

(No Model.)

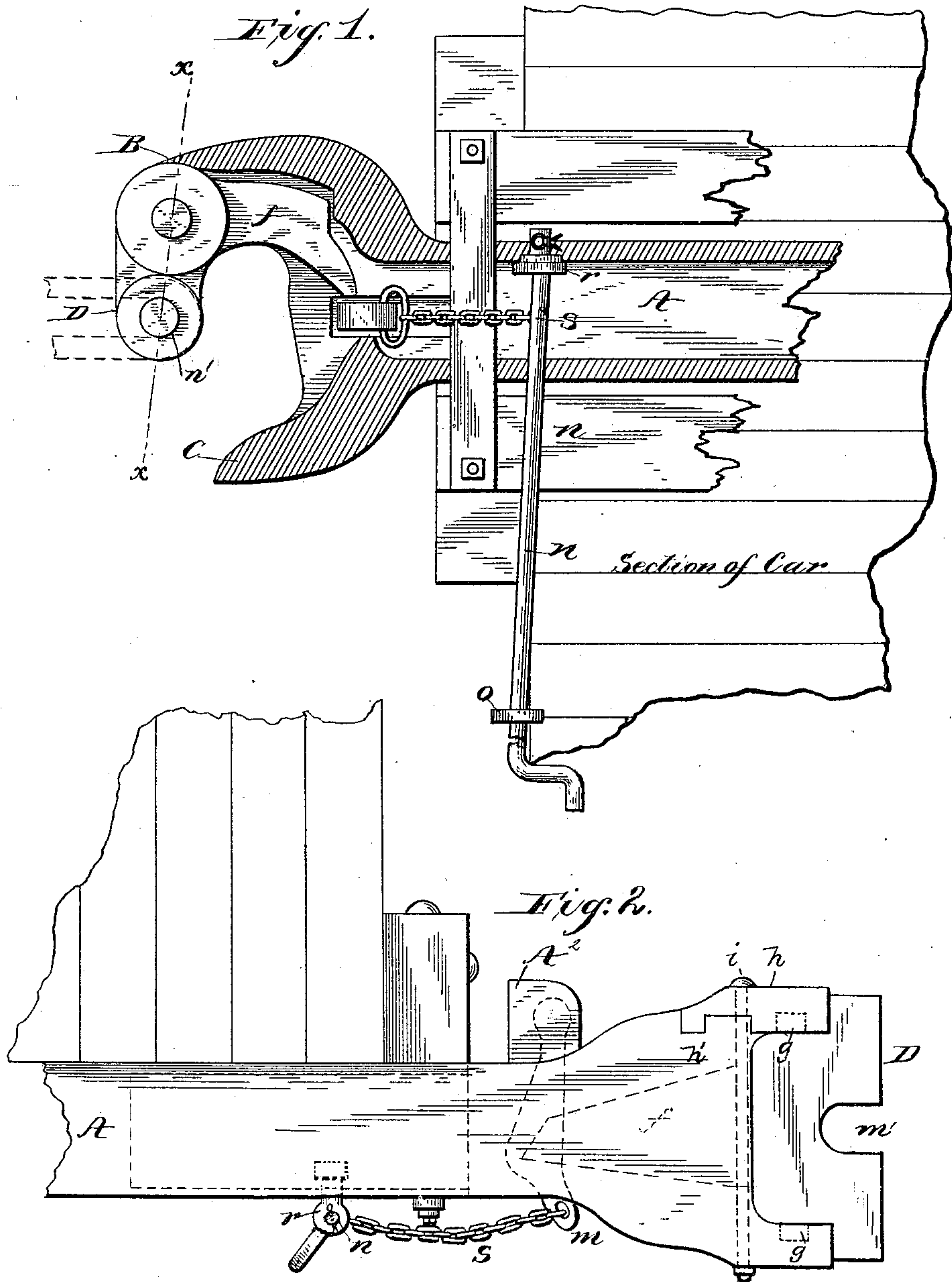
2 Sheets—Sheet 1.

J. A. HINSON.

CAR COUPLING.

No. 379,785.

Patented Mar. 20, 1888.



Witnesses,

Wm H. Scott.
W. A. Redmond.

