

(No Model.)

W. N. WRIGHT.

CAR COUPLING.

No. 405,644.

Patented June 18, 1889.

Fig. I.

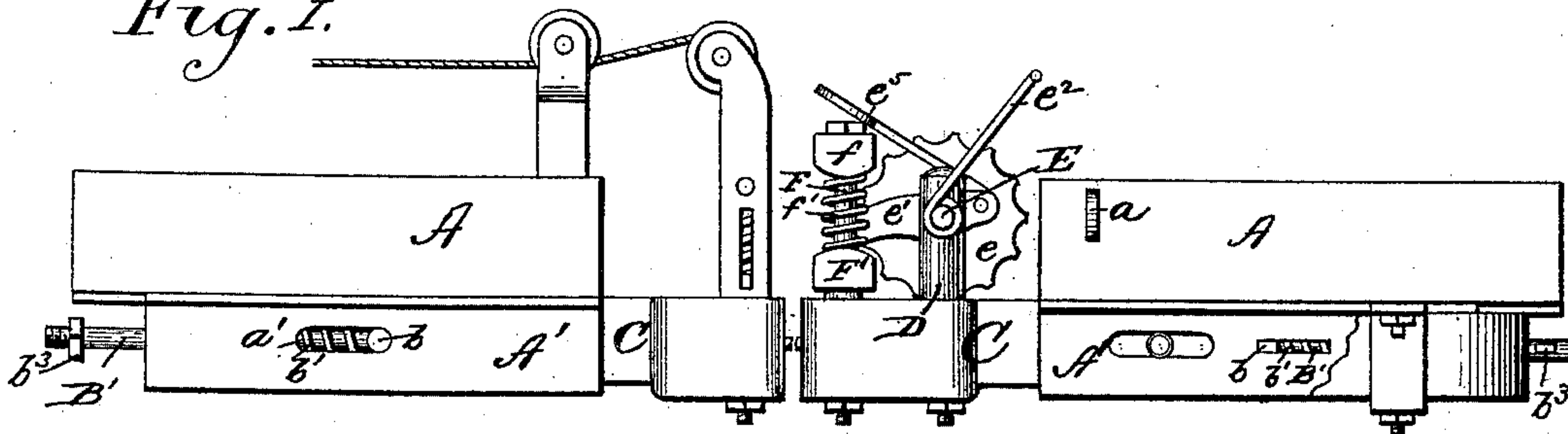


Fig. II.

