

(No Model.)

W. D. SWART.

CAR COUPLING.

No. 363,860.

Patented May 31, 1887.

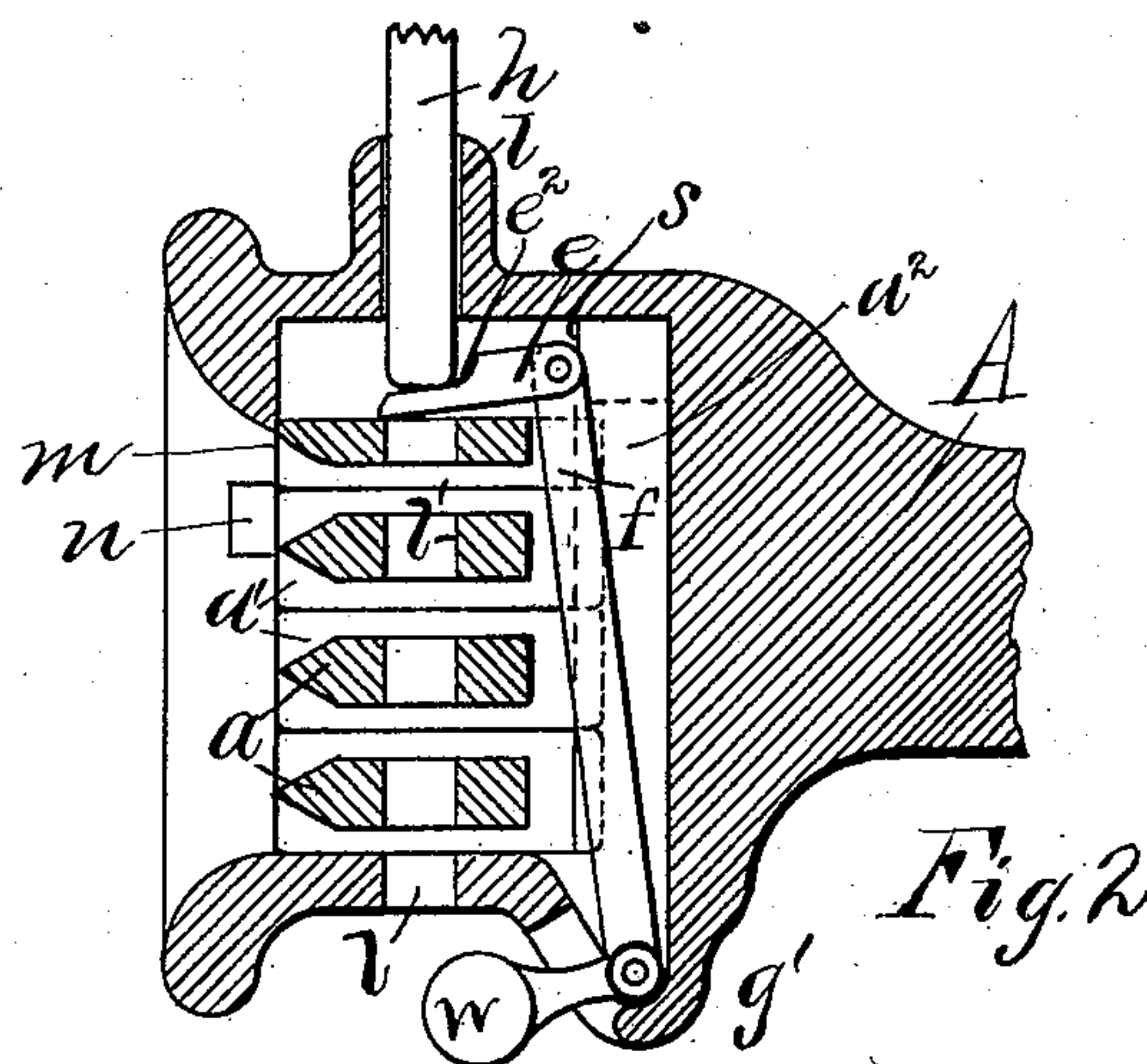