Inventor,

James A. Hinson

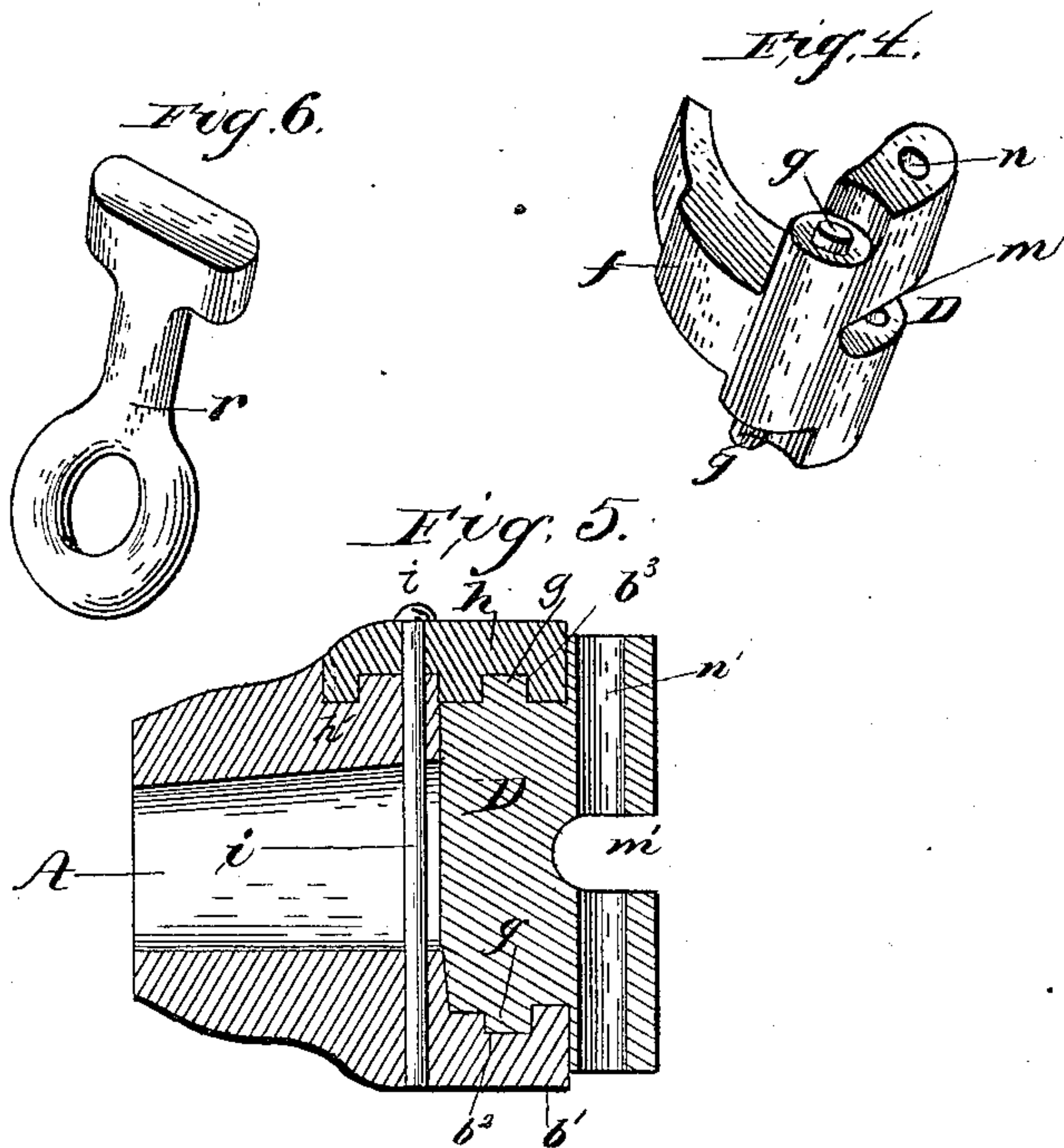
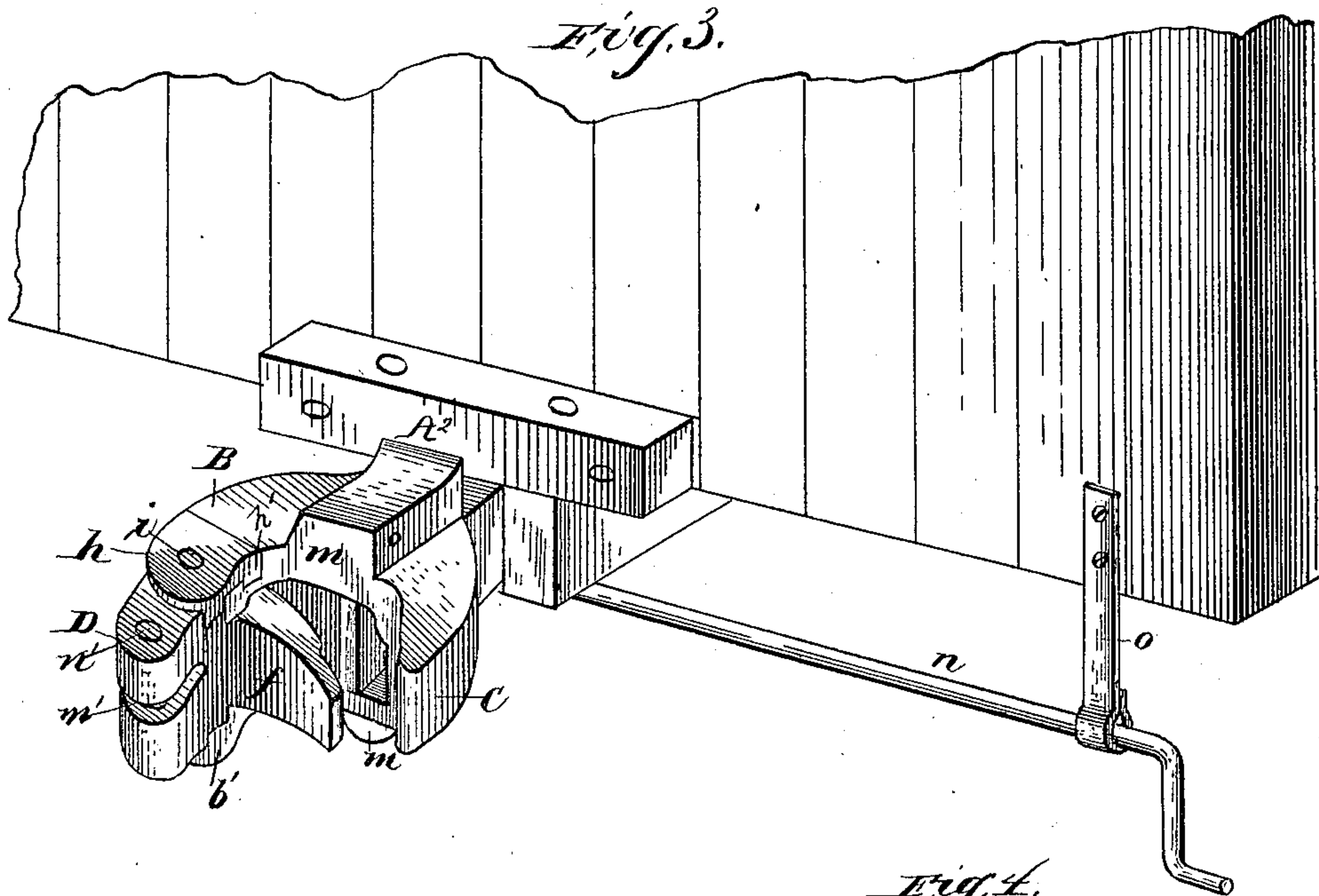
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UNITED STATES PATENT OFFICE.

