2 Sheets--Sheet 1.

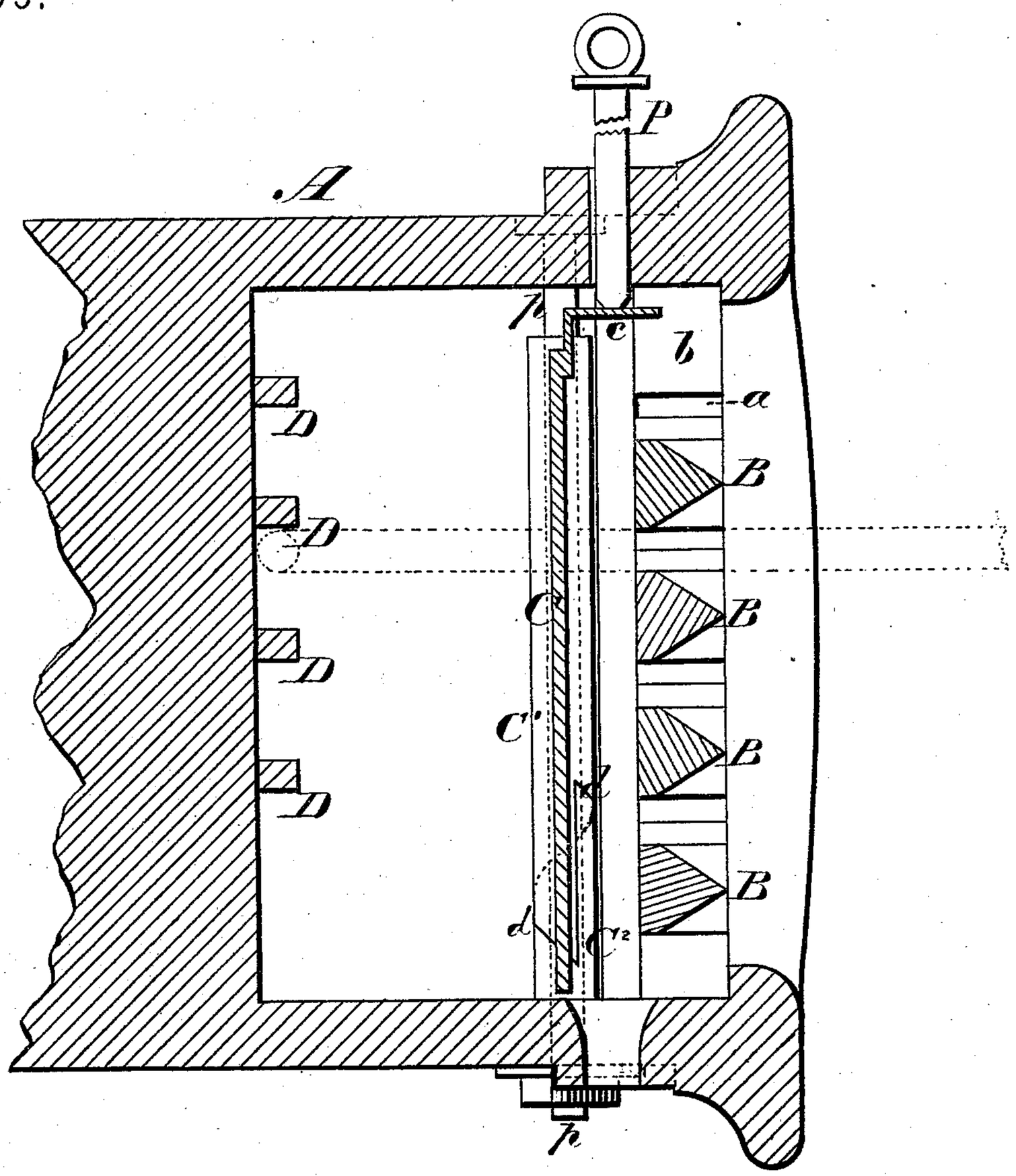
W. KING & J. B. SWAN.

Car-Couplings.

No. 150,693.

Patented May 12, 1874.

Fig. 1.



Witnesses.
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2 Sheets--Sheet 2.

