

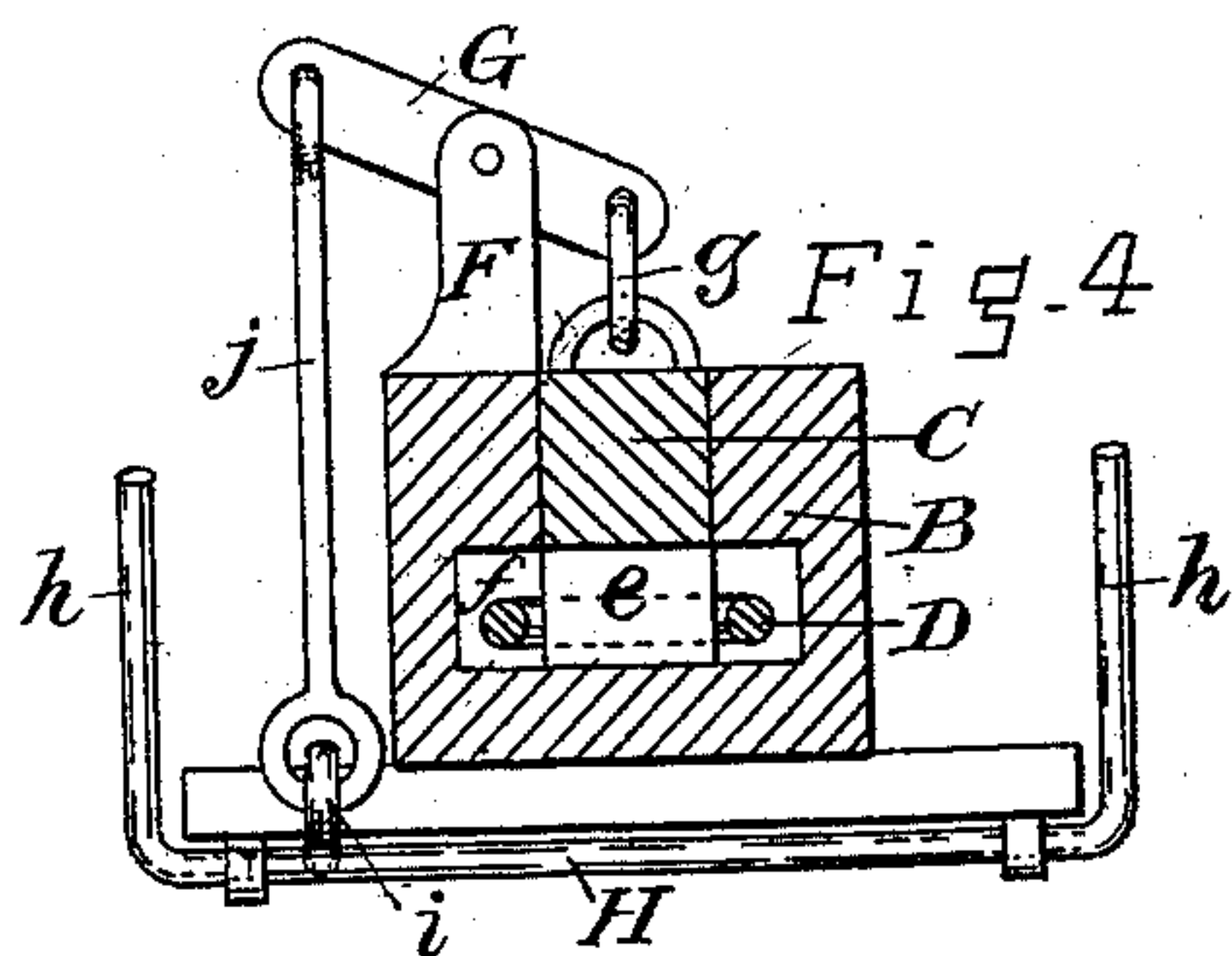
