

(No Model.)

E. WEBBER.  
CAR COUPLING.

No. 270,523.

Patented Jan. 9, 1883.

Fig. 1.

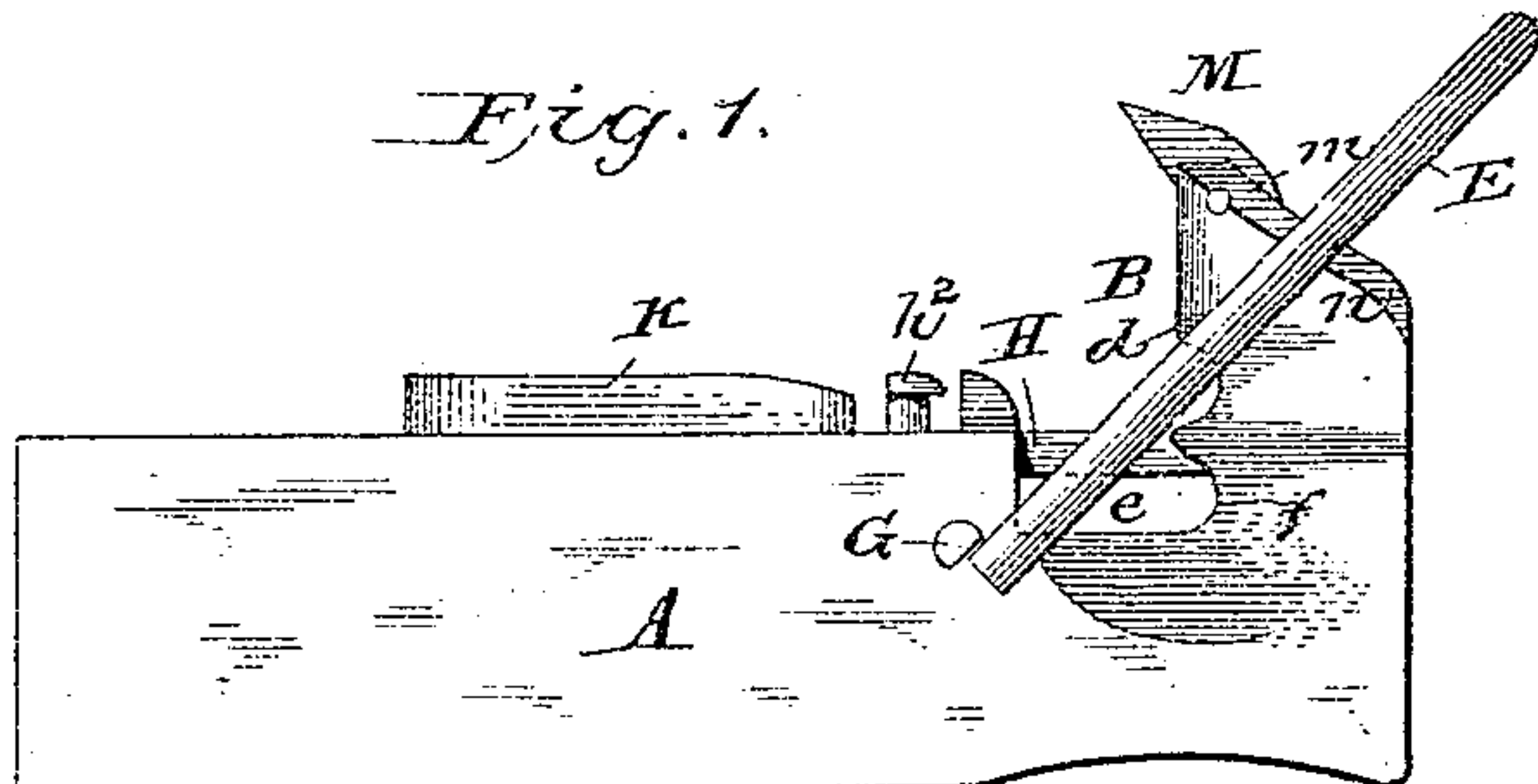


Fig. 2.

