(No Model.)

D. P. KAHL.

CAR-COUPLING.

No. 290,060. Patented Dec. 11, 1883.

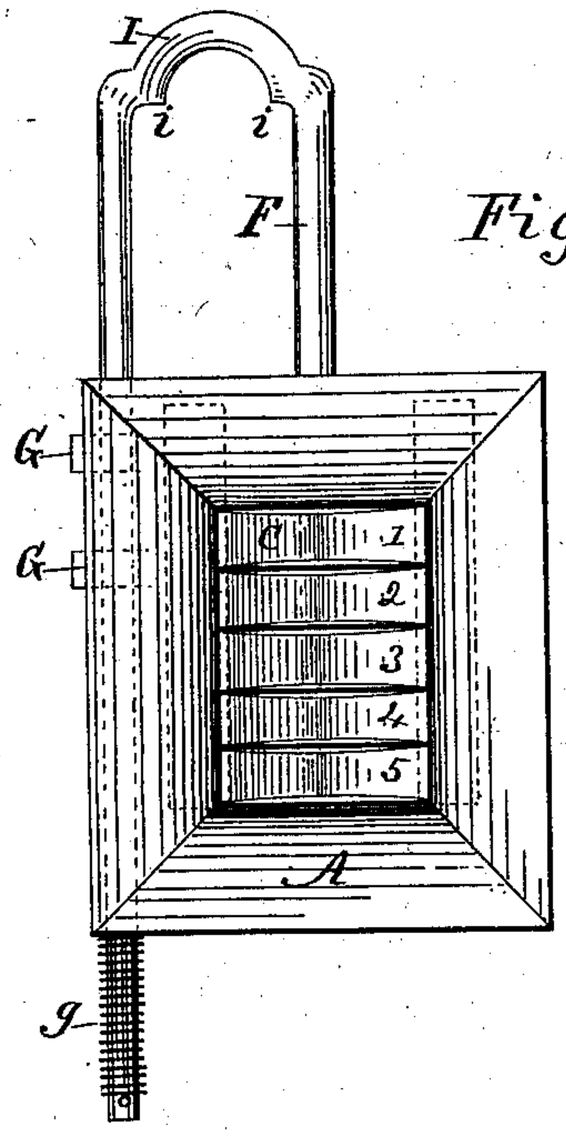


Fig. 1.

