

No. 803,228.

PATENTED OCT. 31, 1905.

G. C. HARLIN.
CAR COUPLING.
APPLICATION FILED JAN. 30, 1905.

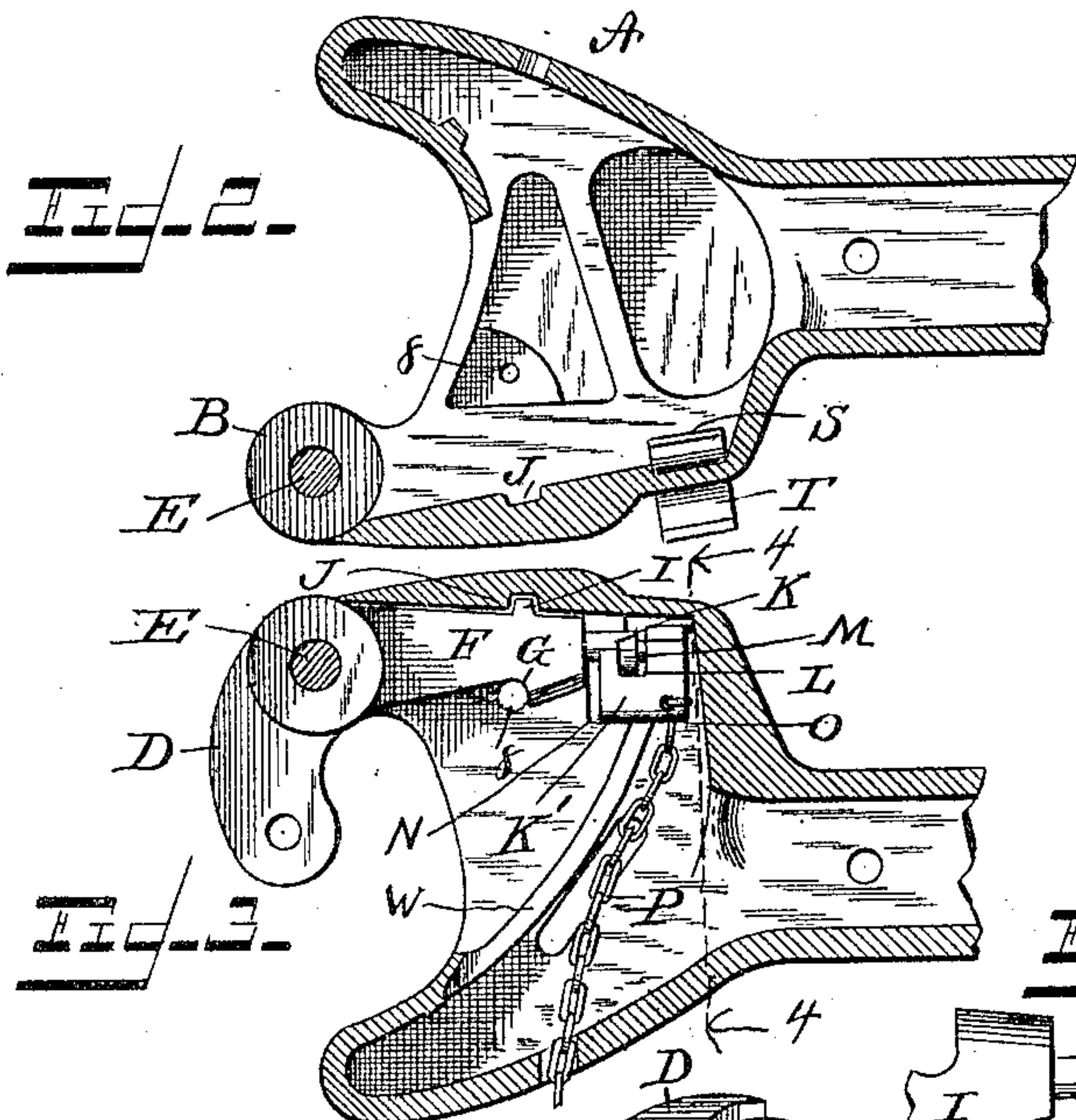
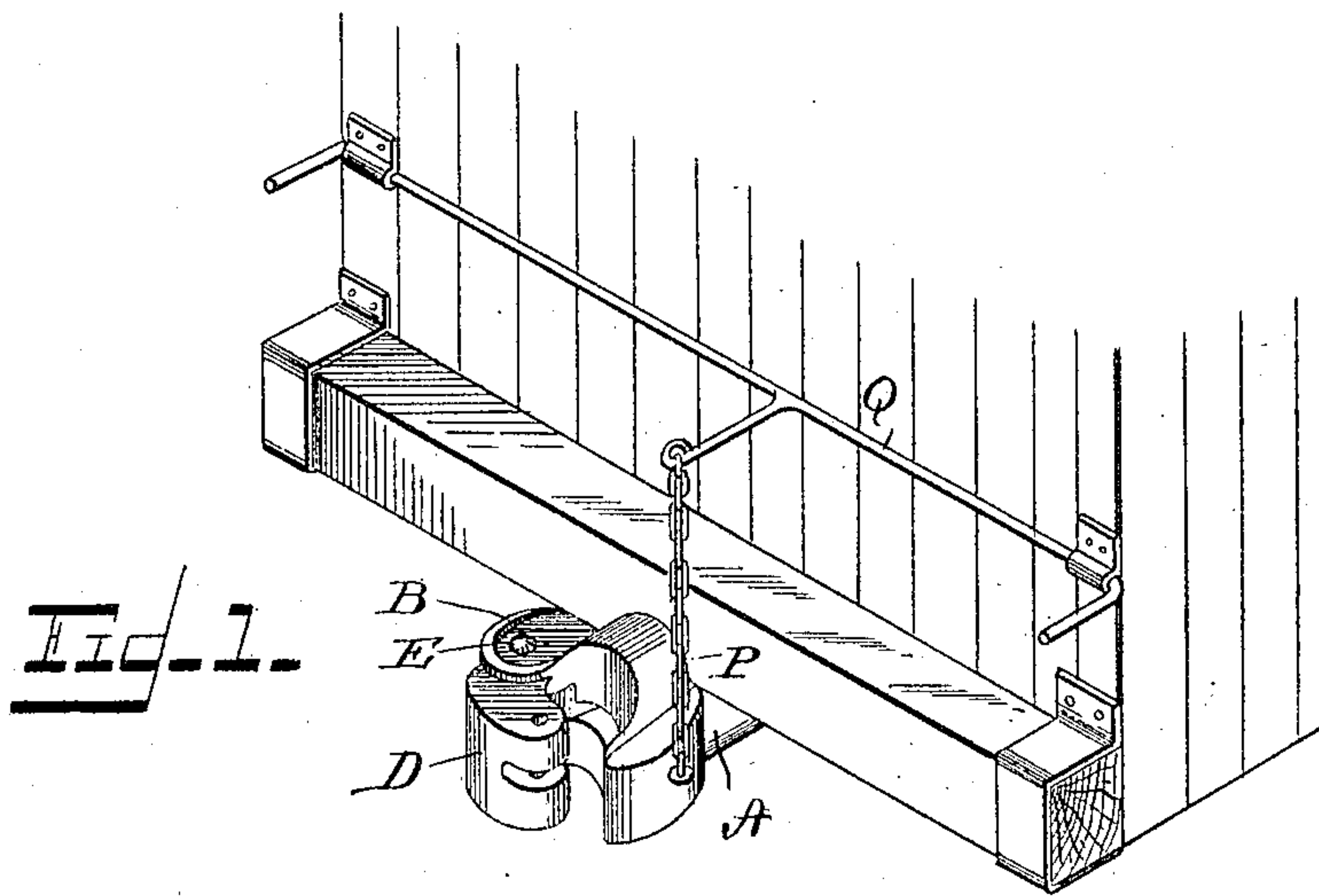