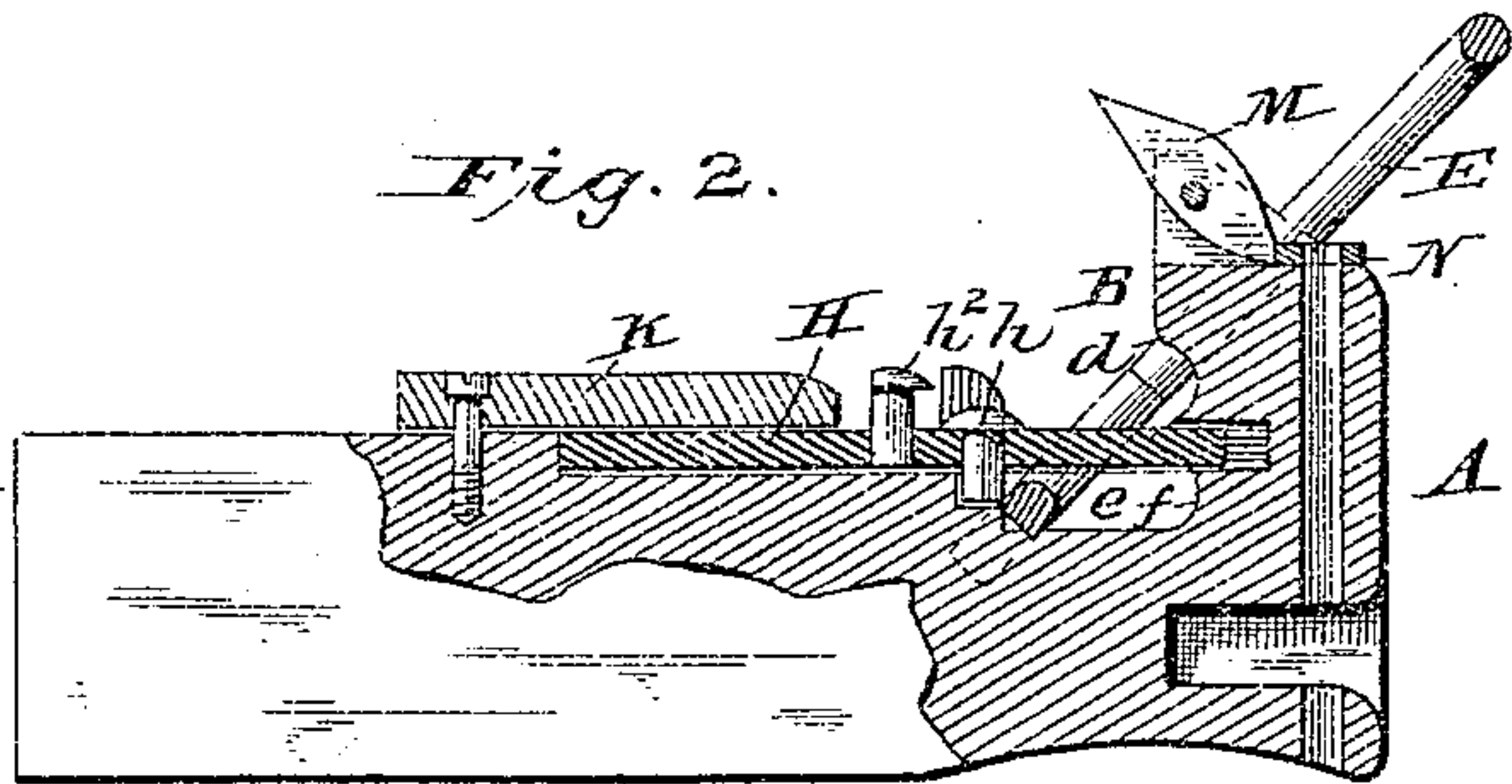


Fig. 3.

