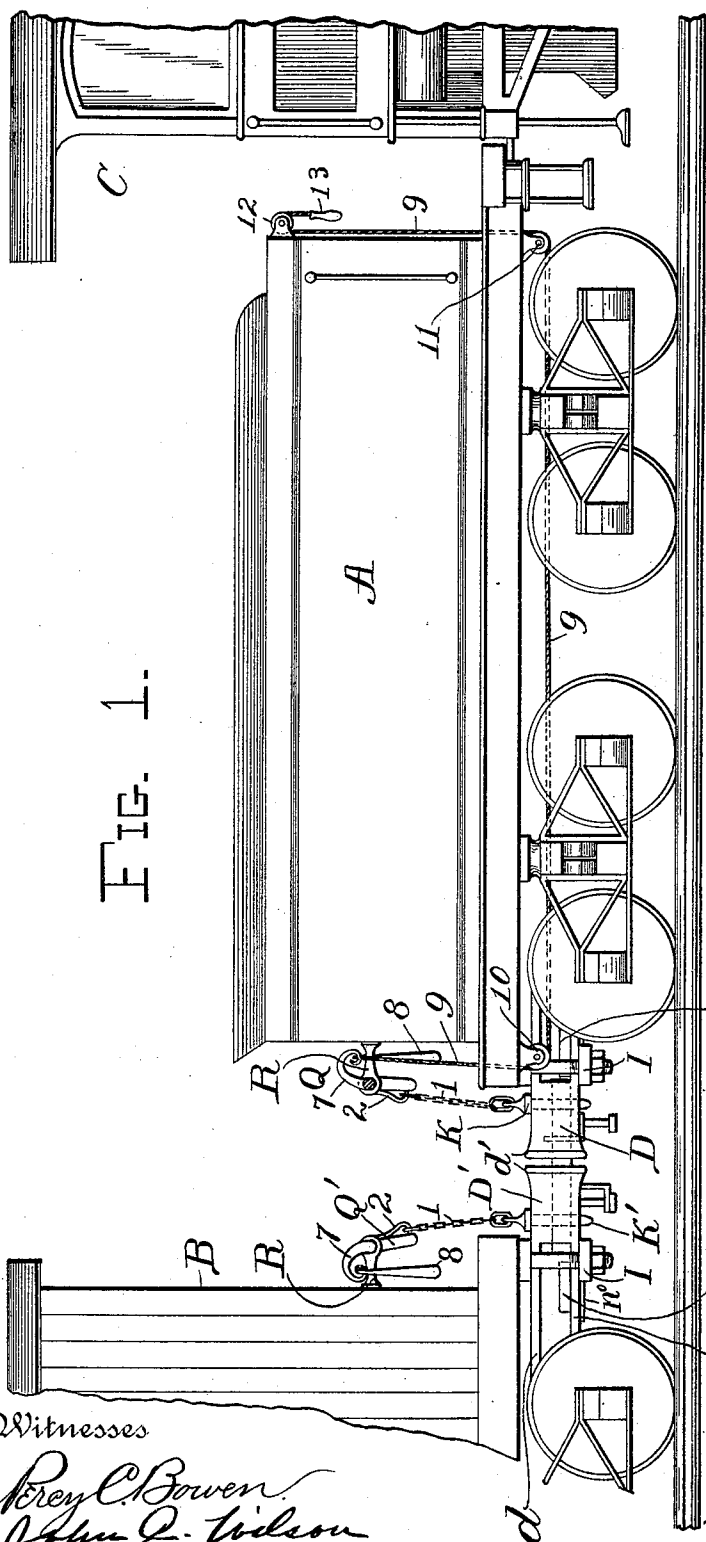


2 Sheets—Sheet 1.

CAR COUPLING.