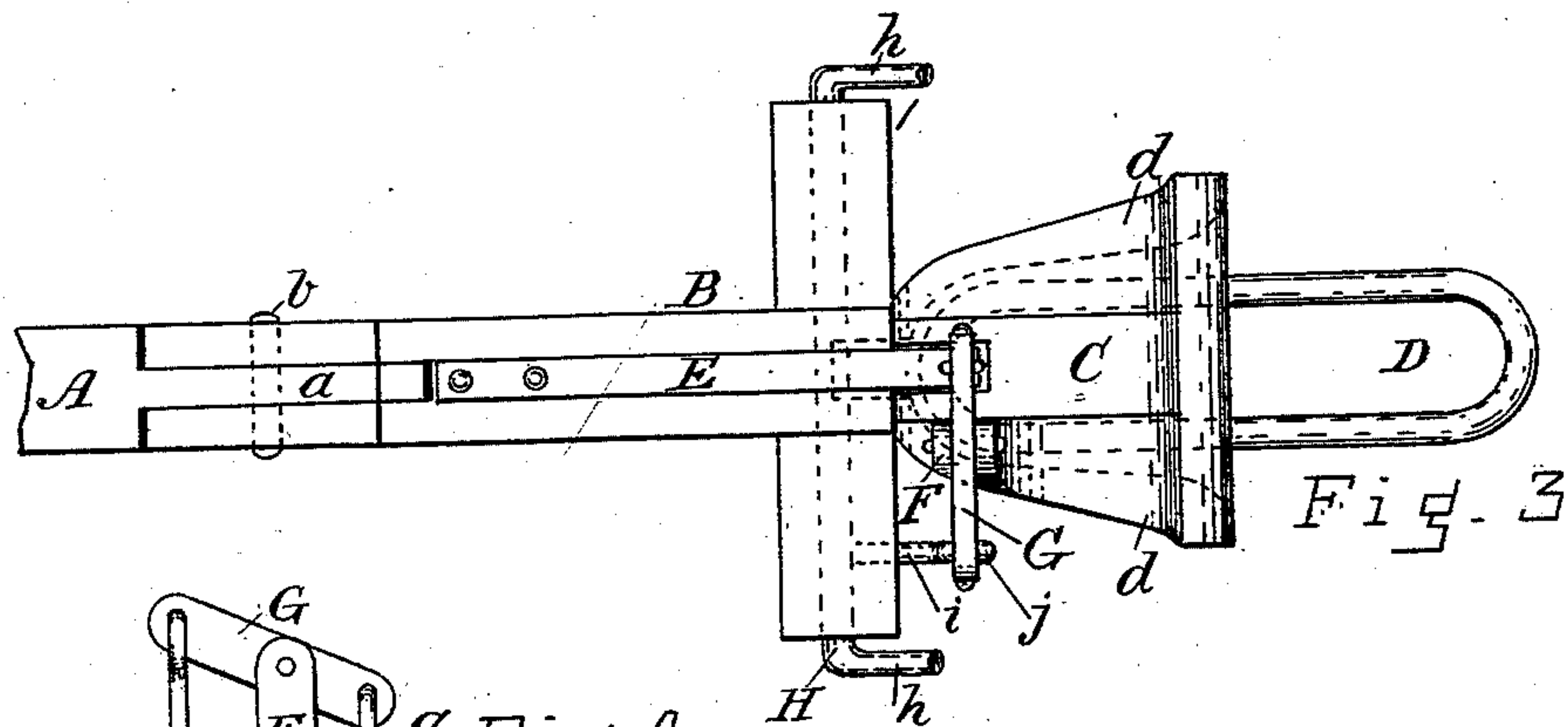
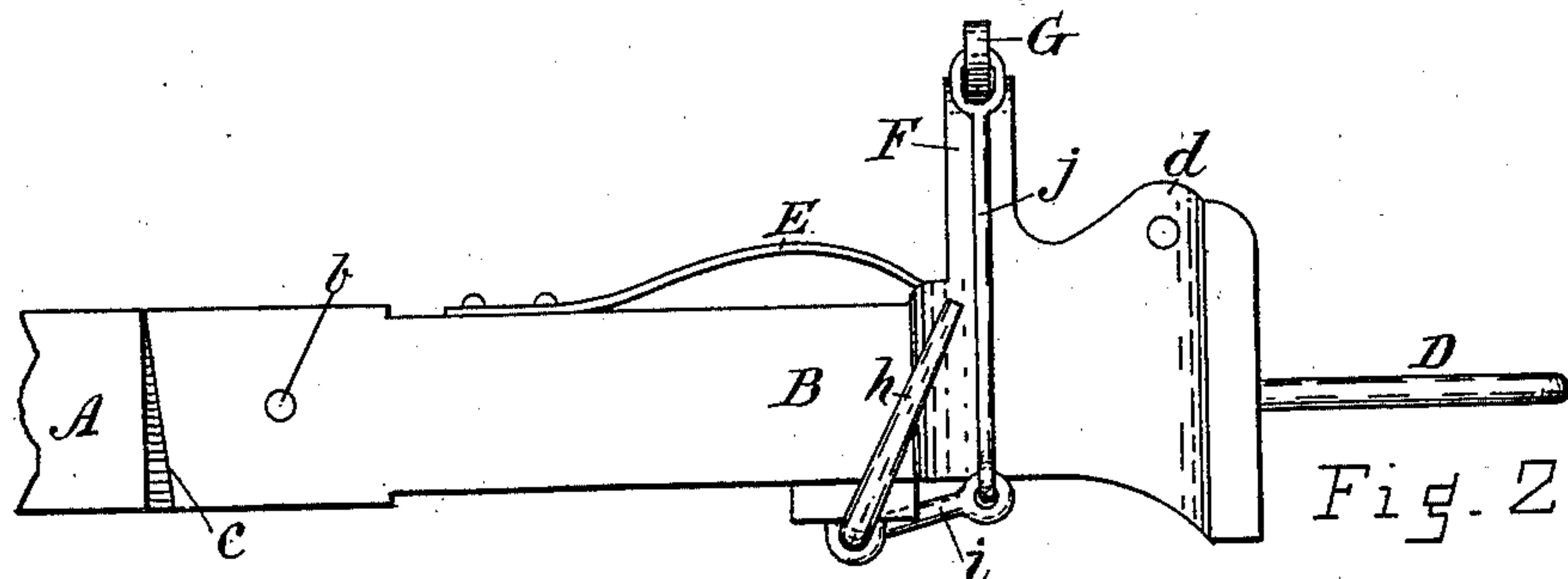
