

H. HOWSON.
CAR-COUPLING.

No. 178,149.

Patented May 30, 1876.

Fig 1.

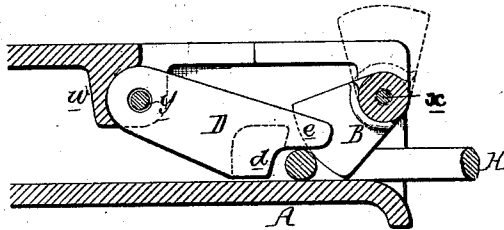


Fig 2.

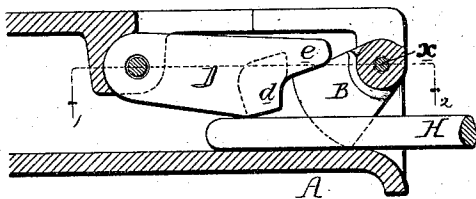


Fig 4.

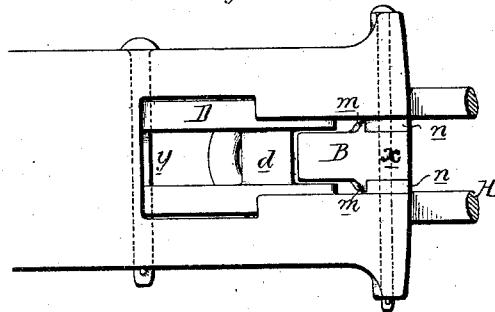


Fig 3.

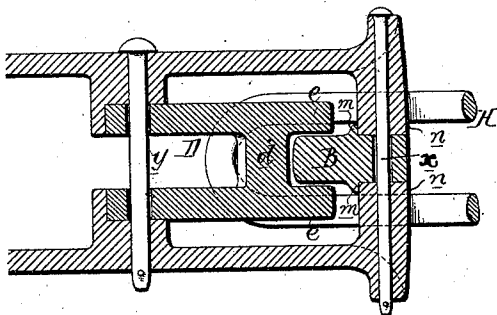


Fig 5.

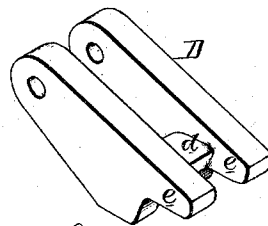


Fig 6.

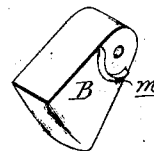
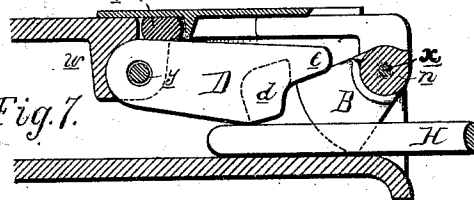


Fig 7.



Witnesses,
Harry Howson Jr.
Harry Smith

Henry Howson
by his Attorneys
Howson and Co

UNITED STATES PATENT OFFICE.

HENRY HOWSON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
WILLIAM WHARTON, JR., OF SAME PLACE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **178,149**, dated May 30, 1876; application filed April 26, 1876.

To all whom it may concern:

Be it known that I, HENRY HOWSON, of Philadelphia, Pennsylvania, have invented an Improved Car-Coupling, of which the following is a specification:

The object of my invention is to combine, in a coupling-head, a pivoted dog, for releasing and retaining the coupling-link, with a pivoted arm, for retaining the link when in a proper position to enter an adjoining head, for serving as an abutment for the said link, and for yielding to the same under the circumstances explained hereafter.

Figure 1 is a sectional view of my improved car-coupling; Fig. 2, the same, showing one of the parts in a different position; Fig. 3, a sectional plan on the line 1 2, Fig. 2; Fig. 4, a top view; and Figs. 5 and 6, perspective views of the weighted arm and retaining and releasing dog.

A is the coupling-head, to which, near the mouth, is pivoted, by a pin, *x*, the coupling-dog B, the rear edge of the latter being formed in the arc of a circle, of which the pivot *x* is the center. It should be understood that I lay no claim to a dog of this character, as it has heretofore been used in car-couplings. I prefer to make shoulders *m m*, Fig. 4, on the dog, for bearing against circular projections *n n*, cast on the head, as shown in Fig. 4, so that the pivot may be relieved from undue strain. D is an arm inclined downward from the rear toward the front of the coupling-head, in a direction contrary to that in which the dog is inclined, and this arm is pivoted to the coupling-head at *y*, and is adapted to shoulders *w*, cast within the said head, the lower portion of the arm having a shoulder, *d*, to serve as an abutment for the coupling-link H. The arm D has projections *e*, one on each side of the dog B, and these projections bear upon the link when the latter is in the position shown in Fig. 1, the weight of the arm tending to maintain the coupling-link in a proper

position for entering the coupling-head of the adjoining car. The arm D should be so hung, and its shoulder *d* must be such, that a much greater effort will be required to cause the link, by pushing it into the head, to raise the said arm than that required to raise the coupling-dog in coupling the link; hence, when the parts are in the position shown in Fig. 1, and the link is entering the coupling-head of an adjoining car, the shoulder *d* will serve as an abutment to insure the proper coupling of the link to the said adjoining head. A block, *q*, Fig. 7, of rubber, or other suitable spring, may bear on the top of the arm, and tend to depress the same, in which case the arm may be comparatively light. Should the link be unusually long, or should the approaching cars tend to force the link into the coupling-head beyond the shoulder on the arm, the latter will yield and permit the link to pass into the head beneath the arm, which is wide enough to ride on the link and permit the withdrawal of the same.

I do not here claim, broadly, an arm for retaining the link in a horizontal or nearly horizontal position, and for serving as an abutment for the link; nor do I claim the combination of these features with a retaining and releasing dog, as this forms the subject of a separate application for a patent; but

I claim as my invention—

The combination, with a coupling-head, of the pivoted dog B, the pivoted arm D, its projections *e*, and shoulder *d*, the said dog and arm bearing the within-described relation to each other, and operating all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY HOWSON.

Witnesses:

HARRY HOWSON, Jr.,
HARRY SMITH.