

(No Model.)

2 Sheets—Sheet 1.

N. NEWMAN.
CAR COUPLING.

No. 429,051.

Patented May 27, 1890.

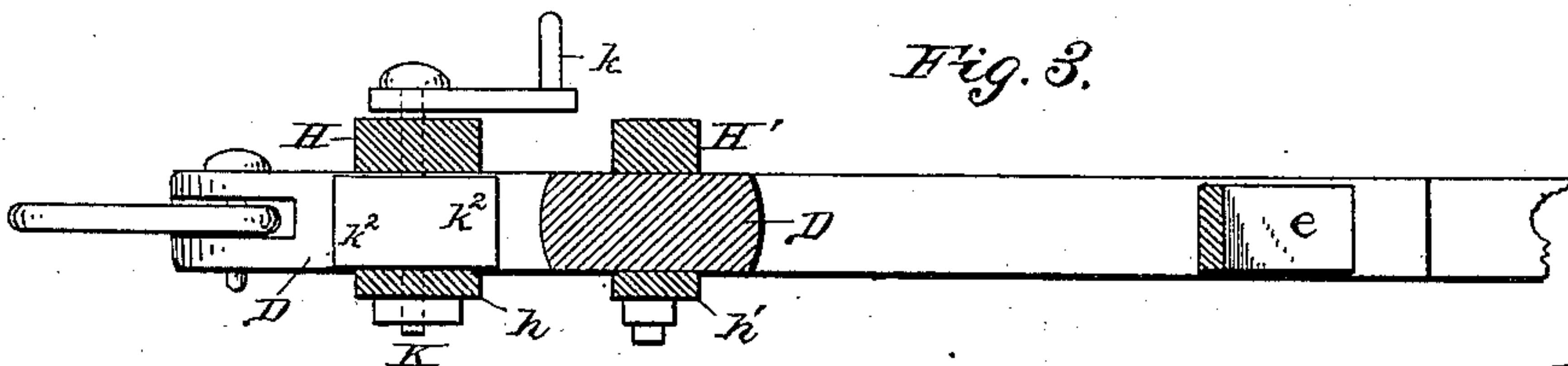
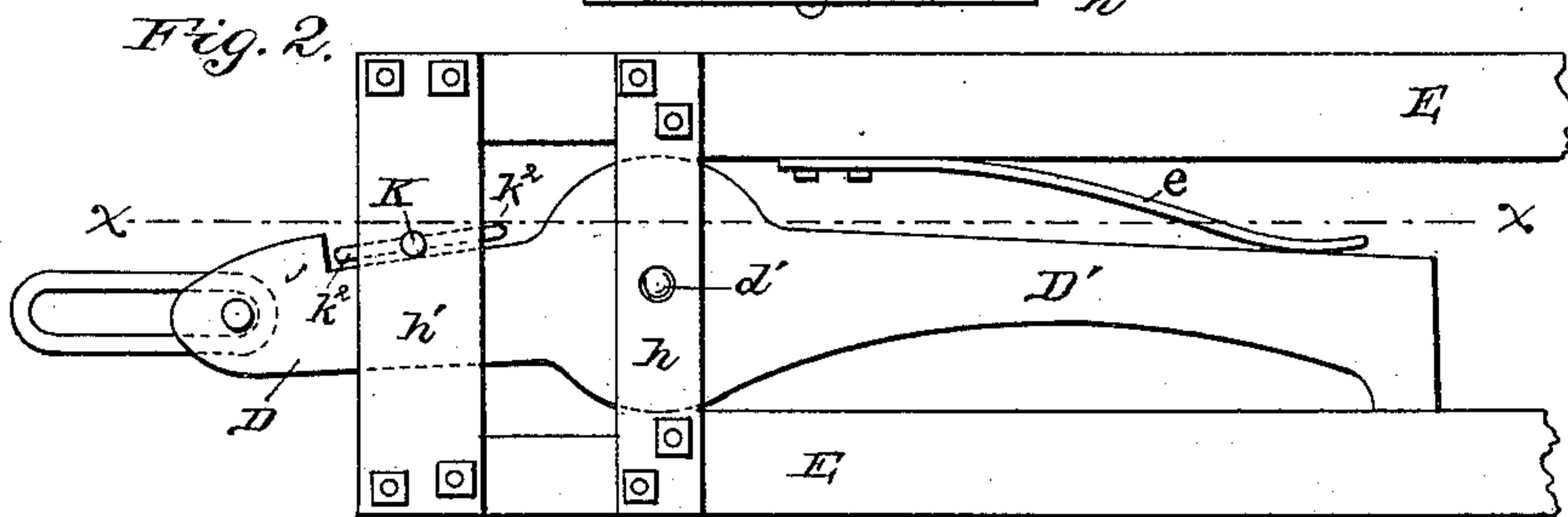
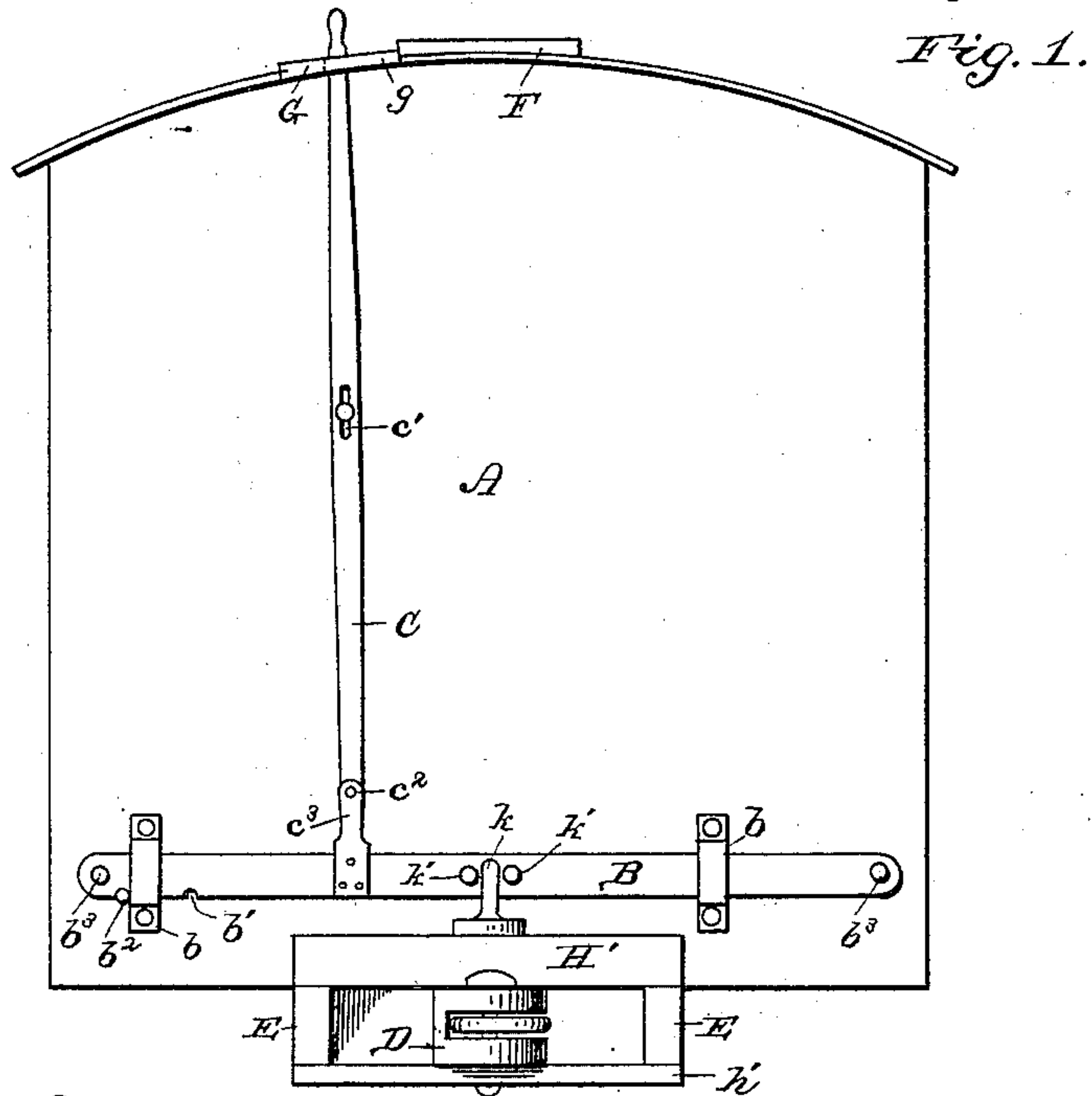


Fig. 4.

