

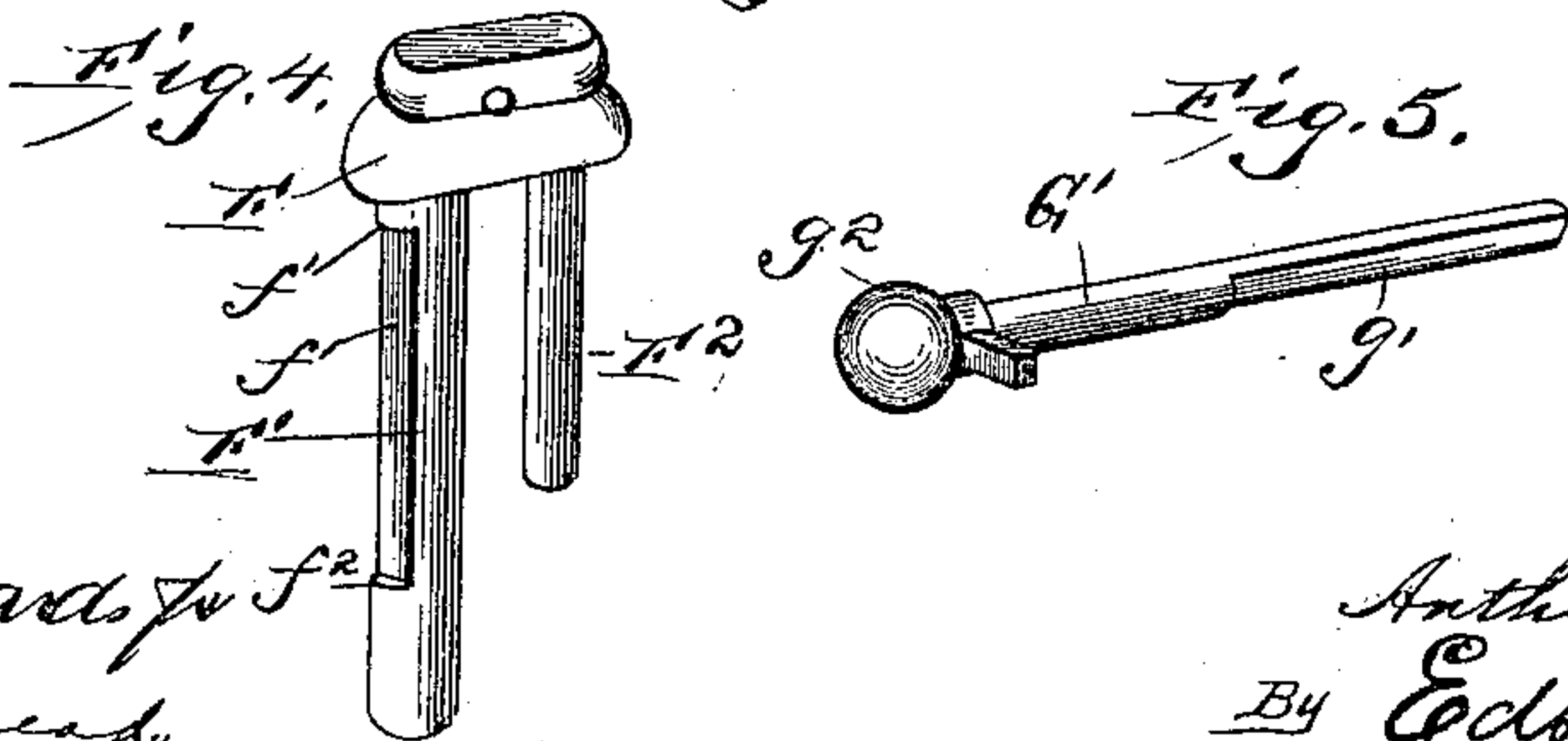
