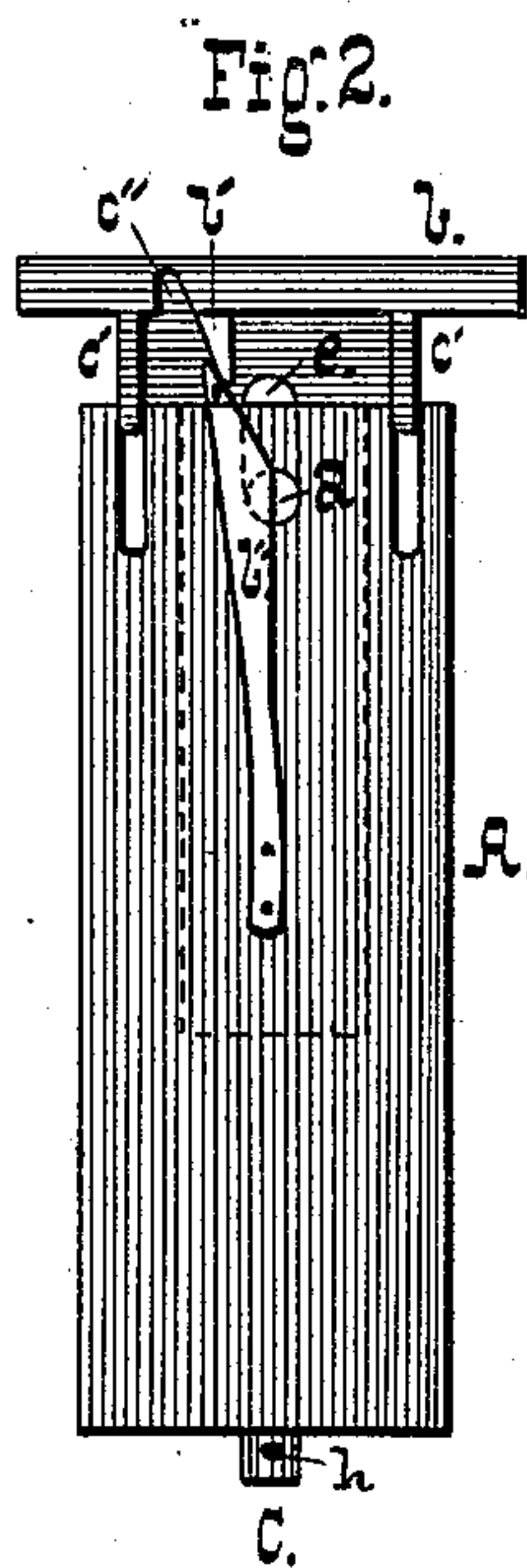
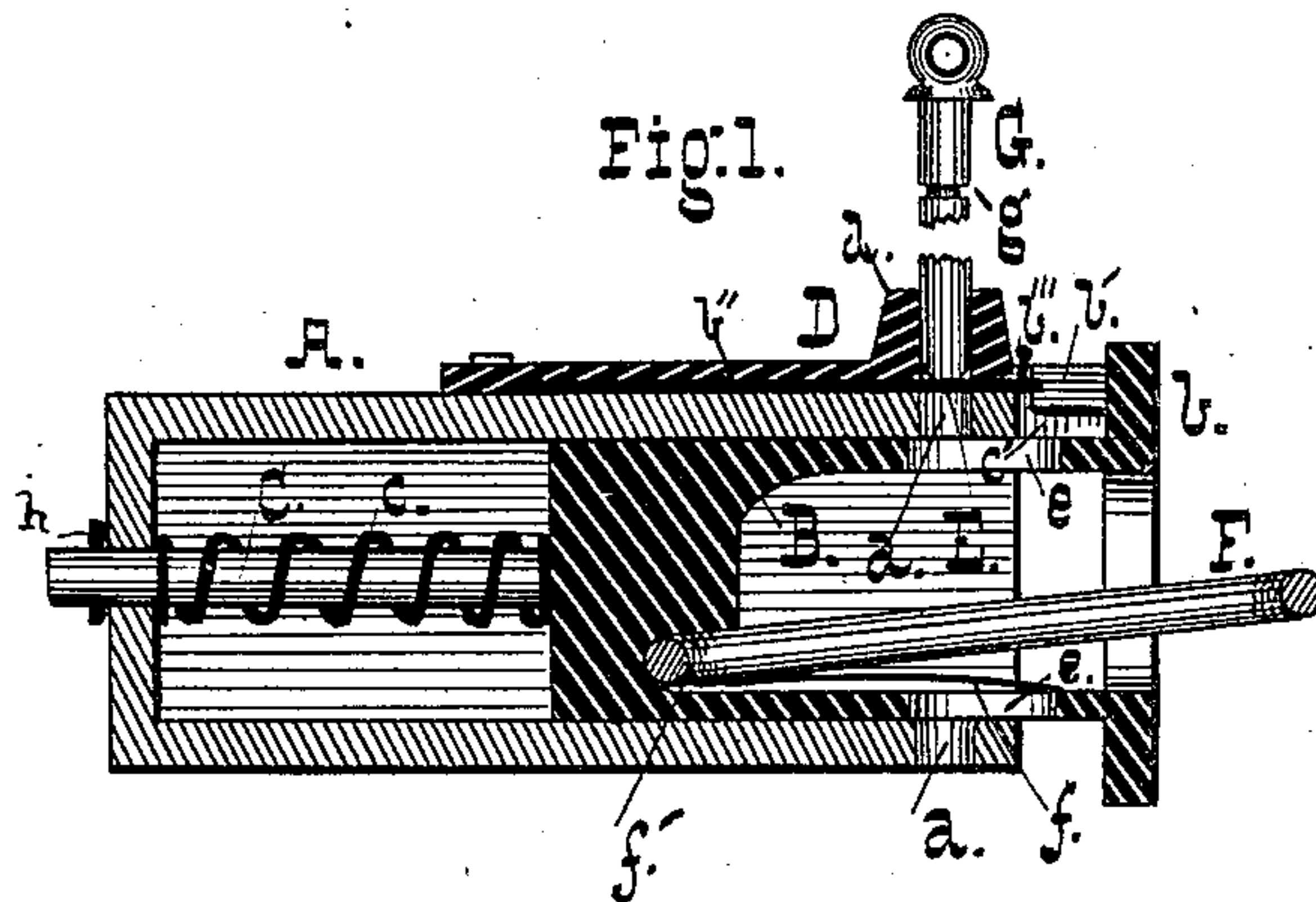


