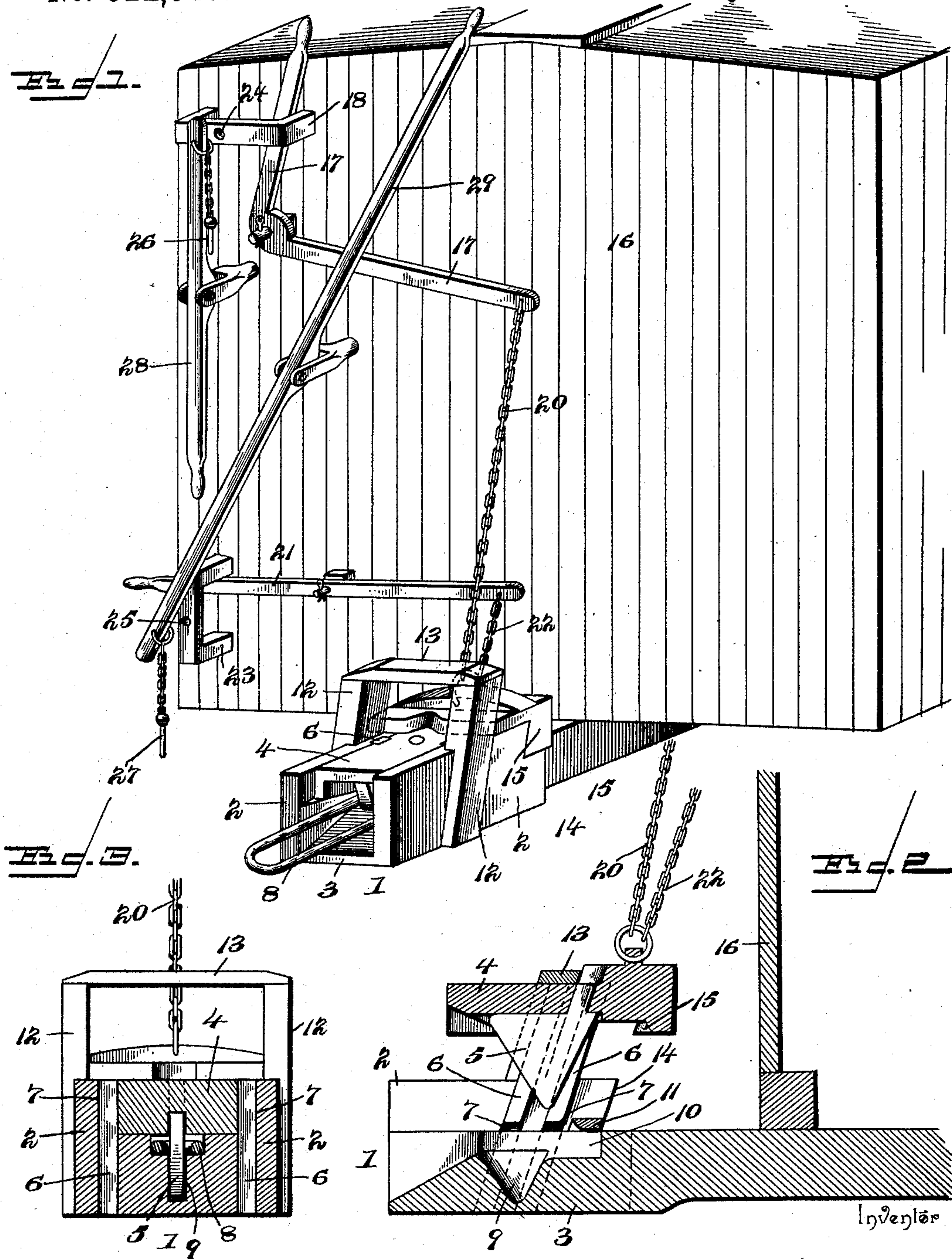


(No Model.)

W. K. KIGHT.
CAR COUPLING.

No. 522,940.

Patented July 10, 1894.



Witnesses
E. N. Stewart
J. F. Riley

By *his* Attorneys.

William K. Kight
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM K. KIGHT, OF EL DORADO, ILLINOIS, ASSIGNOR OF ONE-THIRD TO
W. S. KIGHT, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 522,940, dated July 10, 1894.

Application filed March 19, 1894. Serial No. 504,289. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. KIGHT, a citizen of the United States, residing at El Dorado, in the county of Saline and State of Illinois, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car couplings.

