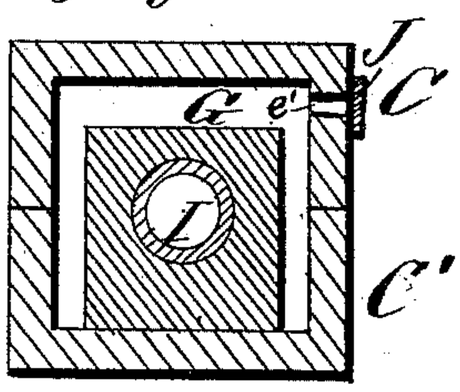
(Model.)

W. W. FITCH.

CAR COUPLING.

No. 277,698. Patented May 15, 1883.

fig 5,



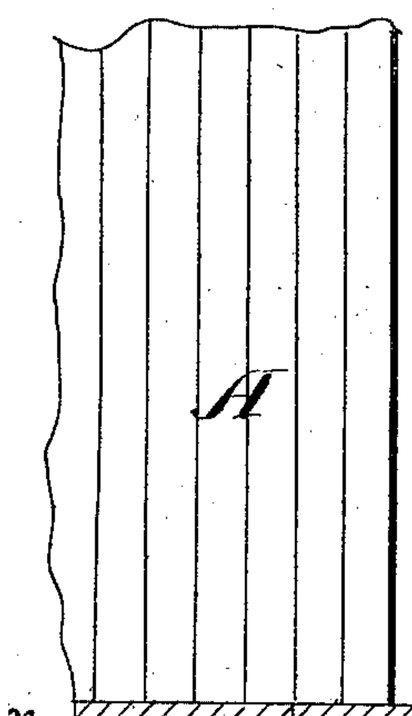


fig 1,

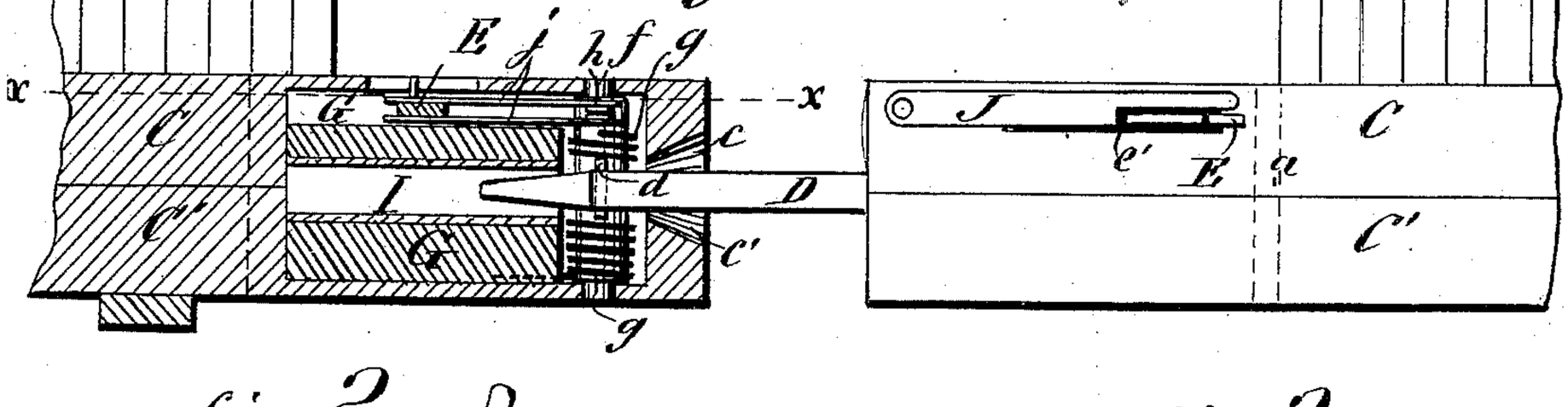


fig 2,

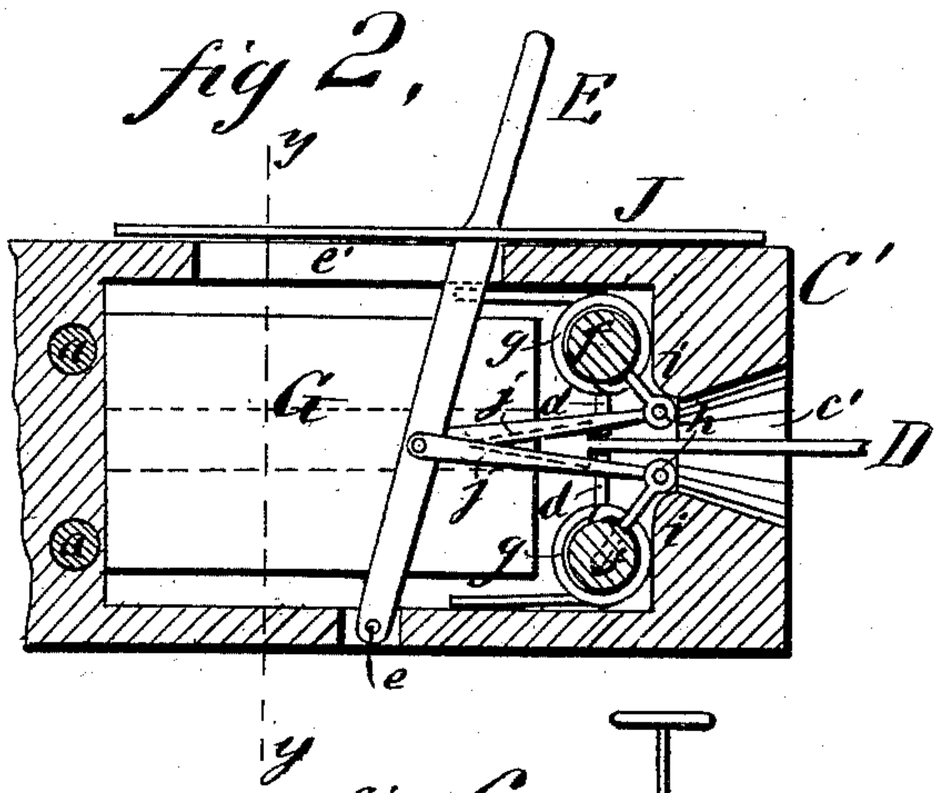


fig 3.