J. A. MASON.  
Car-Coupling.

**No. 212,563.**

**Patented Feb. 25, 1879.**



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **212,563**, dated February 25, 1879; application filed January 10, 1879.

*To all whom it may concern:*

Be it known that I, JAMES A. MASON, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Car-Couplings; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view of the device, and Fig. 2 a plan view of the same.

This invention relates to that class of car-couplings in which the pin that secures the link is released as the cars come together, and falls into appropriate holes in the draw-head, the object being to obviate the necessity of sending a train-hand between the cars to direct the link and release the pin, as is usual with the ordinary form of coupler.

My invention consists in a resilient buffer and its attachments, of peculiar construction, designed to secure certain results, which will be specifically indicated in connection with a description of the construction and mutual adaptation of the several parts.

In the accompanying drawings, A represents the draw-head, having holes *a a* for the pin G, the lower hole having a slightly-flaring mouth, in order to insure the entrance of the pin as it falls.

Within the draw-head slides the buffer B, having the usual face *b* and slots *e e*, through which the pin G passes. These slots are made somewhat longer than the extreme range of motion of the buffer, so that no strain whatever is brought upon the pin other than that of traction from the link.

A rod, C, extends through the draw-head from the buffer, serving as a guide for the buffer and for the spring *c*.

A pin, *h*, limits the forward motion of the buffer. F is the link, of ordinary construction, which rests in a recess, *f'*, in the buffer, and is retained in proper position to enter the buffer of the next car by a spring, *f*, which latter serves also to clamp the link in the recess, and prevent it from being jolted out as the cars approach each other.

D is a block, bolted to the upper side of the draw-head, and terminating in a raised portion, *d*, designed to hold the pin G in a verti-

cal position. Under the block D is secured to the top of the draw-head, on its upper surface, a spring, *b''*, having a beveled lip in front of the draw-head, as shown, and normally partially closing the hole *a*, and serving to sustain the pin G. A corresponding beveled lip, *b'*, is formed upon the buffer, which latter is provided with a slot, *c''*, into which the lip on the end of the spring enters as the buffer is pressed back.

A knob, *b'''*, is attached to the spring-lip to facilitate its retraction by hand. Guide-fins *c'* upon the buffer enter slots in the draw-head as the buffer is retracted. The pin G has an annular groove, *g*, into which the spring *b''* enters after the pin has fallen, whereby the pin is locked in place.

Such is, in general terms, a description of the construction of the device. Its mode of operation is as follows: When it is desired to couple a pair of cars the link F is inserted in the recess *f'*, where it is held by the spring *f* in the proper position to enter the buffer of the next car. The spring *b''* is retracted by pushing laterally upon the knob *b'''*, when the pin G falls and secures the link. As the spring *b''* is released, it enters the slot *g* upon the pin and locks it in place. As the cars are brought together, the buffer enters the draw-head, and the lip *b'* presses back the spring *b''*, allowing the pin G to fall, which latter was previously inserted in the block D, as shown in the drawings. The coupling is thereby completed, and as the buffers separate the secured pin is locked by its spring, as just described.

When it is desired to uncouple the cars one of the pins is released by retracting its spring, admitting of the pin being withdrawn.

It will be seen that the link is not active in releasing the pin as the cars are coupled, that operation being effected by the buffer, so that no strain of thrust is brought upon the link.

What I claim as new is—

1. In a car-coupler, a resilient buffer provided with mechanism for retaining the link and directing it centrally into the opposing draw-head, having mechanism for releasing the pin by the impact of the buffers, in combination with a device for securing it in its released position, as described.

2. In a car-coupler, a draw-head having a



spring for sustaining the pin and locking it in its released position, and a resilient buffer, which automatically releases the pin, substantially as described.

3. In a car-coupler, a laterally-moving spring partially or wholly covering the pin-hole, and thereby sustaining the pin, in combination with a pin having an annular slot, into which the spring falls and secures the pin after its release, as set forth.

4. In combination with the draw-head A, having spring  $b''$ , the spring-buffer B, having lip  $b'$ , as set forth.

5. In combination with the draw-head A, having spring  $b''$ , the resilient buffer B, having slot  $f'$ , as set forth.

6. In combination with the draw-head A, having spring  $b''$ , the resilient buffer B, having rod C, lip  $b'$ , fin  $c'$ , and slot  $f'$ , substantially as described.

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