

(No Model.)

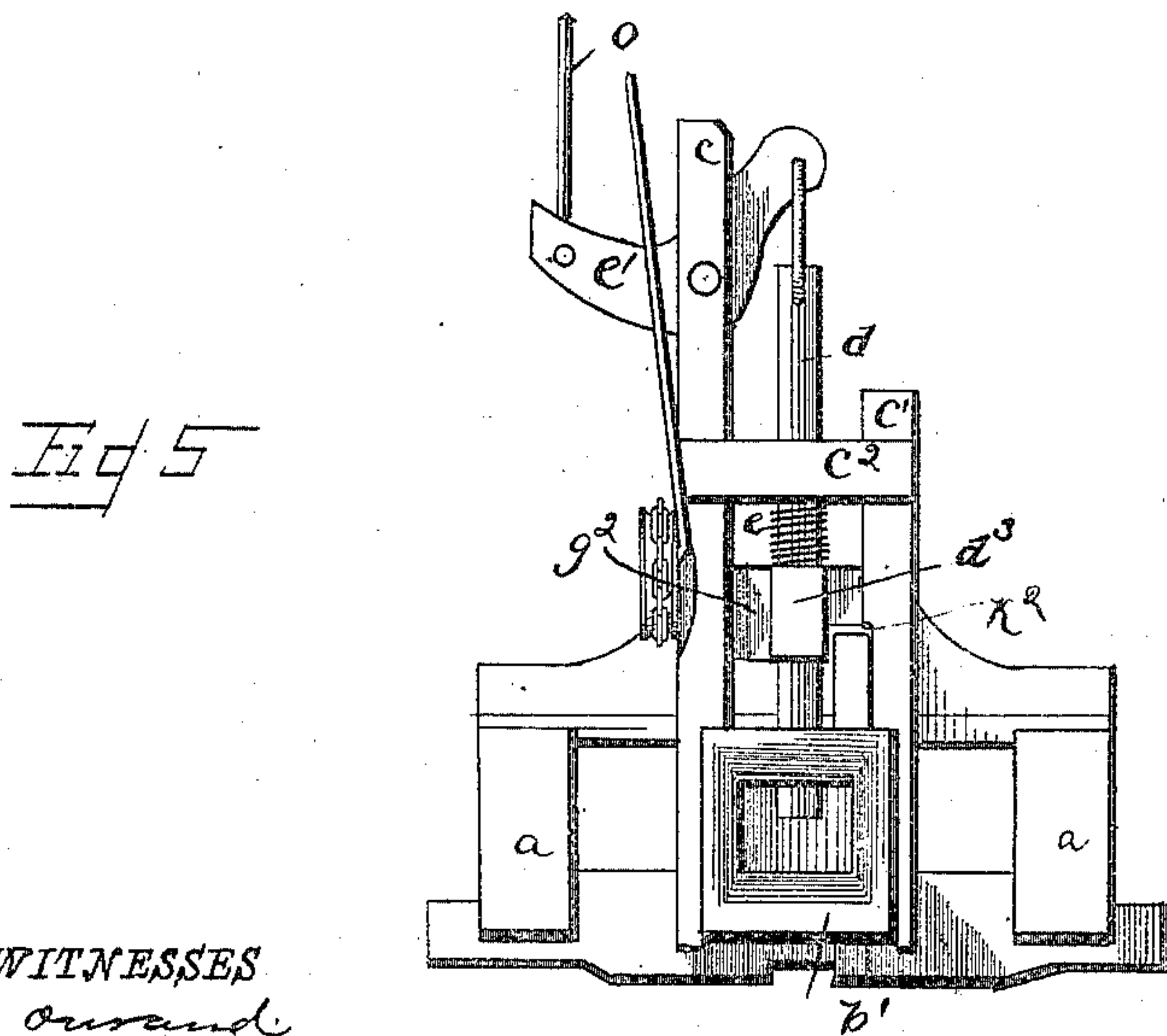
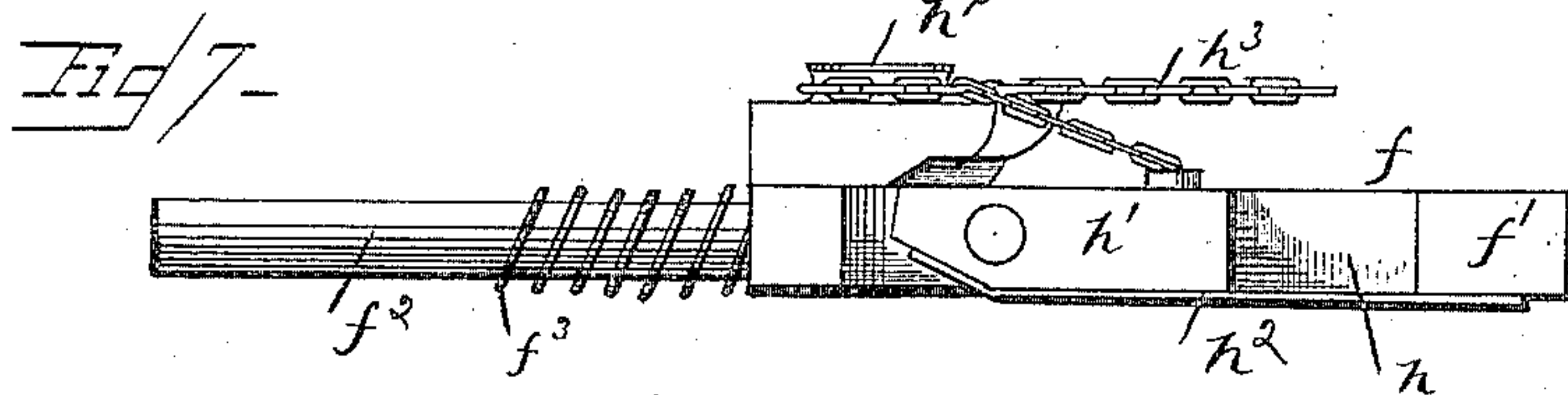
