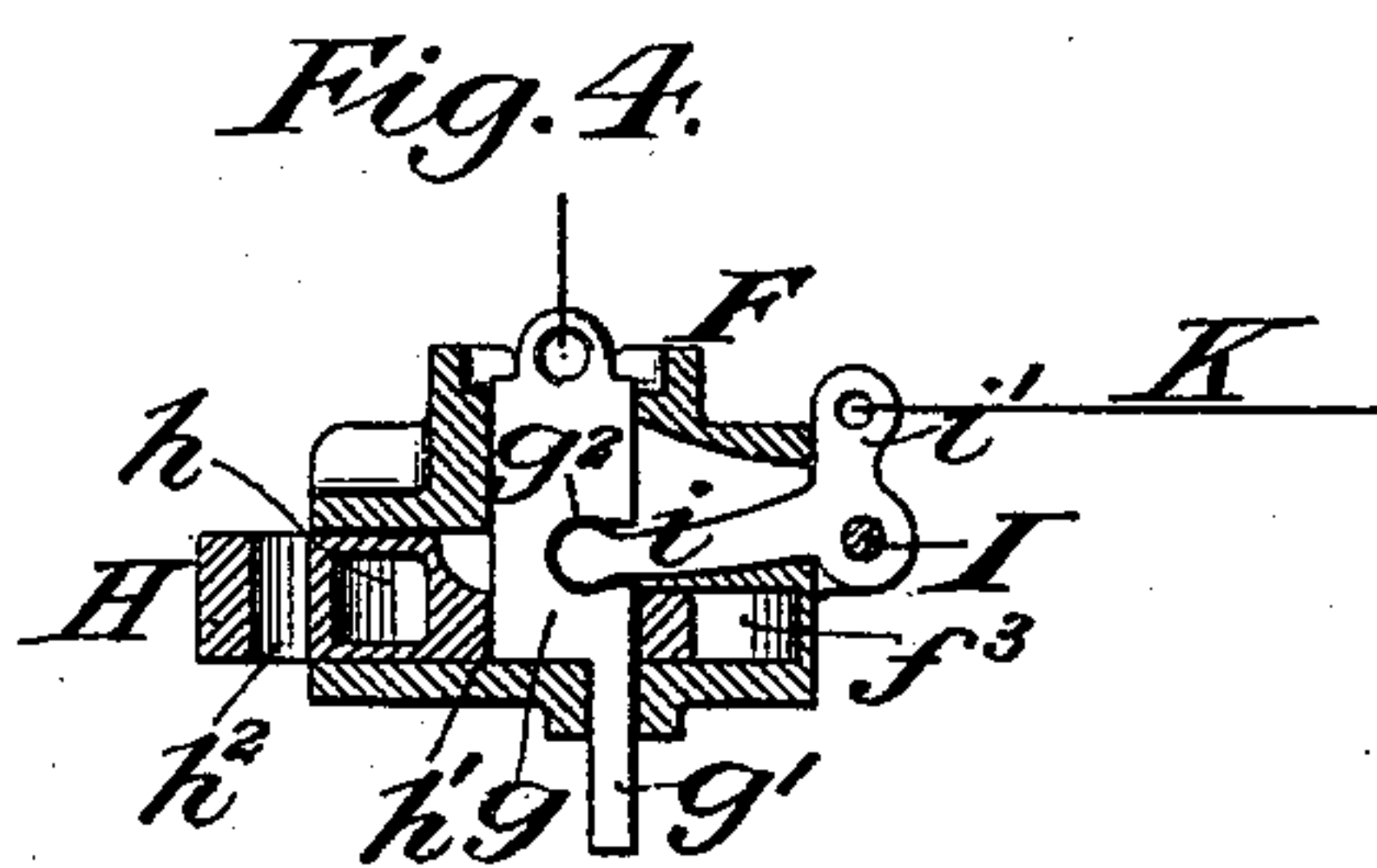