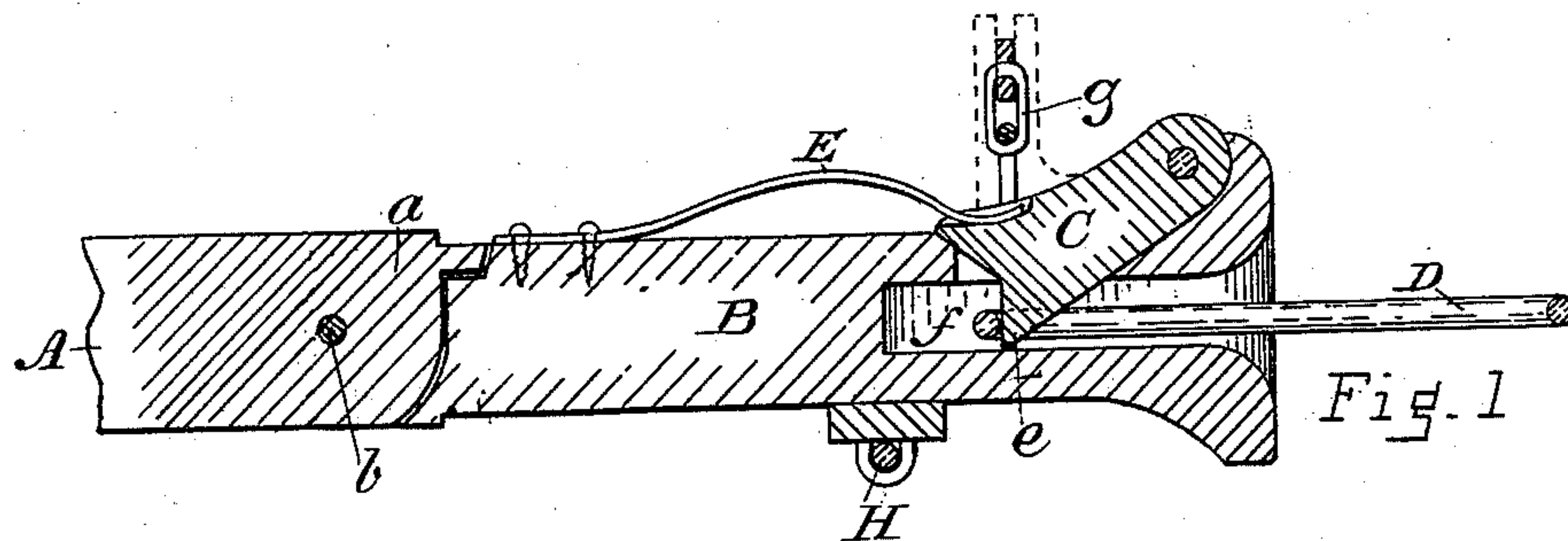
(No Model.)

