

H. F. W. KOEHLER.
Car-Coupling.

No. 211,410.

Patented Jan. 14, 1879.

Fig. 1.

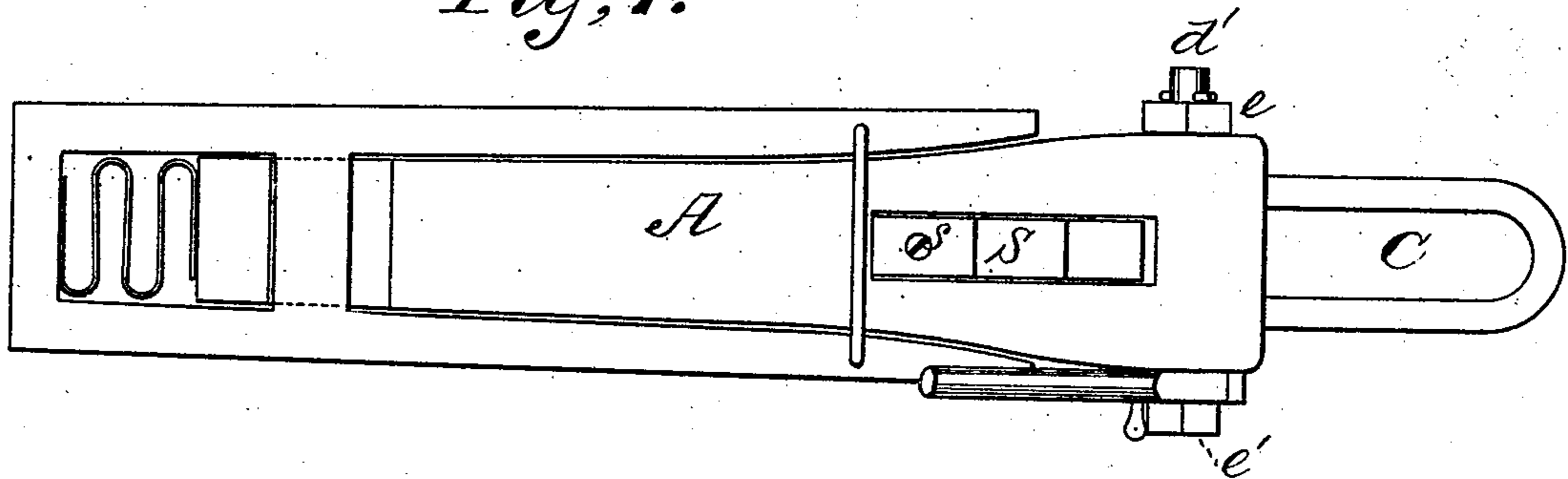


Fig. 2.

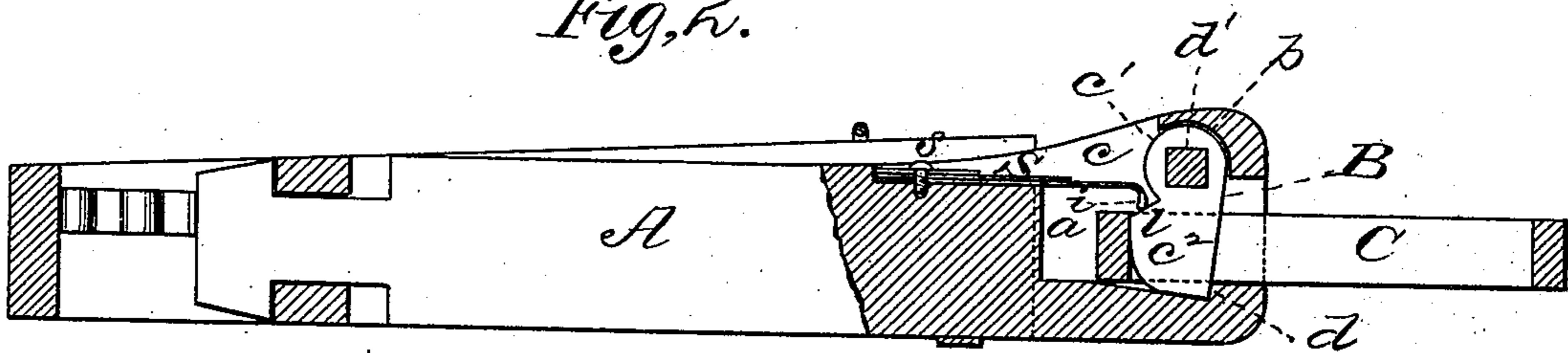


Fig. 3.