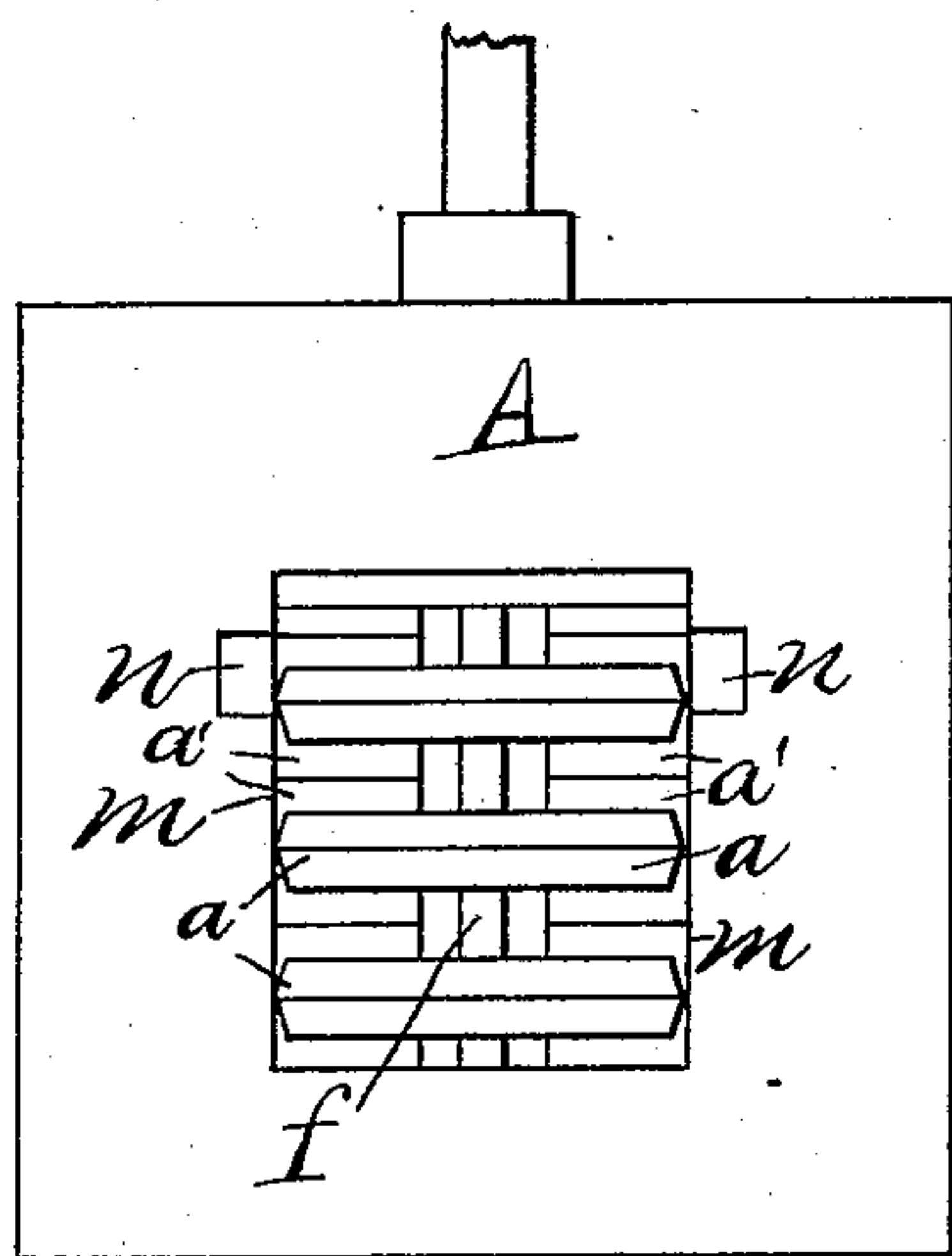
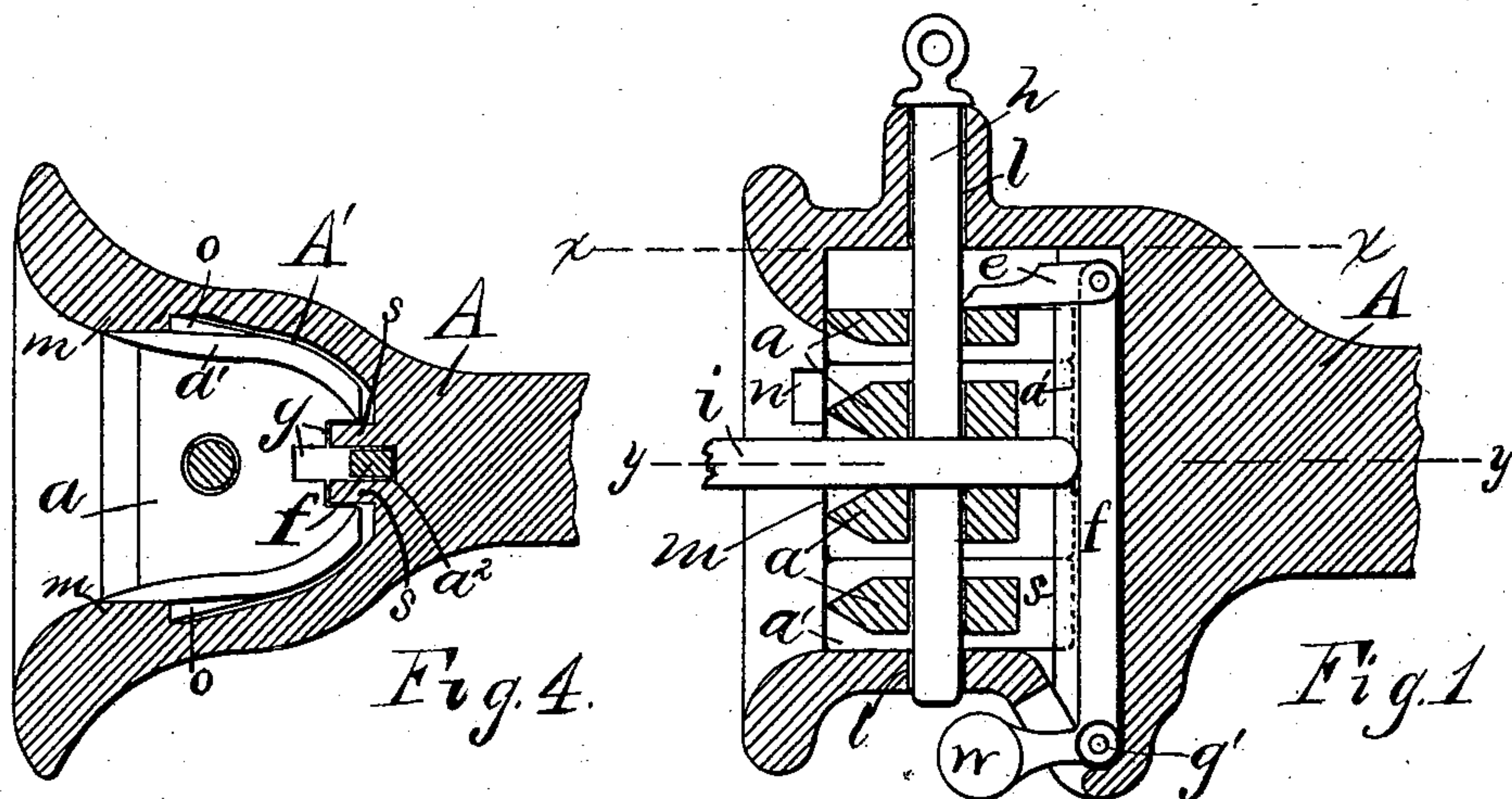


