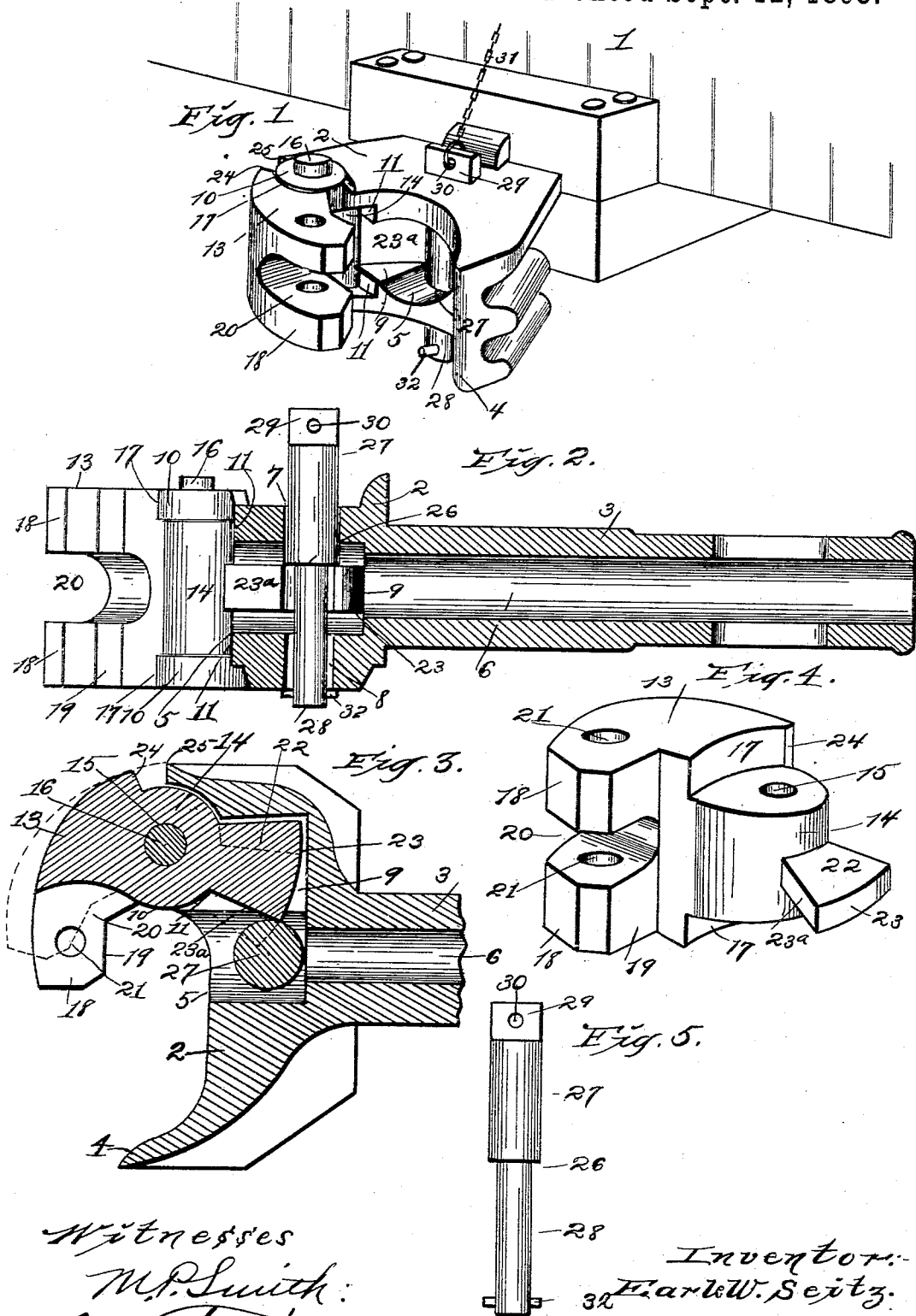


(No Model.)

E. W. SEITZ.
CAR COUPLING.

No. 504,759.

Patented Sept. 12, 1893.



Witnesses
M. P. Smith:
G. H. Thorpe.
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E. W. Seitz.
By Higdon & Higdon Attys

UNITED STATES PATENT OFFICE.

EARLE W. SEITZ, OF KANSAS CITY, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 504,739, dated September 12, 1893.

Application filed January 6, 1893. Serial No. 457,511. (No model.)

To all whom it may concern:

Be it known that I, EARLE W. SEITZ, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in automatic car-couplers, and more particularly to that class of car-couplers known as swinging or pivotal jaw couplings, and my object is to provide a car-coupling which is simple, strong, durable and inexpensive of construction, and which is very effective of operation.

To the above purposes, my invention consists in certain peculiar and novel features of construction and arrangement, as will be fully described and claimed hereinafter.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, represents a perspective view of the lower end of a car, and showing my improved car-coupling applied thereto in operative position. Fig. 2, represents a central vertical longitudinal sectional view of the car-coupling, and showing the pin thereof in its elevated or unlocked position. Fig. 3, represents a central horizontal sectional view of the draw-head, in its locked position. Fig. 4, represents a perspective view in detail of the swinging jaw. Fig. 5, represents a perspective view in detail of the coupling pin used in my improved car-coupling.

In the drawings, 1 designates the end of a car, of any suitable construction, to which my car-coupling is attached.