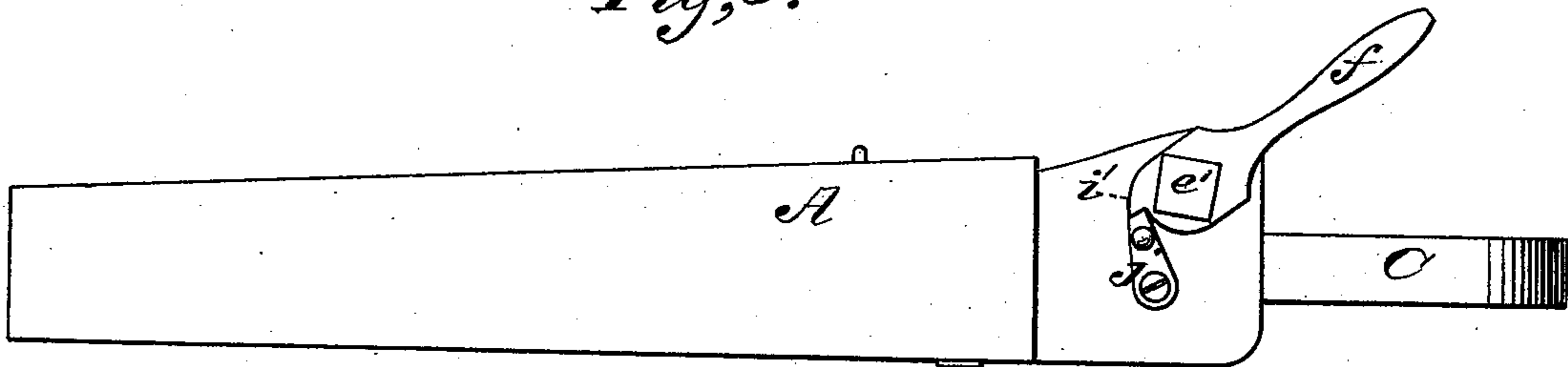
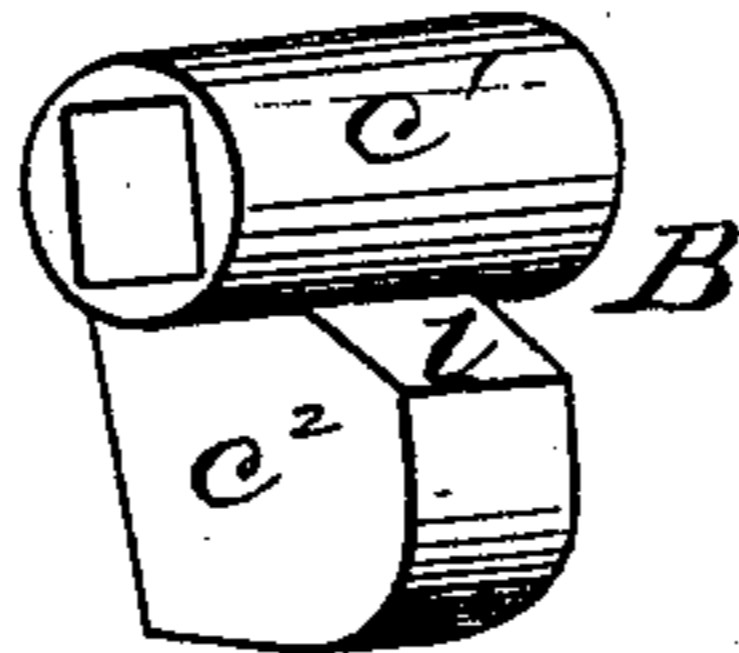


Fig. 4.



