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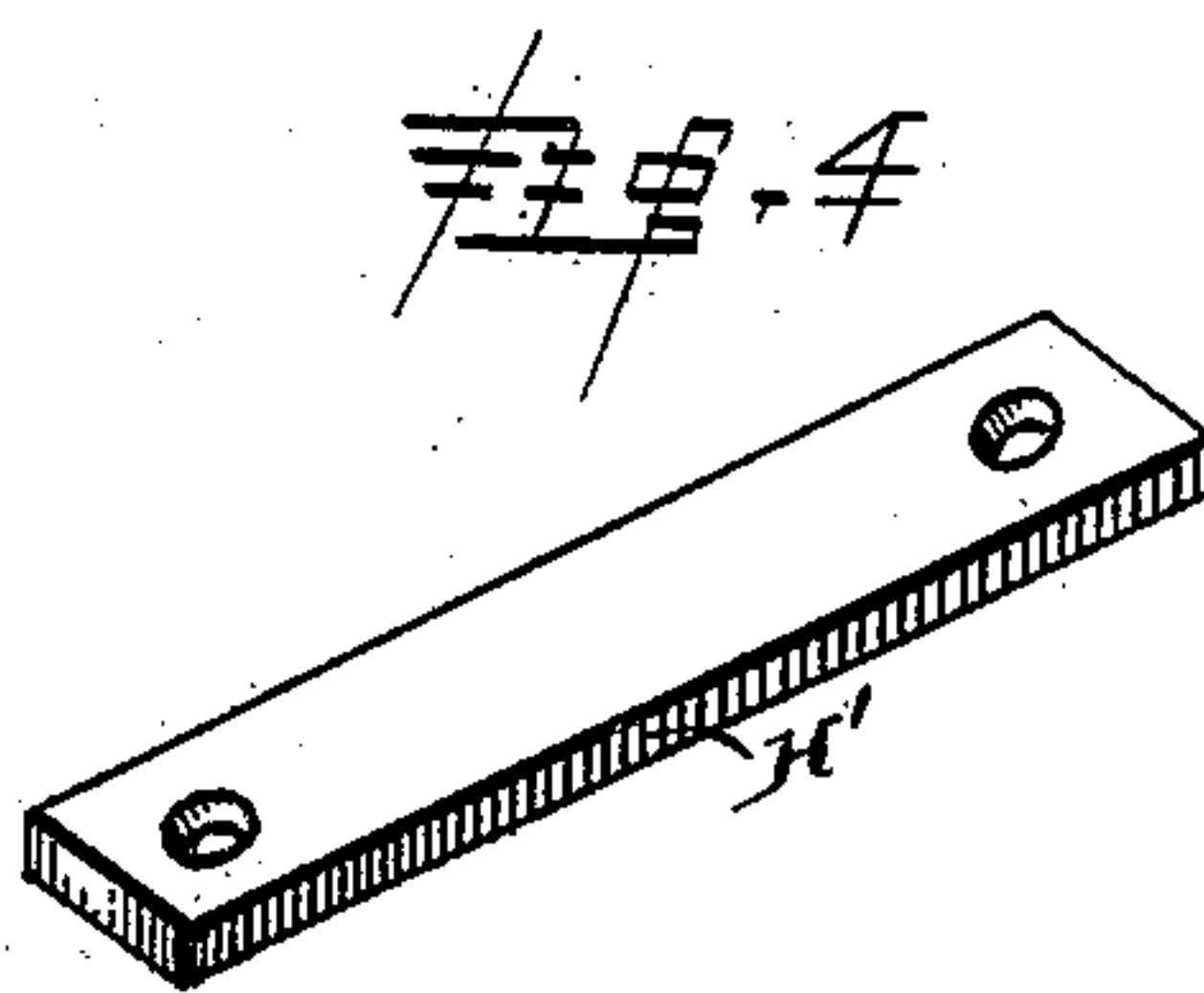
