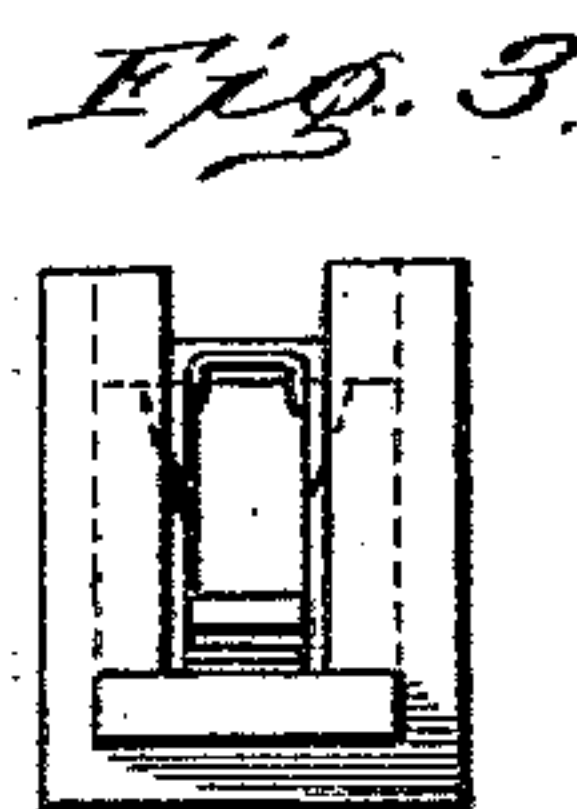
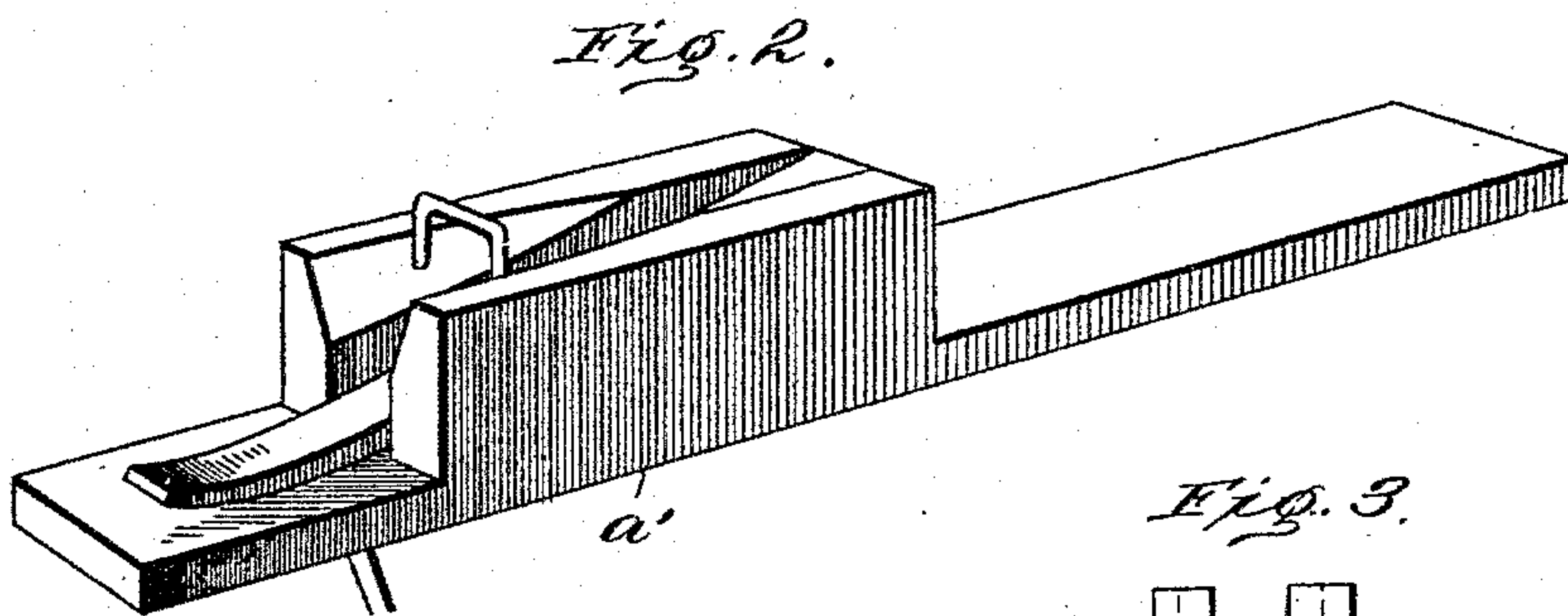
