(No Model.)

D. FRASER & V. L. RICE.

CAR COUPLING.

No. 294,984. Patented Mar. 11, 1884.

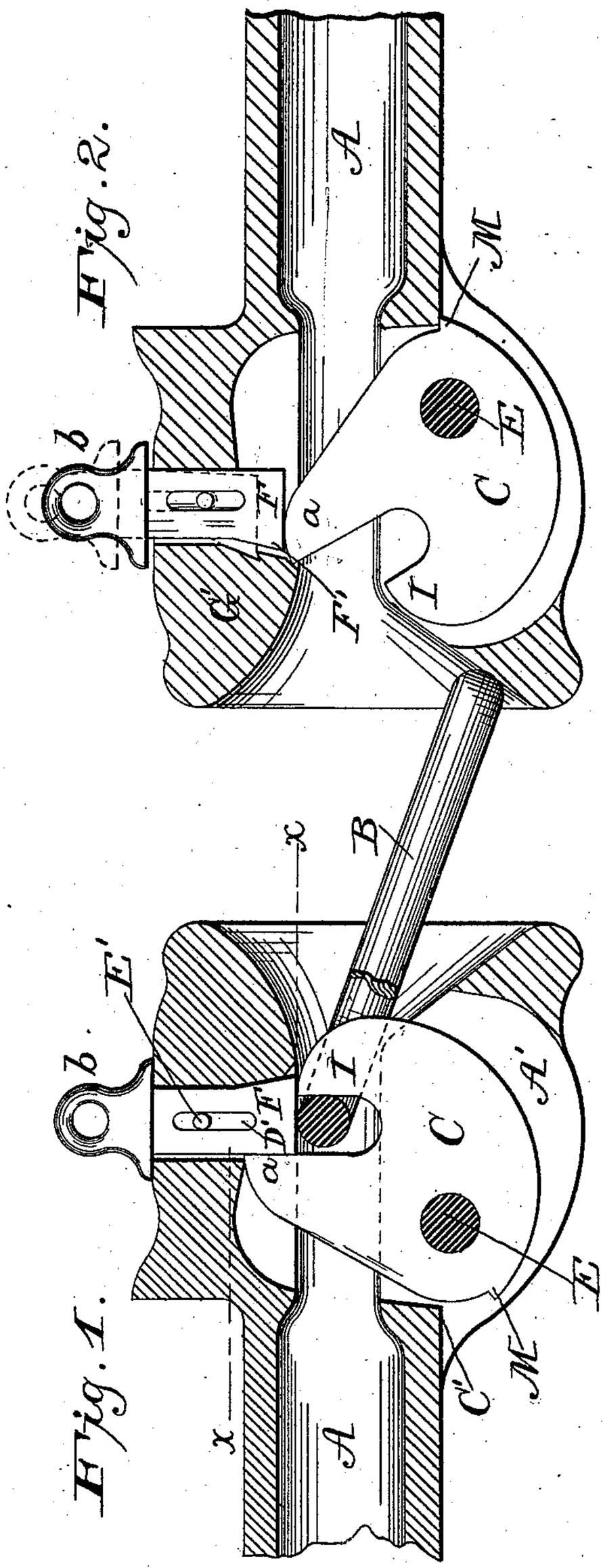

Fig. 1.