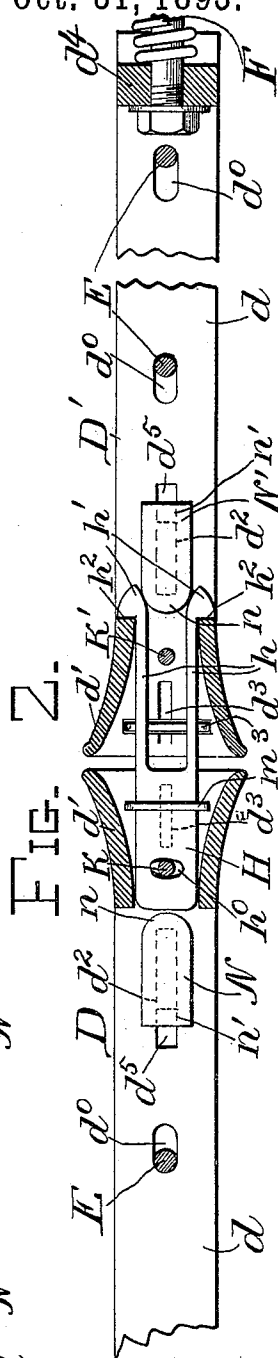
Patented Oct. 31, 1893.



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Witnesses

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Inventors:
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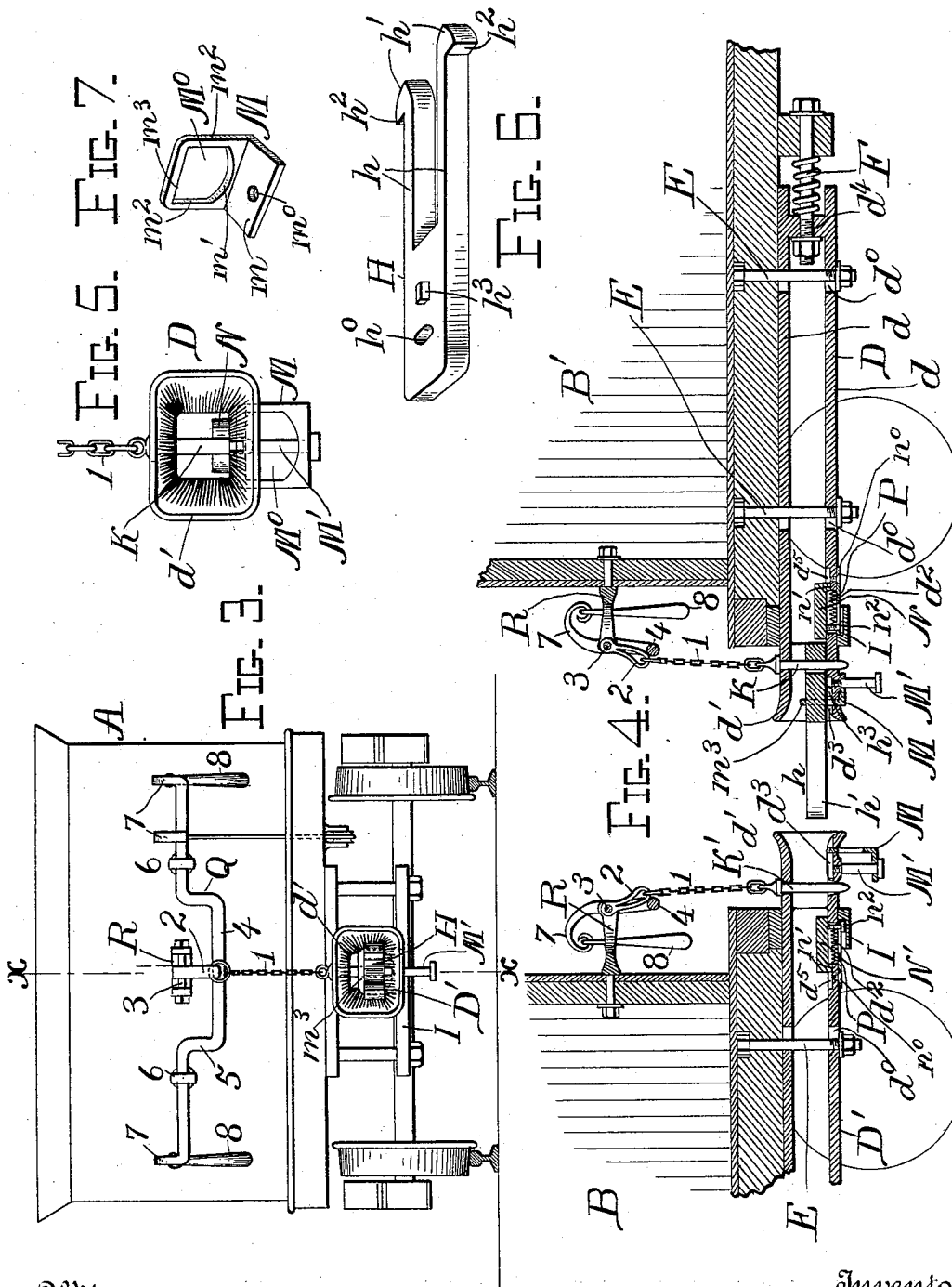
(No Model.)