Fig. 5.

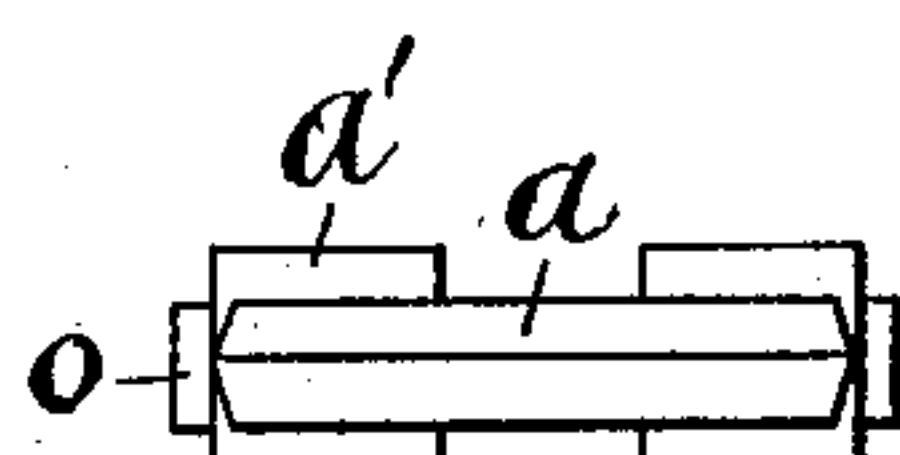


Fig. 6.