JAMES A. HINSON, OF DES MOINES, IOWA, ASSIGNOR TO THE HINSON
STANDARD CAR-COUPLER COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 379,785, dated March 20, 1888.

Application filed October 28, 1887. Serial No. 253,660. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. HINSON, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Automatic Car-Coupler, of which the following is a specification.

Heretofore draw-heads have had arms projecting forward and jaws pivoted to the arms to swing horizontally in such a manner that when two cars equipped therewith came together on a track the jaws would simultaneously engage and vibrate each other so as to reciprocally lock together, and pins or slides would fasten the jaws in fixed positions to the draw-heads, as required to retain the two cars coupled; but when the jaws are thus fastened it is difficult at times to unfasten them on account of pressure against such movable fastenings.

My object is to provide a flexible connection between the draw-head and the car and the jaw fastening and operative mechanism connected therewith, so that no part will become bound by the pressure of the interlocking jaws or the longitudinal motion of the draw-bar, but remain free to be readily operated and adjusted as required to couple and uncouple cars.

My invention consists in the construction and combination of a draw-head, a jaw having an integral branch, a gravitating latch, a detachable shaft-hanger, and a rotatable shaft in a fixed bearing connected with the latch by means of a chain, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a bottom view of an end of a car having my coupler shown in section attached thereto and the pivoted jaw in its locked position. Fig. 2 is a side view showing the jaw closed and locked by means of the pendent gravitating latch, as indicated by dotted lines. Fig. 3 is a perspective view showing the complete invention applied as required for practical use. Fig. 4 is a perspective view showing the jaw detached. Fig. 5 is a vertical section through the line *x x* of Fig. 1, showing the manner of connecting the jaw with the draw-head. Fig. 6 is a perspective view of the detachable shaft-hanger.

A is the draw-bar, adapted in shape to be connected with a car in such a manner that it will have longitudinal motion. It has an integral arm, B, projecting forward from the side of its head at its front end, and a minor projection or guard, C, on the opposite side.