2 Sheets—Sheet 2.

W. W. ROEHM & J. SCHWEITZER, Jr.
CAR COUPLING.

No. 507,932.

Patented Oct. 31, 1893.



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UNITED STATES PATENT OFFICE.

WILLIAM W. ROEHM AND JOSEPH SCHWEITZER, JR., OF AUGUSTA,
KENTUCKY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 507,932, dated October 31, 1893.

Application filed June 22, 1893. Serial No. 478,480. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM W. ROEHM and JOSEPH SCHWEITZER, Jr., citizens of the United States, residing at Augusta, in the county of Bracken and State of Kentucky, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to car couplings, and it consists of certain novel features hereinafter described and claimed.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters and figures throughout the several views.

Figure 1 represents a side elevation of a part of a locomotive, the tender attached thereto, and a part of the first car in a train, the tender and the car being provided with our improved car coupling. Fig. 2 represents a horizontal section through the drawhead above the link, and looking down. Fig. 3 represents a rear view of a car fitted with the improved coupler. Fig. 4 represents a central vertical section through two cars, and two car couplings, just before the cars come together for coupling. Fig. 5 represents a detail view of the front of one of the improved drawheads. Fig. 6 represents a perspective view of one of the improved links detached, and turned upside down; and Fig. 7 represents a perspective view of one of the improved link holders or guides.

A represents the tender attached to the locomotive on a railway train.

B and B' represent cars.

C represents the engineer's cab in rear of the locomotive.

D and D' represent drawbars which are made hollow and are preferably constructed with bell-shaped mouths d' , and two horizontal plates d , open at the sides, and connected together at the rear end by the cross piece d^4 . These drawbars are provided with slots d^0 , into which the supporting bolts E pass, the said slots are oblong as shown in Fig. 2 so that the drawbar may yield backward to buffing

strains. The drawbar is also slotted on its lower side as at d^2 , and has a groove d^3 cut in the upper side of the lower jaw of the bell-shaped mouth d' , for purposes hereinafter to be described.

F represents the tailbolt connecting the coupler and the car in the usual way.

H represents the link, which is bifurcated at its forward end as shown in Figs. 2 and 6. The legs h are arrow-headed as shown at h' , and have hooks h^2 on the outer sides of said heads.

The coupling pin K passes through the pin holes h^0 in the link, and the said pin hole is made somewhat wider than the pin K so that the link H may have a slight lateral play about the pin.

h^3 represents a guide lug on the bottom of the link, which engages in the groove d^3 in the drawbar, and so centers the link in said drawbar, rendering it more convenient to drop the coupling pin K into the pin hole h^0 .