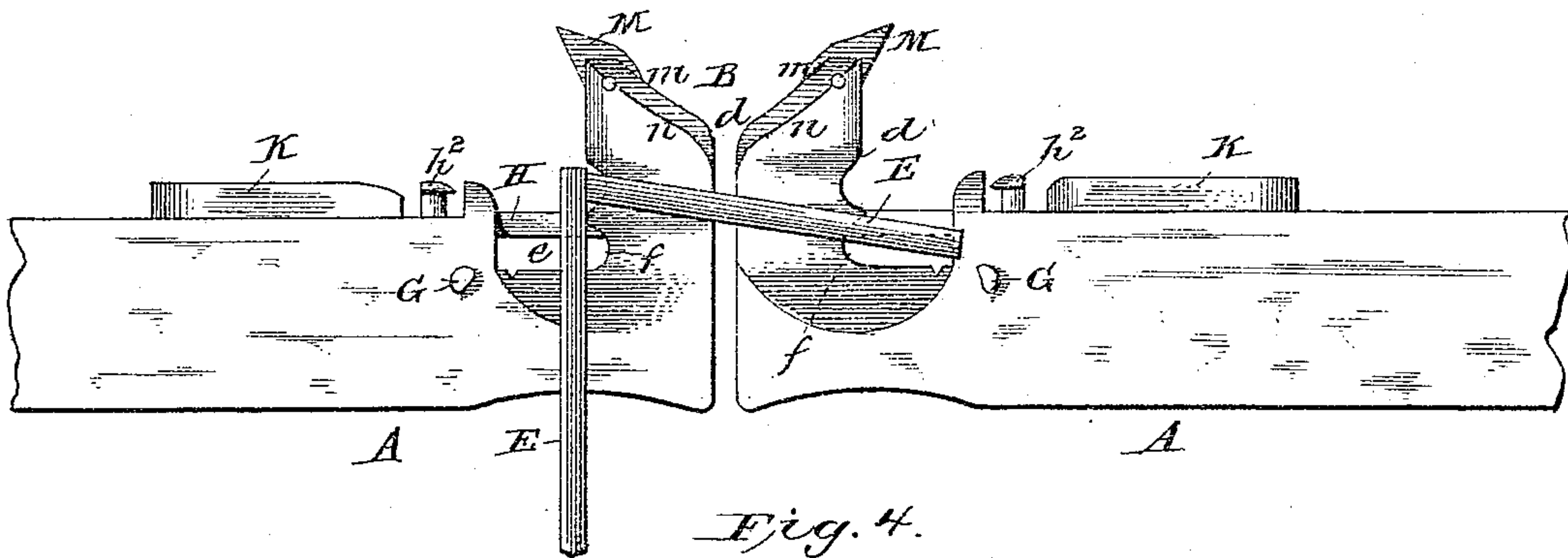
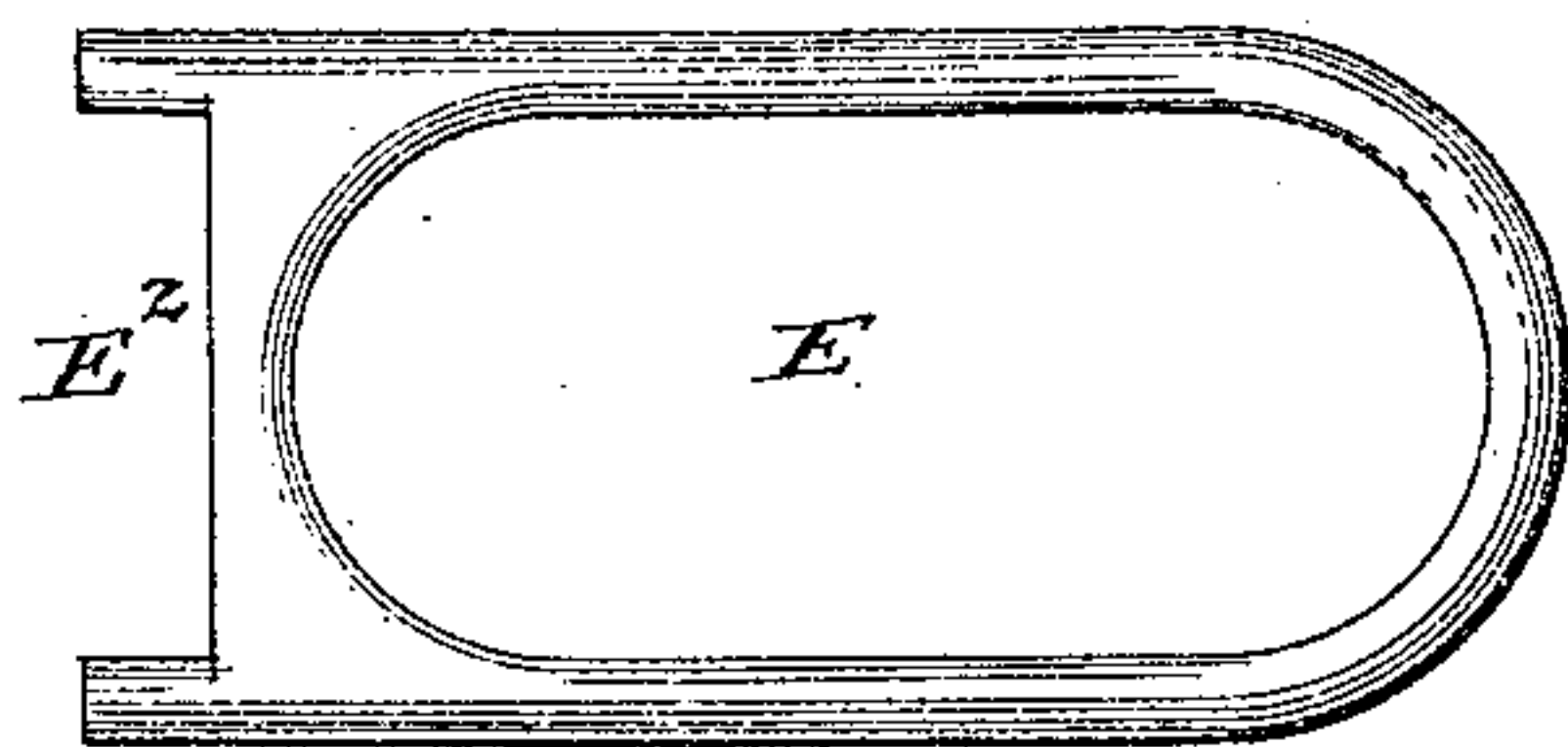


