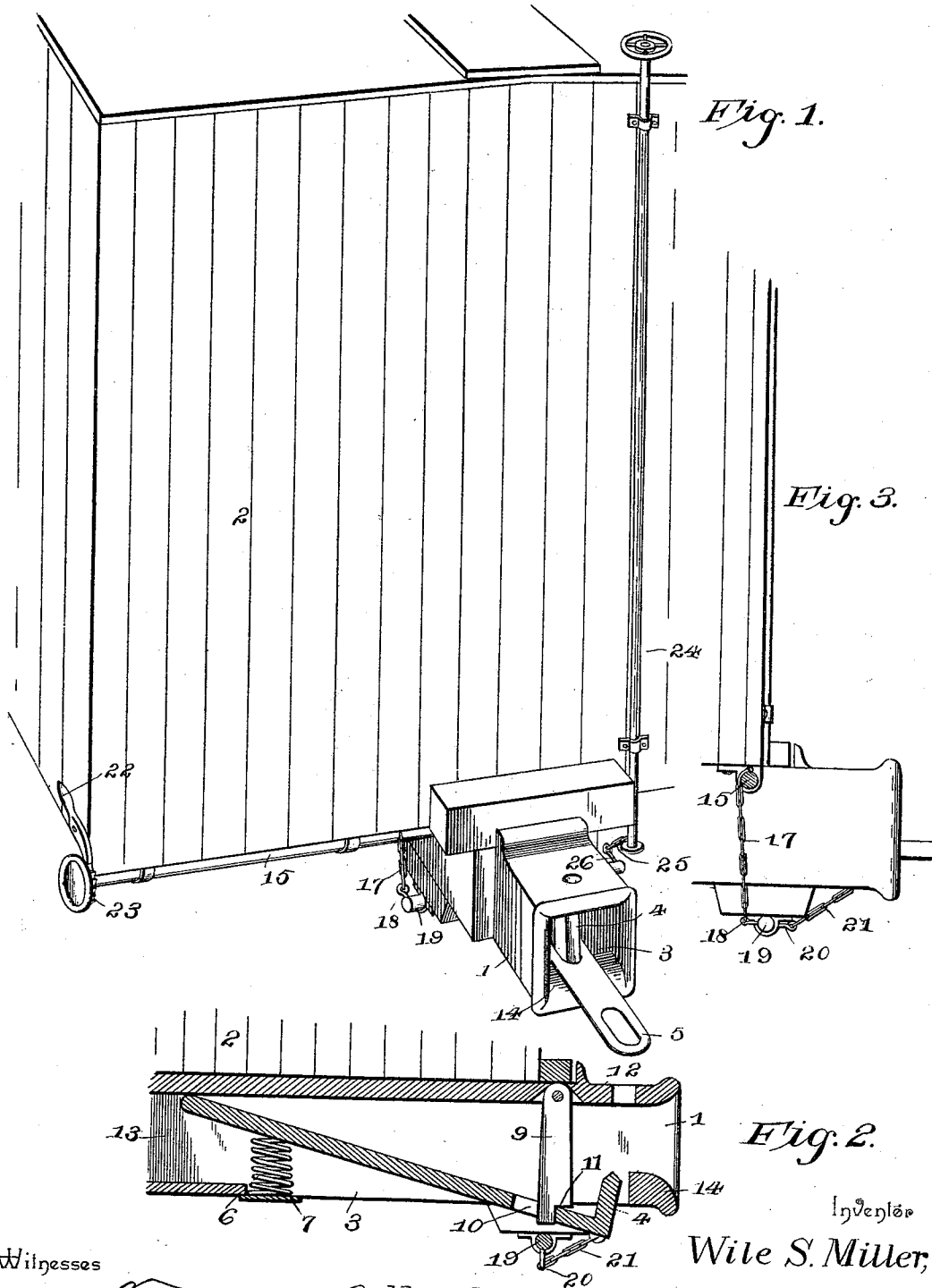


(No Model.)

W. S. MILLER.
CAR COUPLING.

No. 520,443.

Patented May 29, 1894.



Witnesses

C. A. Ford
N. W. Wiley

By their Attorneys.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WILE S. MILLER, OF SPOKANE, WASHINGTON, ASSIGNOR OF TWO-THIRDS TO
O. E. LAWTON AND E. A. HAMMOND, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 520,443, dated May 29, 1894.