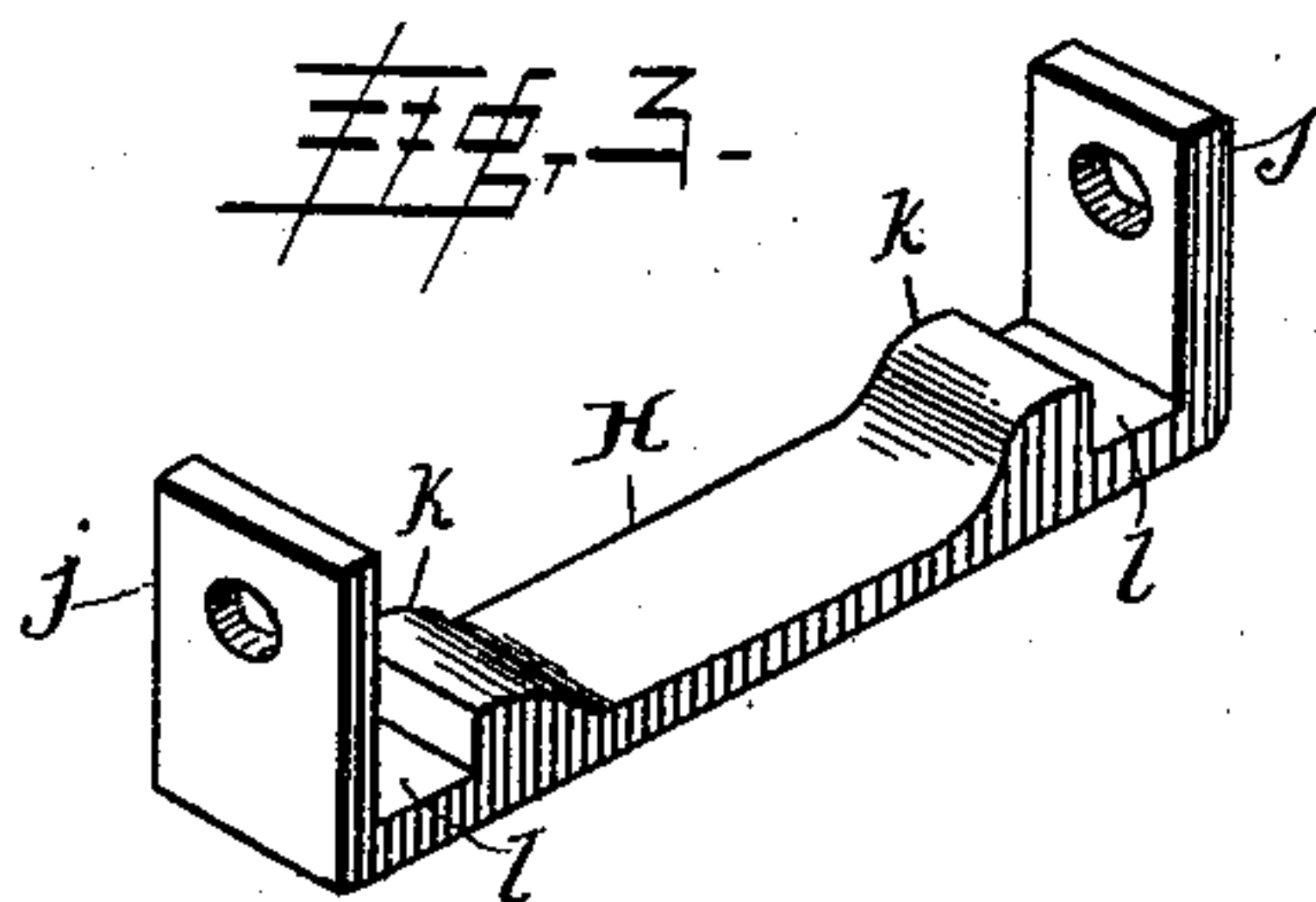
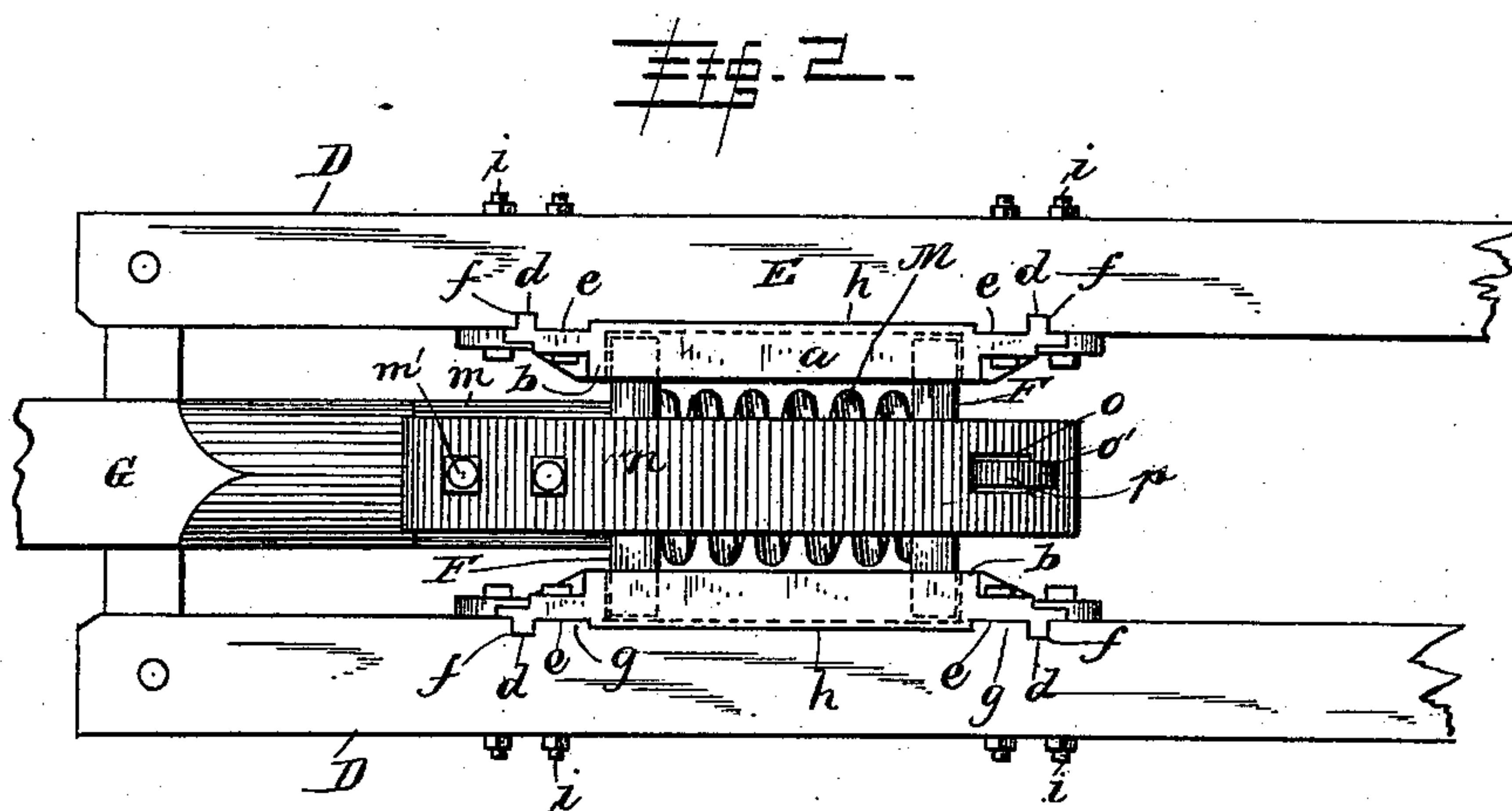