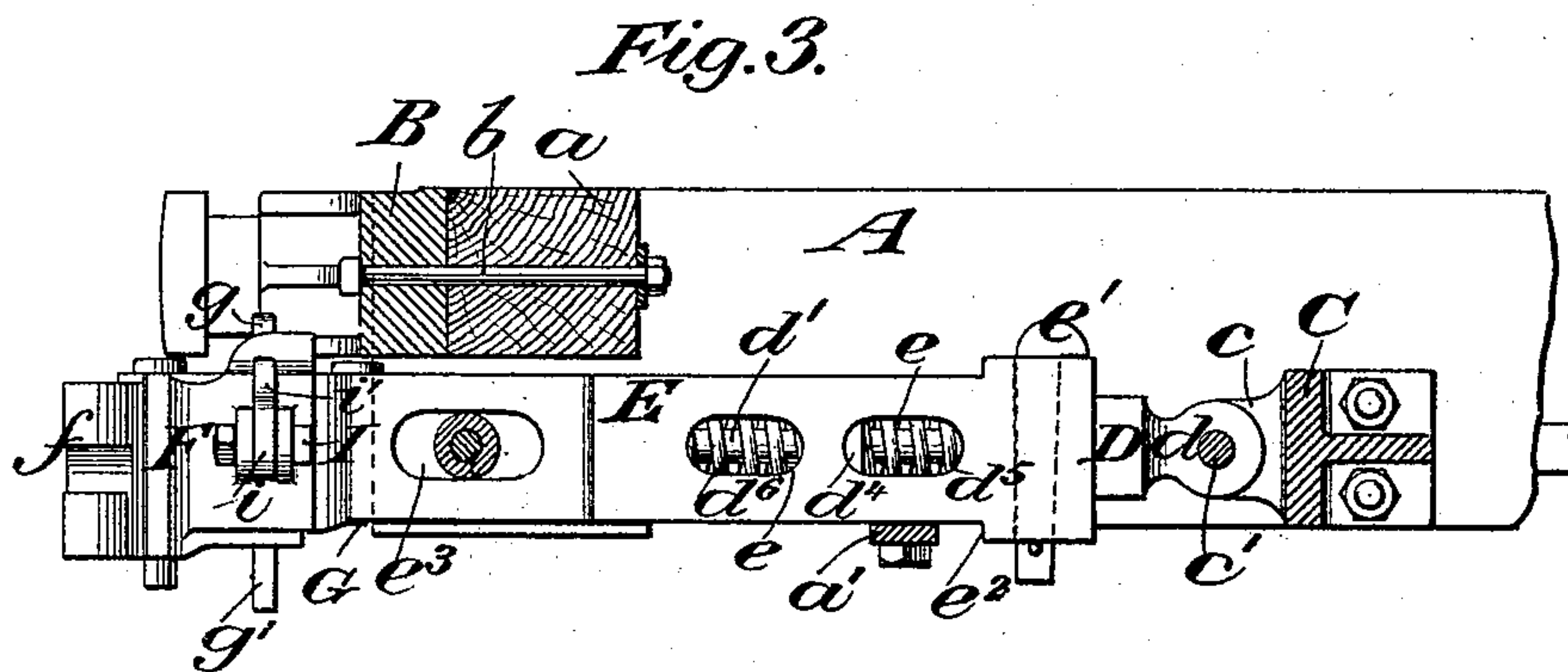
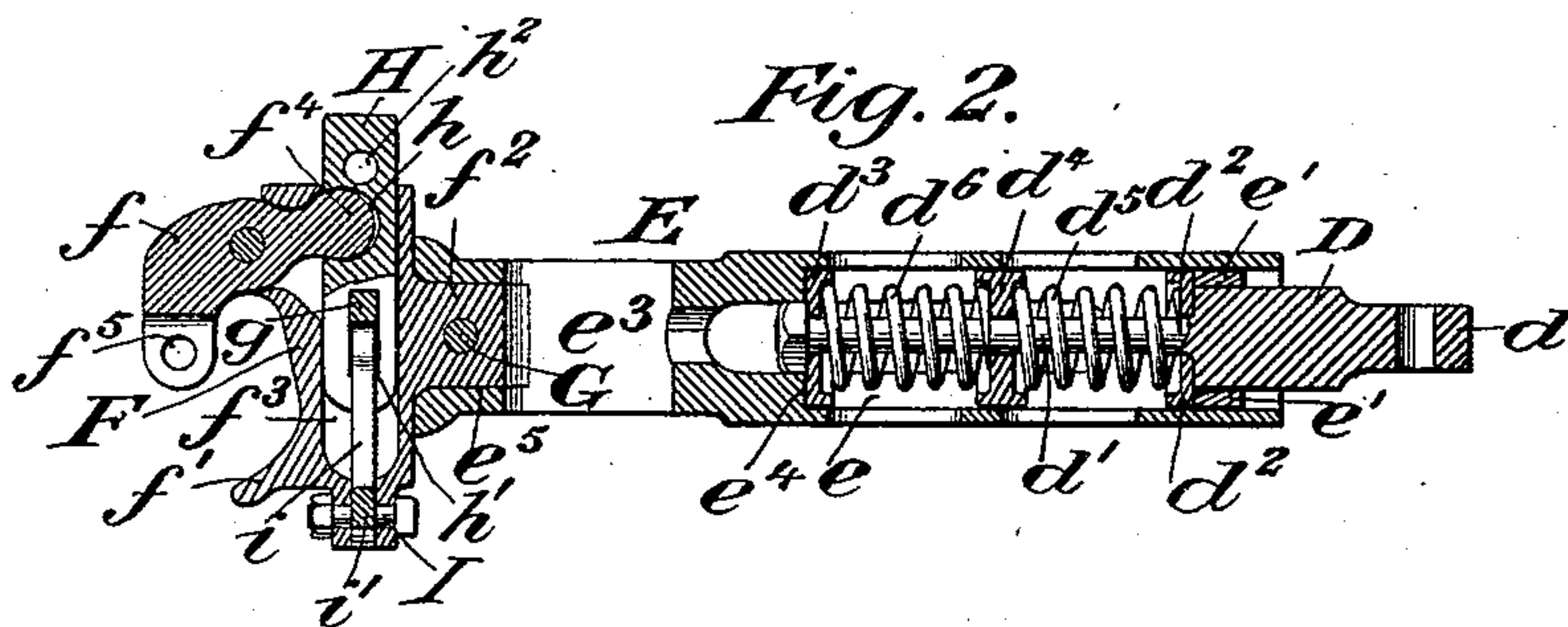
