

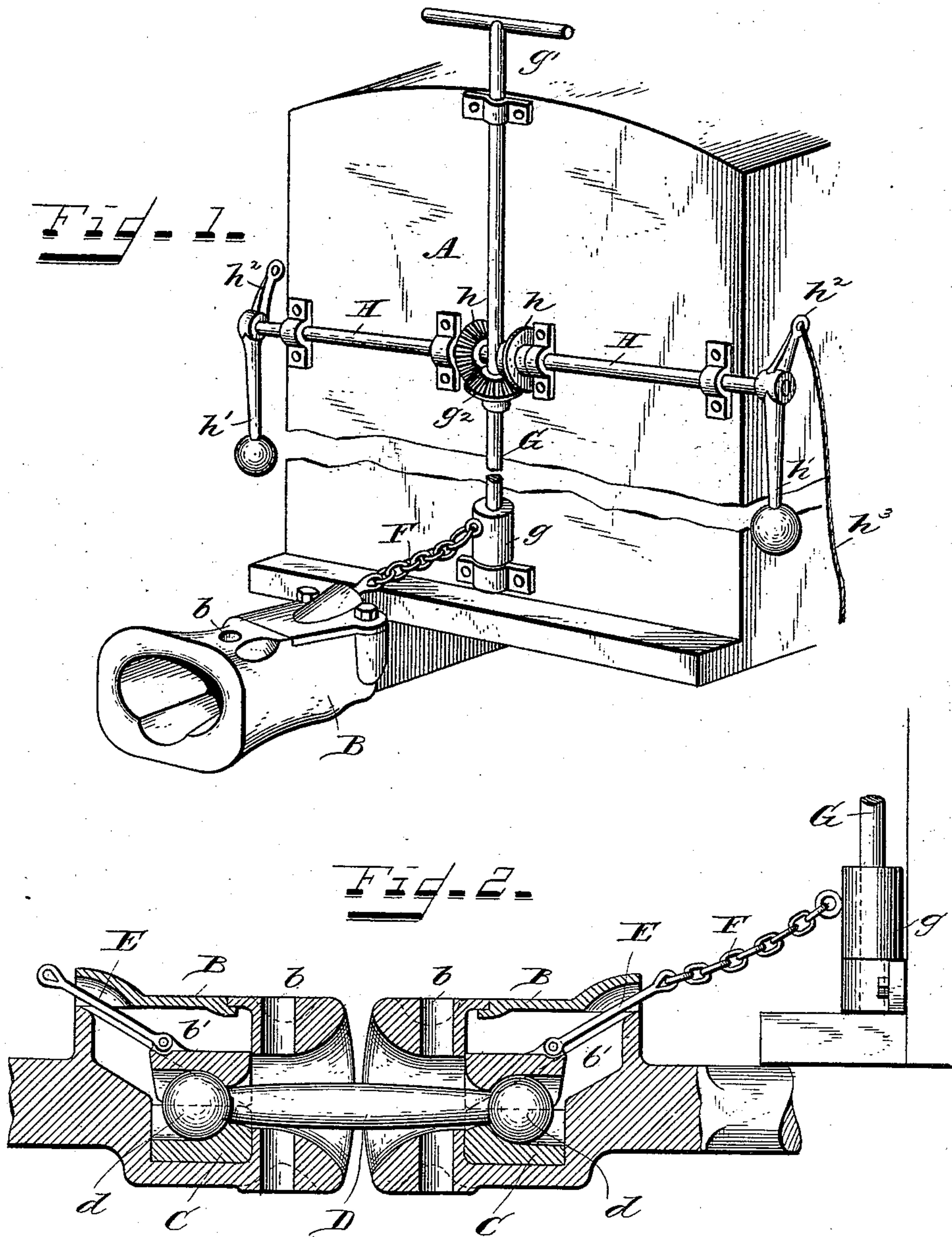
(No Model.)

2 Sheets—Sheet 1.

A. G. CLARK.
CAR COUPLING.

No. 529,020.

Patented Nov. 13, 1894.



Witnesses.
Thomson Cross,
James A. Ramsey

Inventor:
Albert G. Clark,
By Carstensen & Carstensen,
His Attorneys.