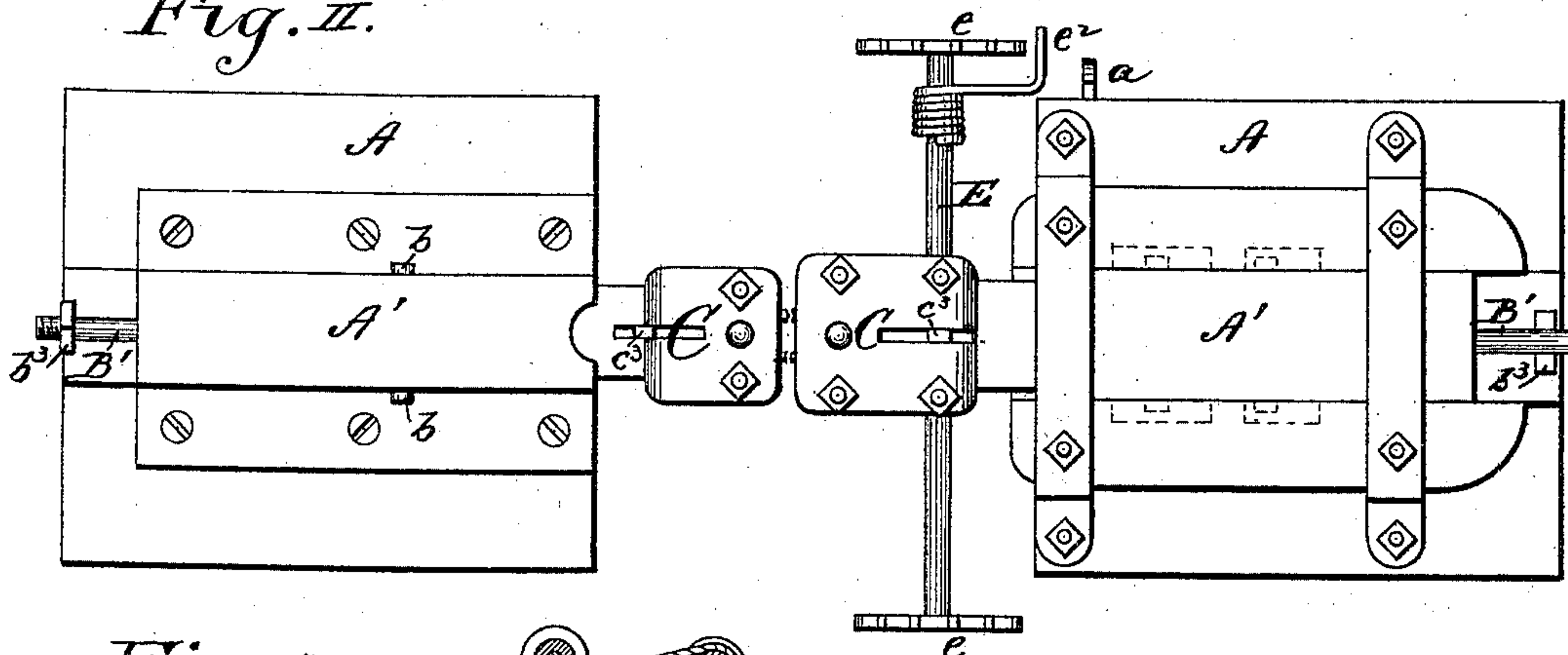


Fig. III.

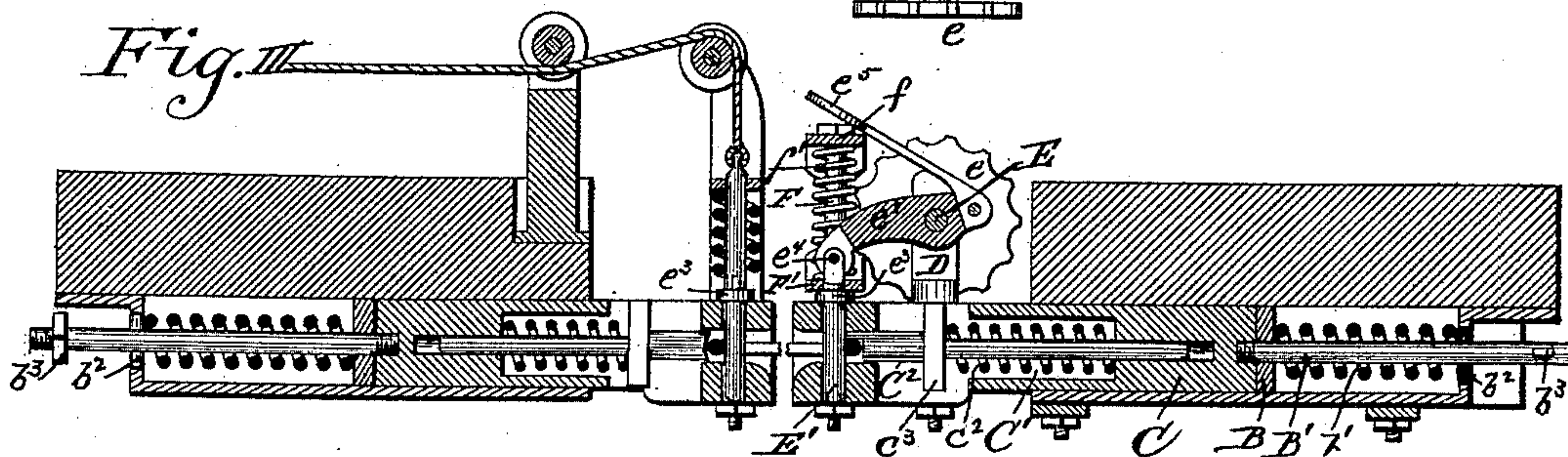


Fig. V.