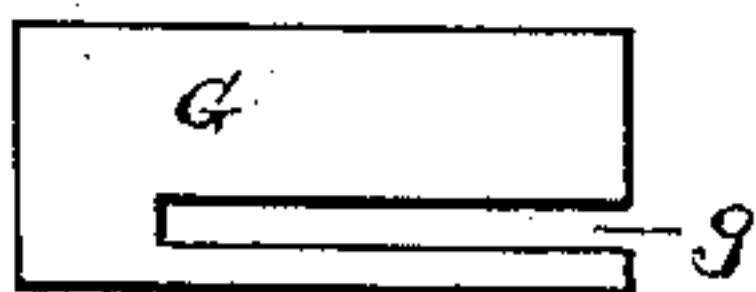


Fig. 5.

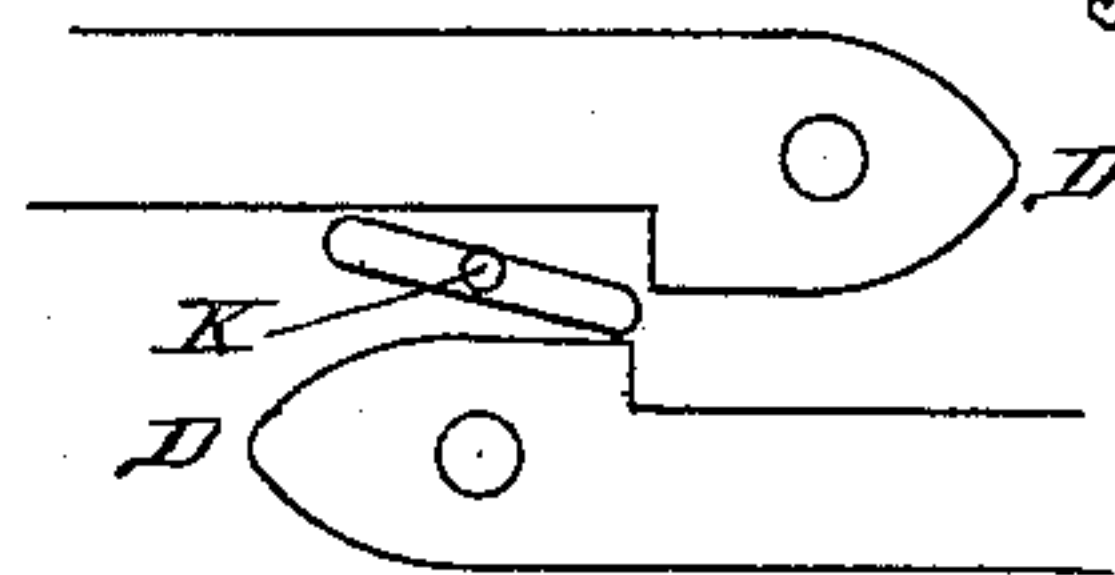
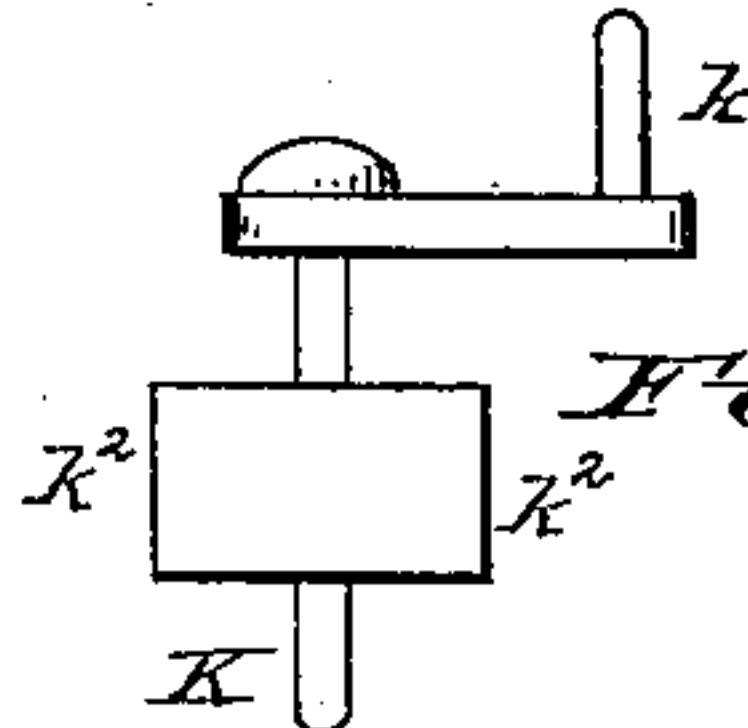