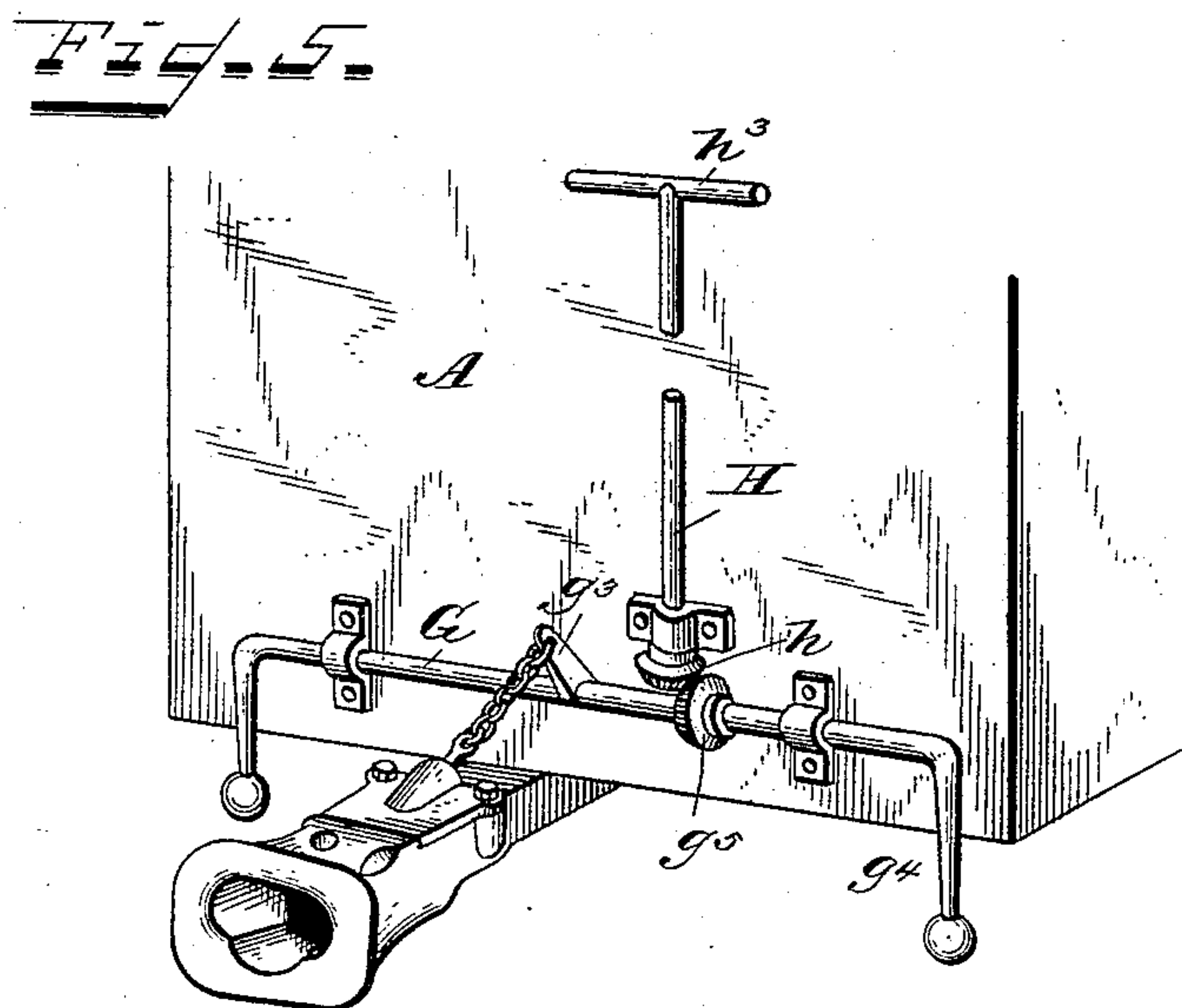
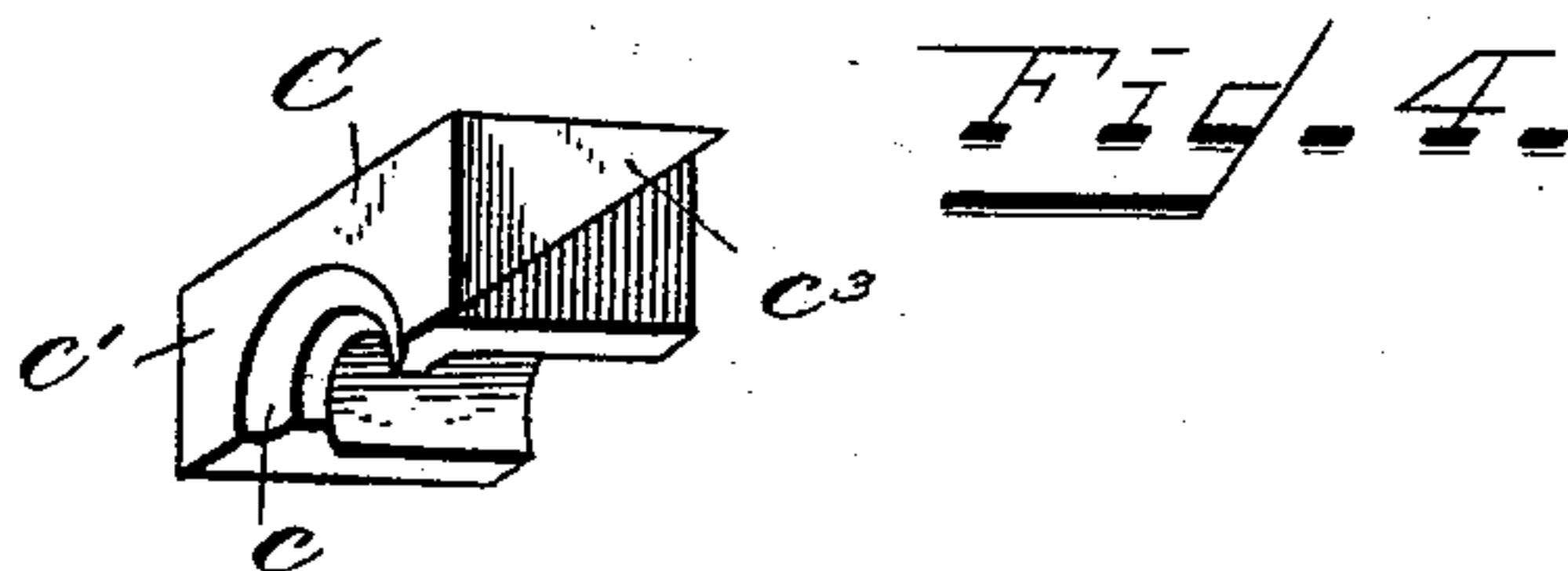
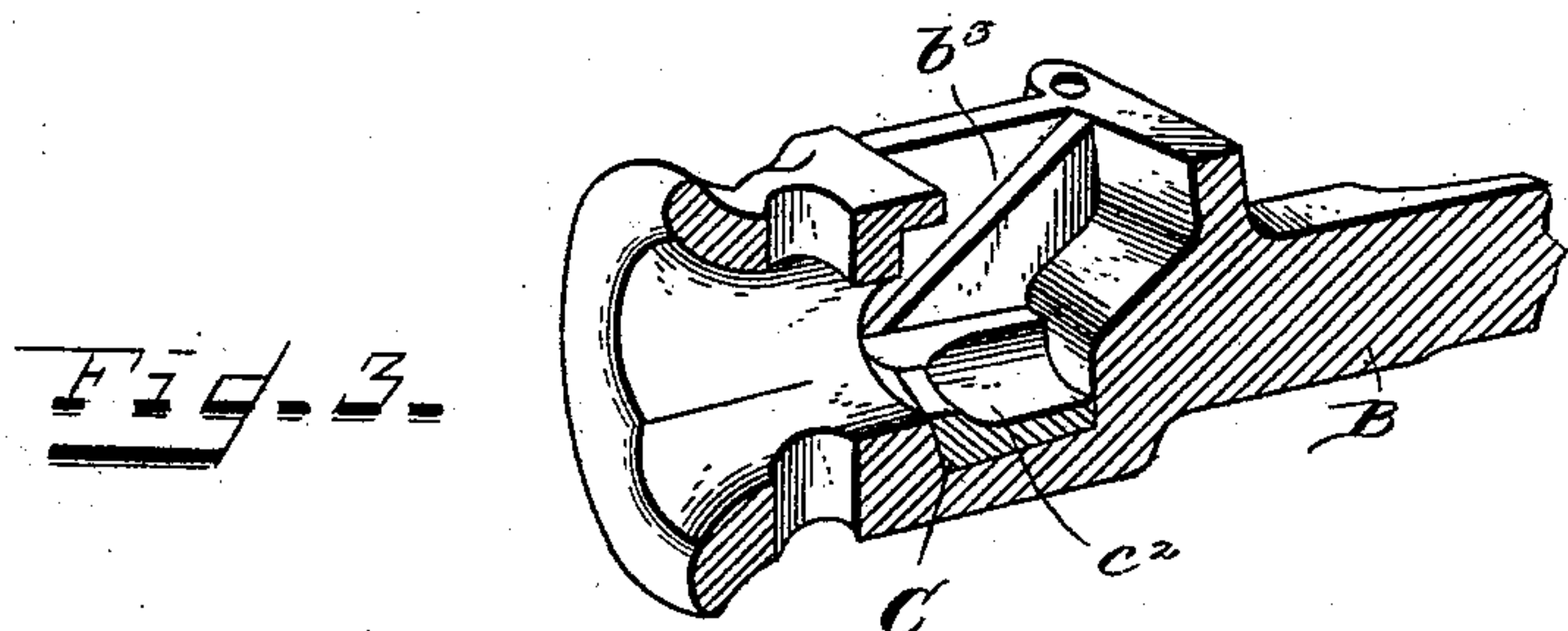
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UNITED STATES PATENT OFFICE.