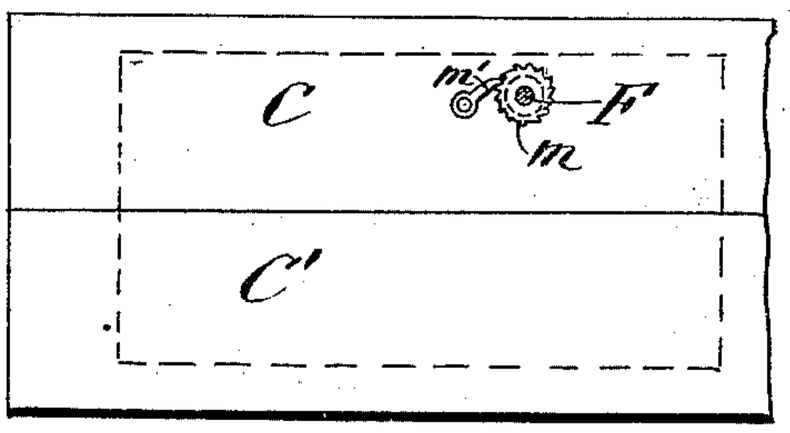


fig 6,

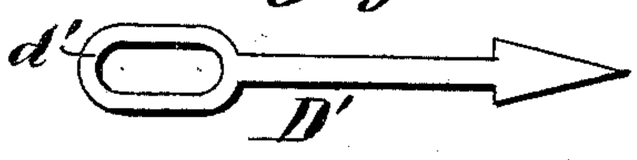


fig 4,

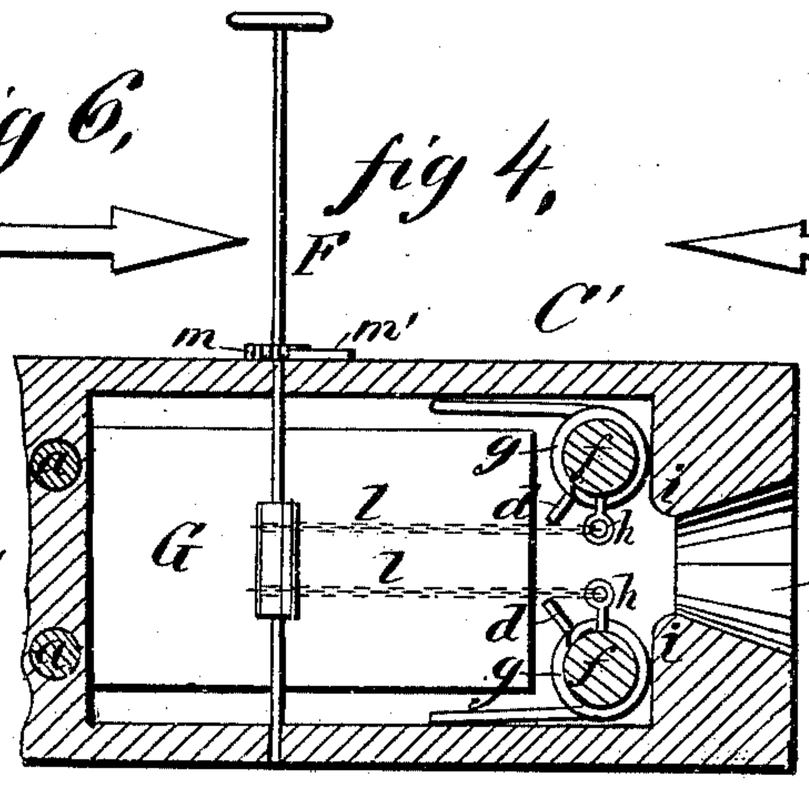
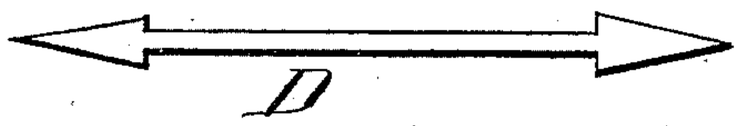


fig 7,



WITNESSES:

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UNITED STATES PATENT OFFICE.