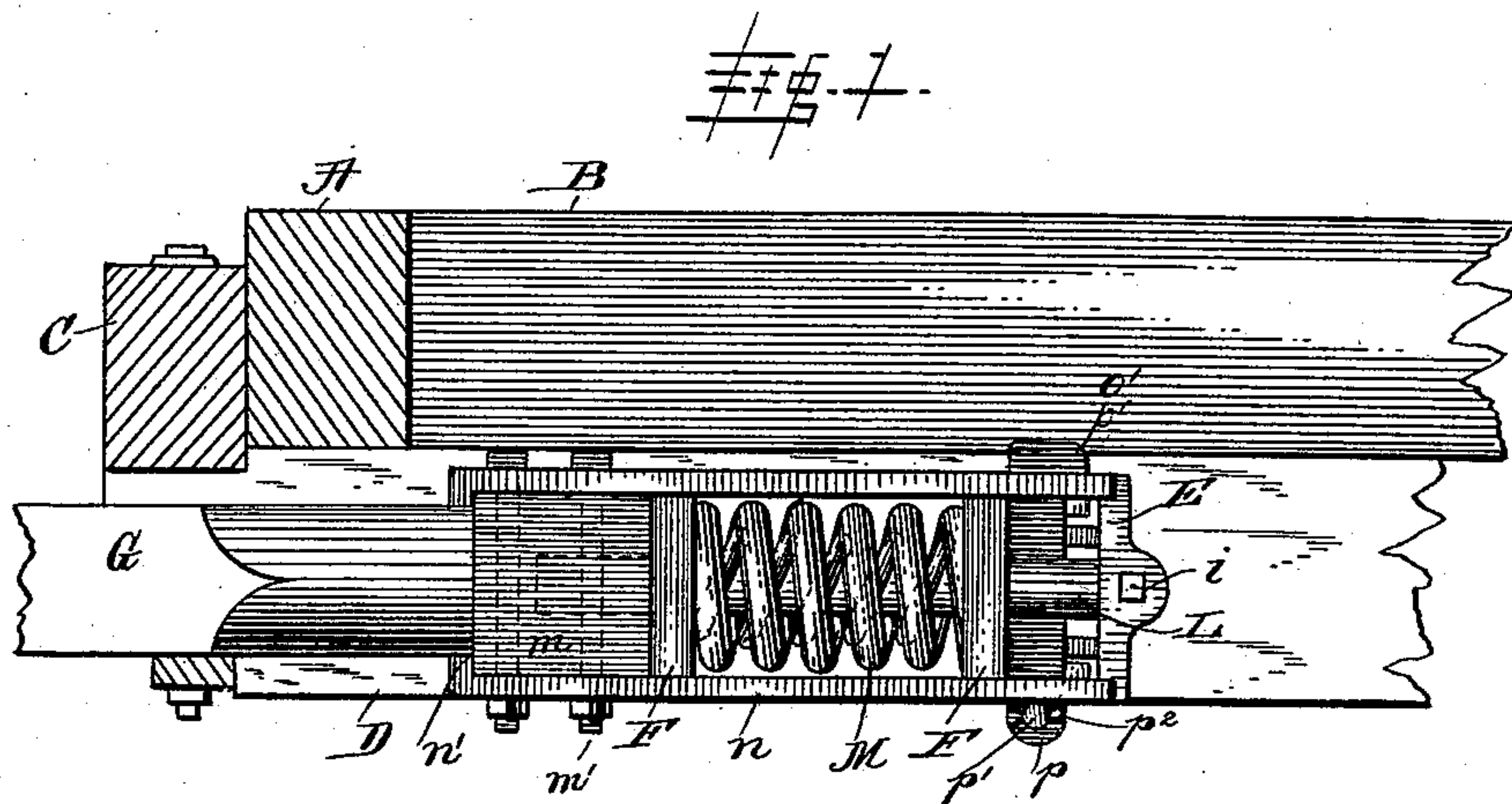
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J. A. HINSON.