Fig. 4.

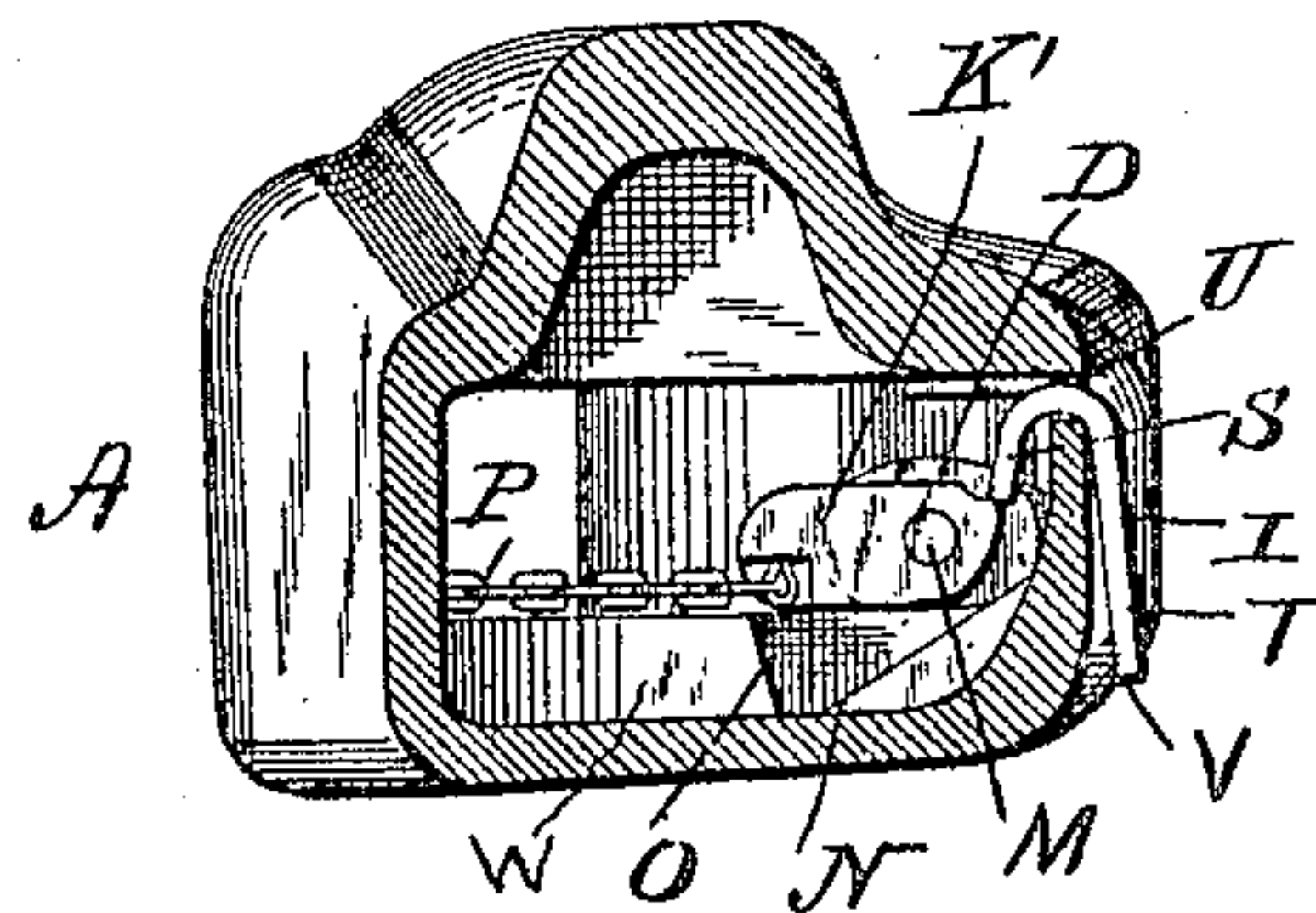


Fig. 3.