Fig. 4.



Witnesses:

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Inventor.

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# UNITED STATES PATENT OFFICE.

ELBRIDGE WEBBER, OF GARDINER, MAINE, ASSIGNOR OF ONE-HALF TO  
CHARLES GIFFORD, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 270,523, dated January 9, 1883.

Application filed August 18, 1882. (No model.)

*To all whom it may concern :*

Be it known that I, ELBRIDGE WEBBER, of Gardiner, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

The present invention relates to the class of self-coupling devices for railway-cars in which is employed a link or shackle capable of being retained in an elevated position until the concussion of the draw-heads liberates said shackle and causes it to drop over a horn-shaped catch on the draw-head of the adjoining car.

The invention consists in providing a draw-head with a guard or lock, which is pivoted at the top of the horn or catch that receives and holds the link of an adjoining draw-head. The function of said guard is to prevent the disengagement of the link in case the same should glide up on the horn-shaped catch from any cause whatever; and this result is achieved by extending the guard in a rearward direction from the link holding or bearing face of the horn. The guard or lock is pivoted so as to swing in a rearward or downward direction and permit the link to clear the same. It is also extended in front of its pivot and provided with an apertured foot or plate for the passage of the ordinary coupling-pin.

The invention also consists in a coupling-link consisting of U-shaped side bars and toe portion and a transverse bar, the latter having a curved or convex inner edge, which follows the contour of the side bars, the transverse bar being also provided with a straight bottom edge, which is adapted to rest on a ledge or bearing of the draw-head, and serves, in conjunction with lugs or projections on the sides of the draw-head, and the side bars of the link, extended beyond the cross-bar thereof, and engaging with the lugs or projections, to hold the link in position ready for coupling.

The invention also consists in a link-tripping device consisting of a sliding bar or plate which moves in the top of the draw-head, and has a bottom lug or projection that serves to throw the cross-bar of the link from its supporting-ledge, and disengages the side bars of the link from the lugs or projections of the draw-head, thus permitting the link to drop down for effecting the coupling operation.

In the drawings, Figure 1 is a side elevation of a draw-head, showing the coupling-link in a raised position, ready for coupling. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a side elevation, showing two draw-heads coupled together. Fig. 4 is a detail view of the coupling-link.

The letter A designates the draw-head, which in the present instance is provided with a mouth or chamber, *a*, for the reception of an ordinary coupling-link, and with a vertical opening for the pin *b*. A horn or hook-shaped extension, B, surmounting the draw-head, has a rounded or convex inner face, *d*, for receiving and holding the curved toe portion of the coupling-link of an adjoining car, as is fully shown in Fig. 3. Below the face *d* is a recess or chamber, *e*, the front wall, *f*, of which is rounded or curved, so as to conform to the contour of the heel portion of the coupling-link E. The bottom of the recess *e* is also curved for properly holding the link when it is not in use.