## DRAFT RIGGING FOR CAR COUPLINGS.

No. 466,348.

Patented Jan. 5, 1892.



*WITNESSES*

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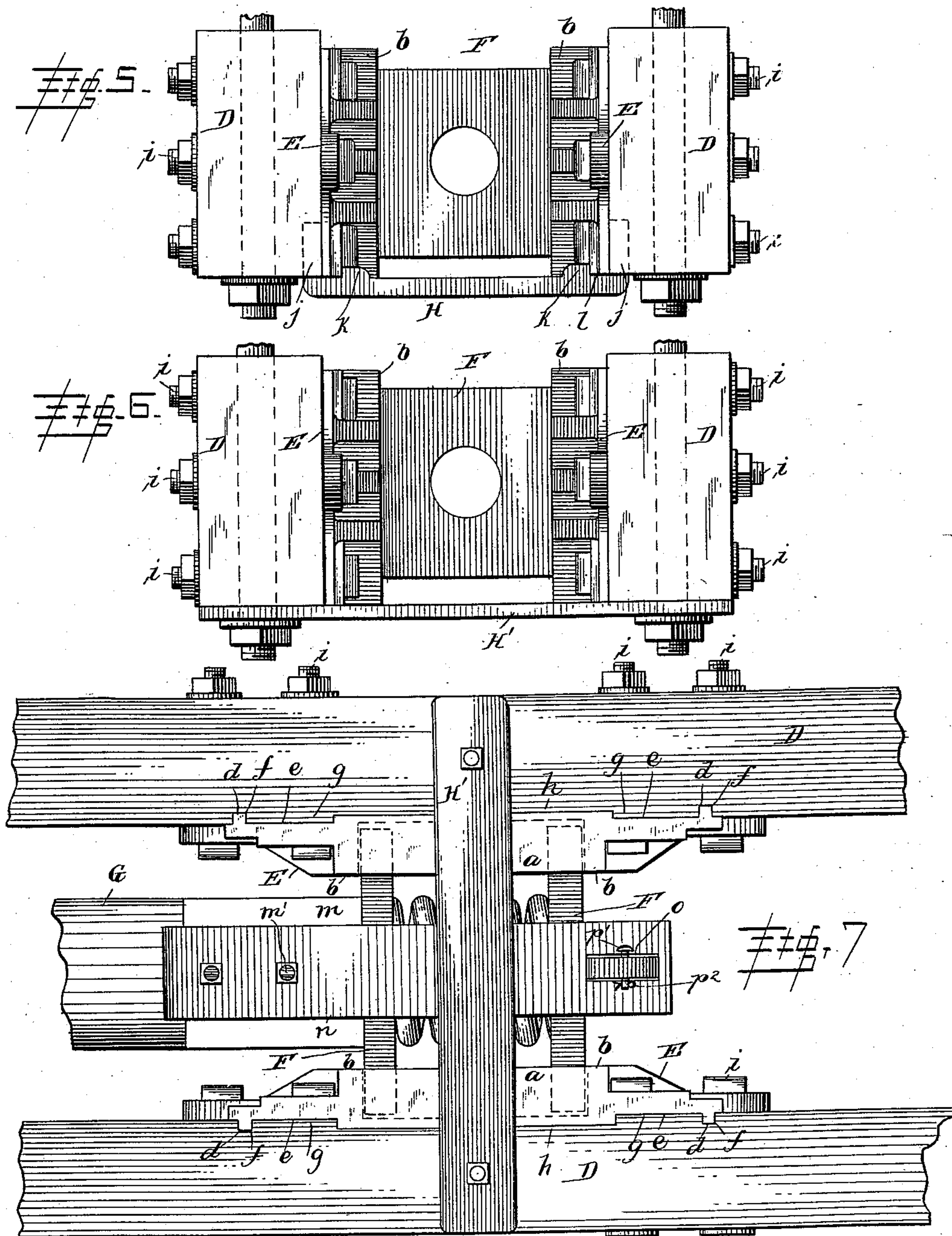