Fig. 6.



Witnesses

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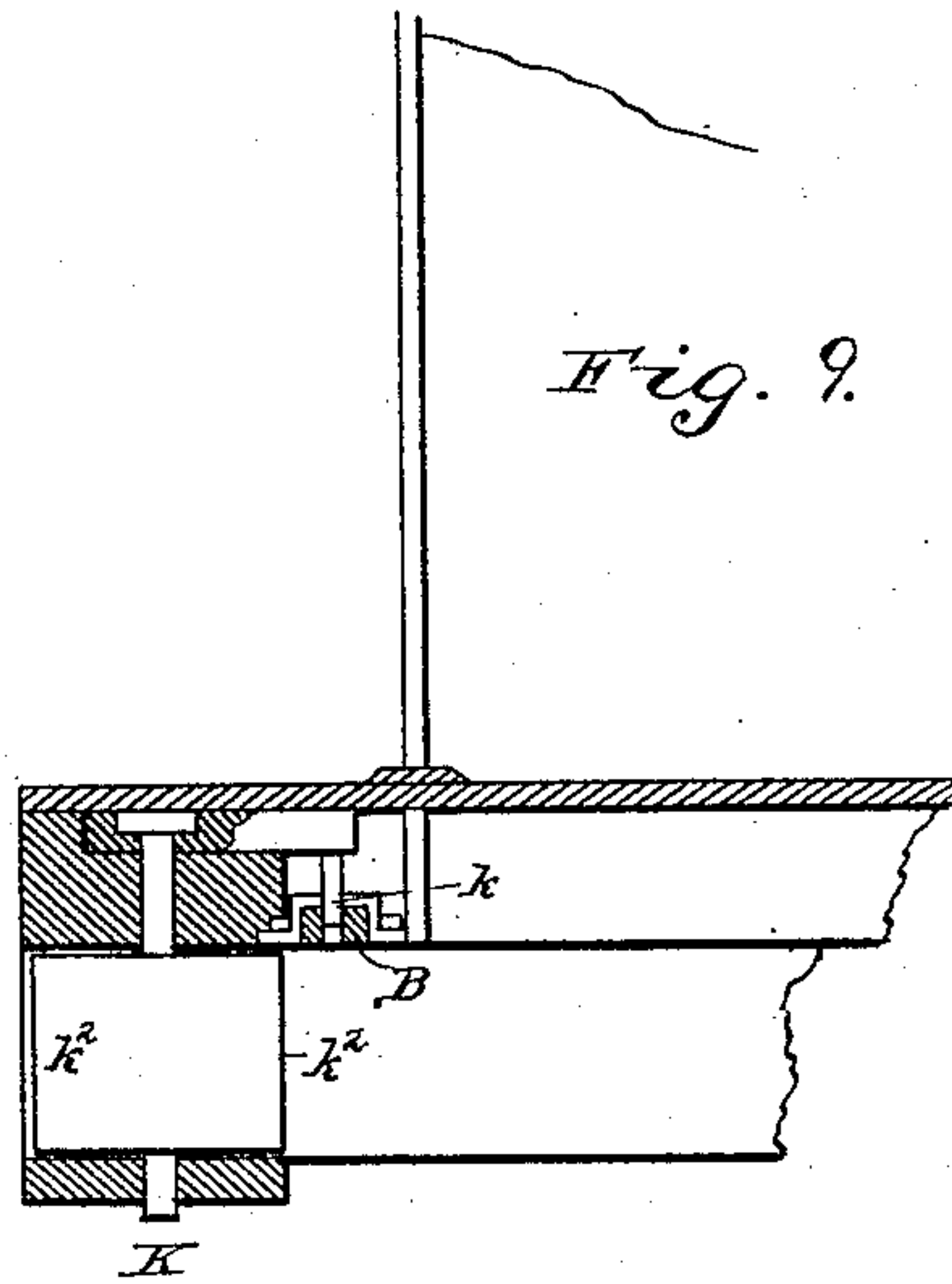
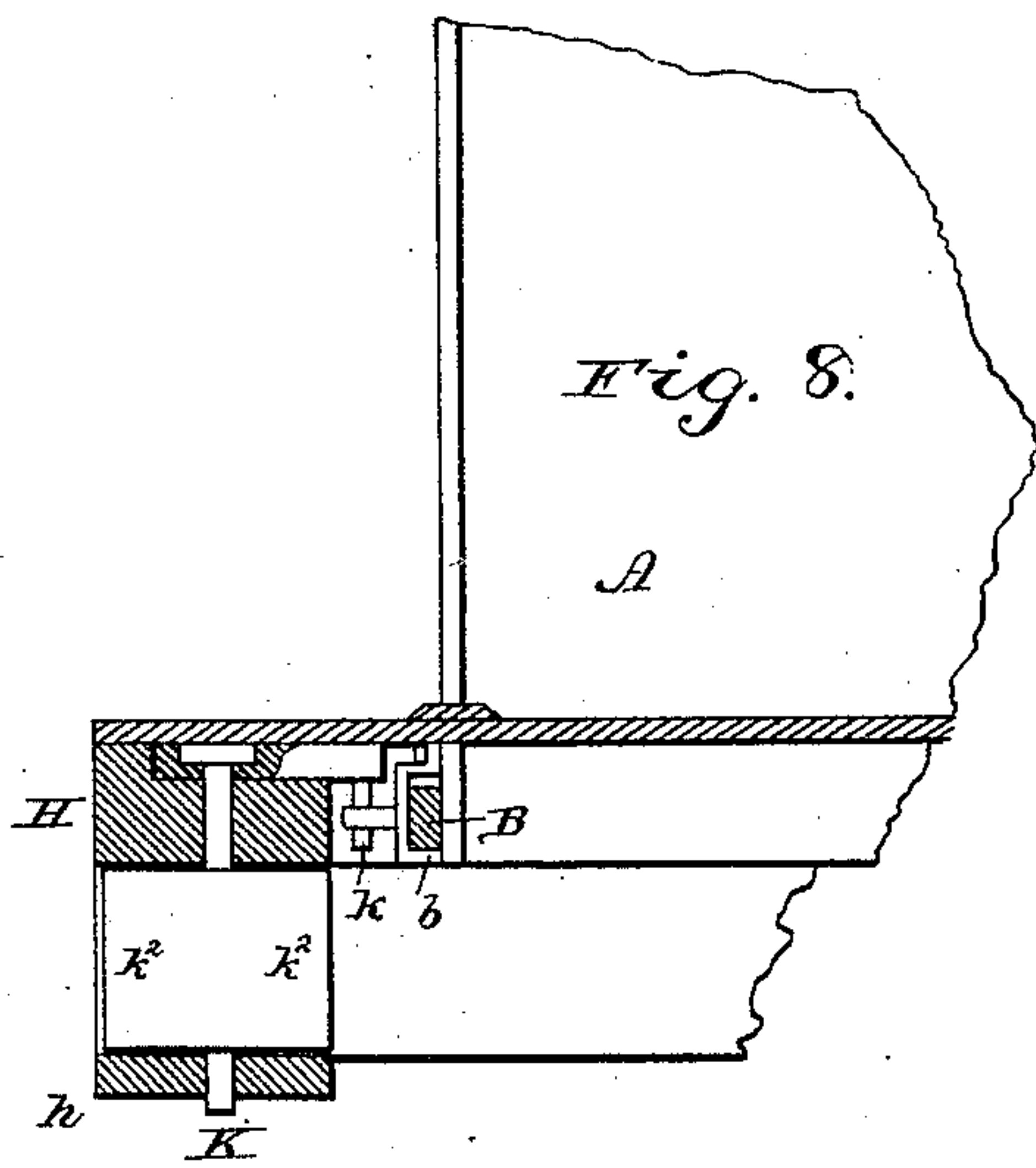
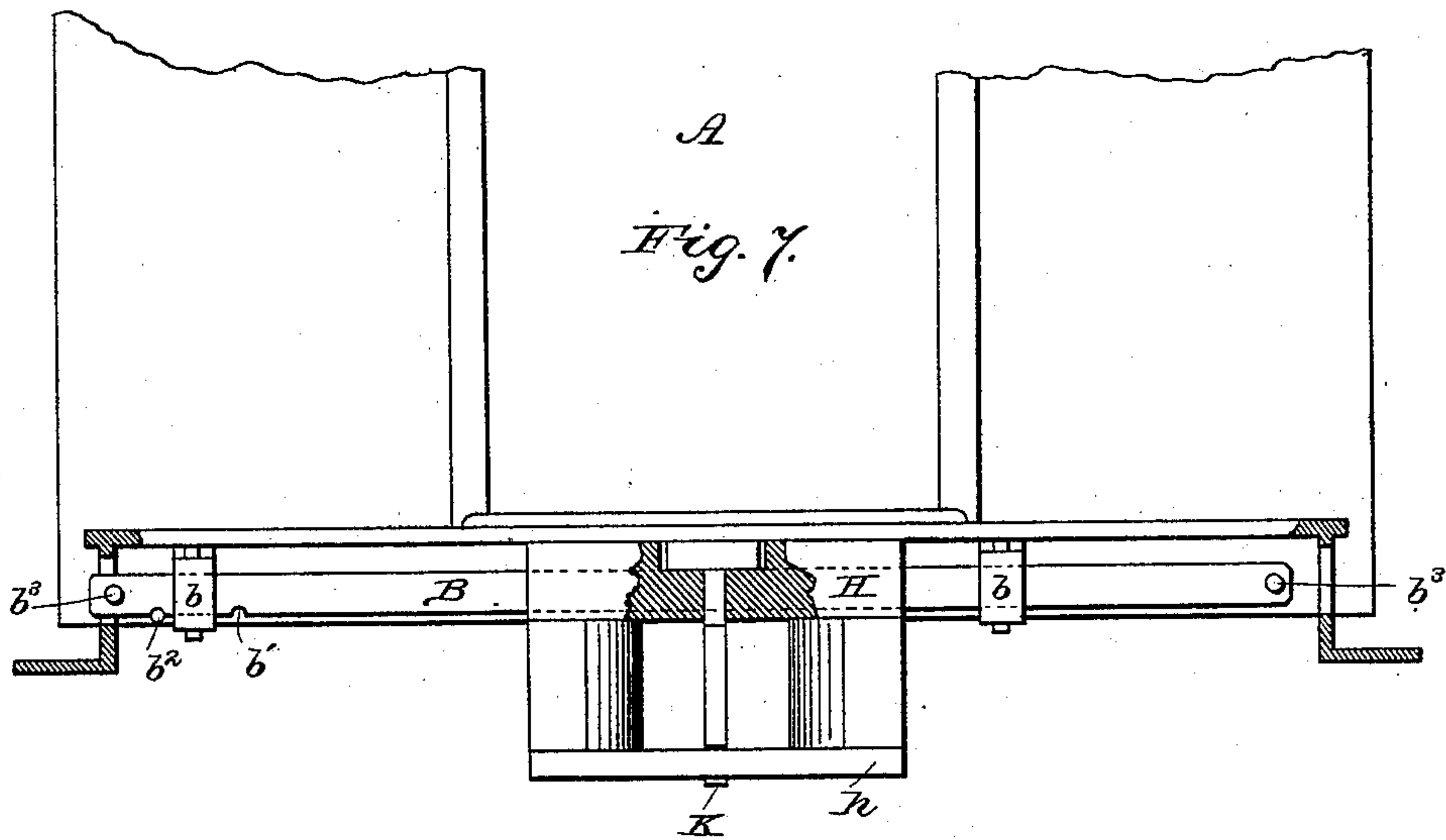
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2 Sheets—Sheet 2.