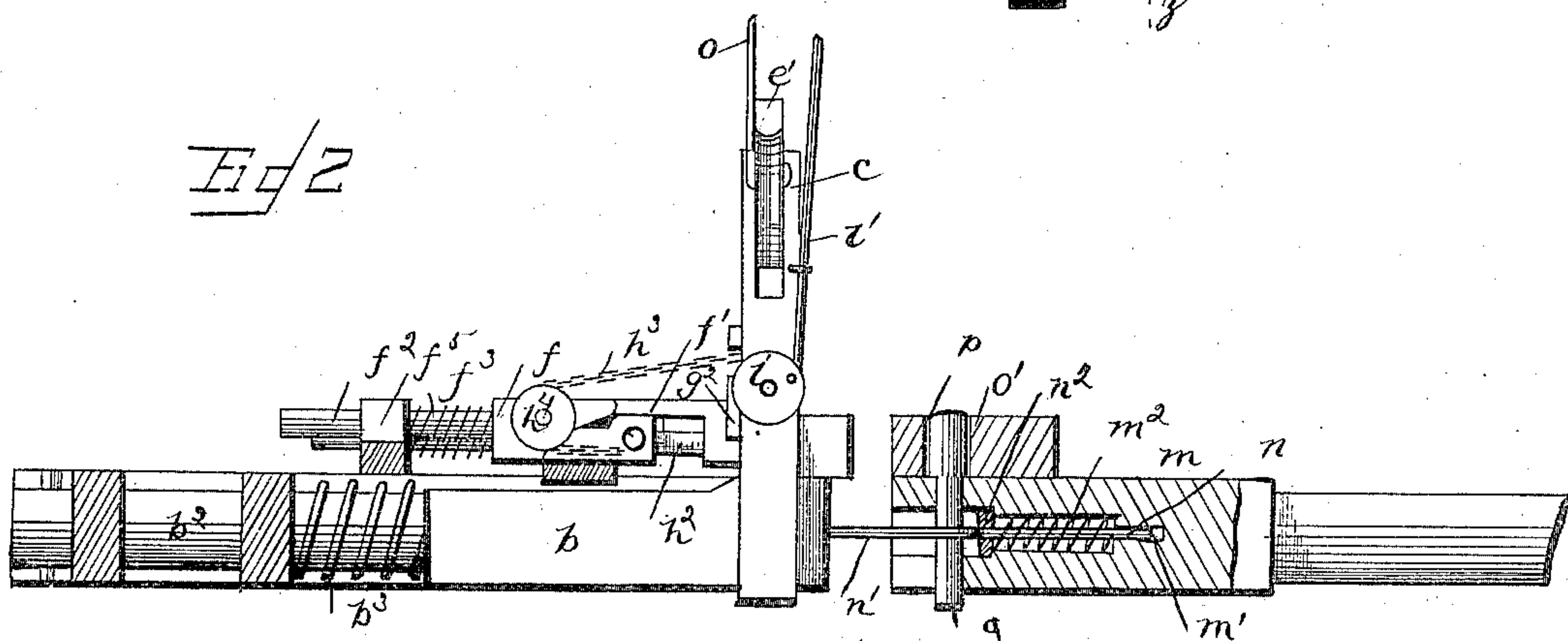
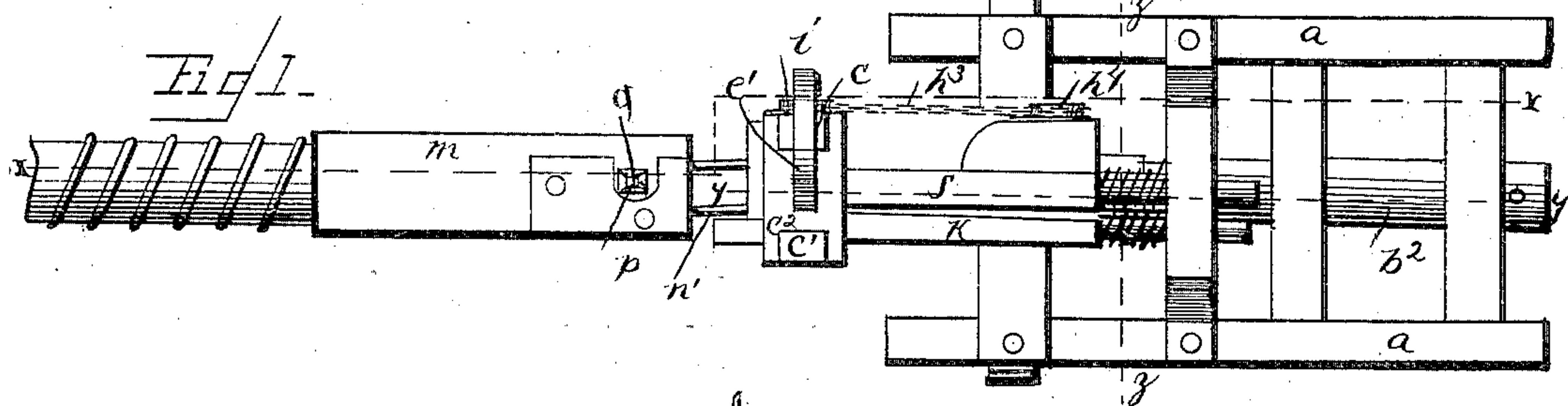
2 Sheets—Sheet 1.