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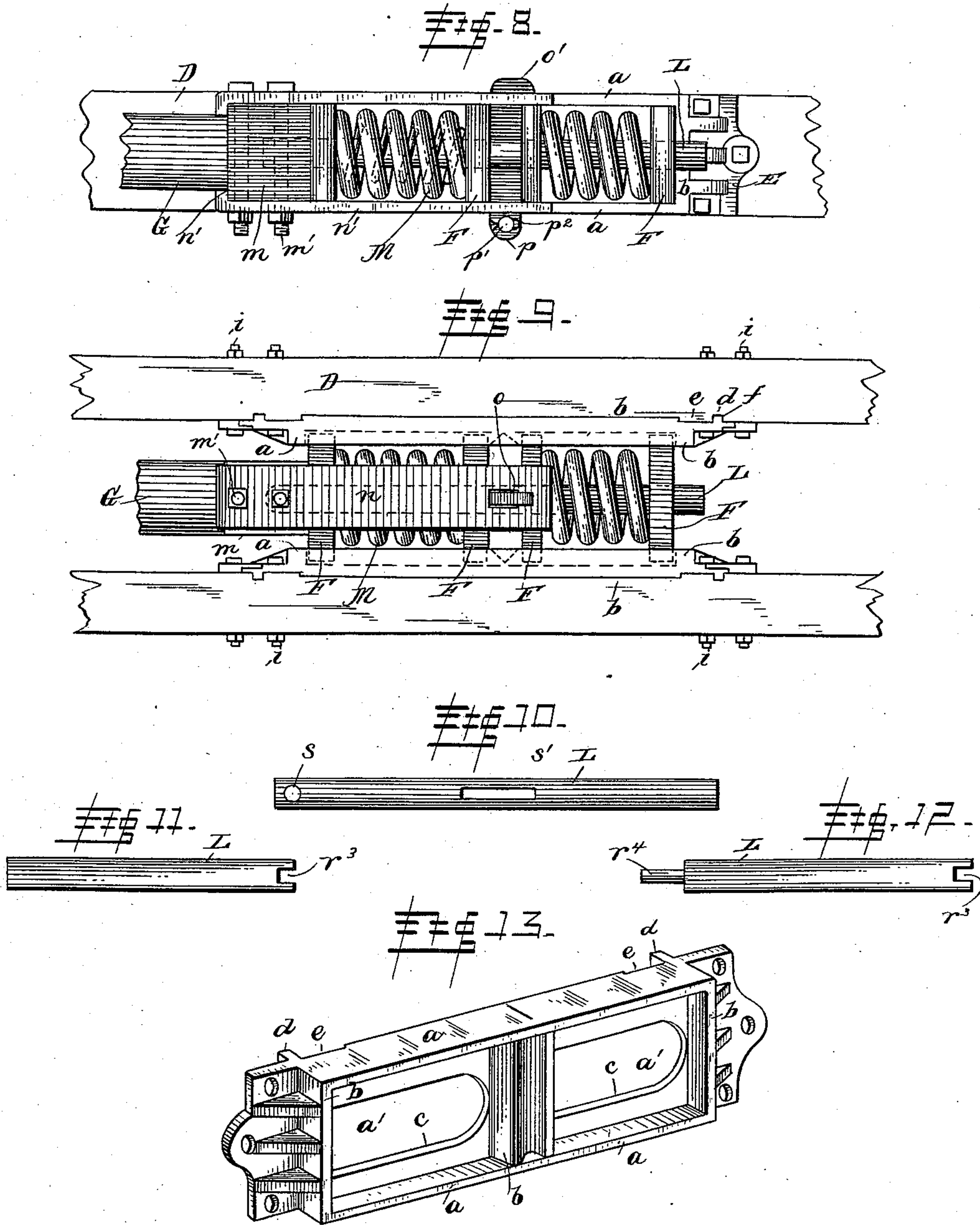
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# UNITED STATES PATENT OFFICE.

