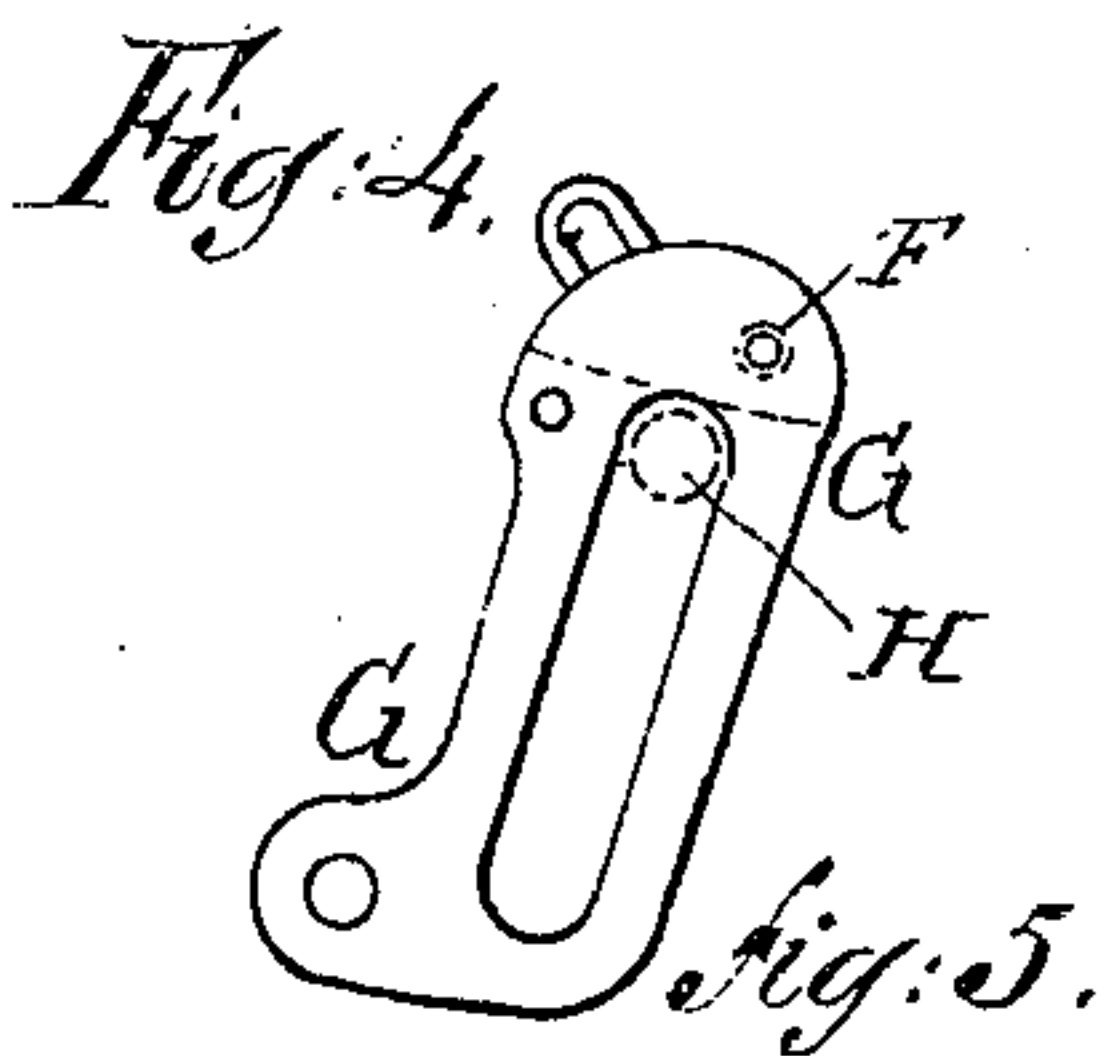