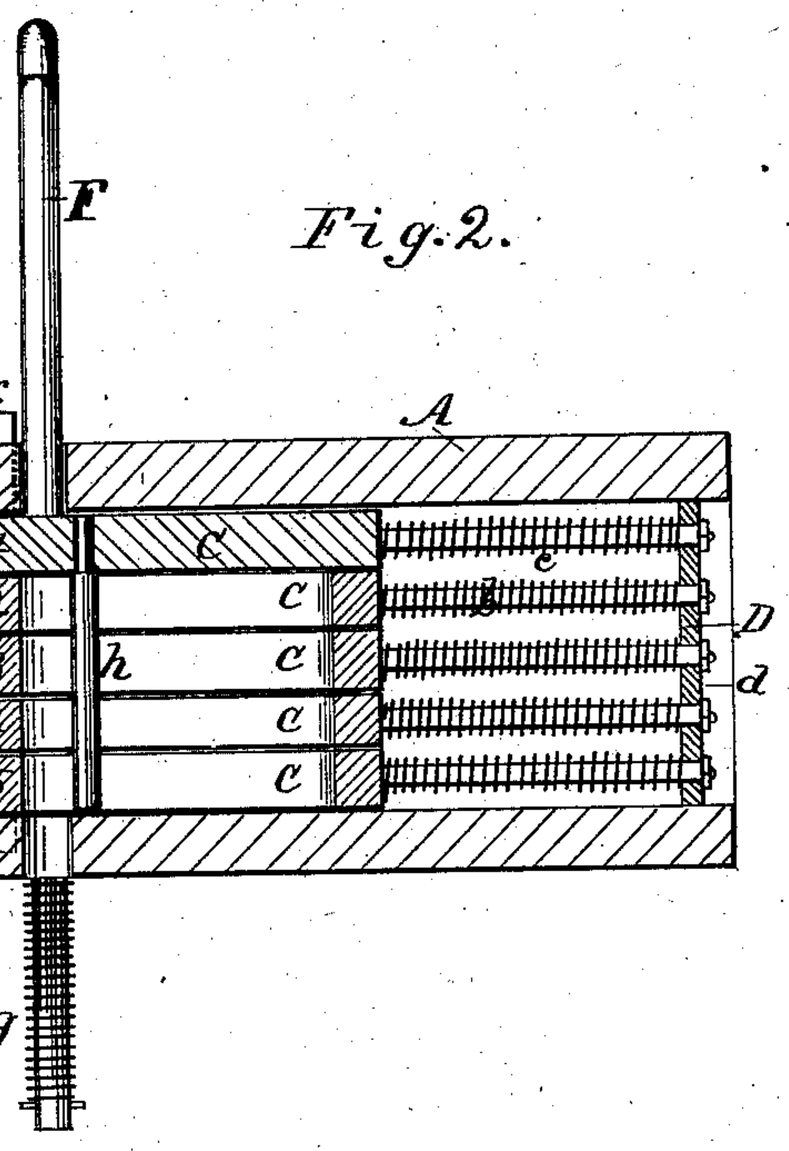


Fig. 2.

Fig. 3.

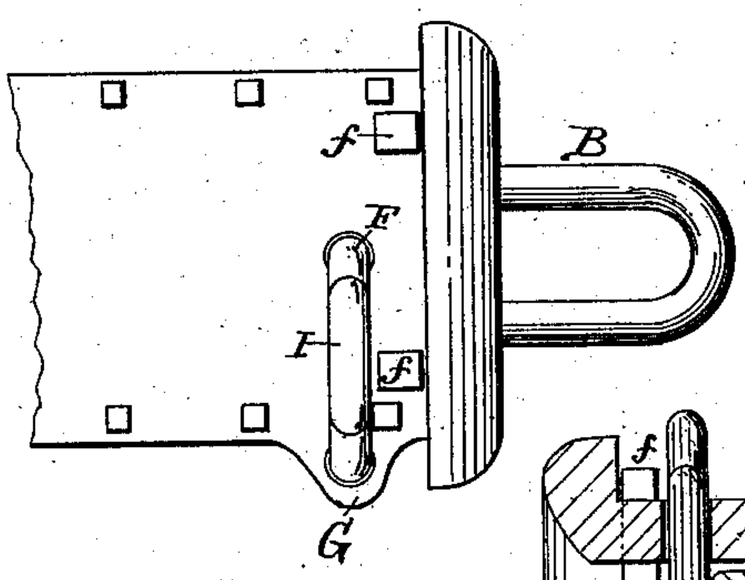


Fig. 4.