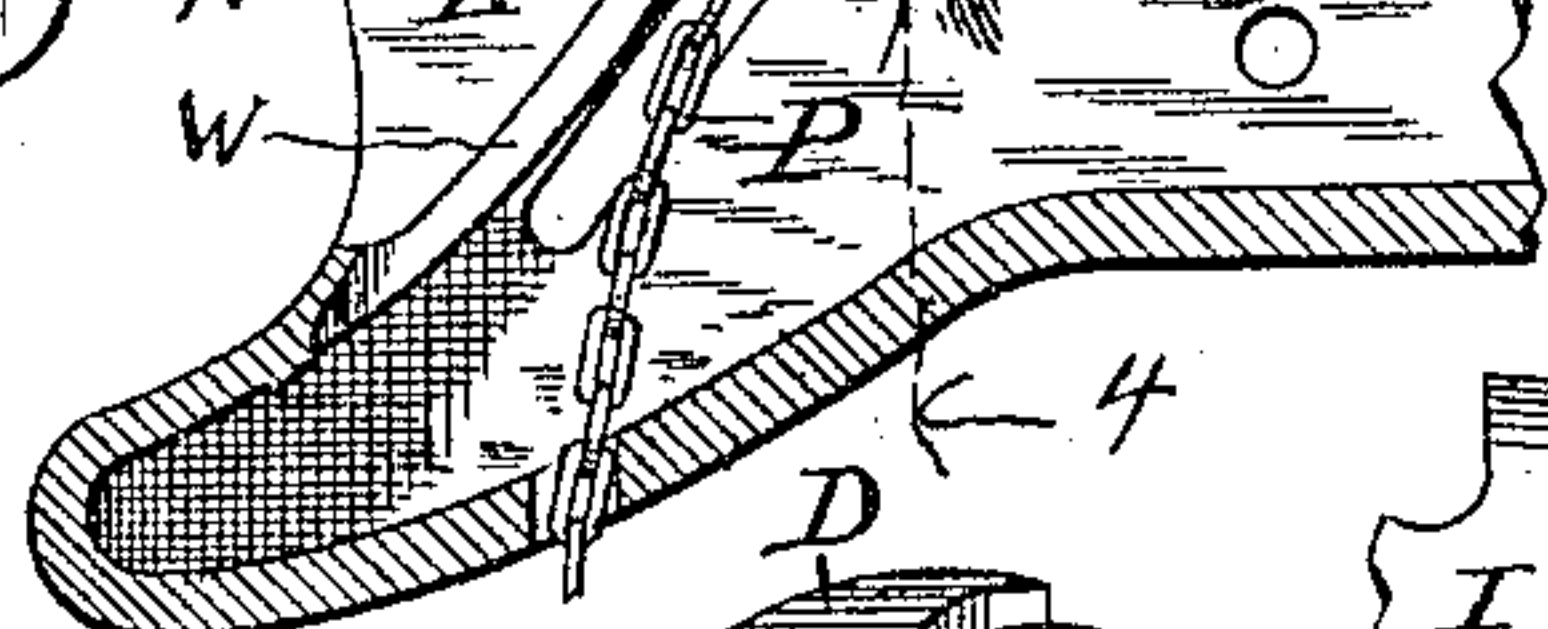


Fig. 6.

Fig. 5.