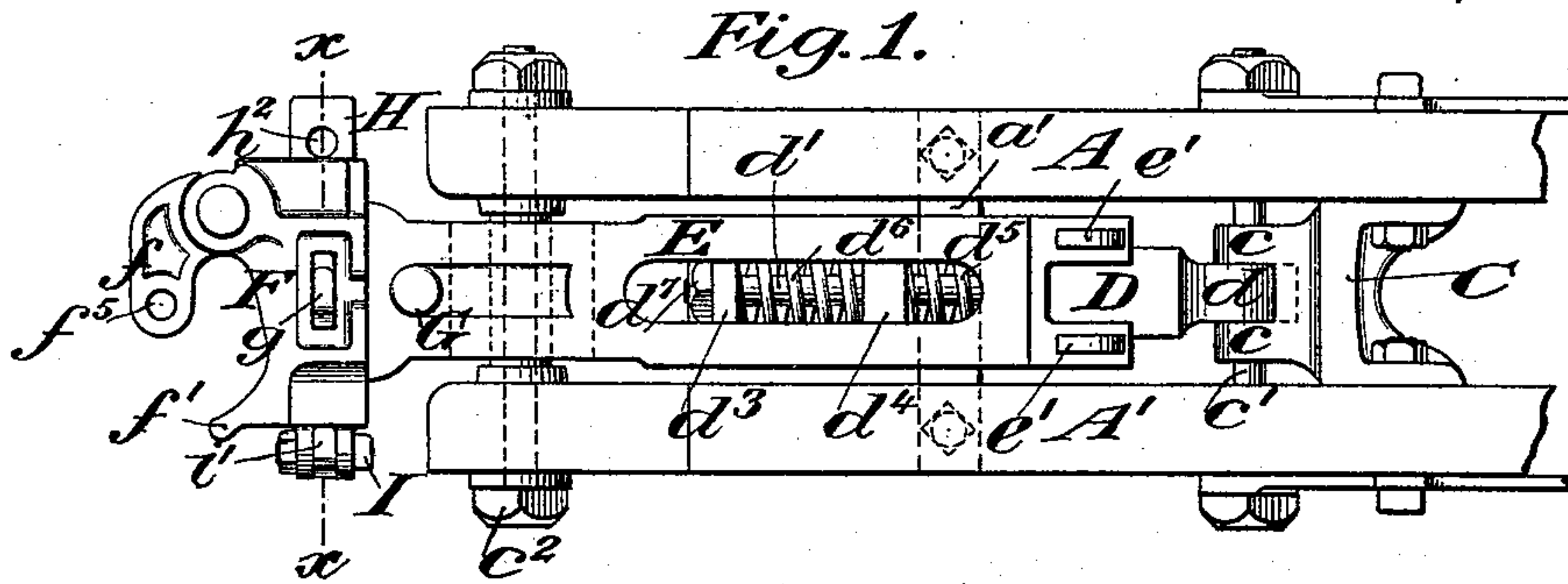