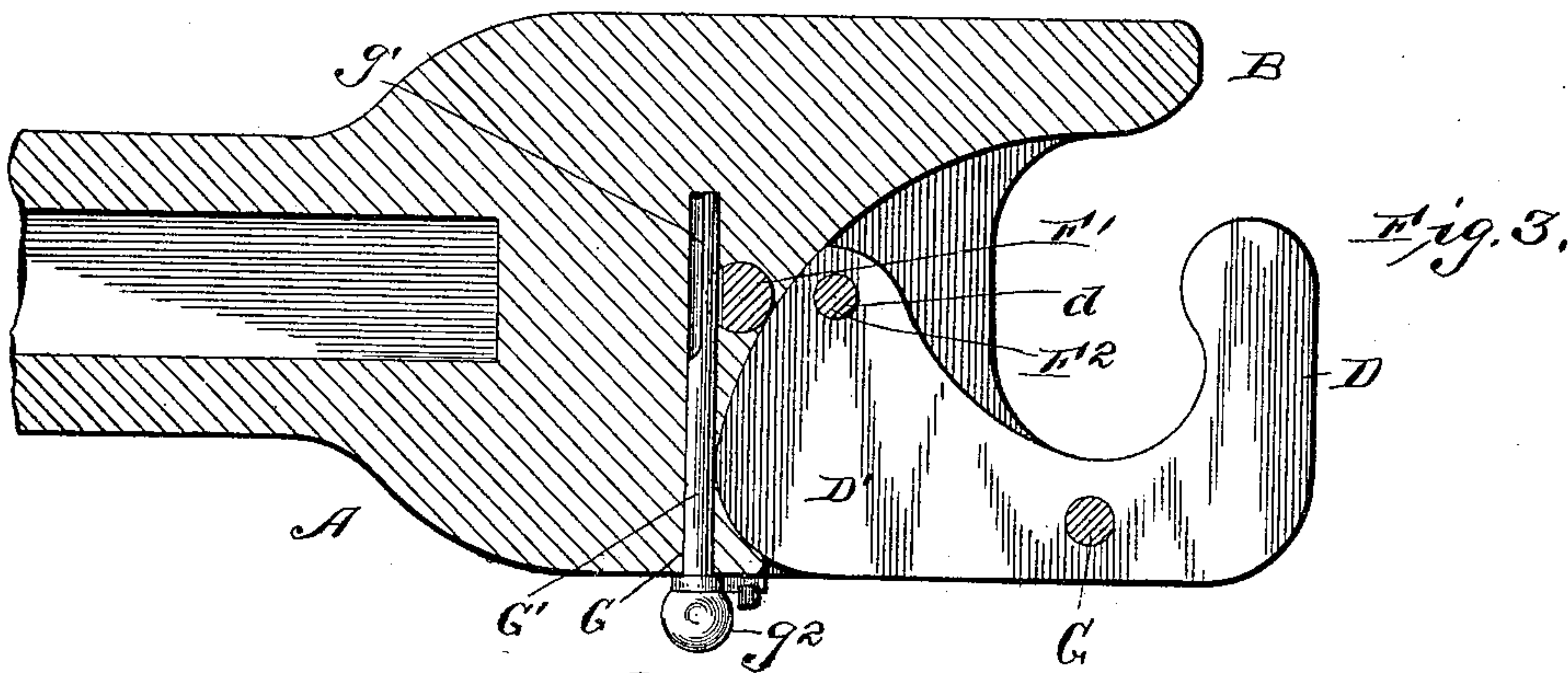
