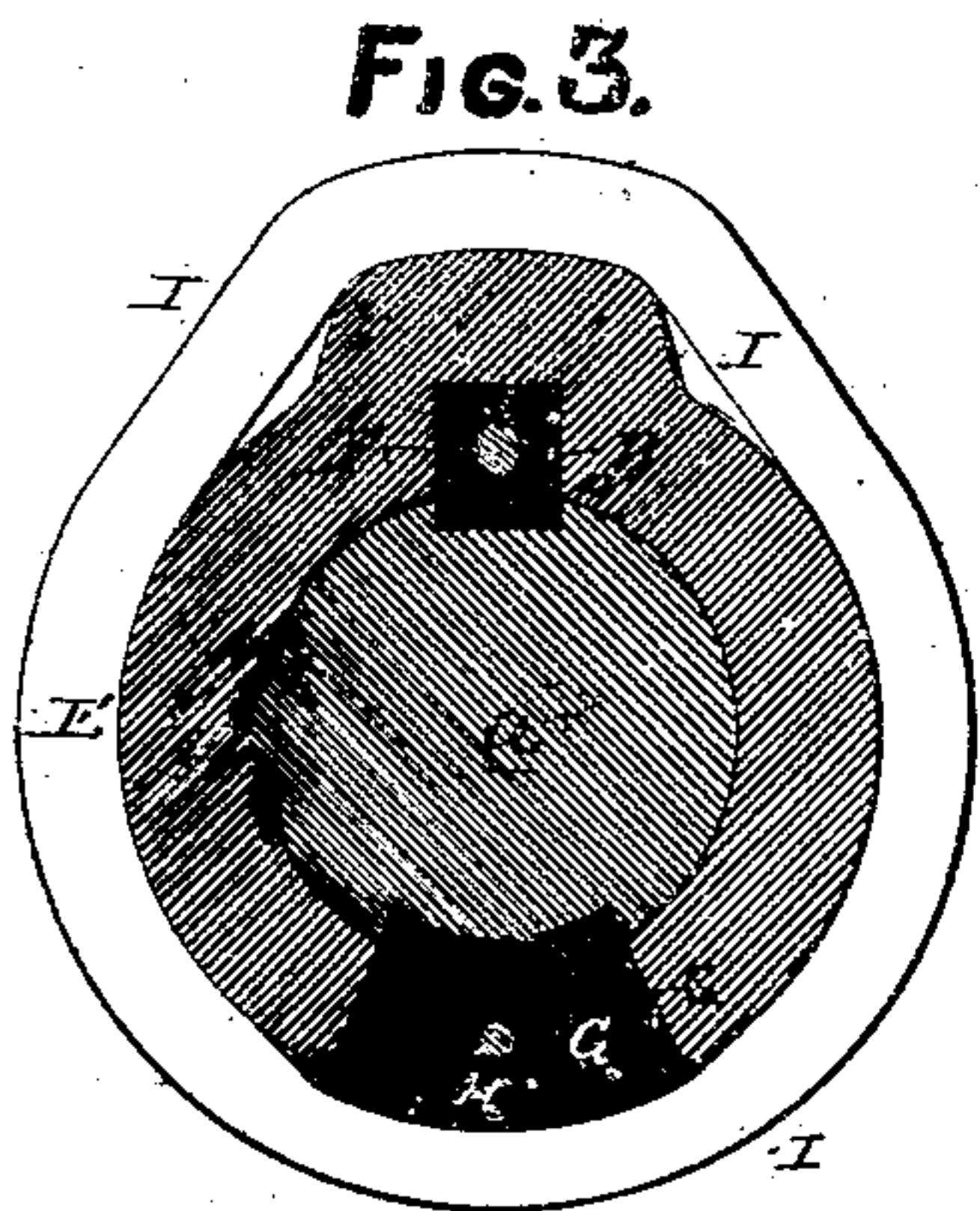
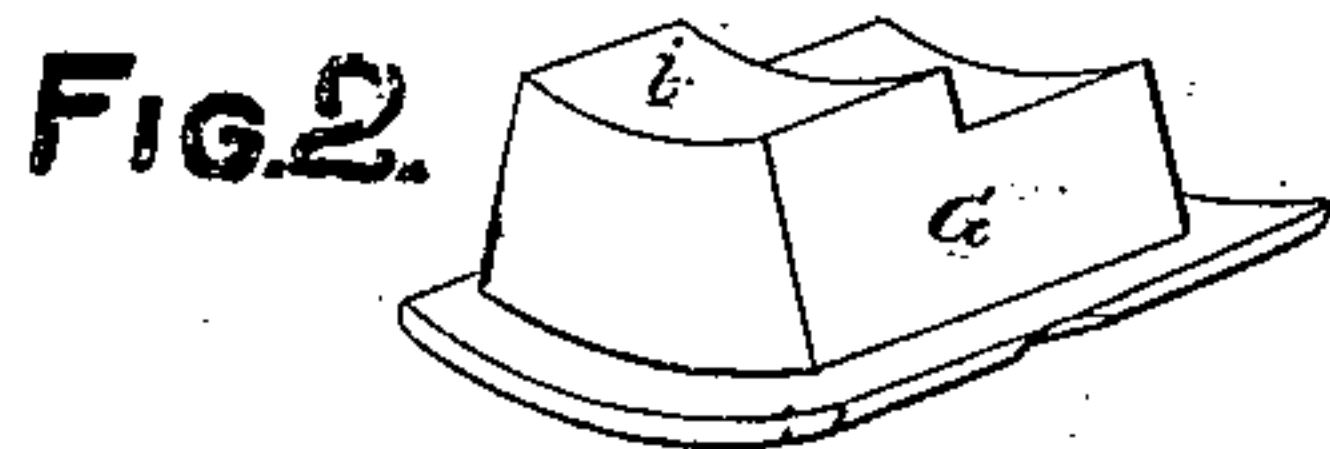