The coupling-link employed by me may be described as consisting of a U-shaped frame and a transverse bar, *E*<sup>2</sup>, located near the ends of the side bars of said frame. It will be perceived from Fig. 4 that said transverse bar has a curved or concave inner edge, which, together with the side bars and curved toe portion, forms an oval opening in the link. The outer or bottom edge of the bar *E*<sup>2</sup> is made flat, for the object hereinafter stated, and the ends of the side bars of the link extend beyond said bar *E*<sup>2</sup> and form bearings which are adapted to engage with lugs or projections G, extending from the sides of the draw-head in rear of and on a level with the link-chamber *e*. The upper face of the draw-bar is provided with a groove which leads into the link-chamber and contains a slide or bar, H, the front end whereof extends into a recess or socket made in the draw-head at a point below the face *d* thereof. This slide or bar has a lug or pin, *h*, on its lower side, which extends in rear of the transverse bar of the link and enters a seat or cavity at the rear of the link-chamber when the parts are in position for coupling, as shown more fully in Fig. 2. A ledge, *m*, having a transverse front groove, *n*, is provided at the rear of the link-chamber *e*, and this ledge and groove,



together with the lugs on the draw-head, serve to hold the link in an inclined position, ready for coupling. It is manifest that the straight edge of the transverse bar of the link will be properly seated on said grooved ledge, and that the side extensions or arms of the link will rest against the oblique bottom faces of the lugs or projections on the draw-head.

When two adjoining draw-heads are brought together after the coupling-link has been properly set, as shown in Fig. 1, the impact or concussion will jar the slide H to such an extent as to cause the pin *h* thereof to force the link from its supporting-ledge and lugs and permit it to drop over the horn or catch of the adjoining draw-head. The slide H is retracted or drawn to its normal position by a pin or projection, *h*<sup>2</sup>, on its upper face, and the slide itself is retained in its seat or groove by a turn button or plate, K, on the top of the draw-bar.

In order to prevent the casual disengagement of the coupling-link from the horn or catch of the draw-head with which it is coupled, I provide the top of said horn with a guard or lock, M, which consists of an arm pivoted in a slot in the center of said horn, at the top thereof. This arm extends beyond the face of the horn that supports or holds the link, and in this manner it will be seen that should the link slide vertically from any cause whatever it cannot become released from the horn, because the arm will act as a stop and arrest the upward movement of the link.

A foot or plate, N, of the guard M has an aperture for the passage of the ordinary coupling-pin, and this foot rests upon a flat ledge below the top of the horn of the draw-head. When the link drops into position for effecting the coupling operation it will depress the guard or lock so as to clear it or pass below the same, and then the preponderance of weight below the pivot of the guard will carry it back to its normal position.

I am aware of the patent of Charles Gifford, dated May 28, 1878, No. 204,212, in which a coupling-link curved at both ends is fitted into a recessed draw-head having semicircular bearing for the heel of the link, and is adapted to engage with an adjoining draw-head provided with a horn with a semicircular face for receiving the toe of the link. Another patent granted to said Gifford, January 25, 1881, No. 236,943, involves the employment of a sliding plate or bar for tripping the link when the two draw-heads come together.

I am also aware of the patent of A. Hebbard, dated April 13, 1858, No. 19,925, which exhibits a pivoted coupling-link held in position for coupling by a fastening device that is liberated by the concussion of the cars, so as to cause the link to drop for performing the coupling operation.

I claim—

1. The draw-head A, provided with a horn or catch, B, for receiving and holding a coupling-link of an adjoining car, and with a pivoted guard or lock, M, extending in rear of said horn at the top thereof, and adapted to be vibrated by the link upon its passage over the same to reach its seat in rear of the horn, as and for the purpose set forth.

2. In a car-coupling, the link E, having the transverse bar E<sup>2</sup>, with outer straight edge, and side arms extending in rear of said bar, in combination with the draw-head having side lugs or projections, G, and the link-recess provided with a notched ledge at its rear, and sliding bar H for tripping the link, as and for the purpose set forth.

ELBRIDGE WEBBER.

Witnesses:

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