W. F. GRASSLER.

Car Coupling.

No. 108,254. Patented Oct. 11, 1870.

Fig. 1.

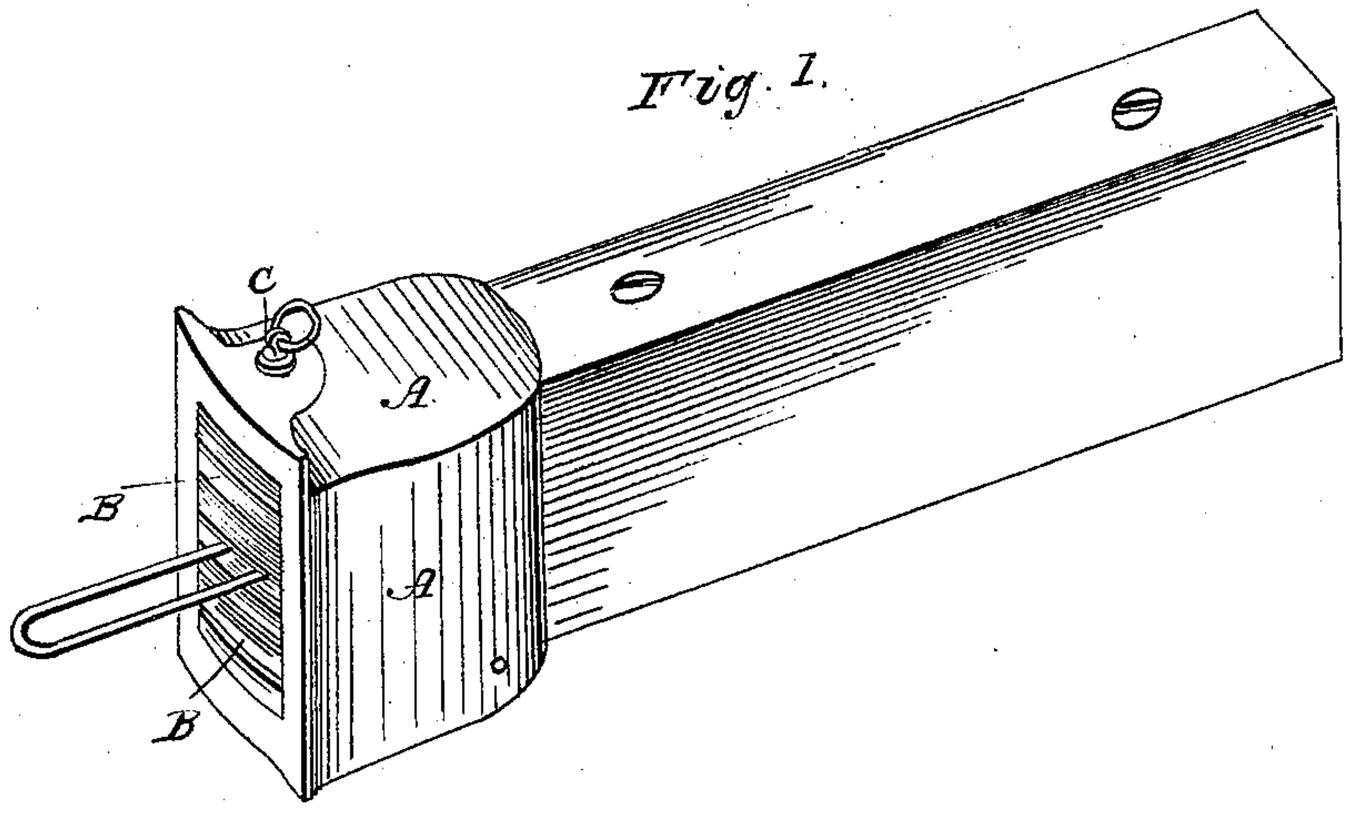


Fig. 2

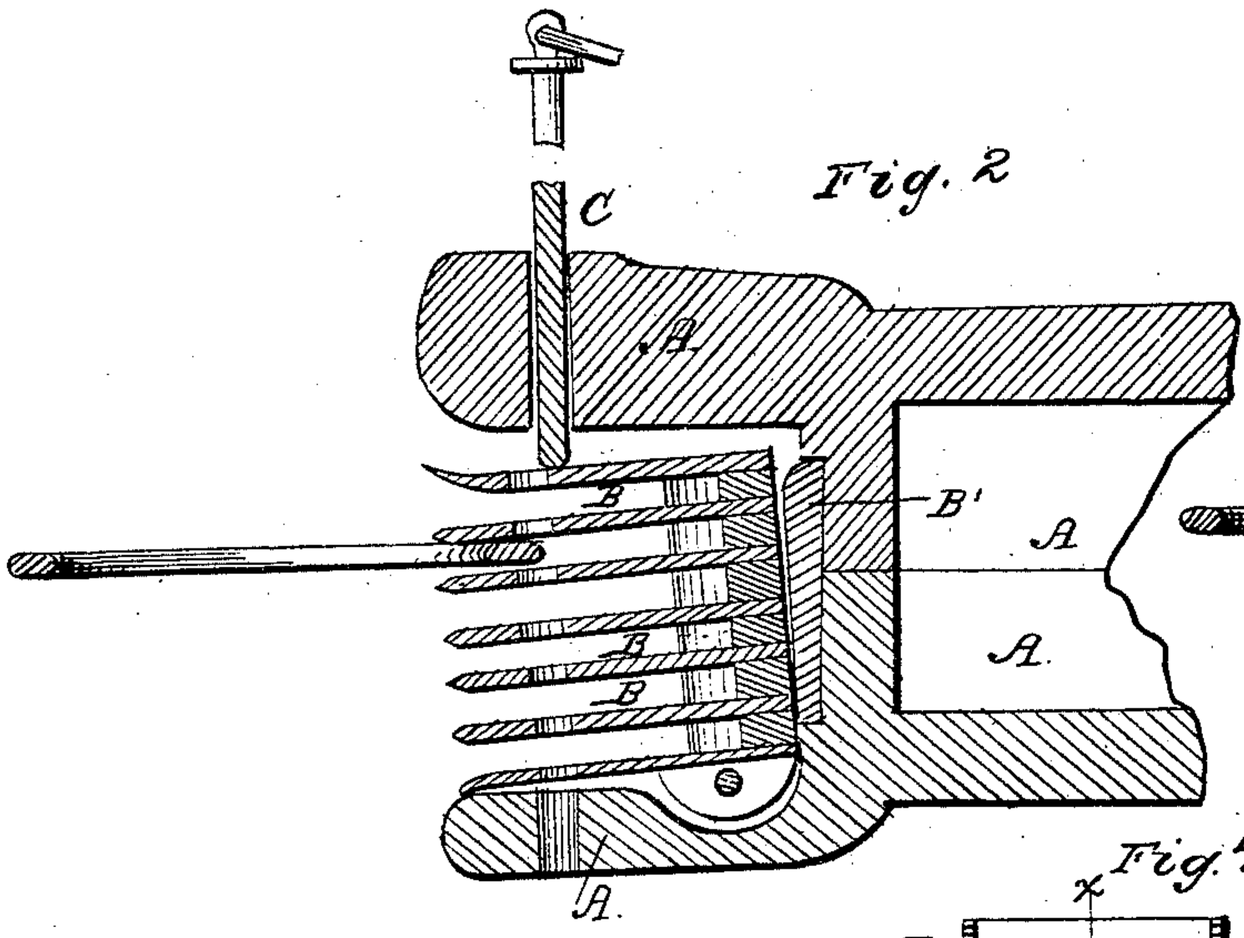


Fig. 3.