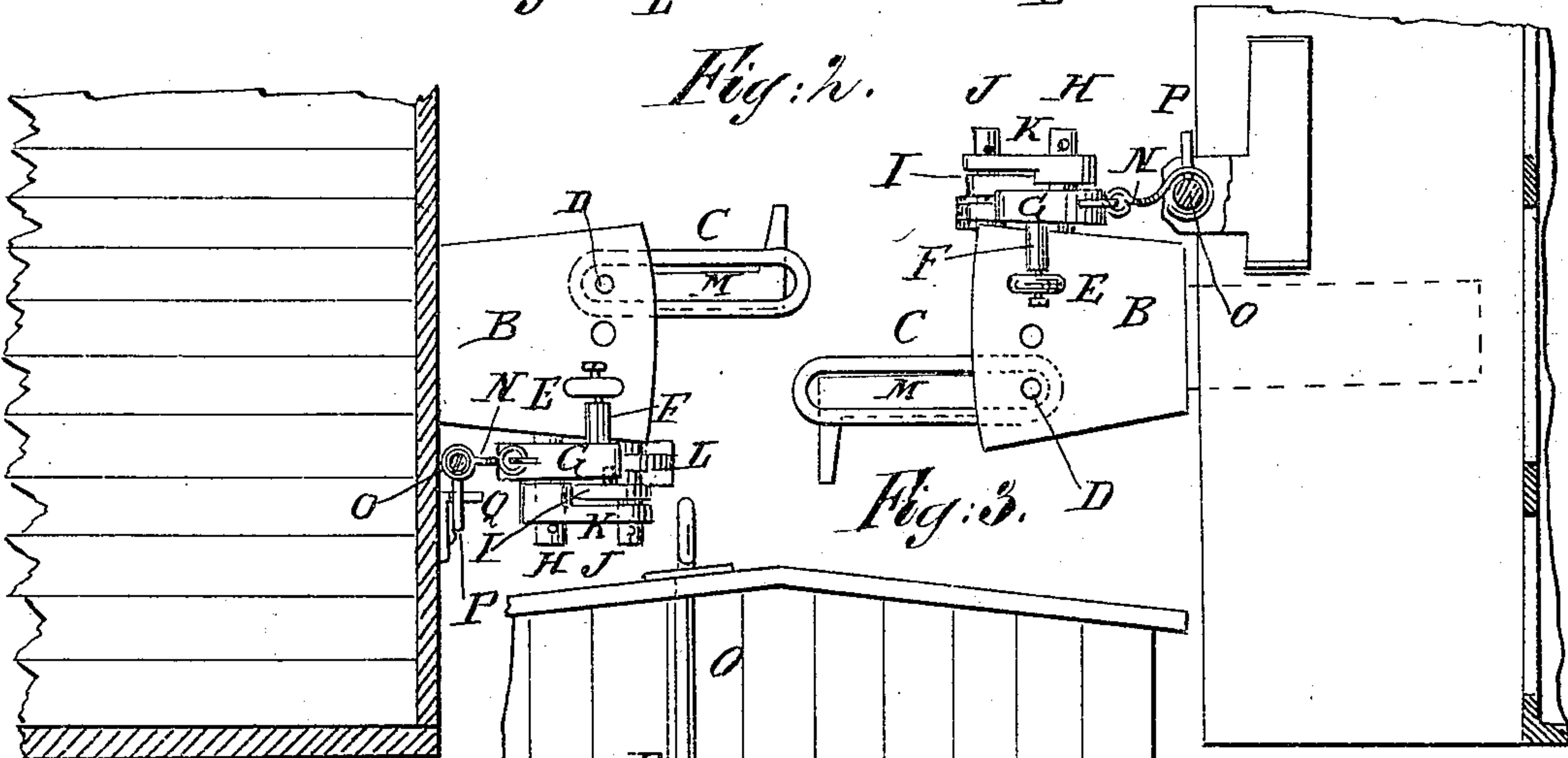