N. J. MYERS.

CAR COUPLING.

No. 302,668.

Patented July 29, 1884.



WITNESSES

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2 Sheets—Sheet 2.

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Fig. 3.

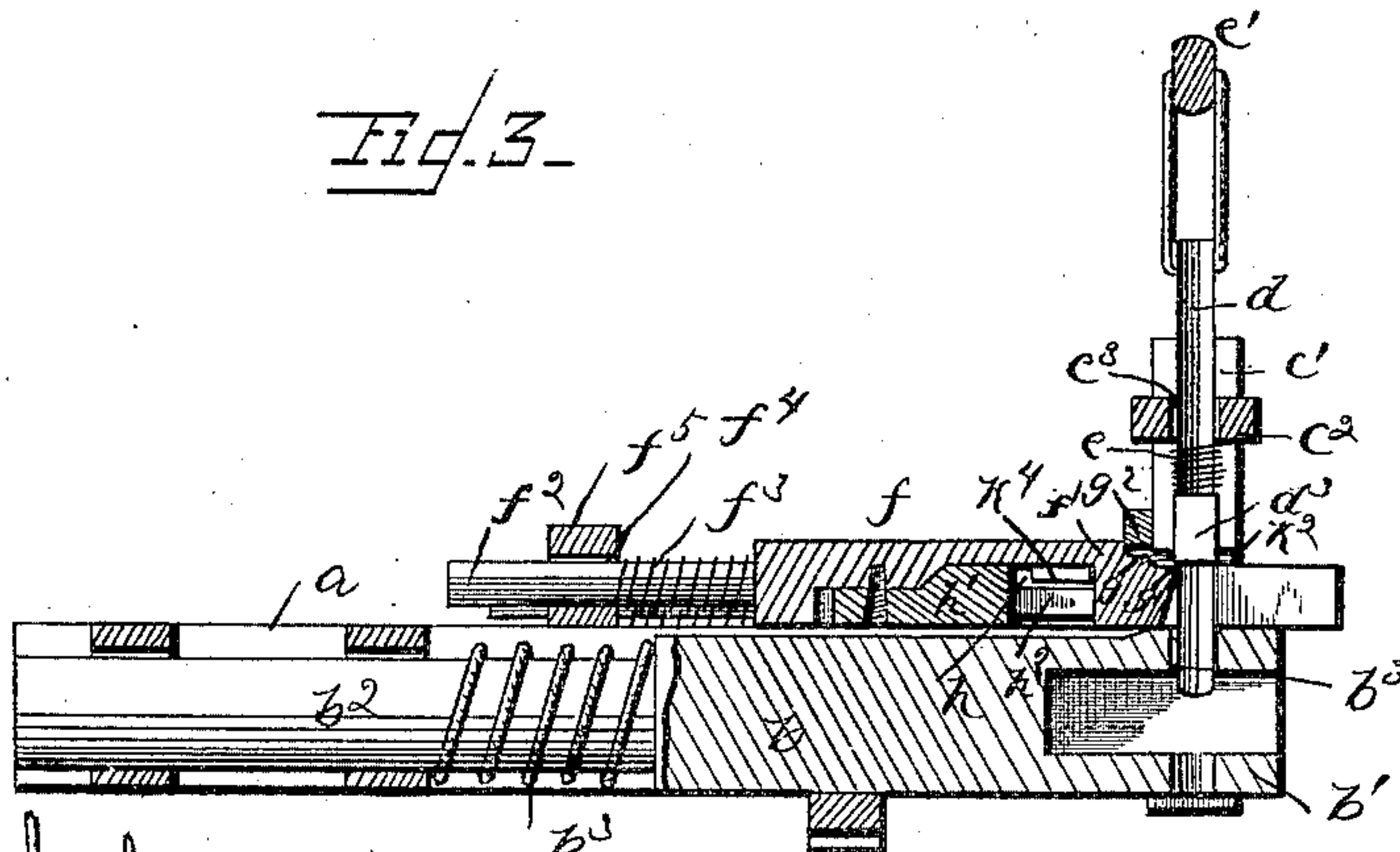


Fig. 4.