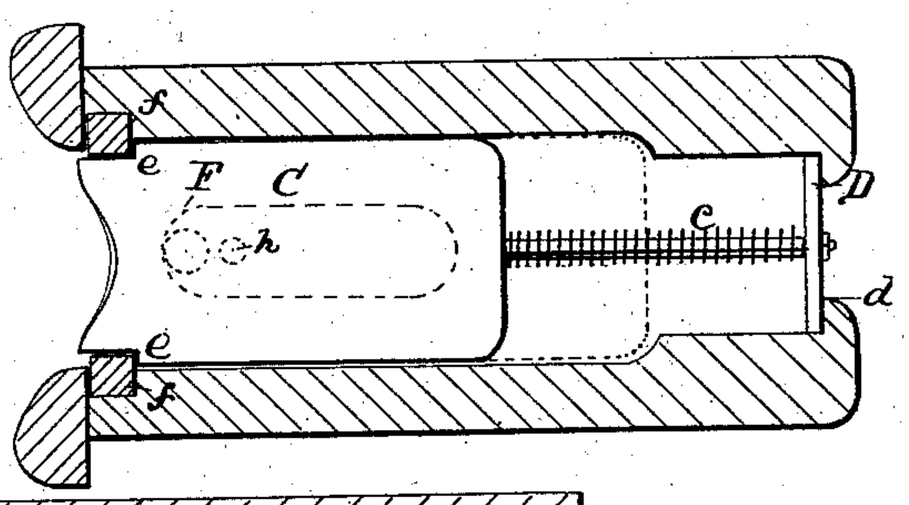
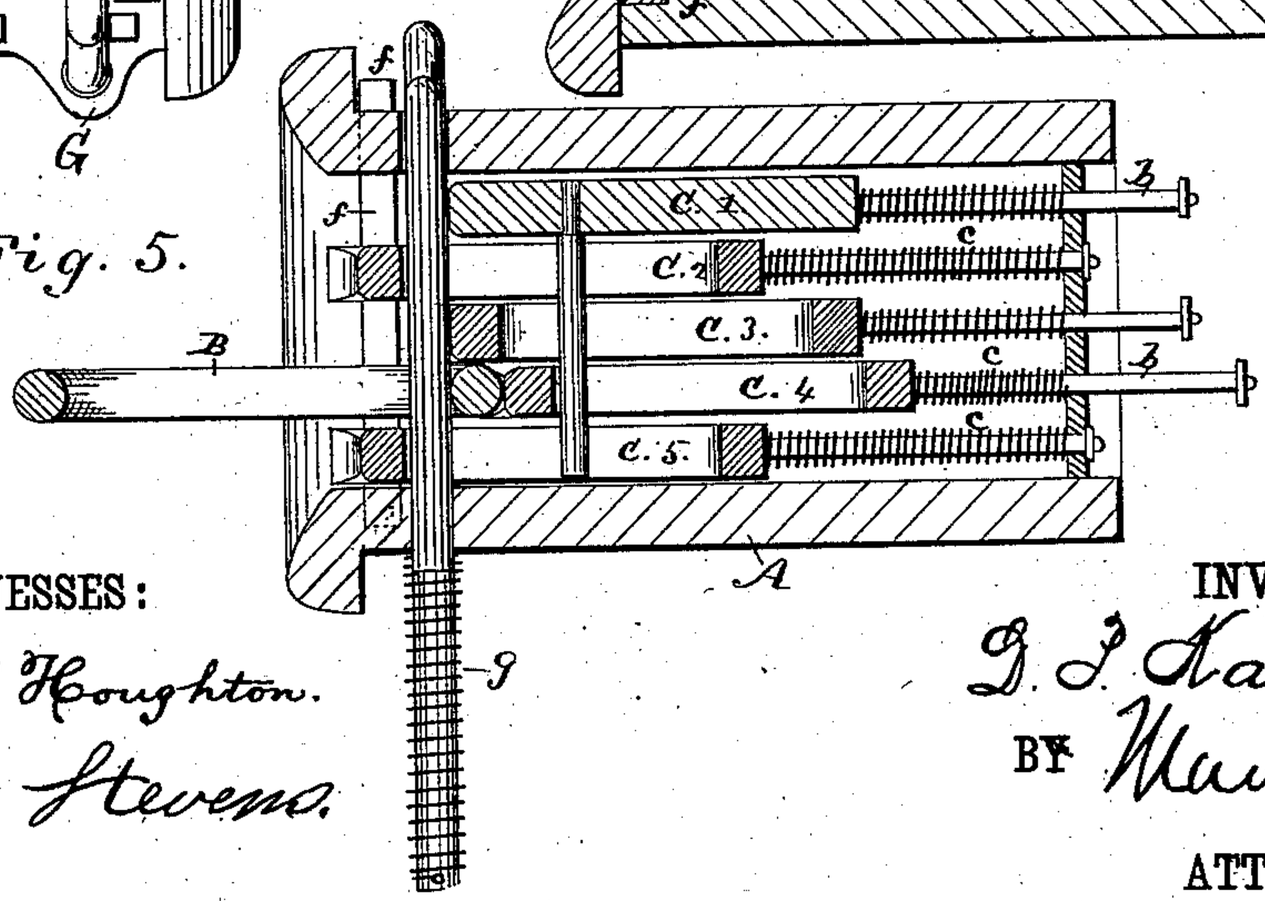


Fig. 5.



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DORSEY P. KAHL, OF LINEVILLE, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 290,060, dated December 11, 1883.

Application filed April 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, DORSEY P. KAHL, a citizen of the United States, residing at Lineville, in the county of Clarion and State of Pennsylvania, have invented a new Car-Coupling, of which the following is a specification.

My invention relates to that class of car-couplings known as "automatic couplers;" and it has for its object to provide means whereby the common link will be held in position in one draw-head, to be properly guided into the other draw-head when two cars come together without manual assistance; to hold the link-pin until the cars meet, and then to release said pin to drop or to be sprung into the draw-head and into the link at the same time, and to furnish shoulders close above and below the link for the pin to draw against.

