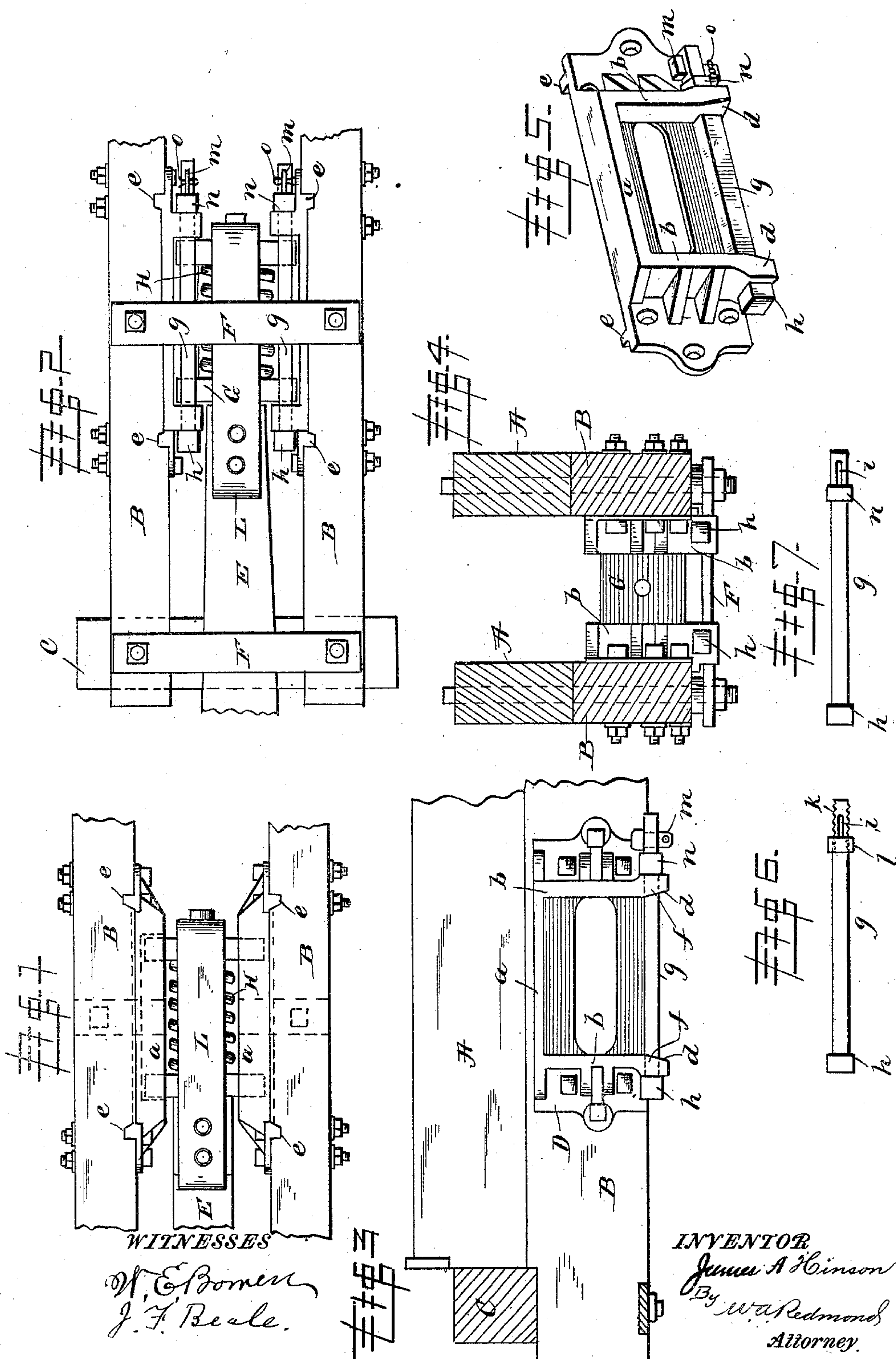


(No Model.)

J. A. HINSON.
DRAW BAR AND SPRING.

No. 466,684.

Patented Jan. 5, 1892.



UNITED STATES PATENT OFFICE.

JAMES A. HINSON, OF DES MOINES, IOWA.

DRAW-BAR AND SPRING.

SPECIFICATION forming part of Letters Patent No. 466,684, dated January 5, 1892.

Application filed April 30, 1891. Serial No. 391,060. (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 Draw-Bar 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 draw-bar draft-riggings for car-couplers, and particularly to that type in which a yoke is employed to connect together in operative position the draw-bar and the follower-plates, through which the buffing blows and strains are transmitted to the buffing-springs to take up the shocks incident to concussion between draw-heads and the strains in drawing trains. The old and ordinary form of yoke consists of a metal bar bent at its middle portion so as to embrace the follower-plates and springs, the ends of said bar being fastened to the rear end of the draw-bar. This construction of the yoke necessitates that the buffing-springs and plates be inserted in the yoke before the latter is placed in position between the draft or side plates, which are secured to the draft-timbers. The form of side plate which is now in common use is formed with a laterally-projecting flange at its lower edge, on which the follower-plates rest and move or slide in following the movements of the draw-bar in the working of the latter, and as the space between two adjacent and opposite flanges, when the plates are in position, must necessarily be less than the length of the follower-plates in order to support the same when in position for operation it follows that the insertion of the yoke with the plates and springs therein between the side plates is rendered almost, if not quite, impossible by the flanges, especially so since it is desirable that the buffing-springs be longer than the space between two follower-plates when in their normal position and that they be compressed in order to insert them between such plates.