M represents a link holder or guide having an upper part perforated as at M^0 and adapted to slide up and down through a slot set transversely in the bottom of the drawhead, and a lower portion m bent at right angles to the said upper portion, and provided with pin holes m^0 adapted to travel up and down on the stud M' projecting beneath the drawhead. The rear end of the link passes through the perforated upper portion M^0 and is held between the sides m^2 , and the top and bottom pieces m^3 and m' of the said guides.

I represents the carrier iron supporting the forward end of the drawhead, which may be constructed in the usual or in any other preferred way.

N and N' represent spring plungers having curved heads n , and guide lugs n' at the lower side of the rear end thereof engaging in the guide groove d^3 in the base of the drawbar. Projecting downward from these spring plungers, a guide screw n^2 engages in the slot d^2 in the bottom of the drawbar, and compressed between this screw n^2 and the rear face of the slot d^2 a spring P is provided. A plate n^0 is then secured over the bottom of the slot d^2 and keeps out dust cinders, and the like.

Q represents a bent lifting bar, and R represents the frame to which the arm for lifting the crank pin is pivoted.

1 represents a chain connecting the coupling pin to the arm 2 pivoted at 3 to the frame R, which arm is tripped by the portion 4 of the lifting bar, which portion is like a crank pin joined by the crank 5 to the straight parts of the bar which are journaled at 6, and provided at 7 with bent arms to which the handles 8 are attached.

9 represents a cord which passes over rollers 10, 11, and 12, on the tender as shown in Fig. 1, and terminates in a handle 13, by means of which the coupling pin may be lifted, and the cars uncoupled from the locomotive.

The operation of the device is as follows: Assuming that there is no link in either drawhead, the link H is put into one drawhead and through the perforation M⁰ in the guide plate M, being centered in the said drawhead by the guide lug h³ engaging in the groove d³. As soon as the pin K is in line with the hole h⁰ the said pin is dropped and the coupler is ready for coupling, as shown in Fig. 4. Now the various parts being in the position shown in Fig. 4, if the cars come together, the two heads h' of the link will enter the drawbar D', and will be swung together somewhat by the contracting sides of the drawhead, striking the rounded face n of the spring plunger N', pressing it backward. As soon as the hooks h² have passed beyond the closed sides of the drawhead, they will spring out into the position shown in Fig. 2, and at the same time the head n of the plunger N' will spring forward between the two heads h', locking them in position, and preventing them from being shaken loose. Should it be desired to uncouple, the pin K is lifted, either by one of the handles 8, or by the handle 13 and cord 9, and the closed end of the link is readily drawn out of the drawbar, leaving the bifurcated end still locked in position. As soon as the link is drawn out of either one of the drawbars, the link guide M falls down into the position shown in Fig. 5, where it is out of the way and not likely to be injured should one of the ordinary forms of link be forced into the drawbar as in coupling on another car. Should it be desired to remove the link H' when it is locked in the drawbar by means of the hooks h², but after the other drawbar has been detached therefrom, this may be readily done by the train hand who inserts one hand in the mouth of the drawhead, raises the link so as to clear the plunger, he then draws the link straight back over the plunger and through the open sides of the drawhead.

It will be evident that the herein described coupling will operate automatically, and that there is no necessity for anyone to go between the cars at or near the time of coupling them together.

Owing to the resilient nature of our im-

proved link, the herein described coupler is especially adapted for coupling on curves.

The various advantages of the improved coupler would readily suggest themselves to any one skilled in the art.

It will be obvious that many modifications might be made which could be used without departing from the spirit of our invention.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In a car coupling, the combination with a link provided with a pin hole near the rear end thereof, and two legs made of resilient material and terminating in tapering heads and hooks at the front end of said link, of a drawhead and coupling pin connected to the rear end of said link; and a draw-bar with an open bell-mouthed drawhead and lateral openings in rear of said drawhead, substantially as and for the purposes described.