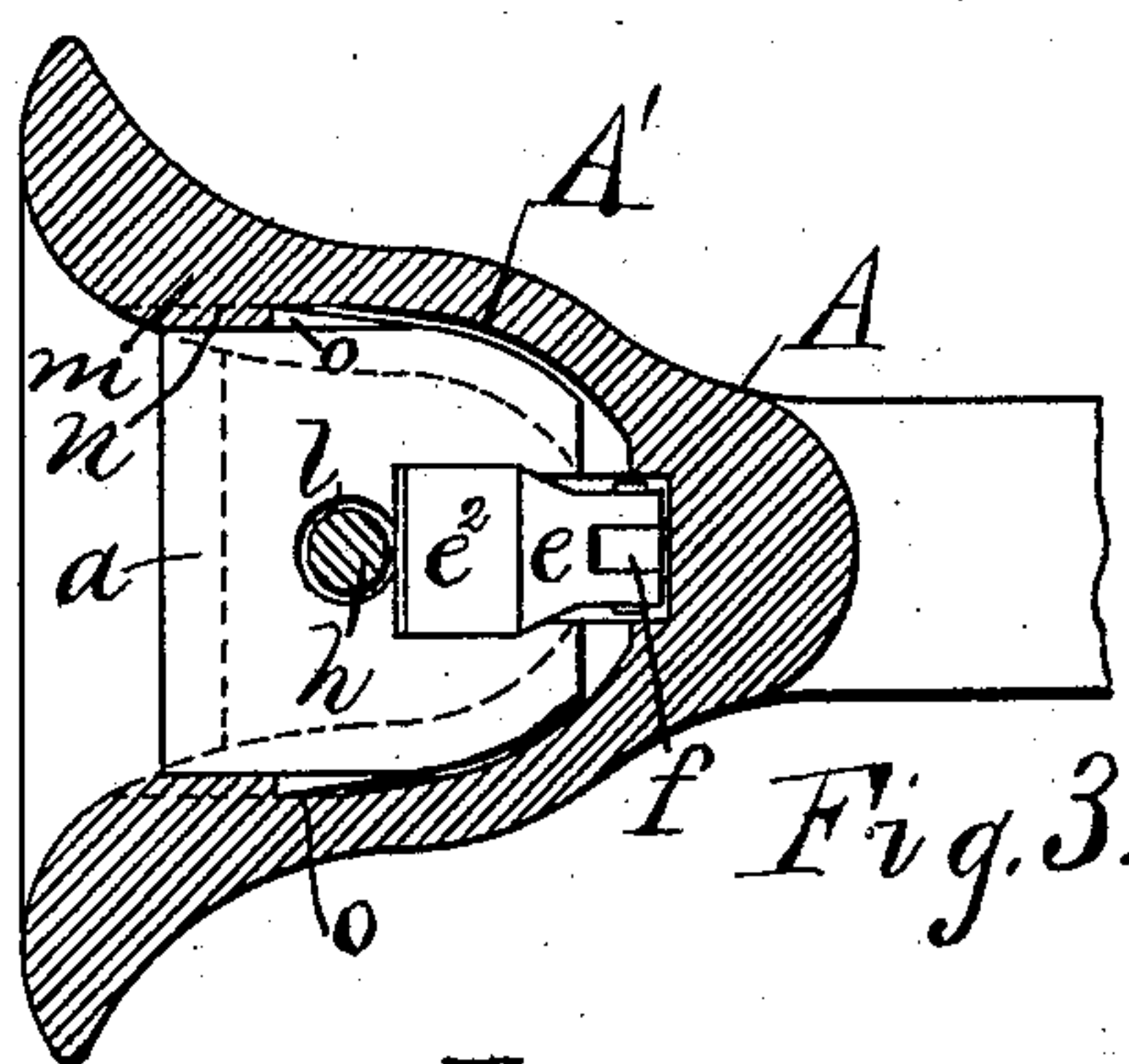


Fig. 3.

Attest:
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Inventor.
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UNITED STATES PATENT OFFICE.

WILLIAM D. SWART, OF NEWARK, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 363,860, dated May 31, 1887.

Application filed March 15, 1887. Serial No. 230,954. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. SWART, a citizen of the United States, residing at Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Car-Couplings, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention belongs to that class of car-couplings in which a series of horizontal wedge-pointed blocks are retained within a recess in the head of the coupling, and are movable vertically to permit the entrance of the coupling-link when the latter is jammed between their wedge-pointed ends.

My improvement consists in a construction adapted to grasp the link with more or less firmness or rigidity when first inserted between the blocks, and to permit the free movement of the blocks to accommodate the oscillations of the link when the cars are fully coupled together and in motion. I form the head to fit the wedge-blocks very freely, and form each block with upright lateral flanges, and with a projecting tongue fitted against the inside of the head. I also employ a movable slide within the top of the head to support the coupling-bolt when not in its operative position, and form the upper wedge-block without the upright flange common to the others.

In the drawings, Figure 1 is a vertical longitudinal section of a coupling-head through the center of the coupling-bolt with the slide retracted. Fig. 2 is a similar section without the link, showing the slide in its normal position. Fig. 3 is a plan in section on line $x x$ in Fig. 1. Fig. 4 is a horizontal section on line $y y$ in Fig. 1. Fig. 5 is a front view of the coupling-head, showing the wedge-points of the block; and Fig. 6 is a front view of one of the wedges.