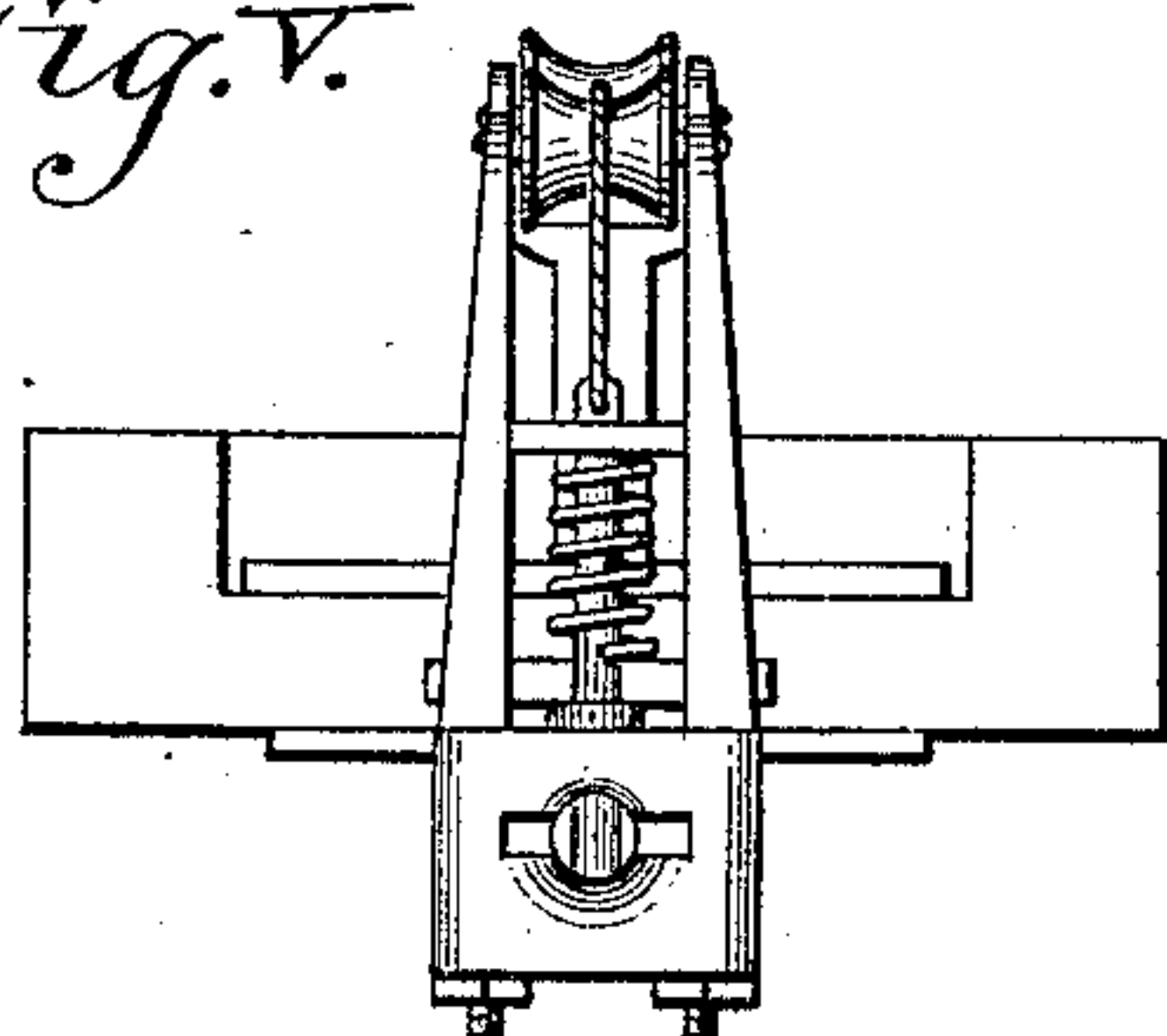
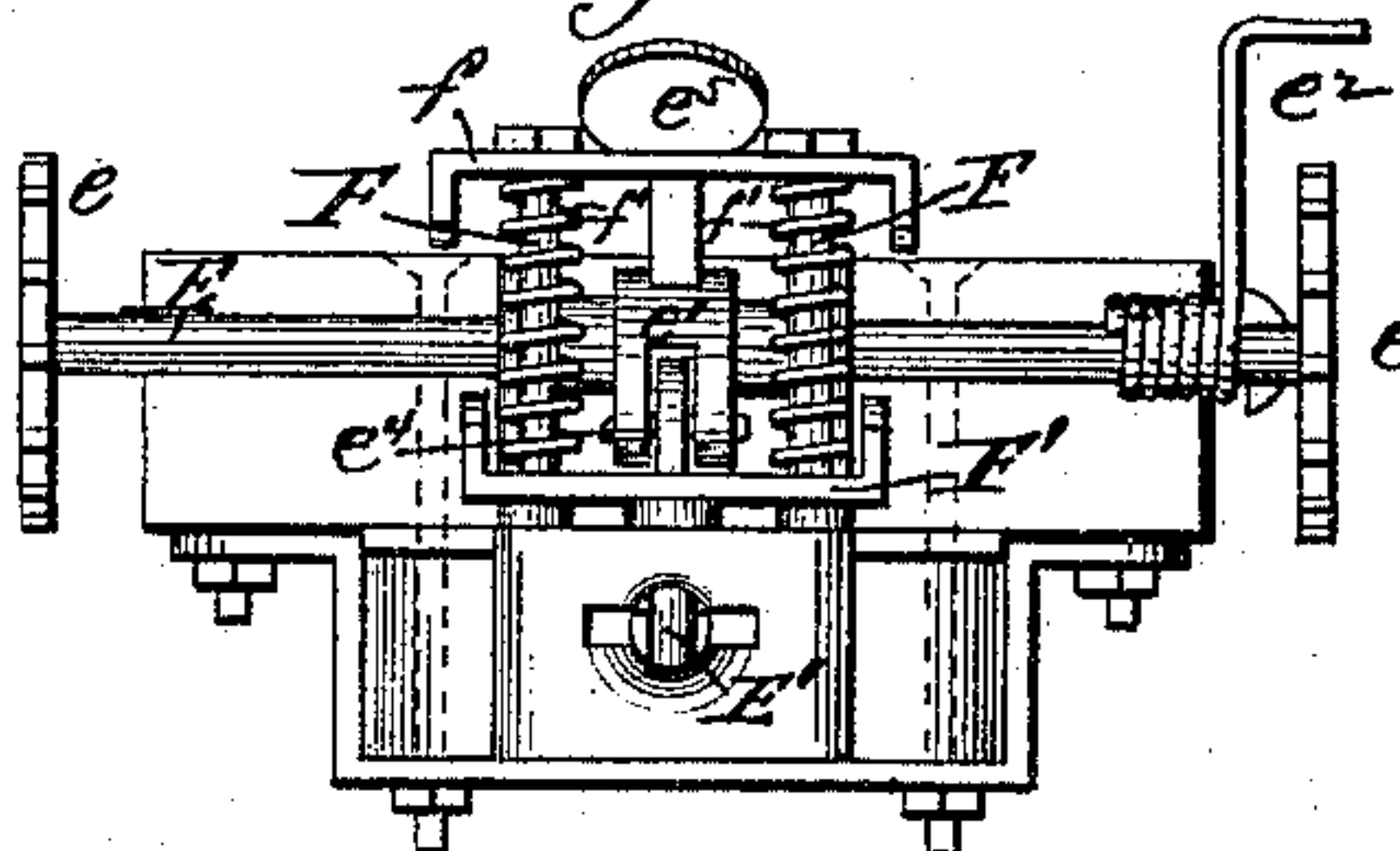