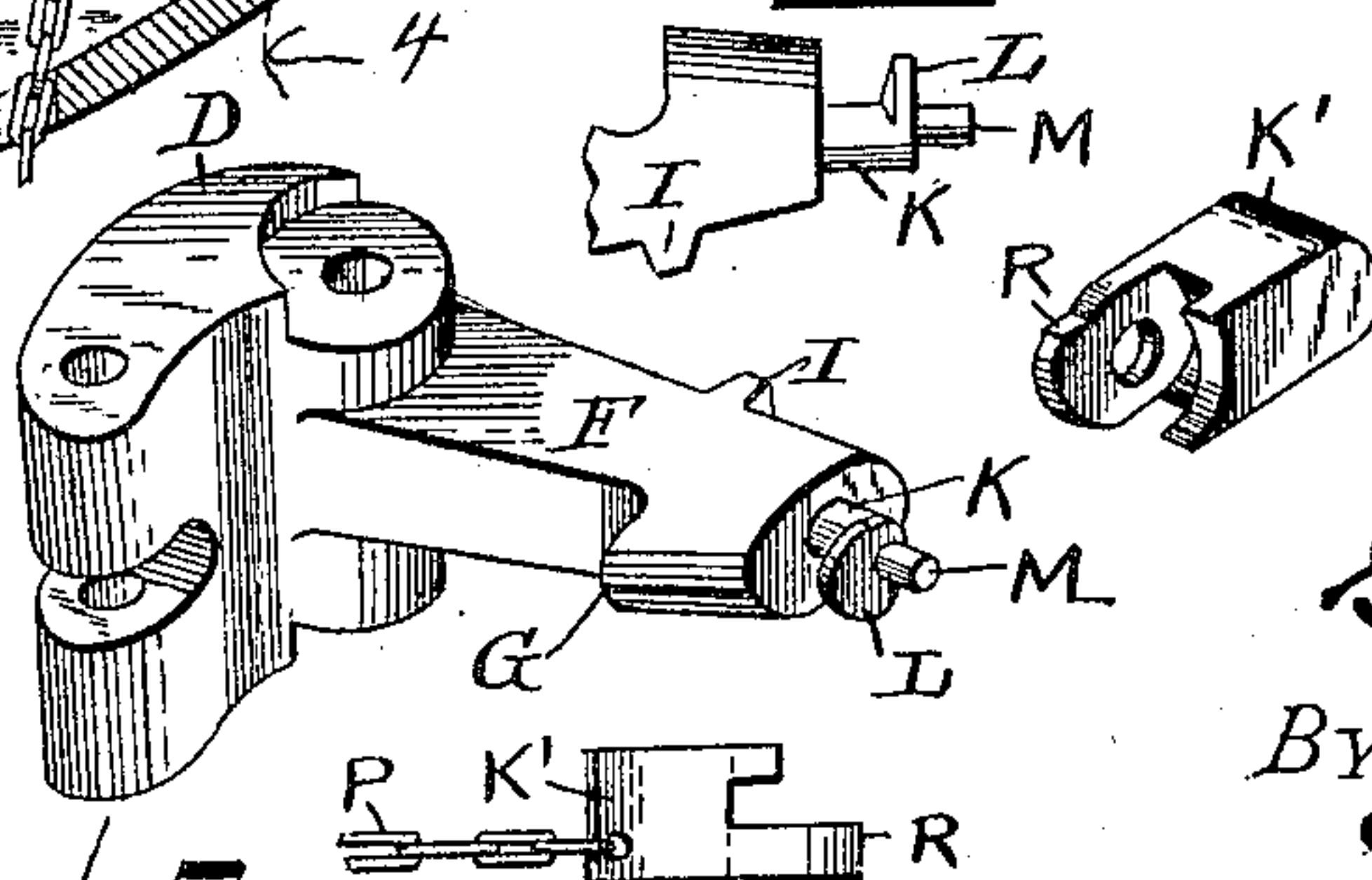


Fig. 7.

WITNESSES:
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Fig. 8.

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UNITED STATES PATENT OFFICE.

GEORGE C. HARLIN, OF SEATTLE, WASHINGTON.

CAR-COUPLING.

No. 803,228.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed January 30, 1905. Serial No. 243,282.

To all whom it may concern:

Be it known that I, GEORGE C. HARLIN, a citizen of the United States of America, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

This invention relates to car-couplers, and particularly to an improvement in the couplers of the Janney type.

An object of the invention is to provide novel means for retaining the couplers in operative position and in combination therewith means for releasing the retaining means whereby the knuckles are permitted to swing out of engagement with each other.

A still further object of the invention is to provide novel means for effecting the disengagement of the retaining device from its interlocking member and for holding the said retaining device until the cars are separated and the knuckles have swung out of contact.

Furthermore, an object of this invention is to provide novel means for securing the knuckle against displacement, which means would be utilized in an emergency or upon the proper retaining means becoming disabled, and to that end the tailpiece of the knuckle has a shoulder for engaging the ordinary coupling-pin in order that the tailpiece may be held against displacement.

The invention consists also in the novel details of construction and the arrangement and combination of parts to be hereinafter more fully described and specifically claimed, whereby a coupler of the character noted may possess advantages in points of simplicity, efficiency, and durability.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts in the several views, in which—

Figure 1 is a view in perspective of a fragment of a car with a coupler embodying the invention applied. Fig. 2 is a horizontal sectional view showing the upper half of the coupler-head and a portion of the draw-bar. Fig. 3 is a sectional view of the lower portion of the coupler with the knuckle and the parts cooperating with it in assembled relation. Fig. 4 is a vertical sectional view taken on a line corresponding to the line 4-4 of Fig. 3. Fig. 5 is a perspective view of the knuckle and tailpiece. Fig. 6 is a view in elevation, showing the end of the tailpiece. Fig. 7 is a perspective

view of the latch. Fig. 8 is a top plan view of the latch.