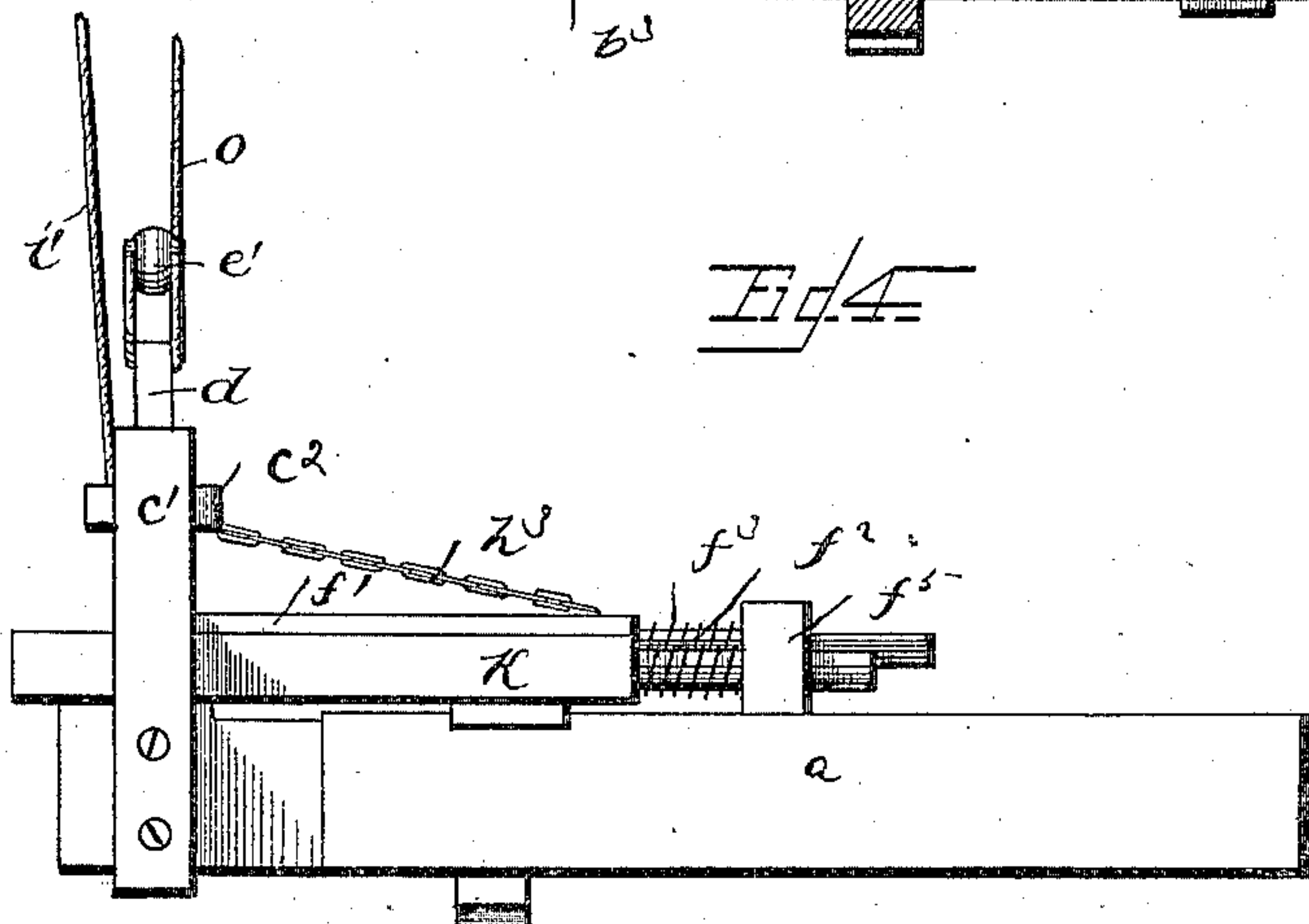