ALBERT G. CLARK, OF GLENDALE, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 529,020, dated November 13, 1894.

Application filed February 23, 1892. Serial No. 422,369. (No model.)

To all whom it may concern:

Be it known that I, ALBERT G. CLARK, a citizen of the United States, residing at Glendale, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

The object of my invention is to provide an automatic car-coupling capable of use with the couplings now in use, and the invention consists in the parts and combination of parts hereinafter described and claimed.

In the drawings: Figure 1 is a perspective view of a car provided with my improved coupling; Fig. 2, a longitudinal section of the coupling; Fig. 3, a longitudinal section of the draw-head; Fig. 4, a perspective view of one of the coupling jaws, and Fig. 5, a perspective view of a car showing a modification of the mechanism for actuating the coupler.

A represents a car and B a draw-head provided with the usual bell mouth adapted to receive and guide the coupling link or bolt, and with apertures *b* adapted to receive pins for use with link couplings. The draw-heads are also provided with internal chambers *b'* adapted to receive jaws C and C', one of which is movable,—the movable jaw in the exemplification being the upper and lettered C. The external surfaces of these jaws have curved or inclined faces *c*, forming a bell mouth, to which the bell mouth of the draw-head serves as a guide. This bell mouth is adapted to open upon external contact with the head *d* of an arrow-headed coupling bolt D. The external surfaces of the jaws also have engaging faces *c'* which may be flat or substantially so, adapted to engage with the end walls *b²* of the chamber *b'*. The coupling jaws are hollowed internally to form a chamber adapted to receive the head of the coupling bolt. The walls *c²* of this chamber are of such an angle or curve, relatively to that of the head of the coupling bolts, that longitudinal strain upon the coupling bolt will clamp the movable jaw against the front wall *b²* of the chamber *b'*, instead of raising it. The movable jaw is provided with inclined bearings *c³* adapted to travel upon an inclined way *b³* in the draw-head.

E is a link connecting the movable jaw with

a chain F, or other flexible part, leading to a collar *g*, or its equivalent, upon a rock shaft G.

In Fig. 1 I have illustrated the rock shaft as vertical and leading to the top of the car, where it is provided with a hand-bar *g'*, or its equivalent, by which it may be actuated.

H H are shafts leading to the sides of the car and connected with shaft G by gear wheels *h h* and *g²*. These shafts are provided at their outer ends with weighted arms *g'* by which the rock shaft may be actuated and by which it will be automatically returned to its normal position after the coupling jaws have been opened. I also provide the weighted arms with a crank arm *h²* to which a cord *h³* may be attached for convenience in actuating the rock shaft—the weights being preferably placed at such a height upon the car as to avoid danger of contact with the heads of employees working about the car.

In Fig. 5 the chain is connected with a crank arm *g³* upon a horizontal rock shaft G provided at its ends, which are preferably near the sides of the car, with weighted arms *g⁴* by which it may be actuated and automatically returned to its normal position.

H is a vertical shaft connected with rock shaft G by gear wheels *h* and *g⁵* and carrying at its upper end a hand-bar *h³* by which it may be actuated.

The operation is as follows: The coupling-bolt being in position in one of the draw-heads, the cars are brought together and the movable jaw in the other draw-head is pressed backwardly and upwardly upon its inclined way by the action of the head of the bolt. When the head of the coupling-bolt drops into the recess of the fixed jaw the movable jaw drops by gravity over the bolt head and into its locking position.

With this construction cars may be readily and safely uncoupled when in motion.

I claim—

1. The combination of a draw-head, an arrow-headed bolt, a pair of jaws within the draw-head one of which is movable, an inclined way in the draw-head upon which the movable jaw may travel and means for withdrawing the movable jaw from its locking position, substantially as and for the purpose specified.

2. The combination of an arrow-headed bolt, a draw-head, a pair of jaws within the draw-head one of which is movable, a rock shaft, a flexible connection between the movable jaw and the rock shaft, and means for automatically restoring the rock shaft to its normal position, substantially as and for the purpose specified.
3. The combination of an arrow-headed bolt, a draw-head, a pair of jaws one of which is movable, an inclined way in the draw-head upon which the movable jaw is adapted to travel, a rock shaft, a flexible connection between the movable jaw and the rock shaft, and means for automatically restoring the rock shaft to its normal position, substantially as and for the purpose specified.
4. The combination with an arrow-headed bolt, of the draw-head B provided with chamber *b'*, the jaws C C', the link E, the chain F and the rock shaft G, substantially as and for the purpose specified.
5. The combination of the draw-head B having aperture *b*, the jaws C C', the link E, the chain F and the rock shaft G, substantially as and for the purpose specified.
6. The combination of the draw-head B, the jaws C C', the link E, the chain F and the rock shaft G provided with weights adapted to return it to its normal position, substantially as and for the purpose specified.

ALBERT G. CLARK.

Witnesses:

JAMES N. RAMSEY,

C. W. FIGNER.