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Witnesses

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UNITED STATES PATENT OFFICE.

NELSON NEWMAN, OF SPRINGFIELD, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO
GEORGE A. SANDERS AND SAMUEL J. WILLETT, BOTH OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 429,051, dated May 27, 1890.

Application filed December 5, 1889. Serial No. 332,616. (No model.)

To all whom it may concern:

Be it known that I, NELSON NEWMAN, of Springfield, in the county of Sangamon, State of Illinois, have invented new and useful
5 Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of my invention, which will enable others skilled in the art to
10 which it pertains to make and use it, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to an improvement in car-couplings; and it consists in the peculiar construction and combination of devices, that
15 will be more fully set forth hereinafter, and particularly pointed out in the claims.

The object of my invention is to provide simple and effective means for automatically coupling cars and for uncoupling the same
20 from either side or from the roof of the car with safety, and which is further adapted for use in coupling or uncoupling cars when in position on switches, and to be operated in connection with cars provided with the com-
25 mon form of pin-and-link coupling.

In the accompanying drawings, Figure 1 is an end elevation of a car provided with my improved coupling. Fig. 2 is a bottom plan
30 view of my improved car-coupling. Fig. 3 is an inverted longitudinal sectional view of the same, looking in the direction of the arrow. Figs. 4, 5, and 6 are detail views. Figs. 7, 8, and 9 illustrate modifications adapted for passenger-cars.

35 On the end of the car A is arranged a lever C, having the slot c' , in which the pivot works. A slide-bar B is arranged transversely on the end of the car in guides b , has longitudinal and a slight vertical movement
40 in the said guides, and at the ends of the slide-bar are handles b^3 . On the under side of the slide-bar, near one end, is a notch b' , which is adapted to engage a pin or stop b^2
45 when the slide-bar is at one limit of its movement to lock said slide-bar in that position, for the purposes to be presently stated.

Arranged longitudinally under the car are parallel sills E, the ends of which project be-
50 yond the ends of the car, and are connected by plates h on their lower sides and cross-bars H on their upper sides. At the ends of

the cars cross-plates h' connect the sills on their upper and lower sides. The extreme ends of the sills are flared or beveled out-
ward on their opposing inner sides. Ar- 55
ranged between the sills, at the ends thereof, are hooks D, having inwardly-extending arms D' , and having the pivots d' , which are in central openings in the cross-plates h' . Springs
60 e have their outer ends bolted to the inner sides of their respective sills, and the free ends of said springs bear against the hook-
arms D' and serve to normally retain the latter in the position shown in Fig. 2. The
65 outer ends of the hooks are slotted and provided with vertical openings intersecting with the slots, and thereby adapted for the
reception of the pins and links in common use for coupling cars. A shaft K is pivoted in
70 openings in each cross-plate h and cross-bar H, and is provided with broadened flattened arms or keys k^2 , which project in opposite
directions, and normally lie snugly between the coupling-hooks when two cars are coupled
together, and being of such slight thickness 75
as to enable the shoulders of the said coupling-hooks to be engaged notwithstanding the
interposition of the flattened arms or keys. At the upper end of each shaft K is attached a
80 crank-arm having a pin or handle k , which is arranged between a pair of projecting pins k' on the proximate slide-bar B. The upper
portion of the lever C works in a slot g in a guide-plate G, attached to the roof of the car
at the end, and the lower end of said lever is 85
pivoted by a pin c^2 to a standard c^3 , which is attached to the slide-bar. The latter may be
moved endwise either by moving one of its handles from either side of the car or by op-
erating the lever C from the roof. 90

