

G. WITHINGTON & F. F. TAYLOR.

Car-Couplings.

No. 136,889.

Patented March 18, 1873.

Fig. 1.

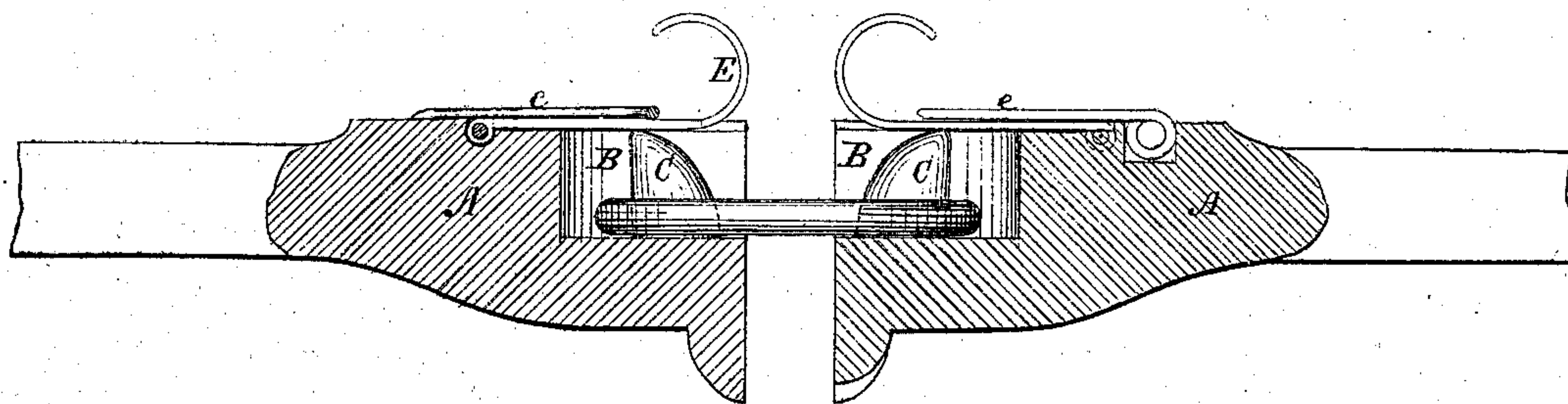


Fig. 2.

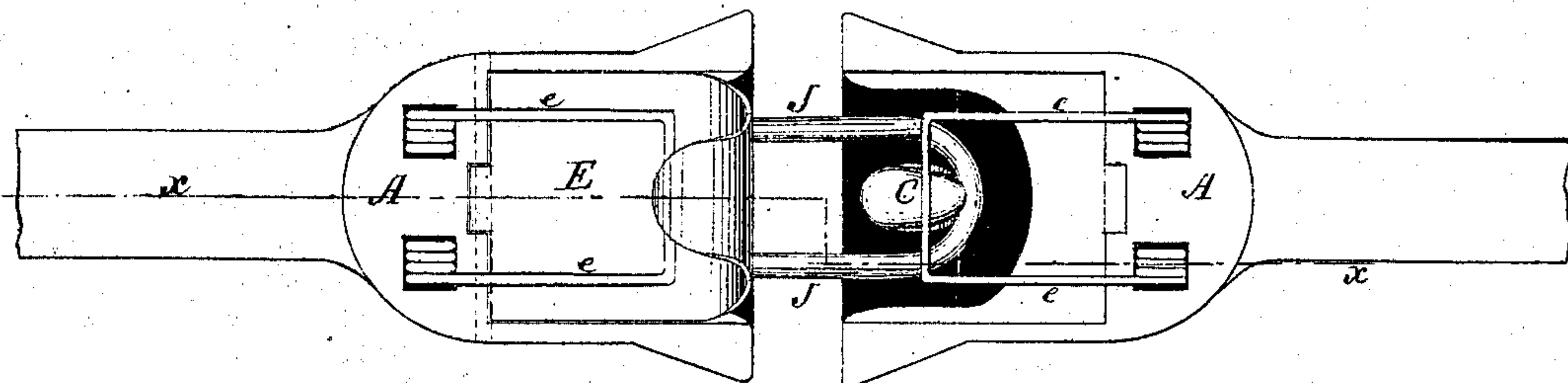
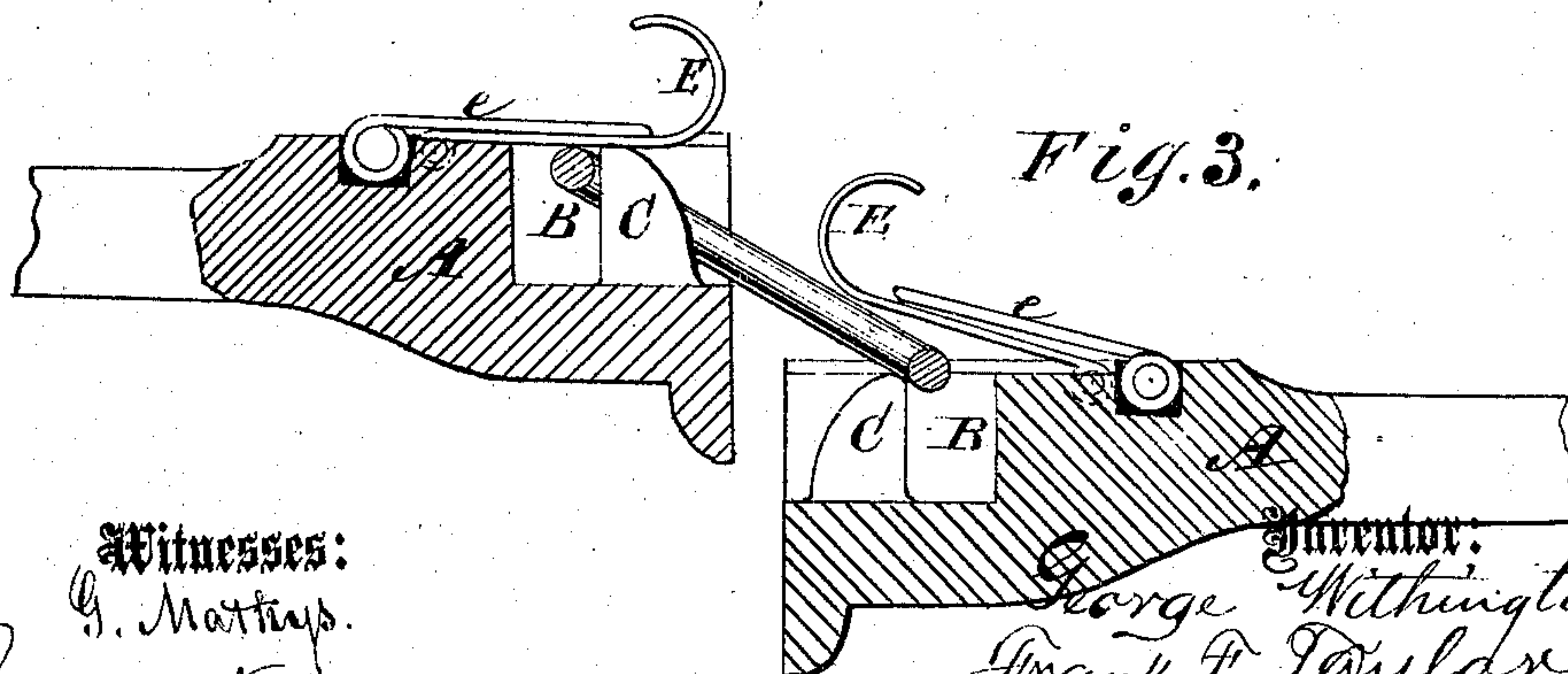