Fig. 5.

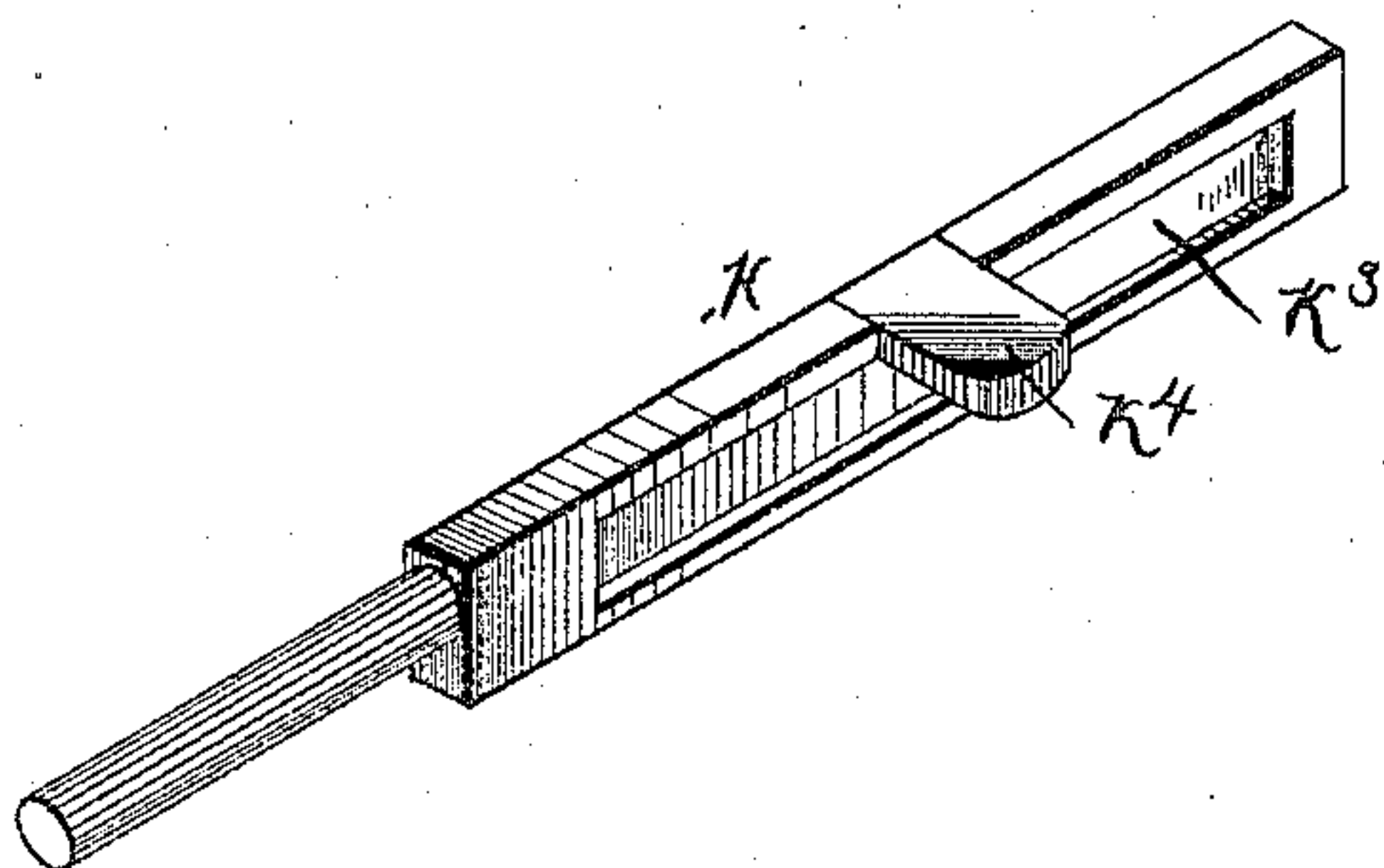