Application filed February 24, 1894. Serial No. 501,413. (No model.)

To all whom it may concern:

Be it known that I, WILE S. MILLER, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car couplings.

The object of the present invention is to improve the construction of car couplings, and to provide a simple and inexpensive one, capable of automatic coupling, and adapted to be readily uncoupled from the top or side of a car, to avoid the necessity of going between cars, either in coupling or uncoupling.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a car coupling constructed in accordance with this invention, and shown applied to a car. Fig. 2 is a longitudinal sectional view. Fig. 3 is a detail view of a portion of the uncoupling mechanism.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a draw-head mounted beneath the car 2, and provided with a flaring mouth, and having in its bottom a longitudinal opening 3, to permit a vertically swinging coupling hook 4 to swing downward to release a link 5. The coupling hook is arranged within the draw-head, and is normally held elevated in engagement with the link by a spiral spring 6, mounted upon a plate 7, and engaging the lower face of the shank of the coupling hook. The coupling hook is held depressed against the action of the spring preparatory to automatic coupling by a swinging gravity catch 9, pivoted at its upper end at the top of the draw-head, and having its lower portion arranged in an opening 10 of the shank of the hook, and provided near its lower end with a shoulder 11 for engaging the shank of the hook at the front edge or end of the opening 10. The opening 10 of the shank of the hook is arranged directly in rear of the head; and

the link 5 in entering the mouth of the draw-head engages and moves rearward the swinging catch, and thereby releases the coupling hook which springs upward into engagement with the link. The head of the hook fits in the opening 12 of the top of the draw-head to lock the hook against outward movement; the swinging catch is at all times in the opening 10 and retains the hook in proper position. The link rests upon the lower transverse portion 14 of the front of the draw-head, and does not tend to depress the coupling hook or pull the same downward, as would be the case were the entire bottom of the draw-head open and were the draw-heads located at different elevations, which latter condition is often present.

The operation of uncoupling may be performed from the side of a car by a horizontal shaft 15, which is connected by a chain 17 with an arm 18, of a rock-shaft 19; the latter has its arm 18 projecting inward, and is provided with a central outwardly projecting arm 20, connected by a chain 21 with the coupling hook; and by rotating the shaft 15 the rock-shaft is turned to depress the coupling hook. A pawl 22 and ratchet 23 is provided for the shafts 16, to hold the coupling hook against coupling when it is desired to shift cars in making up a train or the like.

The operation of uncoupling is performed from the top of the car by a vertical shaft 24, which is connected by a chain 25 with an arm 26 of the shaft 19, the arms 18 and 26 being located at opposite sides of the draw-head.

It will be seen that the car coupling is simple and comparatively inexpensive in construction, that it is capable of ready automatic coupling, and it is adapted to be quickly uncoupled, without going between cars.

Instead of employing a link 5, which is provided at each end with an opening, an ordinary link may be used.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a car coupling, the combination of a draw-head provided at its bottom with a lon-

gitudinal opening, and having a transverse
portion 14 arranged in advance of said open-
ing, a pivotally mounted hook arranged in
the draw-head to engage a link and adapted
5 to be depressed through the opening to un-
couple a link, and provided with an opening
10, a spring mounted in the draw-head and
engaging the lower face of the hook and hold-
ing the latter normally elevated, and a swing-
10 ing catch arranged in the draw-head and hav-
ing its lower portion extending through the
opening 10 of the hook and provided near its
lower end with a shoulder for engaging the
hook, substantially as described.

15 2. In a car coupling, the combination with
a car, of a draw-head provided at its bottom
in rear of its outer end with a longitudinal
opening, a coupling hook pivotally mounted
in the draw-head and arranged to engage the

hook, a plate extending across the opening of 20
the draw-head, a spiral spring mounted upon
the plate and engaging the lower face of the
hook, a rock-shaft mounted on the car and
extending beneath the draw-head and pro-
vided with a forwardly projecting arm loosely 25
connected with the hook, said rock-shaft be-
ing provided with rearwardly extending arms,
and shafts mounted on the car and connected
with the rearwardly extending arms of the
rock-shaft, substantially as and for the pur- 30
pose described.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

WILE S. MILLER.

Witnesses:

J. M. ARMSTRONG,

O. E. LAWTON.