(No Model.)

W. N. HARING.
CAR COUPLING.

No. 487,924.

Patented Dec. 13, 1892.



Witnesses:-

R. N. Raybrook
Fred Haynes

Inventor:-

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UNITED STATES PATENT OFFICE.

WILLIAM N. HARING, OF NYACK, ASSIGNOR OF ONE-HALF TO FRANCES J. HASBROUCK, OF NEW YORK, N. Y.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 487,924, dated December 13, 1892.

Application filed March 15, 1892. Serial No. 425,036. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. HARING, of Nyack, in the county of Rockland and State of New York, have invented a new and useful
5 Improvement in Car-Couplings, of which the following is a specification.

My invention relates to an improvement in car-couplings in which provision is made for the locking of the coupling-heads together
10 either automatically or by hand and in which the heads may be released either by drawing upwardly directly upon the locking-pin or elevating it by an indirect attachment from the side.

15 A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a top plan view of one of the coupling-heads and the parts which support
20 it. Fig. 2 is a horizontal section through the draw bar and head. Fig. 3 is a view of the same in side elevation, showing, also, one of the side supports and a portion of the buffer; and Fig. 4 is a vertical transverse section
25 through the coupling-head on line *xx* of Fig. 1.

The supporting-beams between which the coupling is mounted are represented by A and A', and they are connected at or near their front ends by a buffer-beam *a*, (see Fig. 3,) to the front of which a buffer B is secured—
30 in the present instance by means of bolts *b*, extending through the buffer-beam. Between the said beams A and A' there is fixed a heavy bracket C, the forward end of which is bifurcated to receive between its lugs *c* the head *d* of the plunger D. A heavy cross-bolt *c'* extends through the lugs *c* and the head *d* of the plunger to secure it to the bracket C. The plunger rod or stem is denoted by *d'* and
40 it has mounted thereon the end washers *d²* and *d³* and the central or parting washer *d⁴*. Heavy coil-springs *d⁵* and *d⁶* surround the stem *d'* between the end and parting washers, and the head *d⁷* on the end of the stem
45 holds the springs and washers in position on the stem.

The draw-bar is represented by E and is provided at its rear end with an elongated socket or slot *e* for the reception of the plunger D
50 and the springs and washers carried thereby.

The plunger is locked within the socket in the draw-bar E by means of keys *e'*, which extend downwardly through the rear end of the draw-bar, upon opposite sides of the plunger, as clearly indicated in Figs. 1 and 2, and
55 form abutments for the end washers *d²*, so that when the draw-bar E is pulled outwardly it will slide the washer *d²* on the stem of the plunger, and thereby compress the springs *d⁵* and *d⁶*. The limit of the outward movement of
60 the draw-bar is determined by the engagement of the shoulder *e³* on the under side of the draw-bar with the fixed cross-bar *a'*, bolted or otherwise secured to the under sides of the supports A and A'. The draw-bar E is held
65 in position between the supports by means of a cross-bolt *c²*, extending through the supports A and A' and through an elongated slot *e³* in the side of the bar. The washer *d³* abuts against internal shoulders *e⁴* within the draw-
70 bar, and when the draw-bar E is forced inwardly it carries the washer *d³* with it, and thereby compresses the springs *d⁵* and *d⁶*. The limit of the inward movement of the draw-bar is determined by the engagement of shoulders
75 on the coupling-head with the front of the buffer B.