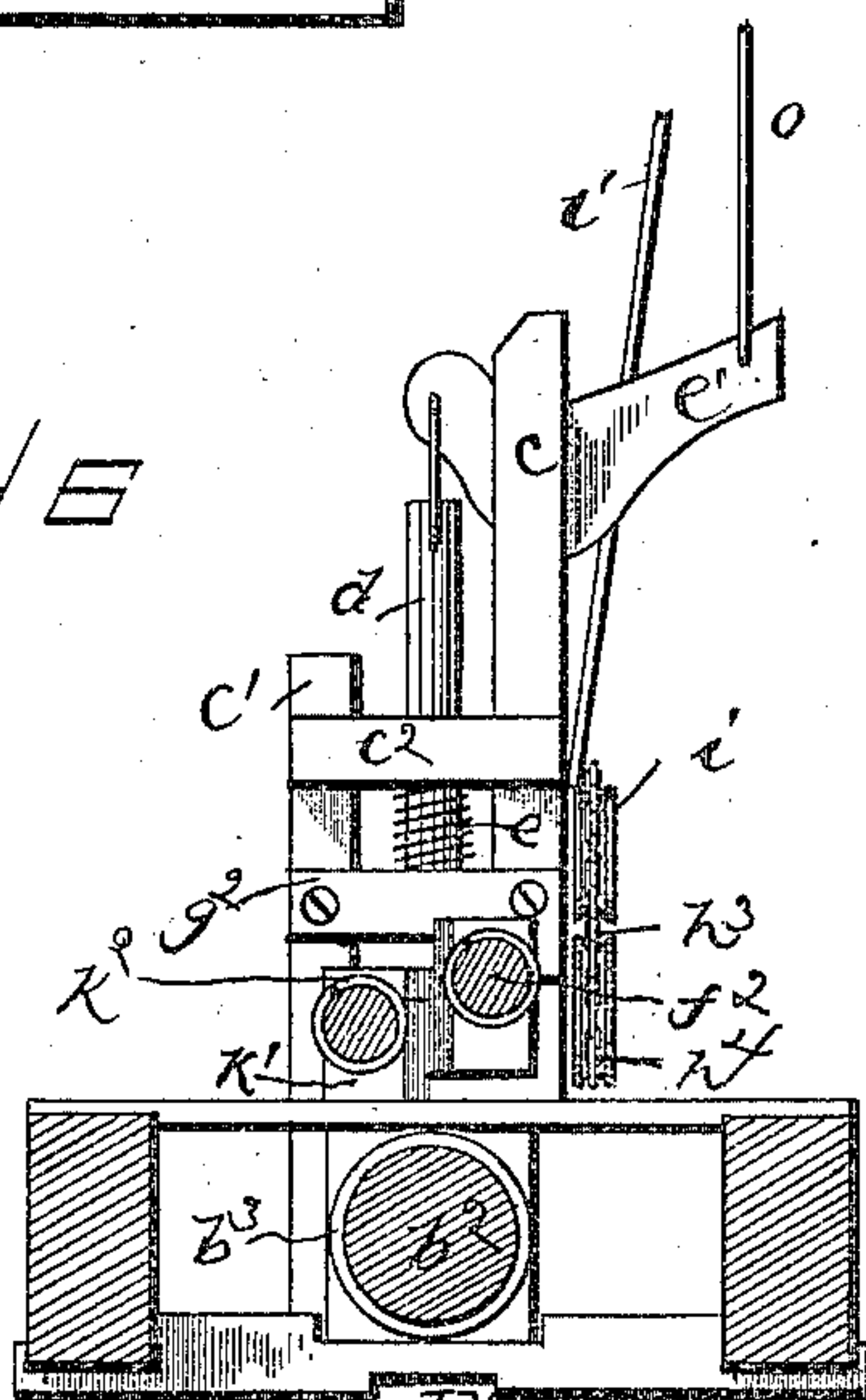