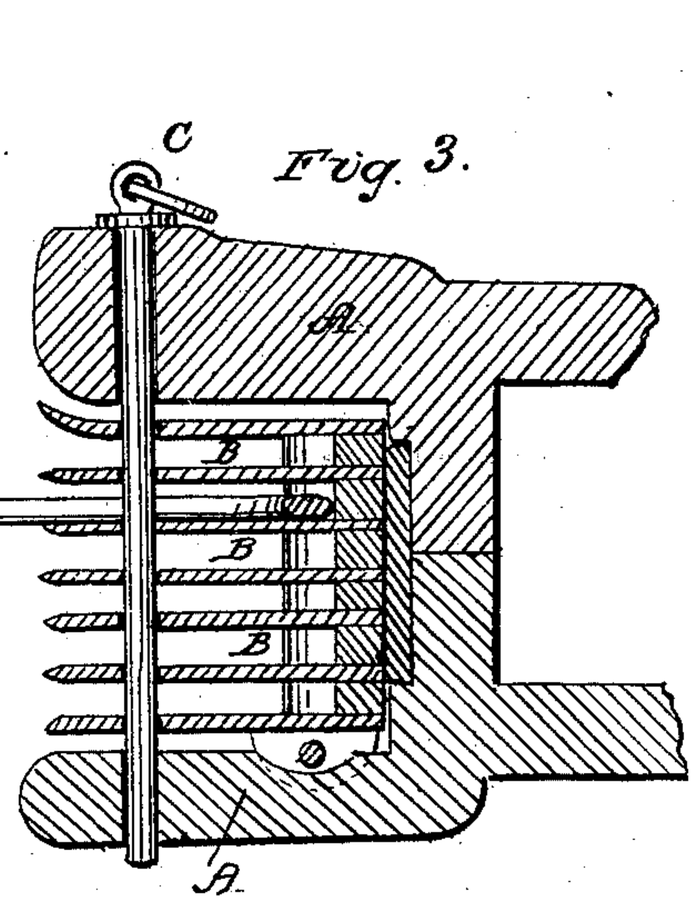
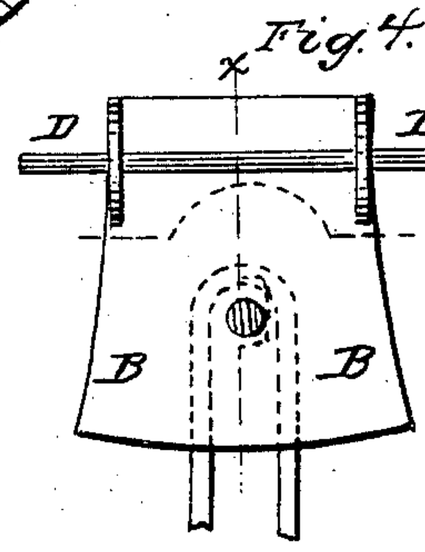


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM F. GRASSLER, OF MUNCY, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **108,254,** dated October 11, 1870.

To all whom it may concern:

Be it known that I, WILLIAM F. GRASSLER, of Muncy, in the county of Lycoming and in the State of Pennsylvania, have invented a new and useful Improvement in Buffers or Draw-Heads for Railroad-Cars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of my improved head, showing the parts in position to be coupled to another head. Fig. 2 is a vertical sectional elevation, showing the coupling-pin resting upon the pivoted division-plates, the link as just entering one of the spaces between such plates, and the manner of attaching said plates to the head. Fig. 3 is a vertical sectional elevation, showing the position of the parts when the coupling-link has been forced into the space between the division-plates and has tilted such plates up, so as to cause their surfaces to assume a horizontal position, which has allowed the coupling-pin to pass down through them and through the coupling-link. Fig. 4 is a bottom view, showing the pin upon which the pivoted division-plates are hinged and the position of the coupling-link.

Corresponding letters refer to corresponding parts in the several figures.

In buffer or draw heads which have had an automatic coupling apparatus attached to them, as they have heretofore been constructed, great difficulty has been experienced in coupling cars of different heights, from the fact that no adequate provision has been made for varying the height of the coupling-link and of holding it in its different positions of greater or lesser height, so that, when it becomes necessary to couple it to another head, it would enter said head readily, although there should be a difference of several inches between them in the distance between them and the surface of the rails, or in their height.