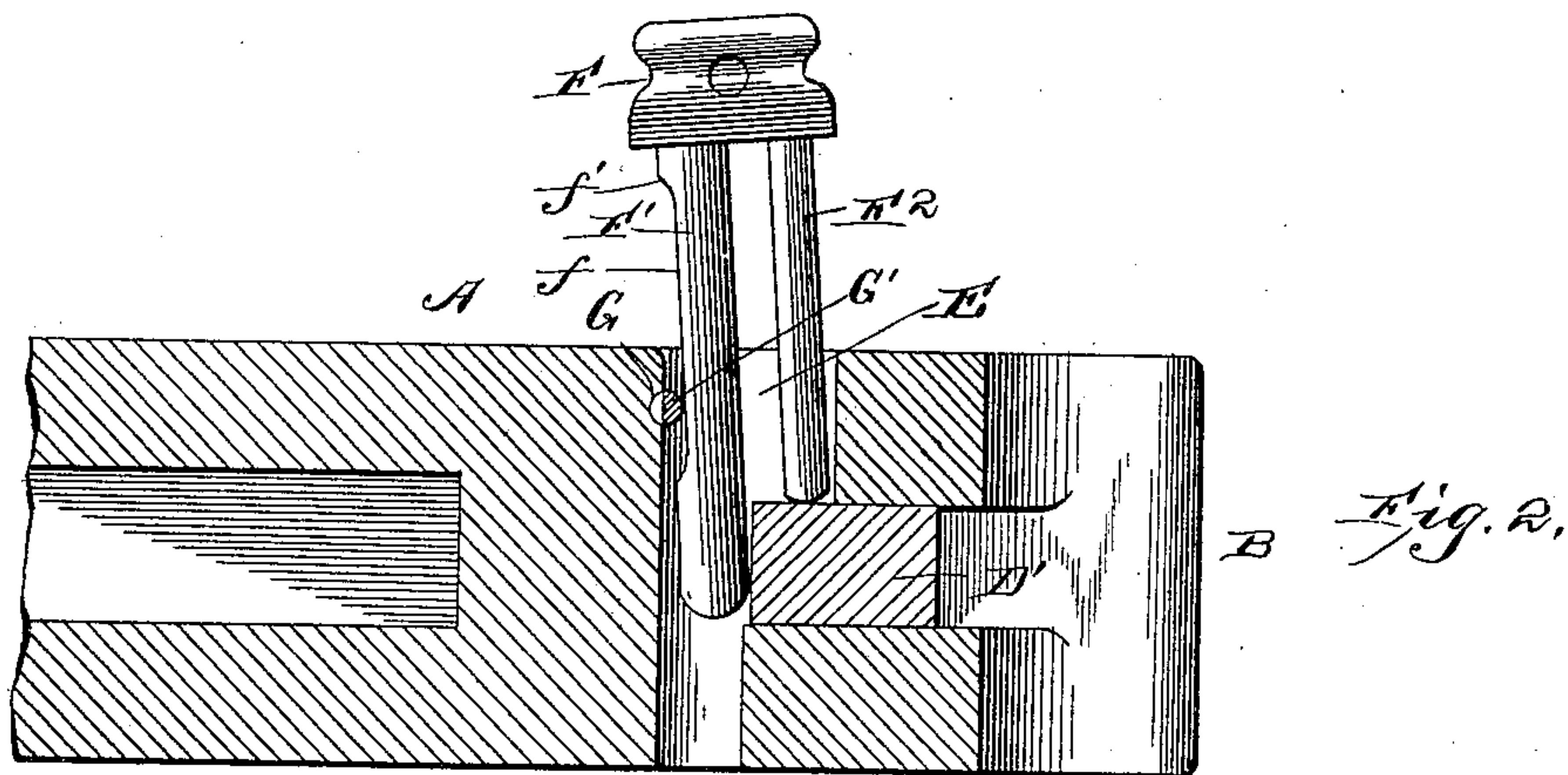