JAMES A. HINSON, OF DES MOINES, IOWA.

## DRAFT-RIGGING FOR CAR-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 466,348, dated January 5, 1892.

Application filed April 9, 1891. Serial No. 388,251. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. HINSON, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Draft-Riggings for Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates, generally, to car-couplers, and particularly to draft-riggings for the draw-bars of car-couplers; and it has for its object to provide a simple, durable, and easily to be adjusted and attached rigging; and it consists, first, in providing a yoke formed in two pieces and adapted to be attached to one end of the draw-bar and to pass over and under the follower-plates; second, in providing means for securing said yoke in rear of the rear follower-plate; third, in providing means for supporting the buffingsprings in position; fourth, in providing improved side or draft plates adapted to carry an auxiliary set of follower-plates and buffingsprings; fifth, in providing means for securing or holding the draft-plates rigidly against the draft-timbers and the latter apart, and, sixth, in other details of construction and arrangement of parts, as hereinafter set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of my improvement in draft-riggings, showing it in position for operation; Fig. 2, a plan view; Fig. 3, a perspective view of an improved brace strap or iron; Fig. 4, a like view of carrier iron or strap; Fig. 5, a front elevation of the draft-timbers, side plates, and follower-plate of a car-coupler, showing the use of the brace-iron shown in Fig. 3; Fig. 6, a like view showing the use of strap shown in Fig. 4; Fig. 7, a bottom plan view of the construction shown in Fig. 6; Fig. 8, a side elevation showing a modified form of draft-rigging for carrying auxiliary buffingspring; Fig. 9, a plan view of the construction shown in Fig. 8; Fig. 10, a detail view of the pin or stem for buffingsprings shown in Figs 8 and 9; Figs. 11 and 12, modified forms of stems or pins for buffingsprings, and Fig.