This invention is intended to provide a remedy for the above-stated difficulties; and to this end it consists in providing a buffer or draw head having in its outer end a mouth or elongated aperture, the greatest or transverse diameter or length of which is at a right angle to the platform of the car to which it is to be attached, said elongated aperture being provided with a series of division-pates for dividing said aperture into two or more divisions or spaces, into which the coupling-link may enter, said plates holding the link in proper position to enter similar spaces in another head, as will be more fully described hereinafter.

A in the drawing refers to a buffer or draw head, which may be made of cast or wrought iron, or of any suitable metal, and in sections, and bolted together, or it may be cast or wrought in one piece, as preferred. The outer end of this head is to be provided with an elongated aperture, the greatest length of which is at a right angle to the platform of the car to which it is attached, it being of sufficient size to receive within it a series of plates or bars of metal for the purpose of dividing it into spaces of sufficient width to receive the coupling-link.

B B B refer to a series of plates of metal, or of other suitable material, such as hard vulcanized rubber, they being placed at such a distance from each other as to leave a space between each of sufficient depth to receive the coupling-link, as indicated in Figs. 2 and 3. The number of plates thus arranged may be from two upward to any number required to fill the elongated aperture in the buffer or draw head, it being of sufficient depth to permit it to receive the link when held in corresponding heads upon cars of any and all different heights. The outer surfaces of these plates are to be reduced in thickness, as shown in the drawing, so that when the end of the coupling-link comes in contact with it it shall be guided into the space between some two of such plates, the distance from the forward ends of the dividing-blocks and the outer ends of said plates being sufficient to permit them to receive and retain in the coupling link in its proper position when it has been placed between any two of them and the coupling-pin has been inserted. Pins or bolts are passed down through these plates and the dividing-blocks, which secure them together in one mass, the lower one being provided with ears, by which to pivot it to the lower portion of the aperture in the draw-head, in Figs. 2 and 3.

When these plates have been constructed as above described, and pivoted to the head, as

shown in Fig. 2, if the coupling-pin is inserted into the head it will rest upon the surface of the upper plates of the series, the center of gravity of which is at such a point as to cause them to assume the position shown in that figure, when, if the head is brought in contact with another one, the coupling-link of which is in the position shown in Fig. 3, the plates will be tilted, so as to cause them to assume the position shown in the figure last named, when the coupling-pin will fall down, as a consequence of its own gravity, and the heads, and consequently the cars to which they are attached, will be coupled together, and this result will be accomplished without reference to the height of the buffer-head, as, if the link is secured in one head at or near its center, it can enter one of the spaces between the plates in the other either above or below the center, and, in passing into such space, will bring the plates into position to cause the pin to drop.

If found necessary, the apertures in the plates may be slightly elongated, in order that they may move up and down, so as to accommodate themselves to the vertical movements of the heads when the cars to which they are attached are in motion, provided the spaces between the plates are not sufficient for that purpose.

To insure the falling or tilting of the outer ends of the plates when the coupling-pin is withdrawn, a spring, B′, may be inserted in a recess formed in the head in the rear of the plates, as shown at Fig. 2, so that, when the coupling-pin is withdrawn, said spring shall aid in tilting said plates.

C refers to the coupling-pin, which may be of any suitable form, such as is shown in the drawing, or any other that will answer the purpose for which it is designed.

D refers to the pin, which passes through the side walls of the head and the ears upon the series of plates, and forms the pivot upon which said plates turn.

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

1. The within-described draw or buffer head, having in its outer end an elongated aperture, its transverse or greatest diameter or length being placed at a right angle to the platform or body of the car to which it is attached, it being provided with a series of plates or bars of metal, pivoted at a point below the lower surfaces to the head, and so arranged that, when the coupling-pin is withdrawn, their outer ends will fall downward, and thus cause the upper plate of the series to form a support for said pin to rest upon, the parts being constructed and arranged substantially as and for the purpose set forth.

2. The combination of the spring B′ and the pivoted series of plates B B, substantially as and for the purpose set forth.

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

WM. F. GRASSLER.

Witnesses:
WM. BRINDLE,
D. P. HOLLOWAY.