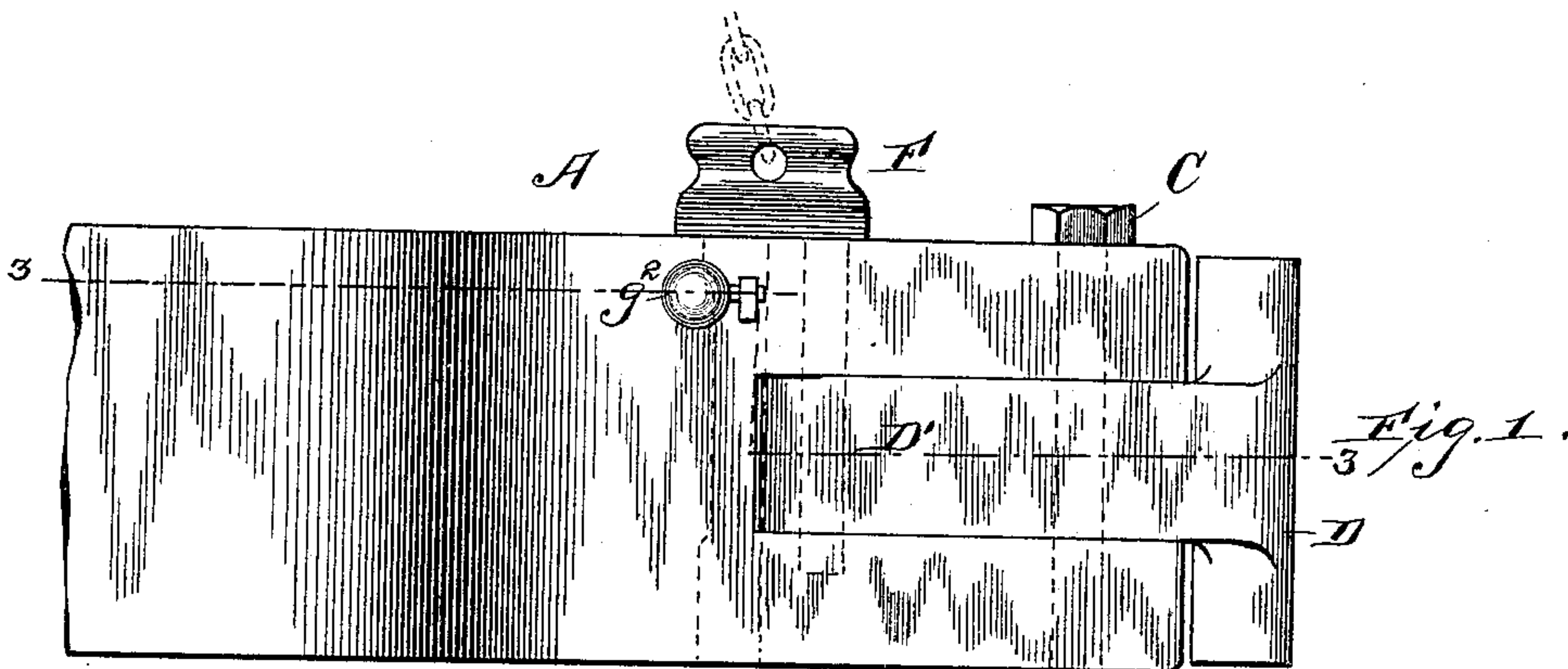
No. 611,066.