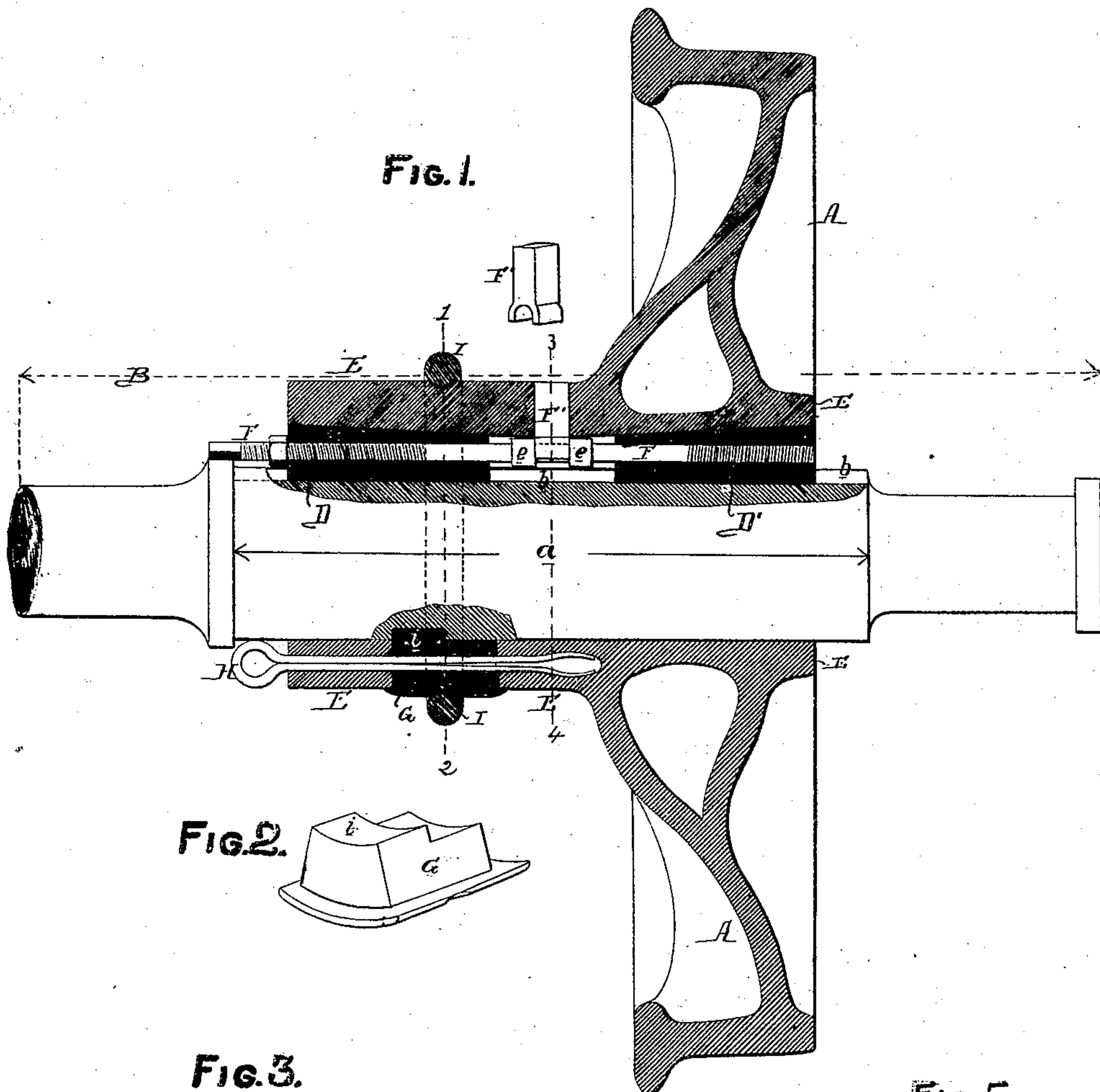