Now it is the object of my invention to overcome this objectionable feature in the modern draft-plates and to render them capable

of use with the old form of yoke connection for draw-bars and also with the ordinary or usual spindle connection without materially reducing the strength or in any way affecting the durability and usefulness of said side or draft plates; and it consists, broadly, in providing a removable flange in lieu of the ordinary flange cast with the plate and in other details of construction and arrangement, as hereinafter fully described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a draft-rigging with yoke in position; Fig. 2, an inverted plan view; Fig. 3, a side elevation of one of the side plates in position; Fig. 4, a front view of the rigging in position and the yoke removed; Fig. 5, a perspective view of one of the side plates, and Figs. 6 and 7 detail views.

Similar letters refer to similar parts throughout the several views.

A represents the car-sills, B the draft-timbers secured thereto, and C the front beam of a car. To the draft-timbers B, I secure the side or draft plates D by bolts passing through the plates and the timbers, and between the timbers the draw-bar E works, carrying-irons F being bolted across the lower side of said timbers to support the draw-bar and its attachments and to hold said timbers rigidly apart. The draft-plates D are formed or cast with an upper flange *a* projecting at right angles and with end bars or flanges *b* extending from the ends of the flanges *a* across the plate near each end, and which extend past the bottom edge of said plate, where they are chamfered off for a short distance on their contiguous faces, as at *d*, in order to increase the distance between them at this point and render the insertion of the follower-plates and springs between them easy. The rear face of the plate is formed with ribs *e* near each end, adapted to fit grooves formed in the faces of the draft-timbers, and said plates are let into the timbers for the thickness of their body portions, whereby their front faces or surfaces will be on a line with the faces of the timbers, thus permitting the use of follower-plates of the ordinary length without setting the draft-timbers farther apart. At the center of the draft-plates I form large oblong

openings, leaving only sufficient of the back surrounding the same to form chafing-surfaces for the ends of the follower-plates to prevent them wearing away the timbers. The
 5 end flanges *b* are slightly enlarged at their lower ends in order to compensate for the material chamfered away at *d*, and a square opening *f* is formed therethrough, adapted to receive a square bolt or bar *g*, having an en-
 10 larged head *h* at one end and a slot or elongated opening *i* at the other end, said bolt or bar taking the place of the ordinary or usual lower flange of the side plate for the follower-plates to slide on. The bolt or bar *g* may be
 15 formed at its end with screw-threads, as at *k*, Fig. 6, to receive a nut *l*, a key *m* being inserted through the opening *i* to retain the nut in place; or a simple washer *n* may be employed instead of the nut and a key employed
 20 to secure it in place, as shown in Fig. 7, a split key *o* being used to prevent the key from dropping or working out.

G represents the follower-plates, *H* the springs, and *L* the yoke, all of which are of
 25 the ordinary construction.

In order to insert the yoke in place, the follower-plates are first inserted crosswise in the same, with the springs between the plates, and then the whole is lifted up to and be-
 30 tween the side plates, the upper or top ends of the follower-plates being placed between the inclined ends of the end flanges *b* and the yoke and plates then driven upwardly between said end flanges, compressing the
 35 springs till the lower ends of the plates are past the openings *f*, when the bolts or bars *g* are inserted in said openings and secured by either of the means described above, thus affording a support for the follower-plates, on
 40 which they may move back and forth in following the movements of the draw-bar, the rear end of which is secured to the yoke by bolts, as shown.

From the above description it will be seen that I provide very simple means for accom- 45 plishing the object sought, that the side plates are not weakened thereby, and that the bars or bolts *g* may be readily and easily removed when worn and new bolts substituted, thus practically adding considerable to the life or 50 use of the draft-plates, which heretofore had to be entirely discarded when their lower flanges became worn by the friction produced by the follower-plates thereon and entire new plates substituted therefor. 55

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

1. A draft-plate for draw-bar riggings for car-couplers, having the end flanges extend- 60 ing below the lower edges of said plate, openings formed therein, and a removable lower flange adapted to be inserted in said openings, substantially as described.

2. A draft-plate for draw-bar riggings for 65 car-couplers, having end flanges formed with openings therein and chamfered away on their contiguous faces, in combination with a removable flange adapted to enter and be secured in said openings, substantially as de- 70 scribed.

3. A draft-plate for draw-bar riggings for car-couplers, having end flanges formed with openings therein and chamfered away on 75 their contiguous faces, in combination with a square rod or bolt having a slot at one end, a washer adapted to fit said bolt, and a key for securing said washer in place, substantially as described.

In testimony whereof I affix my signature in 80 presence of two witnesses.

JAMES A. HINSON.

Witnesses:

F. E. KAMMERER,
 J. E. FORSYTH.