Patented Sept. 20, 1898.

A. DOUGHERTY.  
CAR COUPLING.

(Application filed Apr. 23, 1898.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

ANTHONY DOUGHERTY, OF WAVERLY MILLS, MINNESOTA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 611,066, dated September 20, 1898.

Application filed April 23, 1898. Serial No. 678,679. (No model.)

*To all whom it may concern:*

Be it known that I, ANTHONY DOUGHERTY, a citizen of the United States, residing at Waverly Mills, in the county of Wright and State of Minnesota, have invented certain new and useful Improvements in Car-Couplers; 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 an improvement in car-couplings; and its object is to provide certain new and useful improvements in couplings of the Janney type whereby a quick and secure connection between the cars is obtained and the cars are readily coupled and uncoupled without necessitating the presence of the operator therebetween.

To these ends the invention consists principally of a coupling-pin of peculiar construction adapted to automatically lock the knuckles of the draw-heads when in correct position; also, in the employment of a second or horizontal pin by means of which the vertical movement of the coupling-pin is limited at will.

The invention consists also of certain novel details of construction and combinations of parts, as will be more fully hereinafter described and claimed.

Referring to the accompanying drawings, which form part of this specification, Figure 1 is a side elevation. Fig. 2 is a central vertical longitudinal section showing the knuckle in unlocked position and the pin raised. Fig. 3 is a horizontal section on line 3 3, Fig. 1; and Figs. 4 and 5 are detailed views of the coupling and locking pins, respectively.

Referring to said drawings by letters of reference, A is the draw-head, substantially of the form used in the ordinary type of Janney coupling and is provided with a horn B, as shown. Pivoted within the forward projection of the opposite side, upon the pivot C, is a knuckle D, having a rearwardly-projecting portion D', adapted to swing horizontally within the draw-head, as is obvious. Passing through said draw-head from top to bottom at a point preferably near the center thereof is an opening E, adapted to receive a coupling-pin of the peculiar form shown in Fig. 4. Said pin is composed of a head or cap F,

preferably perforated to receive suitable operating mechanism, one form of which is shown in dotted lines, Fig. 1, and two prongs or pins F' F<sup>2</sup>, one of which, F', is longer and preferably thicker than the other and extends through the entire thickness of the draw-head when seated in position. Said pin F' has a cut-out portion *f* in its rear surface, forming shoulders *f'* *f*<sup>2</sup>, for a purpose hereinafter described.

Extending from one side of the draw-head A, near the upper surface thereof, inward horizontally and on a line with the rear of the opening E, is a second opening G, adapted to receive a pin G', substantially as shown in Fig. 5, which has one side tapered toward the end, as at *g'*. The straight surface of pin G' is adapted to normally rest within the cut-out portion *f* of the pin F' between the shoulders *f'* *f*<sup>2</sup>, formed thereby, thus limiting the vertical movement of the entire coupling-pin to the distance between said shoulders.

The operation of the device is as follows: The coupling-pin is drawn upward and tilted backward, thereby permitting the forward pin F<sup>2</sup> to rest upon the rearward extension D' of the knuckle D, as shown. The two couplers to be secured, which are of the same construction, after having been thus arranged are brought together for coupling. The knuckles D enter into their proper positions and are immediately forced backward, swinging upon the pivots C, by the opposing horns B. Extension D' slips beneath pin F<sup>2</sup> until it reaches a required point, when it drops by force of gravity preferably into an opening *d*, formed through the projection D' from top to bottom, thus resulting in a strong, quick, and effective lock.

In uncoupling the foregoing operation is substantially reversed, the pin being drawn upward, as before described, which permits the knuckle and its rearward projection to swing forward immediately upon the withdrawal of the pin F<sup>2</sup> from the opening *d*.

If it is desired to remove the coupling-pin for any reason, as in case of breakage, &c., all that is necessary is to turn pin G' one-half a revolution by means of head *g*<sup>2</sup>, which is suitably seated, preferably, by the means shown. This movement will turn the outer edge of the pin G' from the cut-out portion *f* of pin



F', as will be obvious, and permit the withdrawal of the coupling-pin.

In the foregoing description I have shown the preferred form of my invention; but I do  
5 not limit myself thereto, as I am aware that modifications may be made without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the  
10 scope of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A coupling consisting of a knuckle piv-  
15 oted as described and having a rearwardly-projecting portion, a coupling-pin, adapted to be supported thereby when open and to be received by said rearwardly-projecting portion when closed, and a revoluble locking-pin  
20 for limiting the movement of said coupling-

pin and having a cut-away portion to permit the withdrawal of said coupling-pin as described.

2. In a car-coupling, the combination of a  
pivoted knuckle having a rearwardly-extend- 25  
ing portion operating as described; and a coupling-pin consisting of a perforated head and a long and short pin, said long pin having a cut-out portion adapted to receive a third pin  
operating as and for the purpose described, 30  
and said short pin being supported by or adapted to enter into, said rearwardly-extending portion of the knuckle, substantially as and for the purpose described.

In testimony whereof I affix my signature 35  
in presence of two witnesses.

ANTHONY DOUGHERTY.

Witnesses:

JOHN CASEY,

JOHN M. CASEY.