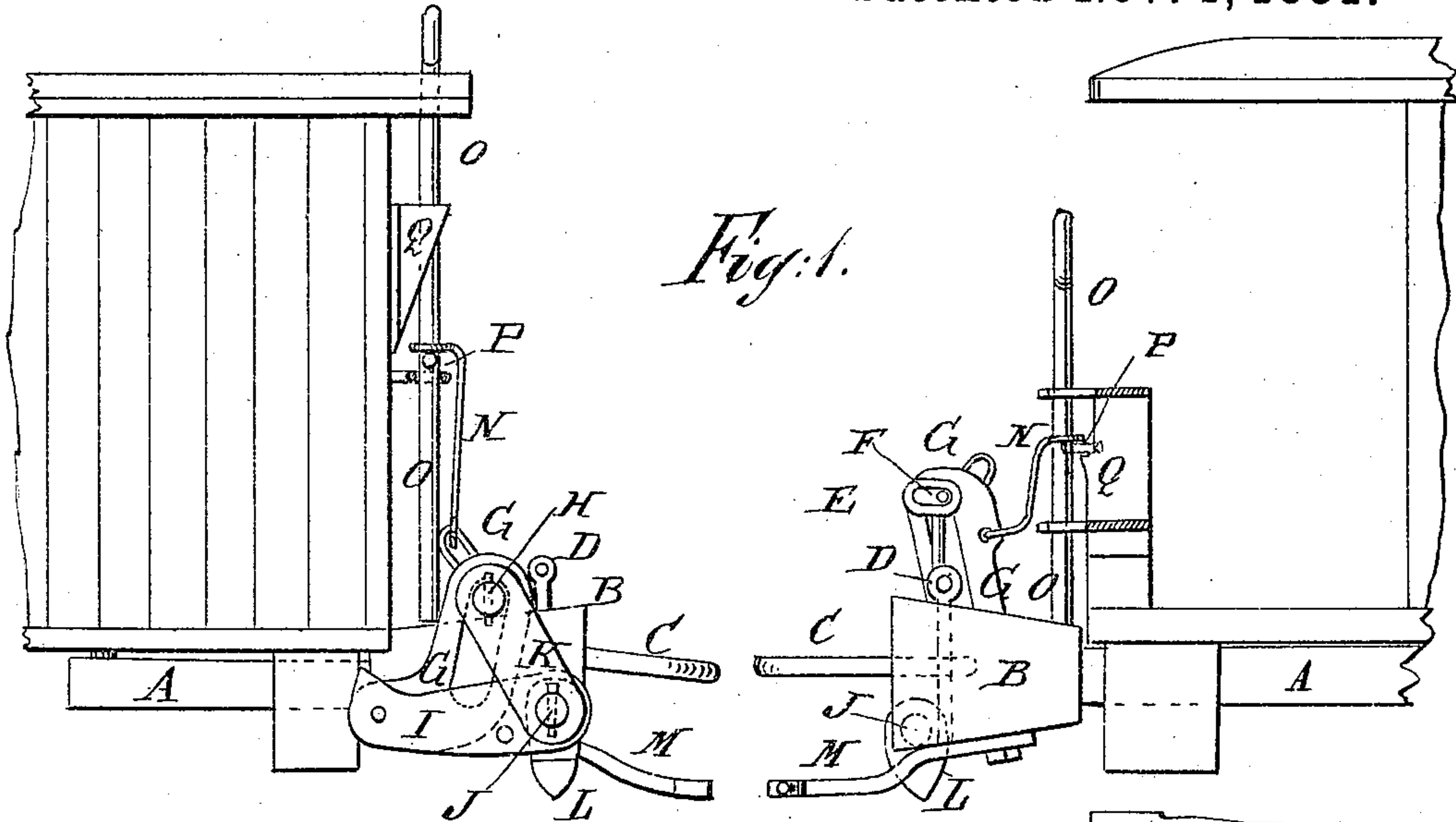