13 a perspective front view of the side or draft plates.

Similar letters refer to similar parts throughout all the views.

A represents the end beam; B, one of the bottom beams of a car, and C a block bolted to the end beam.

D represents the draft-timbers, which are secured in the usual or any desired manner to the bottom of the car and between which the draw-bar works.

The draft or side plates E are formed with the flanges *a*, end pieces *b*, and back portion *c*, forming an inclosed rectangular space (see Fig. 13) in which the ends of the follower-plates F work or slide back and forth with the movement of the coupler or draw-bar G. These plates are formed with the ribs *d* and the recesses or wide grooves *e* on their rear sides or faces near each end, the former being intended to enter corresponding grooves *f* in the draft-timbers and the latter receiving the shoulder or projection *g*, formed on the draft-timbers between the grooves *f* and the wide recess *h*, formed in said timbers to receive the body or main portion of the plates.

The plates E are secured to the draft-timbers by bolts *i*, passing through perforations in the ends of the plates, and the main or body portion of said plates fit in the recess *h*, the object of which is to permit of the setting of the plate with its front surface flush with the face of the timber to which it is attached, thus enabling the use of a somewhat thicker plate to form a chafing-surface for the ends of the follower-plates F without having to shorten the length of the ordinary follower-plate now in common use or to set the draft-timbers farther apart.

For the sake of securing lightness of weight without appreciable loss of strength I form the side plates E with a large oblong opening *a'* in their back portions, as shown in Fig. 13, leaving a sufficient width of material forming the back surrounding said openings to provide a wide chafing-surface for the ends of the follower-plates in their movements back and forth on the flanges *a*, and thus preventing the ends of the follower-plates wearing or cutting away the timbers.

In Fig. 3 I show means for holding the draft-timbers rigidly apart and the side plates E



firmly against said timbers at each end, in which H represents a flat bar of metal having its two ends J turned up at right angles and perforated, and at a suitable distance from each upturned end I form projecting lugs *k*, thus forming recesses *l* between the vertical faces of the lugs and the upturned ends of the bar. The bars H are placed between the timbers D, with their ends fitting in grooves or slots formed therein, and are securely bolted thereto, and the side plates E set thereon, with their edges near each end resting in the recesses *l*, as shown in Fig. 5, so that the vertical faces of the lugs will prevent any lateral movement of the plates occasioned by a loose nut or bolt. The bars H are adapted and only intended to be used in connection with the ordinary form of draw-bar having a spindle secured thereto, which passes through openings in the follower-plates and through the springs and is keyed in rear of the rear follower-plate and not in connection with a draw-bar of the yoke type shown in Fig. 7, in which case I employ a flat bar of iron H', bolted across and beneath the draft-rigging to the timbers, for the reason that the first-named bar H would interfere with the operation of this type of connection between the draw-bar and the follower-plates or draft-rigging.

The draw-bar G is formed, preferably, with a square end *m*, to the bottom and top of which are bolted by through-bolts *m'* the ends of the flat metal bars *n*, said ends being turned at right angles, as at *n'*, to fit over the flanges of the end of the draw-bar, as clearly shown, and the other ends of said bars being formed with longitudinal oblong openings *o*, through which a flat pin *p*, having an elongated head *o'*, may pass. The bars *n* extend backwardly beyond the rear follower-plate and are arranged one above and the other below said plates, so that when the pin *p* is inserted in the openings *o* its edge will bear against the outer or rear side of the rear follower-plate, and thus hold the draw-bar in place. Heretofore, so far as I am advised, the yokes have been made in one piece and bent at points each side of their center or middle to embrace the follower-plates and the ends bolted to the rear end of the draw-bar, which necessitated the removal of nuts and bolts and the springs, follower-plates, and other parts of the draft-rigging before the draw-bar could be taken out or withdrawn or put in place for operation; but with this device all that is required to be done prior to removing the draw-bar is to remove the pin *p* from the slot, when the draw-bar may be readily withdrawn. A key *p'* is inserted in a perforation formed in the lower end of the pin *p* and keyed therein by a split key *p''* or otherwise to prevent the same falling out.