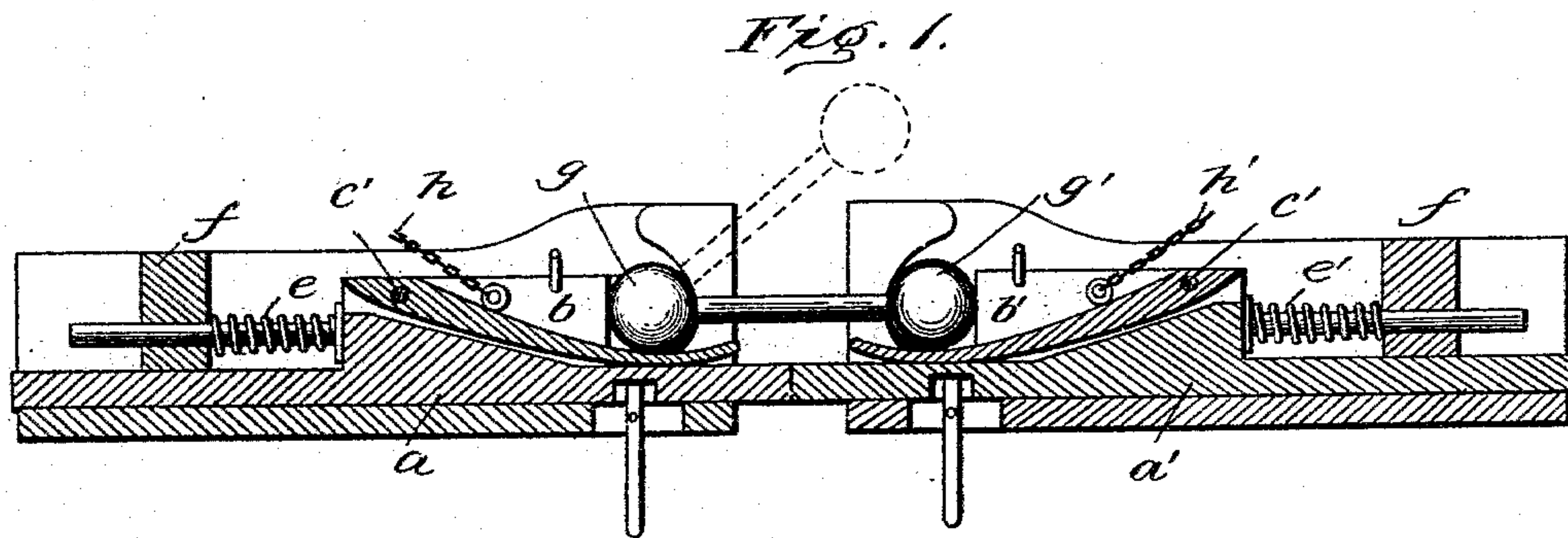