D represents a jaw having a curved branch, *f*, projecting laterally therefrom, and journals *g* formed on or cast at the junction of the jaw and branch, at the top and bottom of the same, adapting the jaw to be hinged or pivoted to the arm B of the draw-head, the lower portion, *b'*, of which is provided with a recess, *b²*, for the reception of the lower journal, while a detachable bearing-plate, *h*, having a recess, *b³*, for the reception of the upper journal, is secured to the arm by means of a bolt, *i*, passing through the arm and plate, the latter being provided with a projection, *h'*, entering a groove in the end of the arm, as clearly shown in Figs. 2 and 5, to hold the same, in connection with bolt *i*, rigidly in place. By thus forming the journals integral with the jaw and providing a detachable bearing-plate, the jaw and bearings are not weakened, as is the case when the bearings are formed integral with the jaw and the same perforated to receive a bolt to form the ordinary hinged joint, and are thus better adapted to stand the shocks incident to the coupling of cars.

A horizontal slot in the front and center of the jaw and vertical pin-holes intersecting the slot adapt the jaw to admit another car to be coupled thereto by means of a common link, as indicated by dotted lines in Fig. 1. The end of the draw-head is hollowed out to form a cavity between the arm B and guard C, thus permitting the branch *f* of the hinged jaw D to swing back and forth therein.

k is a vertical slot that intersects this cavity and extends from the enlargement *A²* on the top of the draw-head down through the bottom in such a manner that a latch, *m*, pivoted in the enlargement will extend down through the cavity and slot.

n is a rotatable shaft that has a crank-handle at its outer end. It is supported at its outer end by a bearing, *o*, secured to the car, and at its inner end by an eyebolt, *r*, carried by the sliding draw-bar. The eyebolt *r* has a T-head, which is passed up through a perforation in

the bottom of the draw-bar, that is adapted in size and shape to admit the T-head and to retain it flexibly connected with the bar when the eyebolt is turned half-way round. A washer and key on the end of the shaft *n* prevent it from slipping out of the pendent eyebolt *r* as it moves back and forth with the draw-bar.

s is a chain linked to the bottom of the pendent latch *m*, and fixed to the shaft *n* in such a manner that the chain can be wound upon the shaft to draw the latch backward to free the branch *f* of the jaw B when it is locked by means of the latch.

In the practical operation of my invention, when two cars are equipped therewith and come together on a track, the jaws D of the mating couplers will reciprocally engage the branches *f* and press them into the cavities in their rear, as required to interlock the jaws; and as the said branches enter the said cavities they come in contact with the pendent latches *m* and press them until the ends of the branches *f* have passed the latches *m*, when the latches will, by force of gravity, resume their normal vertical positions, and thus automatically lock the branches *f* and jaws B in fixed positions, as required to retain the cars securely coupled together. To uncouple two cars thus automatically coupled I simply seize the crank-handle of one of the shafts *n*, and thereby rotate it and wind up the chain *s*, as required to draw the pendent latch *m* backward to free the branch *f* of one of the jaws B.

I claim as my invention—

1. The combination, in a car-coupler, of the horizontally-movable draw-bar, a rotatable shaft having one end flexibly connected with said draw-bar, a pendent latch pivotally secured in the draw-head, and a chain connect-

ing said latch and shaft, substantially as described.

2. The combination, in a car-coupler, of the movable draw-bar, a draw-head having the horizontally-movable hinged jaw and a lateral branch, a latch pivoted in said head, a rotatable shaft flexibly secured at one end to said draw-bar, and a chain attached to said shaft and latch, substantially as described.

3. The combination, with the movable draw-bar and draw-head of a car-coupler, of a removable T-headed eyebolt, a rotatable shaft loosely connected to said eyebolt, a latch pivoted in the draw-head, and a chain connecting said latch and shaft, substantially as described.

4. The hereinbefore-described car-coupler, consisting of a movable draw-bar, a draw-head hollowed out at its center, and having an arm, B, and guard C, a jaw having a lateral branch projecting therefrom and journals *g* formed integral therewith, hinged to said arm B, a pendent latch pivoted in a recess in said draw-head and intersecting its hollowed-out portion, a detachable bearing-plate having a projection, *h'*, and a recess, *b'*, a shaft having one end flexibly connected to said draw-bar, and a chain connecting said latch and shaft, substantially as set forth.

5. The combination, with the draw-bar of a car-coupler, having an arm, B, provided with a groove on its upper side and a recess in its lower portion, of the jaw D, having a lateral branch, *f*, and journals *g*, cast integral therewith, a bearing-plate, *h*, having a recess and a projection on its lower face, and a bolt, *i*, substantially as described.

JAMES A. HINSON.

Witnesses:

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THOMAS G. ORWIG.