McLEOD & LOBDELL.
Adjustable Car Wheels.

No. 103,484.

Patented May 24, 1870.



WITNESSES { *Wm. A. Steel.*
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United States Patent Office.

ALEXANDER McLEOD AND GEORGE GRANVILLE LOBDELL, OF WILMINGTON, DELAWARE.

Letters Patent No. 103,484, dated May 24, 1870.

IMPROVEMENT IN SECURING CAR-WHEELS TO AXLES.

The Schedule referred to in these Letters Patent and making part of the same.

We, ALEXANDER McLEOD and GEORGE GRANVILLE LOBDELL, of Wilmington, county of New-castle, State of Delaware, have invented an Improvement in Securing Car-Wheels to Axles, of which the following is a specification.

Nature and Object of the Invention.

Our invention relates to improvements in securing to axles car-wheels which have to be adjusted to suit tracks of different gauges, and our invention consists—

First, in the employment of two tapering keys adapted to a groove in the axle, and a groove in the wheel, and so connected to a screw or screws that, by operating the latter, the wheel may be effectually secured to the axle by the keys forced between the same and the hub of the wheel in opposite directions.

Secondly, in combining with the said keys a spindle having left and right-handed threads, and so controlled longitudinally that, on turning the said spindle, the keys will act simultaneously and in unison from opposite directions.

Thirdly, in so arranging the screw or screws that the same cannot move longitudinally independently of the wheel.

Description of the Accompanying Drawing.

Figure 1 is a vertical section of a car-wheel illustrating my improvement in adjusting the same on and securing it to an axle;

Figure 2, a perspective view of the reversible block for determining the points of adjustment;

Figure 3, a transverse section on the line 1-2, fig. 1;

Figure 4, a transverse section on the line 3-4, fig. 1; and

Figure 5, part of fig. 1, showing the wheel adjusted to a different position on the axle.

General Description.

A represents the car-wheel, and

B, the axle, *a* being the portion of the latter on which the wheel has to be secured and adjusted, and on this part of the axle is cut a groove, *b*, of uniform depth, for the reception of the lower portion of the tapering keys D and D', the upper portions of the latter being contained in a corresponding groove in the hub E of the wheel, and this hub being elongated by an extension at the rear, as shown in the drawing.

These keys are inclined in contrary directions, and are adapted to corresponding reverse inclinations of their seats in the groove of the hub.

A spindle, F, passes longitudinally through these keys, and has screw-threads adapted to internal threads in the same, the threads for controlling one key being right-handed, and those for controlling the other key left-handed, so that, on turning the spindle in one direction, the keys will retreat from each other, and on turning it in the opposite direction will approach each other.

The spindle is embraced between its two collars *e e* by the forked end of the block or stud F', in such a manner that, while the spindle can be turned freely, it cannot move longitudinally independently of the wheel, for the forked block is fitted snugly in, and secured in any suitable manner to the hub.

In the absence of this block, or other equivalent device for controlling the screw longitudinally, one key might be tightened in advance of the other on turning the spindle, whereas, by confining the latter to the hub in the manner described, or in any other manner substantially the same, a simultaneous action of the keys as mediums for securing the wheel to the axle is secured.

Another block, G, is fitted into the hub of the wheel, and is retained therein by a split key, H, and gum-band, I, the block having a projection, *i*, adapted to a corresponding recess in the axle.

When the block is in the position shown in fig. 1, the wheel has been adjusted for a wide-gauge track, but when the wheel has been adjusted to suit a narrow-gauge track, as shown in fig. 5, the block is reversed before it is inserted in its place. The block, and its projection, in fact, determine the proper adjustment of the wheel for tracks of different gauges. It should be understood, however, that this reversible block has been heretofore used for a like purpose, and, therefore, forms no part of my invention.

It will be evident that the screw-spindle can be controlled longitudinally by a device applied at the ends, as well as by the forked block F in the middle.

The great difficulty in rendering car-wheels easy of adjustment on axles, to suit tracks of different gauges, has been a want of effective means of securing the wheels after adjustment, a single key being barely sufficient for this purpose. It has been found, however, that two keys forced between the hub of the wheel and the axle in contrary directions, as shown, afford ample security for the purpose.

Claims.

1. The two keys D and D', adapted to a groove in the axle, and to a groove in the wheel, and operated

simultaneously by a screw or screws, all substantially as set forth.

2. The combination of the said keys with a longitudinally controlled screw-spindle, having right-handed threads for one key, and left-handed threads for the other, as set forth.

3. The said screw or screws, in combination with the wheel, and with devices whereby any lateral movement of the screws independently of the wheel is prevented.

In testimony whereof we have signed our names to

this specification in the presence of two subscribing witnesses.

ALEXANDER McLEOD.

Witnesses as to McLEOD:

I. M. COLGAN,

HARRY SMITH.

GEORGE GRANVILLE LOBDELL.

Witnesses as to LOBDELL:

JAMES H. CAMERON,

D. CHANDLER.