10 The object of the present invention is to improve the construction of car couplings, and to provide a simple and inexpensive one, capable of coupling automatically, and adapted to be readily uncoupled from the top
15 and sides of a car without going between them.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed
20 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, the catch being lowered and in engagement with a link. Fig. 2
25 is a longitudinal sectional view of the same, the catch being raised preparatory to coupling. Fig. 3 is a transverse sectional view.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.
30

1 designates a draw-head, having integral sides 2 and bottom 3, and co-operating with a vertically movable top 4 carrying a catch 5 and provided at opposite sides with inclined
35 slides 6 arranged in ways 7 of the draw-head. The ways 7 are inclined to conform to the arrangement of the slides, and they consist of grooves of the sides 2 and slots or openings of the bottom 3; and this arrangement causes
40 a link 8 in drawing forward or outward to hold the catch firmly in operative position.

The bottom of the draw-head is provided in rear of its opening 9 for the catch with a recess to receive and engage the link to hold
45 the latter horizontally and to prevent the same from forcing or accidentally throwing the catch and the movable top of the draw-head upward. This link receiving recess 10 has its top formed by a detachable cross-piece or
50 guard 11; the width of the mouth and longitudinal opening of the draw-head is such to

prevent the link from vibrating laterally; and the beveled bottom of the draw-head connects the link when drawn outward to engage the inner edge of the catch, which is approxi-
55 mately vertical, permits the link to drop slightly, but not sufficiently to permit the outer end thereof to lie below the inclined portion of a similar draw-head.

The upward movement of the top 4 of the
60 draw-head is limited by an inclined guard comprising upward extending arms 12 and a top cross bar 13 connecting the upper ends of the arms and detachably secured thereto, to enable it to be removed when it is desired to
65 detach the top 4 and the catch.

The rear edges of the sides 2 of the draw-head are provided near their upper edges with recesses 14 having inclined front walls and adapted to interlock with corresponding
70 lugs 15 depending from the back of the top or at opposite sides thereof. The particular construction of the draw-head and the movable top thereof, and the connections for the same enable the parts, when the top is lowered,
75 to be securely interlocked, and the greater the strain on the link, the more securely are the parts interlocked.

The operation of uncoupling is performed from the top of the car 16, by a bell-crank lever 17 fulcrumed near its angle, and having its
80 upper arm arranged in a keeper 18 of the car and its lower arm connected by a chain 20 with the top of the draw-head. This operation may be performed from one side of the
85 car by a lever 21 connected by a chain 22 with the top of the draw-head, and having its outer end arranged in a keeper 23; and the keepers 18 and 23 are respectively provided with perforations 24 and 25 adapted to re-
90 ceive locking pins 26 and 27 of levers 28 and 29 for confining the operating levers to hold the top of the draw-head elevated, whereby the same is prevented from coupling. The lever 28, which carries the pin for locking the
95 bell-crank lever has its handle arranged within easy reach from the side of the car, and the other lever is within easy reach from the top of the car; and by this means the upper lever 17 may be released from the side of the car,
100 and the lower lever 21 from the top of the car. The pin 26 may be readily withdrawn from

the top of the car, and the other pin may be readily disengaged by hand from the lower operating lever.

5 It will be seen that the car coupling possesses great strength and durability, that it is positive and reliable in operation, and that it is capable of automatic coupling and ready uncoupling from the top and sides of cars, without going between them.

10 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.

15 What I claim is—

1. In a car coupling, the combination of a draw-head, comprising a bottom and opposite sides and provided with inclined ways and having at the rear edges of the sides recesses
20 with inclined walls, and a vertically movable top carrying the catch and provided with slides arranged at an inclination and fitting in said ways, said top being provided at its inner end with opposite depending lugs having inclined front faces conforming to the
25 configuration of said recesses, substantially as described.

2. In a car coupling, the combination of a draw-head comprising a bottom and opposite
30 sides and provided with inclined ways, a vertically movable top carrying a catch and provided with slides arranged in said ways, said

top when lowered fitting between the sides and completing the draw-head, arms extending upward from the sides of the draw-head, 35 and a cross-piece connecting the upper ends of the arms and limiting the upward movement of the top, substantially as described.

3. In a car coupling, the combination with a car, of a draw-head comprising a bottom 40 and sides and provided with inclined ways, and having at the rear ends of the sides recesses with inclined walls a vertically movable top provided with slides arranged in said ways, and having depending lugs with inclined 45 faces to engage said recesses, a guard frame extending above the draw-head and limiting the upward movement of the top, the upper and lower operating levers mounted on the car and connected with the top of the 50 draw-head, keepers receiving the outer ends of the levers and provided with perforations, and upper and lower locking levers fulcrumed on the car and provided with pins adapted to be inserted in the said perforations for confin- 55 ing the operating levers, substantially as described.

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

WILLIAM K. KIGHT.

Witnesses:

C. C. SKELTON,

N. V. S. SUMMERS.