The operation of my invention is as follows: When two cars are to be coupled, the
abutting ends of the two draw-hooks D, Fig. 5, one on each car, impinge against each
other, so as to compress the spring e , Fig. 2, 95
which bears against the arms D' of each draw-bar until the hooked ends of the draw-
hooks D pass each other, when the spring re-
acts, causing the hooks to engage. To un-
couple the cars, the operator, standing at the 100
side of the car, takes hold of the handle b^3
and pushes the slide B in the direction shown

by the arrow, which causes the pins k' to press against the pin k , thereby turning the crank-lever K and the attached wing or arm k^2 , so as to force apart the draw-hooks D and permit the cars to separate. To uncouple from the roof of the car the operation is the same, except that the operator on the foot-board F takes hold of the upper projecting end of the lever C and pulls the lever toward him, which gives the proper motion to the slide-bar B. To prevent the coupling of cars on switches or elsewhere where coupling may not be desired, the draw-hook D is secured in the uncoupled position by moving the slide-bar B until the notch d' hooks over the pin d^2 and firmly locks the slide-bar B and the connected mechanism. The slide-bar B is unlocked either by pulling upward the upper end of the lever C or by lifting on the handle b^3 at the end of the slide-bar adjacent to the pin b^2 , or by depressing the handle b^3 at the other end of the slide-bar.

I will now describe a modified form of my invention in which the coupling devices are adapted to be used on passenger-cars. In Figs. 7 and 8 the slide-bar B is shown arranged under the car-platform A' and in the guides b' , which latter are bolted to the end of the car. The ends of the slide-bar are presented to openings A^2 in the steps A^3 , so that the handles b^3 of the slide-bar may be readily grasped and the slide-bar operated in the manner before described. By thus arranging the slide-bar the latter is disposed entirely out of the way, and the same offers no obstruction. As shown in Fig. 9, the guides b are arranged in a horizontal position under the platform, and the slide-bar is arranged flatwise.

Having thus described my invention, I claim—

1. The combination of the spring-pressed pivoted draw-hooks, the pivoted flattened arms or keys k^2 , arranged against the neck of one draw-hook and adapted to lie between the same and the head of the companion draw-hook, the thickness of the said flattened

arms or keys being less than that of the shoulders of the draw-hooks, for the purpose set forth, substantially as described.

2. The combination of the spring-pressed pivoted draw-hooks, the pivoted flattened arms or keys k^2 , arranged between the neck of one hook and the head of its engaging companion, and the crank-arm attached to the said flattened arms or keys, whereby the latter may be turned, for the purpose set forth, substantially as described.

3. The combination, in a car-coupling, of the pivoted engaging draw-hooks, the pivoted flattened arms or keys k^2 , arranged between them and having the crank-arm, and the slide-bar mounted on the end of the car and connected to the said crank-arm, substantially as described.

4. The combination, in a car-coupling, of the pivoted engaging draw-hooks, the pivoted flattened arms or keys k^2 , arranged between them and having the crank-arm provided with the pin k , and the slide-bar on the end of the car and having the pins k' engaging said pin k , for the purpose set forth, substantially as described.

5. In a car-coupling, the pivoted draw-hooks, the spring, the shaft having the arm or key to disengage the draw-hook, and provided, further, with the crank-arm, the slide-bar connected to the crank-arm, and the lever connected to the slide-bar, all in combination, substantially as described.

6. In a car-coupling, the combination of the sills, the cross-plates connecting them, the draw-hooks arranged between the sills and having the pivot in the cross-plates, the spring bearing against one side of the draw-hook arm, and the shaft having the flattened wings or arms bearing against the same side of the draw-hooks, substantially as described.

In testimony that I claim the foregoing I hereto append my signature.

NELSON NEWMAN.

Witnesses:

WM. R. BOWERS,
A. G. MURRAY.