A is the coupling-head; a , the blocks; a' , their lateral flanges. e is the slide which supports the lower end of the coupling-bolt, such slide being pivoted at its rear end to a vertical lever, f . This lever extends downward behind the blocks, each of which is provided with a notch, g , to permit its entrance, and the recess A' within the head is also provided with a vertical slot, a^2 , to admit the lever when pushed backward. The lever is pivoted in the bottom of the head at g' , and is pro-

vided with an arm and weight, w , to press the slide normally forward.

h is the coupling-bolt, and i is a part of the coupling-link, shown inserted between the blocks in Fig. 1. In this figure the coupling-link is shown in contact with the lever f , as would be the case when the cars are being coupled and the link is jammed between two opposed sets of wedges. The slide is provided with a notch, e^2 , near its front end, to receive the end of the bolt h , and when the slide is thus retracted the bolt drops off the end of the same and engages the link, as shown in Fig. 1.

Holes l are formed in the top and bottom of the head to grasp the bolt. The lateral flanges a' upon the edges of the blocks are flared outwardly to guide the link when entering the coupling, and the blocks being separated and sustained upon one another by such flanges, considerable space exists between them, into which the link is readily inserted.

In preference to fitting the rear ends of the blocks close to the head, I construct the rear end of the head with two vertical ribs, s , integral therewith, and form the ends of the blocks with notches to fit the same to enable such blocks to slide freely upon such ribs.

The cavity A' within the head is formed larger than the edges of the wedge-blocks, and lugs o are provided at each side of the block to steady it longitudinally within the cavity.

A vertical flange, m , is provided at each side of the cavity in front, against which the front end of each of the lugs o and the sides of the outer ends of the flanges a' are fitted, and a groove, n , is formed in each of the flanges m , just below the top block, to permit the successive introduction of the blocks within the cavity by the passage of the tongues through such grooves. The top block is first introduced and lifted toward the slide before the introduction of the other blocks.

In Fig. 2 no link is shown in the blocks, and it is obvious that the slide in its normal position would prevent the lifting of the top block when pressed downward by the weight of the pin resting thereon. The blocks would, however, lift to admit the coupling-link, and thus permit the latter to be pushed between the links without affecting the lever f until the latter were jammed against the lever, when the

slide would be retracted and the link released, as in Fig. 1.

Each block is provided with a vertical hole, l' , to permit the passage of the bolt h .

5 I find in practice that the weight of the coupling-bolt resting upon the slide e , which bears upon the top block, presses downward with sufficient force to hold the link firm enough between the lower blocks to prevent
10 its tipping before it is coupled at its outer end to another coupling-head.

I am aware that it is not new to use a series of blocks to operate by their weight in holding a link within a coupling-head before the
15 cars are coupled, and I do not therefore claim the use of such blocks, broadly; but I have distinguished my invention from such a use of the blocks by showing them in combination with the slide and its actuating-lever, such
20 construction affording the blocks the desired freedom of movement when the cars are coupled, while it prevents the vertical movement of the blocks before the link is pushed against the lever f .

25 Having set forth my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination, with the head A , having flanges m , provided with grooves n , the bolt-holes l l' , and the bolt h ,
30 of the series of blocks formed each with perforated plate a , lateral flanges a' , and lugs o , all substantially as shown and described.

2. In a car-coupling, the combination, with

the head A , having ribs s , and flanges m , provided with grooves n , and the bolt-holes l l' ,
35 and the bolt h , of the series of blocks formed each with perforated plate a , lateral flanges a' , and lugs o , the front ends of the blocks being held in place by the outer ends of the flanges
40 a' and the lugs o , and the rear ends by the ribs s , as and for the purpose set forth.

3. In a car-coupling containing a series of horizontal wedge-pointed blocks, the combination, with the blocks, of a head recessed to
45 retain the same, a hole in the top of the head to receive the coupling-bolt, a vertical hole in each block being provided beneath the same, a slide fitted to move longitudinally within the top of the recess containing the
50 blocks and resting upon said blocks, a lever having its free end pivoted to the rear end of the slide and weighted, as described, notches for the lever in the rear ends of the blocks, and vertical ribs at the rear end of the recess within
55 the head, notches being provided in the rear end of the blocks to fit the same, the whole arranged and operated substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing
60 witnesses.

WILLIAM D. SWART.

Witnesses:

THOS. S. CRANE,
FREDERICK C. FISCHER.