The body portion of the coupling-head or draw-head is represented by F, and it is provided with a hinged jaw *f* and a stationary
80 jaw *f'*, between which the hinged jaw of the opposite coupling-head is received when the two are brought together into interlocking adjustment. The head F has extended rearwardly therefrom a stem *f²*, (see Fig. 2,) 85 adapted to seat within a socket *e⁵*, formed in the front end of the draw-bar E, and is secured therein by means of a coupling-pin G, extending downwardly through the draw-bar and the stem *f²*, so that if from any cause
90 the draw-head becomes useless it may be removed and an ordinary link-and-pin attachment may be made directly with the front end of the draw-bar. The head F is provided with a socket *f³*, extending transversely there-
95 in, and in said socket there is seated a sliding bar H. The projection *f⁴* on the swinging jaw *f* projects within the socket *f³* and seats loosely within a recess *h*, formed in the front
100 of the bar H, so that as the jaw *f* opens and

closes on its pivot to release or lock the corresponding jaw on the opposite draw or coupling head it will slide the bar H inwardly or outwardly in the socket f^3 , and if the bar H
 5 be locked against an inward movement it will thereby lock the head F against swinging outwardly to release the corresponding jaw of the draw-head. A locking-pin g is seated within the head F so as to have a limited ver-
 10 tical movement therein and is adapted to drop downwardly through an opening h' in the bar H when the latter is at the limit of its outward movement, and thereby lock it against inward movement until the pin g is withdrawn.
 15 The pin g has a guiding-prong g' thereon, extending downwardly through the head F, and is fitted at the top to receive an operating chain or cord. The pin g may also be operated by means of an angle-lever pivotally secured to the
 20 head, as at I, one arm i of said lever extending within the head and loosely engaging within a recess g^2 in the side of the pin g and the other arm i' being fitted for the attachment thereto of an operating-chain K,
 25 leading to the side of the car. By pulling upwardly on the pin g by a cord or chain attached to its top and leading, for example, to the top of a freight-car the bar H may be released and the jaw f thereby allowed to
 30 swing outwardly and uncouple. By pulling outwardly on the chain K the angle-lever, pivoted at I, will rock in a direction to lift the pin g , and thereby release the bar H and permit the jaw f to swing and uncouple. As two
 35 opposite draw-heads come together the jaws f will be swung simultaneously inwardly, and the bar H will thereby be moved outwardly until the pin g drops under the influence of gravity through the bar H, and
 40 thereby locks the couplings together. In case

the pin g should become broken or jammed, so that it could not be utilized to lock the bar H in its outward adjustment, I provide for locking it in such position by hand by forming a perforation h^2 downwardly through it
 45 near its outer end for the purpose of receiving an ordinary coupling-pin. The free end of the jaw f is bifurcated and provided with the perforation f^5 therethrough to receive the ordinary link and coupling-pin, as is usual. 50

What I claim is—

1. The draw-head comprising a body portion, a swinging jaw secured thereto, a coupling-pin, and a sliding bar having a loose connection with the swinging jaw and coupling-
 55 pin to lock and release the jaw when the bar is locked or released by the pin, substantially as set forth.

2. The draw-head comprising a body portion, a swinging jaw secured thereto, a lat-
 60 erally-sliding bar having a loose connection with the swinging jaw, a locking-pin having a limited movement into and out of engagement with the sliding bar, and a lever having a loose engagement with the locking-pin for
 65 operating it and hence releasing the bar, substantially as set forth.

3. The combination, with the draw-bar and draw-head secured thereto, of a plunger inserted within the rear end of the draw-bar, a
 70 bearing on the plunger, and keys extending downwardly through the draw-bar in engagement with the bearing for locking the plunger therein in removable adjustment, substantially as set forth.

WILLIAM N. HARING.

Witnesses:

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