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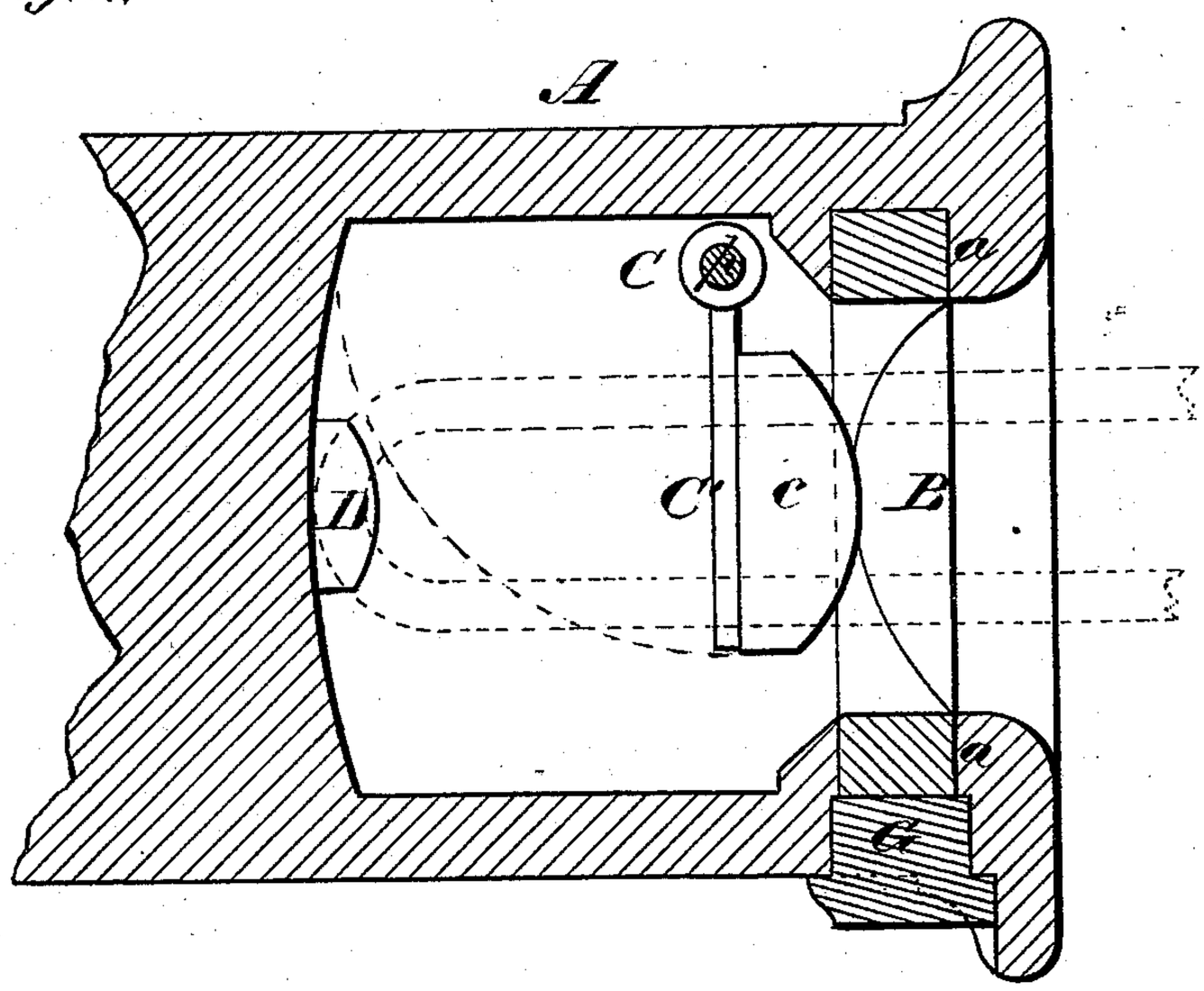
Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM KING AND JOHN B. SWAN, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **150,693**, dated May 12, 1874; application filed February 24, 1873.

To all whom it may concern:

Be it known that we, WILLIAM KING and JOHN B. SWAN, of Louisville, Kentucky, have invented certain Improvements in Car-Coupling, of which the following is a specification:

This invention has relation to self-couplers for railroad-cars, and also to couplers which are self-adjusting for car-platforms varying in height. It consists, first, in the arrangement, in a coupling-head or buffer, of a series of double-beveled horizontal link guides and supports, which are vertically adjustable, and fitted into grooves beneath spring-cushions, in combination with shelves which will receive the end of a link beneath them, and hold the link in a horizontal position; second, in a self-acting gate, which will hold up a coupling-pin when a link is not in its place in the coupling-head, and allow the pin to drop through the link in the act of making a coupling between cars, as will be hereinafter explained.

The following is a description of our improvement:

In the annexed drawings, A represents a coupling-head, which is rectangular in cross-section, and constructed with an outwardly-flaring mouth leading into its chamber. B B represent a series of horizontal guides, which are arranged across the mouth of the head A in planes parallel to each other. The front edges of these guides are double-beveled for directing the end of a coupling-link either upward or downward, and the ends of these guides are fitted loosely into vertical grooves *a a*, made into the cheeks of the head A. The ends of the guides B are rectangular, and are considerably thicker than their intermediate beveled portions, for the purpose of leaving spaces between them, as shown in Figure 1. Above the highest guide B india-rubber springs *b* are fitted into the grooves *a*, for the purpose of preventing injurious concussion when a coupling-link is suddenly thrust between any two of the guides. Similar elastic blocks may be arranged beneath the series of guides. At the back end of the chamber in the head A shelves D are secured, corresponding in number to the number of guides B, and arranged as shown in Fig. 1, so that when a coupling-link is in its place, and resting on any one of the guides, its inner end will be received beneath one of said shelves, and the link will be held in a horizontal position, as indicated in dotted lines, Fig. 1. C represents a pin-dropping gate, which is constructed with a shelf, *c*, on its upper end, for supporting the coupling-pin P in an elevated position, and in such a position as that it will drop through a link when the latter is thrust into the coupling-head. This gate C is hinged to a vertical rod, *p*, by a long eye, C^1, the lower end of which is beveled obliquely, as at *d*, and supported upon the correspondingly-beveled end of a fixed tube, C^2. The weight of the gate thus hung will keep it in the position indicated in Figs. 1 and 2 when a coupling-link is not in the head, in which position the shelf *c* will lie directly beneath the hole for receiving the coupling-pin P, and will hold up this pin. When a coupling-link is thrust into the head A, between any two of the guides B, its end will strike the gate C, swing it around, and allow the pin P to drop and make a coupling. When the pin P and link are removed from the head A, the gate C will swing around, by its own gravity, to the position shown in the drawings. G is a removable plug for allowing the insertion and removal of the guides B.

We disclaim the devices shown in the patent granted to P. Brown, October 15, 1872.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A series of horizontal, transverse, and vertically-moving guides, B, in a draw-head, A, beneath elastic blocks *b*, in combination with shelves D, substantially as described.

2. The gravitating self-closing gate C, with a shelf, *c*, combined with the series of guides B, as and for the purposes described.

WILLIAM KING.
JOHN B. SWAN.

Witnesses:
JAMES BELL,
JAMES KIRWAN.