Fig. IV.



Witnesses:
J. G. Howell
for Coutrier.

Inventor:
William Newton Wright

UNITED STATES PATENT OFFICE.

WILLIAM NEWTON WRIGHT, OF FREEPORT, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 405,644, dated June 18, 1889.

Application filed December 24, 1888. Serial No. 294,544. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NEWTON WRIGHT, a citizen of the United States, residing in Freeport, Harrison county, and State of Ohio, have invented a Safety Car-Coupling Machine, of which the following is a specification.

This invention relates to that class of car-couplers in which the coupling-pin is supported above the mouth of the draw-head by a spring-pressed bolt or plate arranged within the draw-head and adapted to be moved aside by the coupling-link.

One object of my invention is to provide improved means by which the coupling-pin may be operated from the side of the car.

Another object of the invention is to provide the pin-operating devices with means by which the normal operation of the pin may be suspended.

Another object of the invention is to provide the draw-head proper with the pin-controlling devices, whereby the position of the draw-head with relation to the end of the car may be changed without affecting the pin-controlling devices.

With these and minor objects in view the invention consists in novel features of construction and combinations, which will be hereinafter described and claimed.

In the accompanying drawings, Figure I is a side elevation of a car-coupler embodying my improvements. Fig. II is an inverted plan. Fig. III is a longitudinal vertical section. Fig. IV is an end elevation. Fig. V is a similar view of a modified form.

To each end of the car-frame A is secured a hollow casing A', closed at its inner end and provided on opposite sides with longitudinal slots a' for the reception of lugs b, projecting from opposite sides of a stout yoke B, arranged to slide within the casing. The draw-head C is mounted to slide within the forward open end of the casing A', its rear end being held in contact with the yoke B by a stout coiled spring b', encircling a rod B', and confined between a cross-pin b², near the rear end of said rod and the yoke, through an opening in which the forward end of the rod passes freely and is secured to said rear end of the draw-head.