In the drawings, A denotes the draw-head, which in external configuration is of the ordinary type. The draw-head has the usual apertured lugs B, between which the knuckle D is pivoted on the pin E. The knuckle D is of ordinary construction, and the tailpiece F has a shoulder G, which may be engaged by a pin (not shown) passing through the aperture 8 of the draw-head. This feature is utilized only when there is an accident to the latch of the tail-piece and for the purpose of enabling the use of the coupler until repaired. The tailpiece has a lug I, which fits in a recess J of the draw-head, and this acts as a further means for coupling the tailpiece to the draw-head for emergency purposes. The tailpiece has an extension K with an intermediate flange L, and the said extension terminates in a pivotal pin M.

The latch K' is mounted on the extension, and is caused to fall by gravity into the recess N in the draw-head and to abut the shoulder O, which forms one wall of the recess. The latch is preferably connected to the extension by a bayonet-joint, as illustrated in Fig. 3. A chain or other flexible connection P is attached to the latch and extends through the wall of the draw-head and to an operating-arm Q, pivoted on the end of a car; but other means for moving the latch or the flexible connection may be resorted to.

From the foregoing it will be observed that when the knuckles of couplers are interlocked the parts would assume the positions shown in Fig. 3, with the side of the latch lying in the recess of the draw-head and bearing against the shoulder of said draw-head. When the cars are to be uncoupled, a pull on the flexible connection will result in raising the latch to the position shown in Fig. 4, when the knuckle would be free to swing on its pivot and release the knuckle of the adjoining car.

In practice it is frequently found necessary to set the parts in position to permit disengagement of the knuckles in the absence of an operator—that is, a brakeman or trainman may want to set the couplers to uncouple, and to accomplish the result the latch K' has a notch forming the shoulder R, which is engaged by the nose S of a gravity-detent T. The detent comprises a strip of metal having a hooked portion swung in the aperture U of the draw-head and having its exterior depending portion V of sufficient weight to swing

the nose into engagement with the shoulder of the latch for the purpose of holding the latch approximately horizontal or with its edge above the plane of the rib W on which it rides within the draw-head.

The construction, operation, and advantages will, it is thought, be fully understood from the foregoing description, it being noted that various changes may be resorted to in the proportions and details of construction for successfully carrying the invention into practice without departing from the scope thereof.

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

1. In a car-coupler, a suitable draw-head having an internal guide, a knuckle pivoted in the draw-head, a latch swingingly mounted on the end of the tailpiece of the knuckle, means for manipulating the latch and a swinging gravitating detent for holding the latch out of engagement with the shoulder.

2. In a car-coupler, a suitable draw-head having an internal guide, a knuckle pivoted in the draw-head, a latch swingingly mounted on the end of the tailpiece of the knuckle, means for manipulating the latch and a gravitating detent comprising a curved plate having one end extending into the coupler-head and adapted to hold the latch out of operative position, substantially as described.

3. In a car-coupler, a suitable draw-head having an internal guide, a knuckle pivoted in the draw-head, a latch swingingly mounted on the end of the tailpiece of the knuckle,

a detent having a curved end hinged in the draw-head and having its nose adapted to engage the latch to hold it out of operative position, the outer end of said detent being of sufficient weight to cause the said outer end to swing toward the draw-head, substantially as described.

4. In a car-coupler, a draw-head having an internal guide and a shoulder at the end of the guide, a solid lower wall, a knuckle pivoted in the draw-head, a tailpiece for the knuckle, a latch mounted on the end of the tailpiece, a flexible connection attached to the latch and adapted to pass through the opening in the lower wall of the draw-head as the latch moves on the guide, and a suitable detent for the latch, substantially as described.

5. In a car-coupler, a draw-head, a knuckle, a latch carried by the knuckle and swinging automatic means for holding the latch released.

6. In a car-coupler, a draw-head, a knuckle, a latch carried by the knuckle, and swinging automatic means carried by the draw-head for holding the latch released.

7. In a car-coupler, a draw-head, a knuckle, a latch carried by the knuckle and having a notch, and a detent carried by the draw-head for engaging the notch of the latch.

In testimony whereof I affix my signature, in the presence of two witnesses, this 14th day of January, 1905.

GEORGE C. HARLIN.

Witnesses:

A. MILLER,

WM. E. McCLURE.