(Model.)

J. COCHRAN, Jr.
CAR COUPLING.

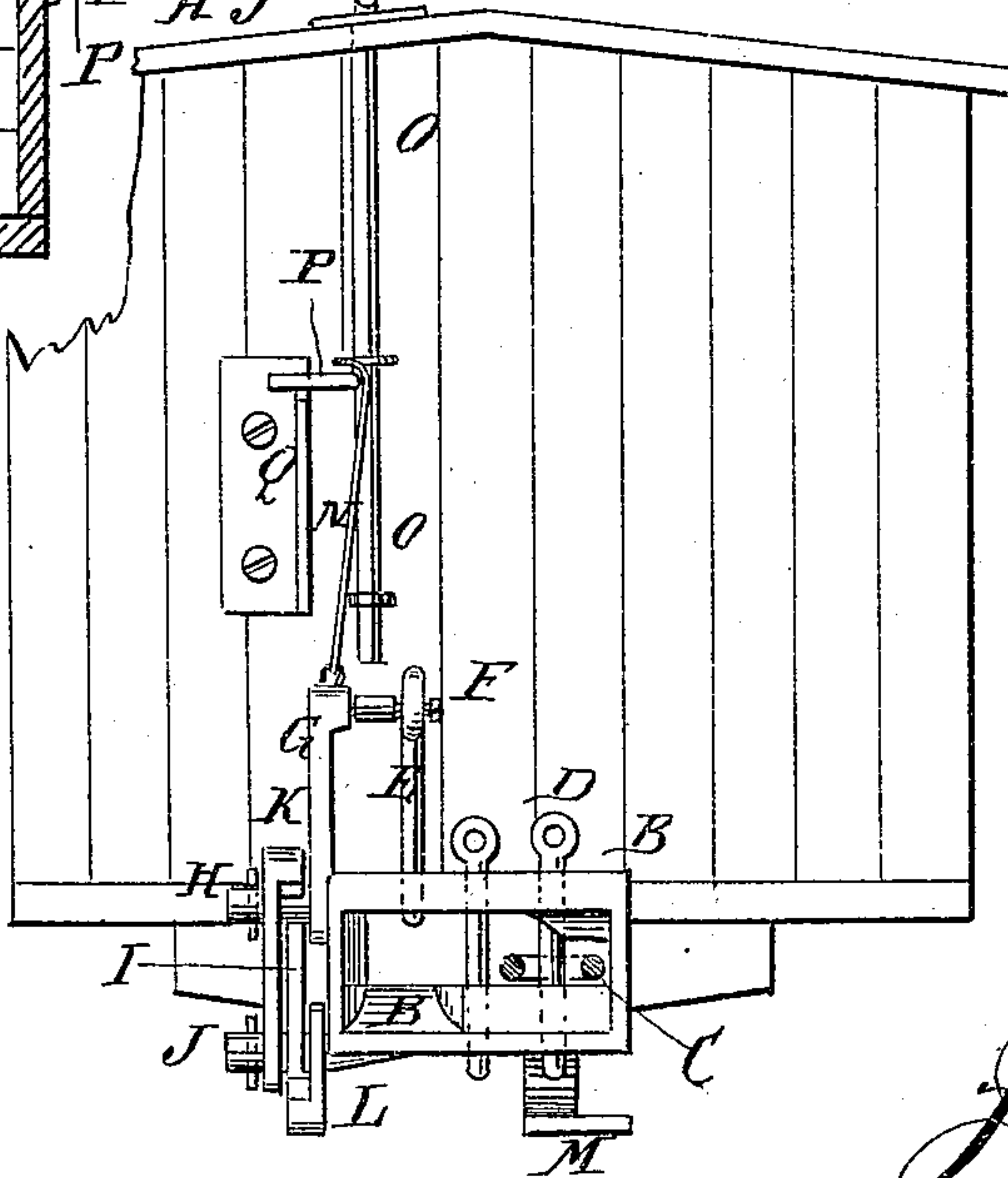
No. 249,007.

Patented Nov. 1, 1881.



WITNESSES:

Chas. Nida
C. Sedgwick



INVENTOR:
J. Cochran, Jr.
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN COCHRAN, JR., OF MILLWOOD, ASSIGNOR TO HIMSELF AND W. B. McALISTER, OF BOWLING GREEN, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 249,007, dated November 1, 1881.

Application filed August 18, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOHN COCHRAN, Jr., of Millwood, in the county of Lincoln and State of Missouri, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

Figure 1 is a side elevation of my improvement. Figure 2 is a sectional plan view of the same. Fig. 3 is a front elevation of one part of the same. Fig. 4 is a side elevation of one of the slotted pin-lifting bars. Fig. 5 is an edge view of the same. Fig. 6 is a side elevation and an edge view of one of the swinging trip-blocks.

Similar letters of reference indicate corresponding parts.

The object of this invention is to facilitate the coupling and uncoupling of cars and promote security in the use of the couplings.

The invention consists in a car-coupling constructed with wide bumper-heads, the two pairs of links, a pair of pins, the slotted sliding bars, connected with a pin of each pair, the pivoted lifting-bars connected with the slotted sliding bars, the swinging trip-blocks, and the rigid arms, whereby the cars will be coupled automatically as they are run together; and, also, in the combination, with the slotted bar connected with one of the coupling-pins, of the connecting rod or chain, the sliding rod having a laterally-projecting arm, and the catch to receive the said arm, whereby the coupling-pin can be raised and held suspended, as will be hereinafter fully described.