WHEELER WILLARD FITCH, OF HONEOYE FALLS, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 277,698, dated May 15, 1883.

Application filed February 26, 1883. (Model.)

To all whom it may concern:

Be it known that I, WHEELER WILLARD FITCH, of Honeoye Falls, in the county of Monroe and State of New York, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The object of my invention is to provide an automatic car-coupling which shall be certain in its action, and strong, durable, and cheap; and to this end my invention consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the ends of two cars having my new and improved automatic car-coupling attached thereto, one of the couplings being shown in sectional elevation, the other being shown in full side elevation. Fig. 2 is a sectional plan view of one of the couplings, taken on the line *x x* of Fig. 1, showing a lever arrangement for uncoupling. Figs. 3 and 4 show a modification wherein a winding-shaft and hand-wheel are used for uncoupling. Fig. 5 is a sectional elevation taken on the line *y y* of Fig. 2, and Figs. 6 and 7 show two forms of coupling-links.

A A represent the cars to which are secured by any suitable means my new and improved couplings. The couplings are composed of the upper and lower hollow castings, C C′, which are secured together by the bolts *a a*, and constitute the draw-heads. At the outer ends these castings are correspondingly cut away, as shown at *c c′*, to form the throats of the draw-heads, through which the spear-headed connecting-link D or D′ passes in coupling the cars. The connecting-link is retained in the draw-heads by means of the jaws *d d*, formed upon or secured to the vertical shafts of studs *f f*, journaled in the castings C C′, as shown clearly in Figs. 1 and 2. These studs have placed upon them the springs *g g*, which normally hold them so that the jaws *d d* face each other in the center of the castings C C′, so that they will engage with the head of the connecting-link when forced between them, as shown in Fig. 2, and thus retain it and connect the cars. The arms *h h* are formed upon the studs *f f*, above and a little in front of the jaws *d d*, by which the studs may be turned against the tension of the springs *g g*, for opening the jaws, or bringing them to the position shown in Fig. 4, for releasing the head of the connecting-link for uncoupling the cars. These arms also serve as stops by coming against the projections *i i*, formed in the draw-heads, for limiting the distance of revolution of the studs and for taking part of the strain that comes upon the studs in the draft of the car, thus relieving the jaws *d d*, as will be understood from Fig. 2.

The means I prefer to employ for turning the studs backward for opening the jaws *d d* for uncoupling the car consists of the horizontal lever E, which is connected with the arms *h h* by the connecting rods or plates *j j*, and which lever is fulcrumed at *e*, and as shown in Fig. 2 and at the right hand in Fig. 1.

By forcing the outer end of the lever E backward from the position in Fig. 2, it will be seen that it will turn the studs *f f* backward and open the jaws *d d*, and thus release the head of the connecting-link. When forced backward the lever may be held in that position, if desired, by the notched lever J. (Shown clearly in Figs. 1 and 2.) Instead of using the lever E for uncoupling the cars, I may use the winding-shaft F, (shown in Figs. 3 and 4,) which is journaled in the sides of the draw-head, and is attached to the arms *h h* by the chains *l l*, (shown in Fig. 4,) and for retaining the shaft for holding the jaws open I provide it with the ratchet-wheel *m*, and the side of the draw-head with the pawl *m′*, which is adapted to engage with the ratchet-wheel, as will be understood from Fig. 3.

G is a block of soft rubber secured to the lower hollow casting, C′, back of the vertical studs *f f*, in which is placed the metal tube I, into which the inner end of the connecting-link passes, as shown at the left in Fig. 1, so that the link will be held steady while the cars are in motion, and so that the link will work sidewise or up and down without injurious strain upon the coupling or danger of bending the link.

In case both cars to be coupled are provided with my improved coupling, the connecting-link D, (shown in Fig. 7,) having both ends spear-headed, will be used; but in case one of the

cars has the old link-and-pin draw-head, the connecting-link D′, (shown in Fig. 6,) having one end spear-headed and the other formed with the loop or ring *d′*, must be used.

Constructed in this manner, it will be seen that the coupling is strong and durable, and is perfectly automatic in coupling, and will hold the connecting-link with great firmness and security, so that there will be no danger of accidental uncoupling.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The vertical pivoted studs *f f* and the surrounding spiral springs *g g*, in combination with the jaws *d d* and the draw-head, as shown and described.

2. The pivoted studs *f f*, carrying spiral springs and arms *h*, in combination with stops *i i* on the draw-head, as and for the purpose specified.

3. The horizontal lever E, pivoted at *e*, the rods *j j*, and the arms *h h*, in combination with the pivoted studs *f f*, surrounded by springs, as and for the purpose specified.

WHEELER WILLARD FITCH.

Witnesses:
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