Fig. 6.



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UNITED STATES PATENT OFFICE.

NEWTON J. MYERS, OF DECATUR, TEXAS, ASSIGNOR OF ONE-HALF TO
WILLIAM H. CUNDIFF, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 302,668, dated July 29, 1884.

Application filed March 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, NEWTON J. MYERS, a citizen of the United States, residing at Decatur, in the county of Wise and State of Texas, have invented a new and useful Car-Coupling, of which the following is a specification, reference being had to the accompanying drawings.

Figure 1 is a plan view of a car-coupling embodying my improvements. Fig. 2 is a vertical longitudinal sectional view on the line x x in Fig. 1. Fig. 3 is a vertical longitudinal sectional view on the line y y in Fig. 1. Fig. 4 is a side elevation. Fig. 5 is an end elevation of the portion carrying the coupling-pin. Fig. 6 is a transverse vertical cross-section on the line z z in Fig. 1. Fig. 7 is a bottom view of the coupling-bar, and Fig. 8 is a perspective view of the tripping-bar.

This invention has relation to car-couplings; and it consists in the construction and novel arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the claims appended.

The objects of the improvements are to produce an automatic car-coupling that will be cheap, simple, and certain in its action, and that may be operated to set it for coupling, either from the side or top of a box or other car, without endangering the persons or lives of the brakemen or attendants.

Referring by letter to the accompanying drawings, a designates the frame-work, in which the bumper b , carrying the draw-head b' at its forward end, works. The bumper-rod b^2 is provided with the usual concussion-spring, b^3 , to receive the shock produced by the meeting of two cars.

Near the front of the draw-head b' , and secured to its vertical sides by suitable bolts, are two uprights, c and c' , directly opposite each other, and connected a short distance above the draw-head by a cross-piece, c^2 , recessed in each end to receive the uprights c c' , leaving their outer faces flush with its ends. These uprights are also properly secured to this cross-piece c^2 , which is perforated midway, at c^3 , for the passage of the upper end of the coupling-pin d , which works in this perforation c^3 and

in the pin-holes b^3 in the draw-head b' . A portion, d^3 , of the coupling-pin d is rectangular, and is located at a point upon the coupling-pin sufficiently far above its lower point to permit the point to pass just through the pin-hole in the lower wall of the draw-head, while the shoulder of the portion d^3 rests upon the top of the upper wall of the draw-head. A spiral spring, e , is coiled around that part of the pin above the shoulder of the portion d^3 , and below the cross-piece c^2 , and they form its bearings. The upright c is longer than the upright c' , and is bifurcated in its upper end to form the bearings for a pivoted angle-lever, e' , which is connected at its weight end by a link or pivot connection to the upper end of the coupling-pin d .

f designates the coupling-bar, which has a rectangular portion, f' , and a cylindrical portion, f^2 . The cylindrical portion f^2 is encircled by a coil-spring, f^3 , and passes through a guide-opening, f^4 , in a transverse bridge-piece, f^5 , secured upon the frame a , the shoulder upon the rectangular portion f^2 and the bridge-piece f^5 forming the bearings for the spring f^3 . The upper face of the coupling-bar f , at its forward end, is cut away to form a double shoulder, g g' , one portion of which stops under the transverse guide-bar g^2 , secured to the rear edges of the uprights c c' , below the cross-piece c^2 , while the other or foremost one passes under the shoulder d^3 on the coupling-pin, when the latter has been raised by the pivoted angle-lever e' , and holds the coupling-pin up in the draw-head, so that the coupling-link may enter its jaws.

The rectangular portion of the coupling-bar f is provided in its under face with an elongated recess, h , in which, near its rear end, is pivoted a laterally-swinging stop, h' , held normally in line in the recess h by a spring, h^2 , connected to the front end of the coupling-bar at one side, and to the inclined rear end of the pivoted stop. One side of this pivoted stop h' , near its front end, is connected by a rope or chain, h^3 , passing over a pulley, h^4 , having bearings in a projection at the side of the coupling-bar, in rear of the recess h , to a pulley, i , on the outer face of the upright c . This

pulley *i* is operated by a push-rod, *i'*, extending to the top of the car.

k designates the uncoupling-bar, which also consists of a rectangular portion and a cylindrical portion encircled by a coil-spring, *k'*, and working at its rear end in a guide-opening in the bridge-piece alongside of the coupling-bar. The forward end of the uncoupling-bar *k* passes under the transverse guide-bar *g'* into a recess, *k''*, in the inner face of the upright *c'*, and projects beyond the coupling-pin and beyond the vertical front face of the draw-head. The tripping-bar *k* is provided in its inner face with a recess, *k'''*, which receives the spring *h''*, and permits the tripping-bar *k* to slide back and forth without interfering with said spring *h''*. A fixed stud, *k''''*, projects from the inner face of the tripping-bar *k*, and is flush with its upper edge into the recess *h* in front of the pivoted stop *h'*, and nearly fills the space in front of said stop *h'*.

A hand-rod, *o*, extends from the arm of the pivoted angle-lever *e'* to the top of the car, and by this rod *o* the angle-lever *e'* may be operated to set the coupling-pin, ready to couple the cars.

The draw-head *m* on the opposite car, or on the opposite end of the same car, is provided at the rear wall of its jaws with a guide-opening, *m'*, provided with a spiral spring, *m''*, at its mouth.