L represents a stem or pin adapted to pass through the central openings in the follower-plates F and support the usual buffing-springs

M between said plates. This pin L may be simply a round bar of iron having an elongated slot formed near one end to receive the pin *p* and a perforation *r'* at the other end, through which one of the bolts *m'*, which secure the yoke to the draw-bar, passes, the end of said pin L extending into the end of the draw-bar and being there held securely by said bolt *m'*.

As shown in Figs. 11 and 12, the pin L may be a flat bar of iron having a recess or slot *r''* at one end adapted to engage the pin *p*, and thereby preventing the pin L turning in its seat. In using this style of pin the openings in the follower-plates will of course be made to conform in shape thereto, and when, as it frequently happens, the draw-bar end is cast with an interior flange, thus reducing the size of the opening therein, the flat pin L will be formed with a reduced end *r'''*, Fig. 12, adapted to enter such small openings; but it is not necessary to secure the same to the draw-bar. Merely inserting it far enough into the draw-bar to prevent it slipping sideways is all that is required. The recess or slot *r'''* of the pin L also holds the pin *p* in place against the center of the follower-plate and prevents it or the yoke from working to one side.

In Fig. 10 I show a pin L, having formed near one end a perforation *s* and at about midway its length an elongated slot *s'*. This pin is intended to be used in connection with the form of draft-rigging illustrated in Figs. 8 and 9 and with plates E, Fig. 13, in which views the plates are shown as made considerably longer than the ordinary draft or side plates and are formed with a stop or cross-piece *b'*, thus forming an intermediate stop or lug between the ends of the plates and practically converting the plate into a double plate or one having recesses for the reception of two sets of follower-plates and springs, the front set being the ordinary or usual follower-plates and buffing-springs and the rear set being auxiliary follower-plates and buffing spring or springs, through which the rear end of the pin or stem L passes, as clearly shown in Figs. 8 and 9. The yoke in this form of the device is not changed or altered and does not extend to the rear set of follower-plates and springs, and is fastened in place by the pin *p* passing through the same and between the rear follower-plate of the first set and the front plate of the rear set, and when the coupler receives a blow the shock is transmitted through the first set of plates and springs to the rear set by the pin *p*; but when the draw-bar is drawn forward in drawing the train the rear set of plates and springs are not affected thereby, as the stem or pin L is free to move in the plates and springs and is only passed through the same to support the spring in place.

Thus it will be seen that I provide means to receive directly the effects of a hard or



violent blow or shock imparted to the draw-head, said means being adapted to receive the blow in the line of draft, thus relieving the main buffing-springs from overcompression and the car-frame from the violence of the shock.

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

10 1. A draw-bar yoke for car-couplers, formed in two pieces adapted to be rigidly secured to said bar and to be keyed together in rear of the rear follower-plate, substantially as described.

15 2. A draw-bar yoke for car-couplers, formed in two pieces having their forward ends bent at right angles and perforated and having oblong slots formed in their rear ends, in combination with a pin adapted to pass through said slots, substantially as described.

20 3. The combination, with a draw-bar yoke formed in two pieces having slots formed at their rear ends, of a pin adapted to enter said slots, and a pin or stem adapted to enter the rear end of the draw-bar and having a slot at one end, through which said first-named pin passes, substantially as described.

25 4. The combination, with a draw-bar yoke formed in two pieces having slots formed in their rear ends, of the pin adapted to pass through said slots, a stem secured at one end to the draw-bar and having a slot formed

therein, and a key securing said pin in position, substantially as described.

5. A side or draft plate for draw-bar rigging, consisting of the back portion forming a wide chafing-surface, the side flanges, the end cross-pieces or stops, and the intermediate cross-piece or stop, all projecting from the same side of said plate, substantially as described.

6. The combination, with draft-timbers having the grooves *f*, projections *g*, and wide recess *h*, of a draft-plate consisting of the back portion forming a wide chafing-surface, the side flanges, the end pieces or stops, the ribs formed at the rear side near each end, and the recesses or grooves formed intermediate said ribs, whereby the outer face of said plate may be set flush with the face of the draft-timber, substantially as described.

7. The combination, with the draft-timbers and side plates, of a bar having its ends perforated and bent at right angles, and lugs cast or formed on the body of said bar at suitable distances from each end, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. HINSON.

Witnesses:

DAVID SECOR,  
FRANCIS A. SPINK.