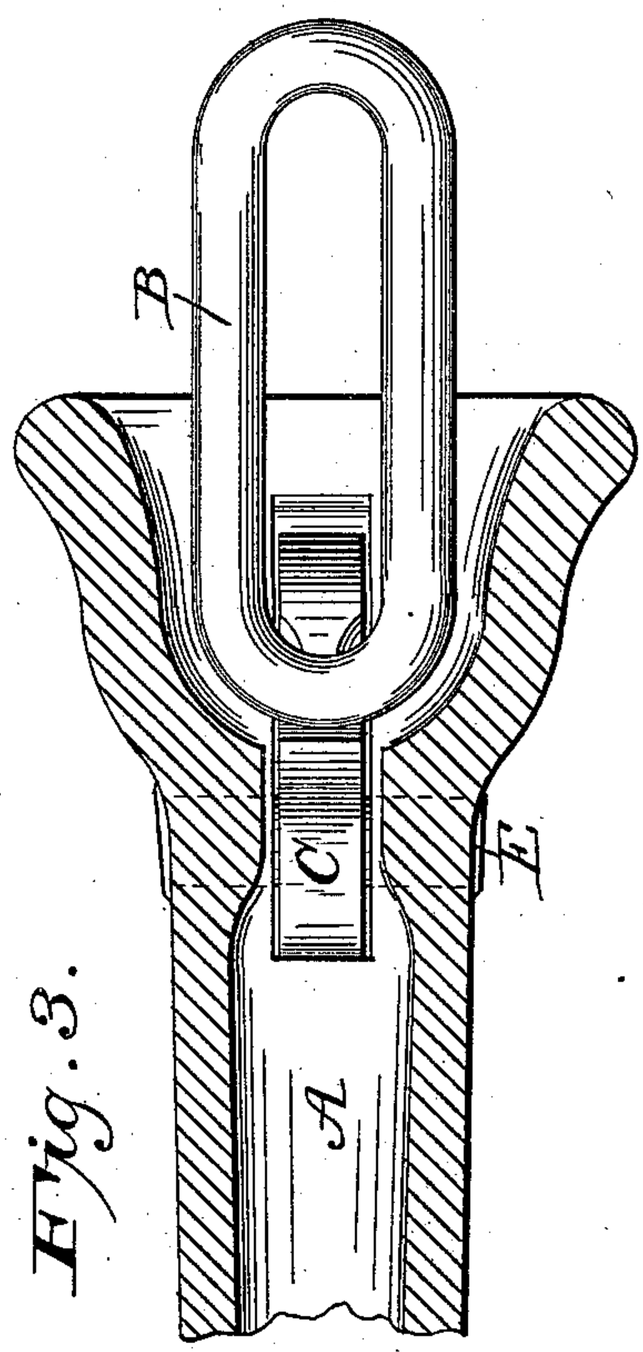

Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

DONALD FRASER AND VIETTS L. RICE, OF MINNEAPOLIS, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 294,984, dated March 11, 1884.

Application filed January 4, 1884. (No model.)

To all whom it may concern:

Be it known that we, DONALD FRASER and VIETTS L. RICE, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

Our invention relates to improvements in automatic car-couplings, the object of which is to make such coupling safe, strong, and reliable in its action, and at the same time adapted to be easily unlocked without danger to the operator.

Referring to the drawings, Figure 1 is a longitudinal vertical section, showing the coupling-link locked in position. Fig. 2 is a similar view, showing the cam-hook in position to receive the loose end of the coupling-link. Fig. 3 is a horizontal sectional view on the line *x x* of Fig. 1.

A A designate the draw-bars, made of the form shown, and having in the lower portion thereof a slot or cavity, A′, which extends through the lower portion of the draw-bar.

C is a steel or wrought-iron cam-plate, provided with a hook, said plate being secured in the slot or cavity A′ by means of a pin, E, so that the cam-hook is free to oscillate back and forth in the slot within certain limits. The projection *a* on the cam-hook, coming in contact with the walls of the draw-bar, prevents said hook from turning backward too far, while the projection M, coming in contact with the point *c′* of the draw-bar, prevents the cam-hook from dropping down too far in the other direction.

F is a pin working in an opening in the draw-bar, said pin being provided with a slot, D′, through which a pin, E′, passes, and which prevents the pin F from becoming detached or lost. The pin F, when in a working position, rests on the top of the cam-hook proper, while the coupling-link lies in the cavity of the cam-hook. The projection *a* of the cam-hook, coming in contact with the pin F, as shown in Fig. 1, prevents the cam-hook from turning when a pull is exerted upon the coupling-link. The pin F is provided with the usual head, *b*, having a hole therethrough to receive a ring or other device by which the pin is raised when it is desired to unlock or uncouple the cars. It will be noticed that the pin or bolt F is provided with a projection or corner, F′, which, when the pin F is raised, fits into a notch, G′, in the wall of the opening in which the pin F is seated, so that by raising the pin and pressing the top slightly backward the point F′ will engage with the notch G′ and hold the pin F in an elevated position, said pin being jarred from the notch G′ when the cars are bumped together. In cases where a running shunt is desired to be made, and the cars are to be pushed onto the side track by a bump or jar from the other portions of the train, and it is not desirable to have them coupled, the cam-plate is turned around, so that the portion I will fill the opening in the draw-bar. The pin F will fall back in front of the projection *a*, holding the cam-plate in position, and thus permitting of any amount of bumping or jarring without effecting a coupling of the cars.

The coupling-link B is of the ordinary construction, so that the links now in use can be utilized to advantage. This is an important feature of my invention, for the reason that the expense of a special link is obviated.

The operation of my device is as follows: The parts being in position, as shown in Fig. 2, the end of the link B rises on the inclines of the cavity of the draw-bar until it strikes the portion or projection *a* of the cam-hook C, thus turning the cam-hook partially around until the portion I enters the link and the pin F drops down in front of the projection *a*, thus coupling or locking the cars together.

It will be noticed that by extending the cavity in which the cam-hook is located through the wall of the draw-bar, any snow or ice which might collect to obstruct the operation of the cam-hook can be readily removed through the slot; and, furthermore, should the cam-hook become broken or be jarred out of position and lost, a coupling-pin of the ordinary length can be inserted through the opening in the link, and thus effect a coupling in the old style.

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

1. In a car-coupling, a cam disk or plate,

C, pivoted eccentrically in the draw-head, as set forth, provided with projections I and *a*, and stop M, in combination with the slotted pin F, as set forth.

2. In a car-coupling, the draw-head provided with an open slot, in which is pivoted the cam-plate C, as described, said cam-plate being provided with a stop, M, which impinges against the draw-bar at the rear end of said slot, as and for the purpose set forth.

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