The rear closed end of the casing A' is provided with an opening of a size and shape to admit of the free passage of the rod B' and its cross-pin b², but to prevent the passage of a pin or nut b³ on the extreme rear end of said rod which, normally, is positioned a little distance in rear of the closed end of the casing. The rear end of the coiled spring b' also bears on the rear closed end of the casing, and serves to hold the lugs b of yoke B normally against the forward ends of the longitudinal slots a' of the casing. Owing to this arrangement the draw-head C will yield in both directions to take up the shock occasioned by coupling cars or starting a train, as a rearward pressure on the draw-head will move the yoke B rearward the length of the slots a' of the casing and compress the spring b' between said yoke and the closed rear end of the casing, and by a forward pull on the draw-head the rod B' and its cross-pin b² will be moved forward, compressing the spring b' until it is stopped by contact of the rear nut or cross-pin b³ with the rear closed end of the casing.

As the draw-head C does not maintain a fixed position with relation to the car-body, I connect my coupling devices directly to the draw-head, in order that the relative positions of the coupling-pin and its operating mechanism may remain unchanged by the movement of the draw-head in its casing. To this end I secure to the draw-head in rear of its pin-aperture standards D, provided at their upper ends with bearings in which a shaft E is journaled. The ends of this shaft extend slightly beyond the sides of the car and are fitted with hand-wheels e, a rigid arm e' being keyed or otherwise rigidly secured to the center of the shaft, with its forward end terminating in a vertical plane with the pin-aperture of the draw-head.

Secured to the forward end of the draw-head, on opposite sides of the pin-aperture, are two vertical posts F, encircled by coiled springs f', the ends of which bear against a fixed plate f, secured to the tops of the posts, and a stirrup F', mounted to slide on said posts. This stirrup F' is provided centrally with an aperture through which the head of the coupling-pin E' projects, a collar e³ being

arranged just below the head of said pin to support the stirrup when the pin is raised. The upper end of the coupling-pin is connected to the forward end of the rock-arm e' of shaft E by a pivot-pin e^4 , thus enabling an attendant to control the position of the pin by means of one of the hand-wheels e on the ends of the rock-shaft.

The draw-head C is provided in rear of its mouth or link-socket with a chamber C' to receive and guide the rear end or stem of a follower C^2 , encircled and pressed forward by a coiled spring c^2 in a manner well known, the movement of the follower being limited by a pin c^3 , passing through the stem of the follower and working in a longitudinal slot in the draw-head, as shown.

In order to suspend the operation of this coupling device for any purpose, I secure to one end of the operating rock-shaft E an arm e^2 , preferably of spring metal, the outer end of which is adapted to engage a hook or stud a , projecting from the side of the car, and retain the coupling-pin in its raised position, whether its lower end be supported by the follower C' or not. An arm e^5 is secured near the center of the shaft E or to arm e' , to enable an attendant standing on the end sill or platform of a car to raise the pin for uncoupling, and this operation may be performed by one standing on the roof of a box-car through the agency of a rope, rod, or chain leading from the car-roof to the free end of the arm.

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

1. In a car-coupler, the combination, with a longitudinally-yielding draw-head, of a coupling-pin provided with a collar, posts secured to the draw-head, a spring-pressed stirrup adapted to slide on said posts, a standard secured to the draw-head in rear of said posts, a rock-shaft journaled in bearings on the standard and provided at its ends with hand-wheels, a rock-arm rigidly secured to the center of said shaft, a pivot-pin for connecting the free end of the rock-arm to the coupling-pin, and a spring-pressed follower mounted in the draw-head to support the coupling-pin.

2. In a car-coupler, the combination, with a car having a draw-head adapted to yield longitudinally in both directions, of a coupling-pin provided with a collar, posts secured to the draw-head, a spring-pressed stirrup adapted to slide on said posts, a standard secured to the draw-head in rear of the posts, a rock-shaft journaled in bearings on the standard and provided near its end with a spring-arm, a hook on the car, with which said arm may be engaged, an arm rigidly secured to the center of the rock-shaft and pivotally connected at its free end to the coupling-pin, and a spring-pressed follower mounted in the draw-head to project normally beneath the end of the coupling-pin.

WILLIAM NEWTON WRIGHT.

Attest:

NATHAN WRIGHT,
EMELINE WRIGHT.