To this end my invention consists in the construction and combination of parts hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a front end view of a car draw-head, showing my coupling ready for use. Fig. 2 is a longitudinal sectional elevation of the same. Fig. 3 is a top view of the same. Fig. 4 is a horizontal sectional plan of the same; and Fig. 5 is a vertical section corresponding to Fig. 2, but showing the link inserted in the draw-head or in use.

A represents the draw-head, which is made of either cast or wrought iron in the usual manner.

B is the common link.

C represents the guards, which are of the same vertical thickness as the link, and there may be any number required to fill the interior of the draw-head. Each of these guards is provided with a rod, *b*, extending to the rear to serve as stems to keep springs *c* in place between the rear of guards C and the block D. This block enters the draw-head from the front end, and abuts to the rear against shoulders *d* thereof. Springs *c*, extending themselves between block D and guards C, push each guard forward independently of the other. The guards are just wide enough to fill the draw-head, entering at its mouth, and they are provided with shoulders *e*, which abut against two vertical keys, *f*. These keys are driven closely in the draw-head, to project about half their thickness within the inner walls thereof to serve as abutments for the shoulders *e* of guards C.

F is the link-pin having two legs, one of which is fitted to slide vertically in ears G on the draw-head and provided with a spring, *g*, which acts to force the pin down. Gravitation might answer the purpose, but I prefer to quicken its action by the aid of a spring. The other leg, or, more properly, the body of the pin F, is adapted to pass, as usual, down through the draw-head to hold the link when inserted therein. The top guard, C 1, is a solid plain plate, on which pin F is set, as in Fig. 2, to wait for the coming link. Each one of the lower guards, C 2 3 4 5, has a hole in it like a link, through which pin F may pass when guard 1 is pushed back.

h is a vertical stud firmly secured in guard 1, to project down into the openings of all the lower guards.

The action is as follows: The link of an approaching draw-head pushes in some one or two of the guards—say 3 and 4, as in Fig. 5—and they push back stud *h*, and with it guard 1, allowing pin F to drop through guards 2 and 5 and through the link. The pin, when pulled forward by the link, will rest on guards 2 and 5 close above and below the link, thus lessening the danger of breaking the pin; or the link may push in but one guard, in which case the pin will be supported directly above and below the link. Should the link push in only the upper guard, the pin F will be dropped in the same manner without the intervention of stud *h*. The forward ends of the guards are concaved to guide the link centrally, so that the pin may not land on either side bar thereof, but be sure to enter it. The openings in the draw-heads may be of any required vertical thickness and be filled by the required number of guards C. If the two draw-heads to be coupled vary in height from the rail, the link may be placed at the lower guard of the high one, and when they come together the link will find its level in the lower one and be there held. A link inserted by pushing in but one guard will be held thereby firmly against pin F, and it will be so closely held by the guards in contact with it above and below that it will remain practically horizontal, so as to enter the opposite draw-head with greater accuracy and certainty than if the link

were loosely held. When the link chances to push in two guards, they will both remain in after the link is caught, but one of them will generally spring forward to the pin either above or below the end of the link, as in Fig. 5. Pin F is provided with a curved handle, I, by which it may be raised, and the shoulders *i* are adapted to land on the draw-head to prevent the pin getting stuck in its holes and to keep the handle up so it can be taken hold of, or so that a bar may be put under it to pry it up in case it gets stuck. The draw-head may be of any usual form in rear of the part shown.

Any common pin would work with the rest of my invention, but I prefer using a spring to insure its instant action. The guards C might be inserted at the side or rear of the draw-head and rest their shoulders *e* directly against the draw-head; but I prefer to use keys *f*, as they are mere square bars of iron, readily replaced in case of wear or breakage.

What I claim as my invention is—

1. The combination, with the draw-head A, of the solid guard C 1, the stud *h*, secured therein, and one or more link-shaped guards, C 2 3, &c., below it, each guard being provided with independent springs to thrust it forward, and adapted to draw against the draw-head, substantially as specified.

2. The combination, with the draw-head A and the guards C, having shoulders *e*, of the keys *f*, inserted in the draw-head, as and for the purpose specified.

3. The combination, with the draw-head A and the guards C, of the rods *h*, springs *c*, and the block D, as shown and described.

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Witnesses:
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