The stem *n* of a link, *n'*, is provided with a rectangular guide-plate, *n''*, which fits the jaws of the draw-head *m*, and is pressed back against the spring *m''* as the stem is pushed back into the guide-opening *m'*. This draw-head *m* is provided on its upper face with a bumping-block, *o'*, which is recessed at *p* to admit the coupling-pin *q*, which holds the link *n'* in place. The stem *n* of the link *n'* guides the link to the opposite draw-head.

The operation of the car-coupling is quite simple and is absolutely certain. To set the automatic coupling it is only necessary to press down upon the power end of the pivoted angle-lever, which will raise the coupling-pin in its draw-head, and the spring on the cylindrical portion of the coupling-bar will force the shoulder *g'* at its forward end under the shoulder of the coupling-pin and hold it up, so that the link in the opposite draw-head may enter and pass beneath it. The tripping-bar is at the same time carried forward by its coil-spring, and its forward end is projected beyond the forward end of the draw-head *b'*. Now, as the cars approach the link will enter beneath the coupling-pin, and the bumper-block on the opposite draw-head will strike against the projecting end of the tripping-bar and move it back. As it moves back the fixed stud projecting from its side into the recess in the coupling-bar will strike against the pivoted stop within said recess, and will carry the coupling-bar back with it, moving its forward end from under the shoulder of the coupling-pin, the spring on which will force the

coupling-pin down through the opening in the link and couple the cars automatically.

If, however, it should be desired that the cars should not be coupled after the pin has been set, as before described, it will only be necessary to push down upon the rod that operates the rope or chain running over the pulleys to the pivoted stop in the recess in the coupling-bar, which will swing the stop to one side, out of the way of the fixed stud on the tripping-bar, which will then move back within the recess without moving the coupling-bar to trip the pin, should a bumper-block of an opposite car come in contact with the projecting end of the tripping-bar of the automatic coupling. Thus it will be seen that the cars can be coupled, and they can be uncoupled by operating the angle-lever to raise the coupling-pin, without danger to the brakeman or other attendant.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an automatic car-coupling, the combination, with the draw-head provided with a frame carrying the coupling-pin having a shoulder between its ends, an operating-spring, and an operating-lever, of a recessed and shouldered spring coupling-bar and a spring tripping-bar having a fixed stud engaging the stop of the coupling-bar, substantially as specified.

2. In an automatic car-coupling, a spring coupling-bar having a recess in its under face provided with a spring-stop pivoted therein and operated by a spring and a rope passed over pulleys, one of which is operated by a push-rod, in combination with a tripping-bar engaging the coupling-bar by a fixed stud, and adapted to project beyond the draw-head, and a spring coupling-pin operated by an angle-lever fulcrumed in one of the arms of the frame in which the coupling-pin works, substantially as specified.

3. In an automatic car-coupling, a spring coupling-bar recessed in its under face, and provided in said recess with a pivoted spring-stop, and mechanism for swinging it laterally in said recess, substantially as specified.

4. In an automatic car-coupling, the combination, with a coupling-bar actuated by a coil-spring, and provided with a recess having a pivoted spring-stop, of a tripping-bar actuated by a spring and connected to the coupling-bar by a fixed stud working in the recess in the coupling-bar, substantially as specified.

5. In an automatic car-coupling, the combination, with the draw-head of a vertical frame carrying the coupling-pin provided with a shoulder intermediate of its ends and a spring for forcing it downwardly, of an angle-lever fulcrumed in one of the vertical arms of the vertical frame and connected to the coupling-pin by a link-connection for raising the pin, and a coupling-bar and a tripping-bar actuated by a spring to hold and release the coupling-pin when desired, substantially as specified.

6. In an automatic car-coupling, the combination, with the angle-lever connected to the coupling-pin, actuated by a spring, and the spring-actuated coupling and tripping bars, of
5 a rod connected to the arm of the angle-lever and extending to the top of the car, for uncoupling the cars, substantially as specified.

7. In an automatic car-coupling, the draw-head having a guide-opening back of its rear
10 wall and a bumper-block upon its upper face, in combination with a stem-link having a rectangular guide-plate, a concussion-spring in rear thereof, and a coupling-pin for holding the link in the draw-head, substantially as
15 specified.

8. In an automatic car-coupling, a tripping-bar having a fixed stud at its inner face, and having its forward end adapted to project be-

yond the draw-head, in combination with a recessed coupling-bar having a shouldered
20 front end adapted to engage the coupling-pin, and mechanism for operating the same, substantially as specified.

9. In an automatic car-coupling, a link provided with a guide-stem, in combination with
25 a draw-head having a guideway for the stem, and a coupling-pin for holding the link in place, substantially as specified.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in
30 presence of two witnesses.

NEWTON J. MYERS.

Witnesses:

SEWALL BROWN,
L. H. LAWRENCE.