2 designates the draw-head, which is of approximately pentagon-shape in plan view, and 3 designates the draw-bar, which is secured beneath the car in the usual manner. The draw-head is extended at one side, for a suitable distance, to form a guiding arm or flange 4, for the swinging or pivoted jaw of an opposing draw-head, and has formed in its forward side and centrally thereof, the longitudinally extending and cylindrical channel or recess 5, which communicates at its rear end with the passage 6 of the draw-bar.

The draw-head is further provided with vertically aligned pin-holes or openings, the upper hole or opening 7, being preferably of greater diameter than the lower pin-hole or opening 8.

Located on the opposite side of the recess 5, from the guiding arm or flange 4, and communicating centrally with said recess 5, is a horizontal recess 9, which is of less vertical depth than said recess, and which extends for a suitable distance toward the outer wall of the draw-head.

Projecting forwardly from the front side of the draw-head, at the upper and lower sides of the recess 9, are the vertically aligned and segmental arms or shoulders 10—10; the outer sides of these segmental arms or shoulders, project a slight distance above and below the upper and lower surface of the draw-head, preferably as shown, and the inner sides of said arms or shoulders, extend to within a suitable distance of the upper and lower margins of the recess 9, forming shoulders 11—11 at the forward margins of said recess, which are preferably concentric to the axis of the segmental arms or shoulders 10—10. The arms or shoulders 10—10 are provided with axially and vertically aligned holes or openings. A swinging jaw, 13, is provided with a vertically extending segmental hub or shoulder 14, which is provided with an axial passage 15, and this shoulder 14 is adapted to fit between the inner sides of the arms or shoulders 10—10 of the draw-head, and a pivot pin 16, passing through the aligned and vertical openings of the said shoulders 10, and the opening 15 of the hub 14, secures their pivotal connection. This swinging or pivotal jaw 13, is of greater vertical thickness than the hub or shoulder 14, and the rear margins 17 thereof, projecting beyond the upper and lower surface of said hub or shoulder, are adapted to fit snugly against the forward ends of these segmental shoulders 10—10 of the draw-head. The opposite end of the swinging jaw is curved forwardly and inwardly, to form a coupling hook 18, the inner side of which is flattened at 19. The hooked end 18 of the swinging-jaw is bifurcated or recessed at 20, and is provided with the vertically aligned openings 21—21.

Projecting rearwardly and centrally from

the hub or shoulder 14, is a horizontal supporting leg or arm 22, which is adapted to fit snugly in the recess 9 of the draw-head and the rear margin 23 of the said leg or arm is formed concentric to the axis of the hub 14, and at the inner radial side of said supporting leg, is formed the abrupt vertical face 23^a. At the outer side of the swinging jaw 13, a vertical shoulder 24 is formed which is adapted to come in contact with the vertical shoulder 25 of the drawhead, when the device is in its unlocked position. The cylindrical coupling pin is diametrically decreased in size at a point midway of its length or thereabout, forming the annular and circular shoulder 26, which rests when the device is in its unlocked position, upon the supporting leg 22 of the swinging jaw 13, (as shown in Fig. 2) and the upper or larger portion 27 of the pin passes through the opening 7, and the lower and smaller portion of the pin passes through the smaller opening 8 of the draw-head. The upper end of the coupling pin is provided with the usual head 29, having an aperture or hole 30, to which is attached the lower end of a chain 31, which may be connected in the usual manner to transverse rock-shafts upon the car, and also to a hand ring upon the roof of the car, so that the coupling pin may be raised by an operator upon the roof or upon the ground at either side of the car. The radial distance from the axis of the swinging coupling jaw to the periphery of the supporting leg is such, that when the coupling-pin is in its elevated position and the car is uncoupled, the periphery of the supporting leg is in frictional contact with the smaller portion 28 of the coupling-pin, as illustrated in Fig. 2, and when the coupling jaw is locked and the pin is down, the larger portion 27 of the coupling pin prevents the supporting leg from further movement, and therefore the uncoupling of the cars, as illustrated in Fig. 3. When the cars are uncoupled, the coupling pin is elevated and the annular shoulder 26, rests upon the upper surface of the supporting leg of the swinging coupling jaw, as illustrated in Fig.

2. When the cars come together, the coupling jaws are caused to swing inwardly (frictionally revolving the coupling pin) until the supporting leg is disengaged from the shoulder 26, and the pin descends until the head 29 thereof comes in contact with the top of the draw-head, and the larger portion 27 of the coupling-pin is opposite the supporting leg of the swinging jaw, and thus prevents the said coupling jaw from moving to its original or unlocked position. A key or pin 32 is passed through the lower end of the coupling-pin, which projects a suitable distance below the under side or bottom of the draw-head, to prevent the entire removal or the lifting of the pin too high, when uncoupling the cars.

The car coupling described, may be used in connection with the ordinary pin and link type when necessary, by reason of the recess 20, and openings 21.

From the above description, it will be seen that I have produced a simple and thoroughly efficient car-coupling, and which is also inexpensive and durable of construction.

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

In a car-coupling, the combination with a drawhead, having a longitudinally extending cylindrical recess 5, the recess 9 at one side of and communicating with the cylindrical recess 5, and forwardly projecting segmental shoulders 10, with a pivotal locking jaw, having a cylindrical hub 14, pivoted to move laterally between the shoulders 10 of the draw-head and the forwardly and inwardly extending hooked end 18, and the rearwardly and horizontally extending supporting leg 22, adapted to engage the coupling pin and the recess 9 of the drawhead, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

EARLE W. SEITZ.

Witnesses:

M. P. SMITH,

G. Y. THORPE.