A represents the draw-bar, and B the bumper-head of the coupling, which is formed upon or attached to the end of the said draw-bar A. The bumper-head B is made wide, and with a cavity wide enough to receive two links, C, side by side, and inclined upon the lower side of the right-hand part to guide the entering link into place. Each bumper-head is designed to carry a link, C, in its left-hand part, and the lower side of the left-hand part of the cavity is made flat to hold the said link in a horizontal position when its other end is unsupported. Each bumper-head is provided with three pin-holes, one in the left-hand part to receive the pin D, that holds the coupling-link, one in the right-hand part to receive the

pin E, that engages with the free end of the link C of the adjacent car, and one in the middle part to receive a pin when the cars are to be coupled with a single link, or when a car with my improved coupling is to be coupled with a car having an ordinary coupling. The coupling-pin E of each bumper-head B is hung upon a pin, F, attached to the inner side of the upper end of a bar, G, which is slotted to receive a pin, H, formed upon or attached to the upper part of the right-hand side of the bumper-head B at a little distance from its forward end. The lower end of the slotted sliding bar G is made with a rearward projection, which is perforated to receive the rivet, pin, or bolt that pivots the said bar G to the rear end of the lifting-bar I. The forward end of the lifting-bar I is pivoted to a pin, J, attached to or formed upon the lower forward corner of the right-hand side of the bumper-head B.

To the outer ends of the pins H J are attached the ends of a bar, K, which serves as a keeper to keep the bars G I in place. With this construction, by pressing the lifting-bar I upward the bar G will be forced upward, raising the pin E and releasing the end of the link C. The slot in the bar G limits the upward movement of the said bar, and is made of such a length that the pin E will not be raised out of the hole in the upper part of the bumper B.

To the pin J is pivoted the upper end of a swinging block, L, the lower end of which is made heavy, so as to keep the said block L hanging in a vertical position. With this construction, when the swinging block L is pushed back it will strike the trip-bar I, or a pin attached to the said trip-bar, and raise the bars I G and the coupling-pin E, to admit the coupling-link.

To the under side of the left-hand part of each bumper B is attached the rear end of an arm, M, the forward end of which projects about as far as the forward end of the link above the said arm. The arm M is curved downward and forward, so that its forward end, when the cars are run together, will pass beneath the bumper-head B of the adjacent car and strike and push back the swinging block L, raising the coupling-pin E, and allowing the

coupling-link C to enter the cavity of the bumper-head B. As the end of the arm M passes the swinging block L the bars G I and the pin E drop by their own weight, the pin E passing through the link C and coupling the cars. The forward end of the arm M is bent to one side to make it wide, so that it will certainly strike the swinging block L, and so that the said swinging block L can drop back to its place as soon as the end of the arm M has passed it. With this construction the cars will be coupled automatically as they are run together.

To the upper end of each slotted bar G is attached the lower end of a short rod or chain, N, the other end of which is attached to a vertical rod, O. The rod O slides up and down in guides attached, in the case of a passenger-car, to the platform-railing, and in the case of a freight-car to the forward end of the car-body. Both arrangements are shown in Fig. 1. In the case of a passenger-car, the rod O terminates in such a position that it can be conveniently operated from the platform of a car, and in the case of a freight-car it is extended up to such a height that it can be conveniently reached and operated from the roof of the car.

To the rod O is attached a laterally-projecting arm, P, which, when the said rod O is raised to raise the bar G and pin E and uncouple the cars, can be hung upon the shoulder of a catch, Q, attached to the platform-railing or the end of the car-body, to hold the pin E raised, so that the cars can be drawn apart at any time. In case the cars should be

run together when the rods O are raised, the jar will throw the arm P off the catch Q and the pin E will drop, coupling the cars, so that the cars will couple themselves automatically when the said cars are run together, whether the coupling-pin E be down or raised.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A car-coupling constructed substantially as herein shown and described, consisting of the wide bumper-heads B, the two pairs of links C, the pair of pins D E, the slotted bars G, connected with the pins E, the pivoted lifting-bars I, connected with the slotted bars G, the swinging trip-blocks L, and the arms M, as set forth.

2. In a car-coupling, the combination, with the wide bumper-heads B, the pair of coupling-links C, and the two pairs of coupling-pins D E, of the slotted bars G, the pivoted lifting-bars I, the swinging trip blocks L, and the arms M, substantially as herein shown and described, whereby the cars will be coupled automatically when run together, as set forth.

3. In a car-coupling, the combination, with the slotted bar G, connected with the coupling-pin E, of the rod or chain N, the sliding rod O, having laterally-projecting arm P, and the catch Q, substantially as herein shown and described, whereby the coupling-pin can be raised and held suspended, as set forth.

JOHN COCHRAN, JR.

Witnesses:

HENRY T. MUDD,
R. E. ROBEY.