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE WITHINGTON, OF IONE CITY, AND FRANK F. TAYLOR, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 136,889, dated March 18, 1873.

To all whom it may concern:

Be it known that we, GEORGE WITHINGTON, of Ione City, in the county of Amador, and FRANK F. TAYLOR, of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Car-Coupling, of which the following is a specification:

Our invention relates to couplings of the class in which provision is made for automatic connection of two cars when brought together, and for disconnection of the same when one flies the track in case of accident.

Our invention is more particularly an improvement on couplings in which the link is passed over prongs standing vertical, or nearly so, within the cavity or chamber of the draw-heads, the top portion of the latter being hinged and acted on by a spring so as to rise and permit the link to pass over the prong when two cars come together, or to be disengaged therefrom when the cars separate. But such hinged top portions or plates of the draw-heads have been constructed with a projection on the under side, contiguous to the prong, which prevents the automatic disconnection of the link when one car falls below the level of the other in case of accident—such as breaking of a wheel, axle, or rail—the end of the link in such case coming in contact with the projection, which prevents it from passing over the prongs.

In our invention the hinged plate is formed with a flat and smooth under surface, so that the link will pass over the prong without such impediment, thereby assuring the desired disengagement of the cars or parts of the train.

In order to explain our invention so that others will be able to understand its construction and operation, reference is had to the drawing accompanying this specification and forming a part of the same, in which—

Figure 1 is a sectional elevation of our improved coupling. Fig. 2 is a plan view, one of the plates being removed. Fig. 3 is a sectional elevation of the draw-heads, represent-

ing the link in the act of being disengaged from one of them.

A represents the draw-heads of the coupling. Each draw-head is provided with a cavity, B, on its upper side, of sufficient depth to permit the link to have the necessary amount of vibration in each direction. Extending upward from the floor of this cavity B is a fixed stud or prong. This stud inclines backward from the face of the bumpers, as shown, thus giving an inclined face to guide the entering-link over its upper end, while the sides are rounded or tapered toward the point, and the rear side slightly inclined backward, for the purpose hereinafter described.

We employ a plate, E, to form the upper side of the draw-head, or cover for the cavity of the same, and hinge it at its rear end, as shown. To prevent it from rising when the train is in motion, the spring *e* is suitably arranged to bear upon it. The front edge of the plate is bent upward at an angle so as to present a flaring edge to direct the entering-link, and form likewise a handle, by which it may be raised, when desired, for disengaging the link when the cars are at rest.

By this construction, when the link J is forced against the stud C by the opposite bumper, the force of the concussion will cause it to ride up on the stud and lift the plate, thus passing over the stud, when the plate E will fall back upon the top of the stud and draw-head. This effects the automatic coupling of the cars.

The principal object in forming the end of the prong smooth, and conical or tapered, is to insure the automatic disengagement of the link when from any cause (as a broken rail, wheel, axle, or pedestal) one car drops below that to which it is coupled. In such case the draw-heads will assume the position indicated in Fig. 3, and the link be drawn out of the lower draw-head over the end of the prong or between the prong and plate E. The form of the end of the prong, and the described construction of the plate E and its spring *e*, fa-

cilitate this operation, which has been previously effected by mechanical appliances.

Similarly, if a car be thrown from the track laterally, the link will be turned or twisted so as to free one or both the prongs.

Disclaiming the use of a prong inclined on its front side, also of a hinged top plate for a draw-head—

We do claim as new and of our invention—

The prong C, constructed in the manner

herein described, in combination with the hinged plate E, having a plane and smooth under surface, and the spring e, all constructed and arranged as and for the purpose specified.

GEORGE WITHINGTON.

FRANK F. TAYLOR.

Witnesses to both signatures:

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