G. MITCHELL & W. D. MARTIN.

CAR COUPLING.

No. 303,583.

Patented Aug. 12, 1884.



Witnesses:
A. Charbonneau.
H. Harwood

Inventors.
Geo. Mitchell
Wm D. Martin
By J. Coursole
att'y

UNITED STATES PATENT OFFICE.

GEORGE MITCHELL, OF NEWCASTLE, AND WILLIAM DAVID MARTIN, OF
MONCTON, NEW BRUNSWICK, CANADA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 303,583, dated August 12, 1884.

Application filed January 23, 1884. (No model.) Patented in Canada April 17, 1883, No. 16,699, and September 12, 1883, No. 17,665.

To all whom it may concern:

Be it known that we, GEORGE MITCHELL, of Newcastle, in the county of Northumberland, in the Province of New Brunswick, and
5 WILLIAM DAVID MARTIN, of Moncton, in the county of Westmoreland, in the aforesaid Province, Canada, have invented a new and useful Automatic Car-Coupler, of which the following is a specification.

10 Our invention consists, mainly, first, in hinging the draw-head to the draw-bar, so that the head may move vertically within a limited angle to suit the different height of a car to which it might be connected; second, in replacing
15 the ordinary coupling-pin by a latch-hook depressed by a spring, and placing a shaft across the draw-head, with levers for raising said latch when uncoupling the cars.

In the drawings, Figure 1 is a longitudinal
20 vertical section of our improved coupler. Fig. 2 is a side elevation. Fig. 3 is a top view, and Fig. 4 is a cross-section of the same.

A the draw-bar, and B the draw-head, are connected by a hinge-joint consisting of
25 the tongue *a*, fitted in a slot-mortise formed in the end of the head, and pivoted by the pin *b*. The upper portion of the tongue *a* is lengthened out to fit in a corresponding recess in the head for preventing the head from being raised
30 above a straight line with the draw-bar, and the shoulders *c* of the head being slightly sloped inward and downward to allow of the downward deflection of the head. The head B, being thus movable vertically within a limited
35 angle, adjusts itself to the height of the adjacent head and link to which it is desired to be coupled.

C is the latch-hook. It is pivoted at the forward end of the head in two lugs, *d*, cast on
40 or otherwise secured to the upper surface of the head. The nose *e* of the latch-hook projects into the link-chamber *f* of the draw-head, sloping rearward and downward, so as to present a nearly perpendicular shoulder to the
45 end of the coupling-link D, between the shanks of which it is made to be a loose fit. The latch-hook is held down in the chamber *f* by a spring, E, one end of which is secured to

the upper side of the draw-head, and the other end bears upon the swinging end of the latch-hook to hold it down. 50

F is a standard formed on the top of the draw-head, and upon which is fulcrumed the lifting-lever G, the inner end of which is connected with the swinging end of the latch-hook
55 by a chain or link, *g*, of any approved pattern.

H is a rock-shaft placed transversely to and journaled in bearings formed on the underside of the draw-head. On the ends of this rock-shaft are formed or rigidly secured the hand-lever *h*, by which the coupling may be operated. The rock-shaft H is also provided with
60 an arm, *i*, the swinging end of which is connected with the outer end of the lifting-lever G by the rigid rod *j*. From this it follows that the latch-hook may be raised by simply depressing the hand-levers *h*. 65

What we claim as our invention is—

1. In a car-coupler, the lifting-lever G, fulcrumed in the standard F, and connected by the link *g* to the latch-hook C and by the rod *j* to the arm *i* of the rock-shaft H, substantially as described. 70

2. In a car-coupler, the draw-bar A, pivotally connected to the draw-head B by means of a hinge-joint, substantially as shown, and for the purpose hereinbefore set forth. 75

3. The combination, in a car-coupler, of the draw-bar A, hinged to the draw-head B, the latch-hook C, pivoted to the draw-head B and projecting its nose *e* into the chamber *f*, formed therein, and the spring E, bearing on the latch-hook, with the standard F, lifting-lever G, and link *g*, with the rock-shaft H, having the hand-levers *h h*, and the arm *i*, connected with the lifting-lever G by the rod *j*, substantially as shown, and for the purpose hereinbefore set forth. 80 85

Signed at Newcastle this 22d day of December, 1883. 90

GEORGE MITCHELL.

WILLIAM DAVID MARTIN.

In presence of—

JOSEPH A. RUSSELL,

CHAS. J. THOMSON.