(No Model.)

I. N. HINSHAW.
CAR COUPLING.

No. 515,830.

Patented Mar. 6, 1894.



Witnesses

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UNITED STATES PATENT OFFICE.

ISAAC N. HINSHAW, OF SHERIDAN, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 515,830, dated March 6, 1894.

Application filed April 19, 1893. Serial No. 470,983. (No model.)

To all whom it may concern:

Be it known that I, ISAAC N. HINSHAW, a citizen of the United States of America, residing at Sheridan, in the county of Hamilton and State of Indiana, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to car-couplers and it consists in the improvement hereinafter described, illustrated in the accompanying drawings and especially pointed out in the claims.

The object of my invention is to provide an automatic coupling which will be simple in its construction, strong, easily operated and which will accommodate itself to grades and curves.

In the drawings, Figure 1, is a longitudinal section of my improved couplers showing the drawheads connected by a ball and bar link, and the buffer, uncoupling levers and actuating mechanism in position. Fig. 2, is a perspective view of the drawhead, showing the lever for disengaging the link when the cars are to be uncoupled. Fig. 3, is an end elevation of the drawhead. Fig. 4, shows a modified form of link to be used when coupling with the pushing bar of a locomotive.

Referring to the several parts by letters of reference, A A' are opposing drawheads which open longitudinally downward, said opening extending backward to the draw-bolt attachment, not shown. This opening is however bridged at *f*, the bridge serving to keep the buffer bar B in place and to form an abutment for the buffer spring *e*; the opening in the front part of the drawhead is made flaring, the two sides forming heavy lips or flanges *a* which approximate each other so closely as to leave but little more space than is necessary for the passage of the bar of the draw link; back of the lips *a* the opening is sufficiently large to receive the ball, the lips being curvilinear upon their inside are adapted to conform to the semi-spherical shape of the link head that rests against them when the cars are uncoupled, which with the flaring mouth form a ball and socket joint accommodating the coupling to curves and

changes of grade. The opening below the lips is enlarged so as to receive the buffer bar and hold it in position at its forward end. This bar is provided with a raised portion B', from which projects a rod *e'* carrying the buffer spring *e*, the upper face of the part B' being slotted and fitted with a lever *b* pivoted at *b'* and provided with an eyelet bolt *c* to which is secured a chain *c'* that leads to any convenient part of the car for operating the lever *b* when uncoupling. The slot in the upper face of the projection of the buffer bar is beveled outward upon each side so that the ball on the link will be allowed to gradually take position behind the lips *a* when the buffer is forced back in coupling. This slot is bridged near the front with a wire or rod *d* which limits the upper movement of the lever *b*. The under portion of the drawhead is slotted and provided with levers *g g'* adapted to force the buffer bars back against the springs *e* by hand whenever occasion requires it.

The operation of my coupler is as follows: The buffer bar is forced back by hand and one end of the link *h* is positioned behind the lips *a*, when the bars B are released and the projection B' coming against the ball, binds it between said projection and the lips, thus creating sufficient friction to hold the link in any position at which it may be placed; the link is then elevated as indicated in dotted line and the cars are brought together when the buffers striking take the pressure off the link and the ball drops from its elevated position into the beveled groove in the projection of the buffer bar of the opposing drawhead, and from there to position as the cars are drawn more closely together, thus automatically coupling them. When it is desired to uncouple the cars they are backed until the drawheads are forced against the springs *e*, when by raising the lever *b* by means of the chains *c'* the ball of the link will be thrown from its position and the cars may be separated.

When it is desirable to use the pushing bar of the locomotive I use the form of link shown in Fig. 4, with a ball on one end and a link on the other.

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

1. In a car-coupler, opposing drawheads
5 and means for connecting the same by a link consisting of a bar having spherical ends, in combination with a buffer bar having an upward projecting portion, and a beveled groove in said portion by which the fall of the link
10 is broken, and it is permitted to assume position gradually as the cars are drawn more closely together, as and for the purpose specified, substantially as set forth.

2. In a car-coupler a drawhead opening longitudinally upon its upper face and in front,
15 the front opening having flaring sides, and being provided upon the opposing sides with lips, the inner surfaces of which are of curvilinear form and adapted to conform to the
20 ball bearing of the connecting link, in combination with a pivoted lever, the free end of

which rests under the ball end of the bar link, as and for the purpose specified, substantially as described.

3. In a car-coupler the combination of the
25 drawhead opening in front, and upon its upper face, of the inwardly protruding lips, and the buffer having an upward projecting portion with beveled groove held to position beneath the same, said groove containing a piv-
30 oted lever of the spring to normally hold the buffers in a forward position, and the link having spherical ends with the lever and connecting mechanism for coupling and uncoupling, substantially as set forth. 35

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

ISAAC N. HINSHAW.

Witnesses:

CHARLES W. GRIFFIN,
JOHN C. NEWBY.