WITNESSES

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HENRY F. W. KOEHLER, OF ST. JOSEPH, MISSOURI.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **211,410**, dated January 14, 1879; application filed November 23, 1878.

To all whom it may concern:

Be it known that I, HENRY F. W. KOEHLER, of St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and valuable Improvement in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of my improved car-coupling. Fig. 2 is a side view of the same, partly in section; and Fig. 3 is a full side view of the same. Fig. 4 is a view of the coupler.

This invention has relation to improvements in car-couplings that act automatically.

The object of this invention is mainly to devise means in an automatic car-coupler for releasing the link conveniently and expeditiously; for holding the coupler up out of the way, so that cars may come together without being coupled; and, finally, for rendering a failure to couple when desired practically impossible.

The nature of the invention consists in the novel construction and arrangement of the various devices used, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a cast-metal coupling, having in its front a preferably rectangular chamber, *a*, having at its front upper part a nearly semi-cylindrical recess, *b*. *c* indicates a longitudinal slot formed in the upper wall of the draw-head, in rear of the transverse recess *b*, and opening into chamber *a*.

B indicates a T-shaped coupler, the cross-piece *c*¹ of which is cylindrical and fits snugly up into the recess *b*. The leg *c*² of this coupler is at right angles to the part *c*¹, and it extends down into the chamber into a recess formed in the bottom thereof, resting against the shoulder *d* of the said recess.

The cylindrical part of the coupler is tubular and the form of the bore prismatic, as shown in Fig. 4; and the said coupler is secured to the draw-head by means of a bolt, *d'*, also of prismatic form, extending through the bore of the coupling-dog, and having its bearings in the sides of the draw-head. This bolt projects

at both sides of the draw-head, and is provided at one end with a retainer-nut, *e*, or other equivalent device, and at the other with a head, *e'*.

f designates a manipulating-lever, of the general form of a wrench, and having in one end a prismatic seat or eye, to which the prismatic portion of the bolt *d* strictly conforms; or the said eye may be circular, and, the said bolt having been passed through it, the lever may be secured to the bolt by means of a set-screw. This lever extends upward a sufficient distance, and, as shown in Fig. 3, has on its lower extremity beyond the bolt a strong lip, *i'*. By thrusting this lever down a sufficient distance the coupling-dog will be swung upward out of engagement with the link C, and an uncoupling may be effected by separating the cars. It being desired to hold the dog in this position, so as to avoid a coupling when the cars are again brought together, a vibrating latch, *j*, pivoted to the side of the draw-head, is swung up with its end engaged with the lip *i'* of the lever aforesaid, holding it firmly in the position shown in Fig. 3, and preventing the dog from swinging down.

In the top of the draw-bar, in rear of the slot *c* and in line therewith, is a metallic spring, S, composed of one or more leaves. This spring is usually recessed into the head, and is secured thereto by means of a screw or screws, *s*. The free end of this spring is down-turned, as shown at *i*, and rests upon a shoulder, *l*, usually inclined, formed on the rear edge of the vertical part of the dog, near its junction with the cylindrical part thereof. When the dog is swung backward and upward by the contact of the link C, the spring S is forced upward by the inclined bearing-shoulder *l* of the dog; and the moment the said link passes to the rear beyond the said dog, the spring S immediately reacts and causes the said dog to rapidly assume the position shown in Fig. 2, holding the link securely in place and coupling the cars.

The effect of this spring, it will be seen, is to prevent and obviate any sluggishness in falling of the dog, and to force it rapidly into engagement with the link.

What I claim as new, and desire to secure by Letters Patent, is—

In a car-coupling, the draw-head A, having

chamber *a* and transverse recess *b*, the coupling-dog B, provided with the tubular cylindrical cross-piece *c*¹ and arm *c*² at right angles thereto, the rock-bolt *d*', journaled in the sides of the head, and having a prismatic part conforming to the bore of part *c*¹ of the dog, and extending through the same, the lever *f*, secured on one end of said bolt, and provided with the lip *i*', and the vibrating latch *j*, adapted to engage said lip, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY F. W. KOEHLER.

Witnesses:

AUGUST CARLSON,
ALLEN H. VORIES.