2. In a car coupling, the combination with a drawbar provided with an open bell-mouthed drawhead and a guide groove in the lower jaw of said bell mouth, of a link provided with a pin hole near the rear end thereof, a guide lug on the lower side of said link adapted to engage in said guide groove, and two legs made of resilient material and terminating in tapering heads and hooks at the front end of said link, of a drawhead and coupling pin connected to the rear end of said link; and a drawbar with an open bell-mouthed draw head and lateral openings in rear of said drawhead, substantially as and for the purposes described.

3. In a car coupling, the combination with a drawbar provided with an open bell-mouthed drawhead and lateral openings in rear of said drawhead, of a bifurcated link having legs made of resilient material with hooked ends to said legs adapted to spring out through said lateral openings and to engage in rear of said drawhead, and a spring plunger in rear of said drawhead and adapted to be pressed back by said hooked ends until they spring outward and then to be pressed forward between the said hooked ends and lock the same, substantially as and for the purposes described.

4. In a car coupling, the combination with a link provided with a pin hole near the rear end thereof, and two legs made of resilient material and terminating in tapering heads and hooks at the front end of said link, of a drawhead and coupling pin connected to the rear end of said link; and a drawbar with an open bell-mouthed drawhead and lateral openings in rear of said drawhead, and a spring plunger in rear of said drawhead and adapted to be pressed back by said hooked ends until they spring outward and then to be pressed forward between said hooked ends and lock the same, substantially as and for the purposes described.

5. In a car coupling, the combination with a drawbar provided with an open bell-mouthed

drawhead and a guide groove in the lower jaw of said bell mouth, of a link provided with a pin hole near the rear end, a guide lug on the lower side of said link adapted to engage in said guide groove, and two legs made of resilient material and terminating in tapering heads and hooks at the front end of said link, of a drawhead and coupling pin connected to the rear end of said link; and a drawbar with an open bell-mouthed drawhead and lateral openings in rear of said drawhead, and a spring plunger in rear of said drawhead and adapted to be pressed back by said hooked ends until they spring outward and then to be pressed forward between said hooked ends and lock the same, substantially as and for the purposes described.

6. In a car coupling, the combination with a link provided with a pin hole near the rear end thereof, and two legs made of resilient material and terminating in tapering heads and hooks at the front end of said link, of a drawhead and coupling pin connected to the rear end of said link; a transverse slot in the base of said drawhead, a guide plate M perforated as at M⁰ and moving vertically in said slot; and having a bent arm *m* with pin hole *m*⁰; a stud M' attached to said drawhead and engaging in said pin hole *m*⁰; and a drawbar with an open bell-mouthed drawhead and lateral openings in rear of said drawhead, substantially as and for the purposes described.

7. In a car coupling, the combination with a drawbar provided with an open bell-mouthed

drawhead and a guide groove in the lower jaw of said bell mouth, a transverse slot in the base of said drawhead, a guide plate M perforated as at M⁰ and moving vertically in said slot, and having a bent arm *m*, with pin hole *m*⁰; a stud M' attached to said drawhead and engaging in said pin hole *m*⁰; of a link provided with a pin hole near the rear end thereof, a guide lug on the lower side of said link adapted to engage in said guide groove, and two legs made of resilient material and terminating in tapering heads and hooks at the front end of said link, of a drawhead and coupling pin connected to the rear end of said link; and a drawbar with an open bell-mouthed drawhead and lateral openings in rear of said drawhead, substantially as and for the purposes described.

8. In a car coupling, a pin lifting device comprising a bent bar Q pivoted at 6, and having projecting portion 4, bent portions 5, arms 7, and handles 8; an arm R projecting from the car and pivoted at 3, a chain 2 connecting said pivoted arm and the coupling pin, and a cord 9, pulleys 10, 11, and 12, and handle 13, substantially as and for the purposes described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM W. ROEHM,
JOSEPH SCHWEITZER, JR.

Witnesses:

L. P. KNOEDLER,
JOHN M. HARBESON.