

No. 861,414.

PATENTED JULY 30, 1907.

F. H. WENDT.
CAR COUPLING.

APPLICATION FILED OCT. 19, 1906.

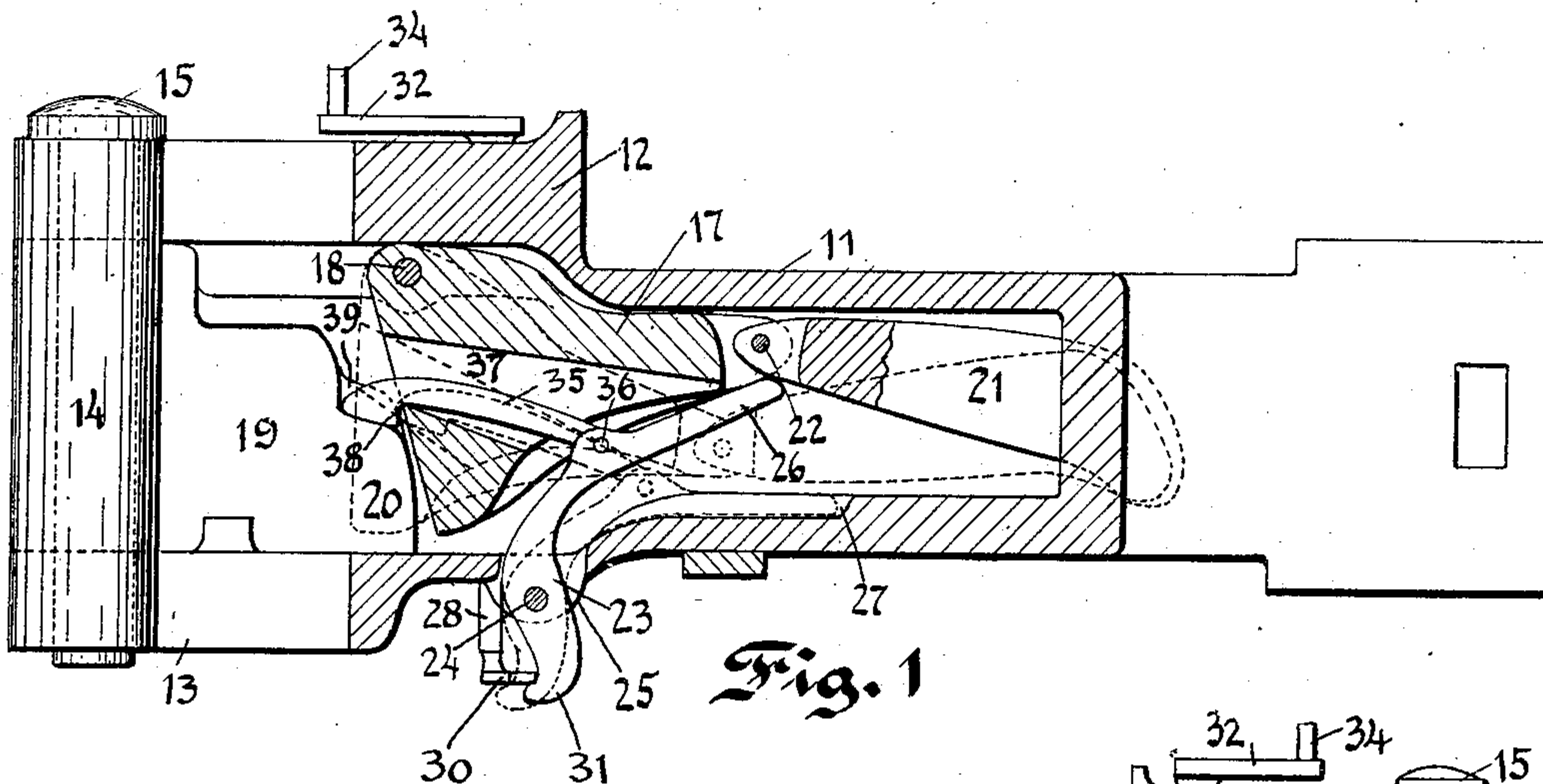


Fig. 1

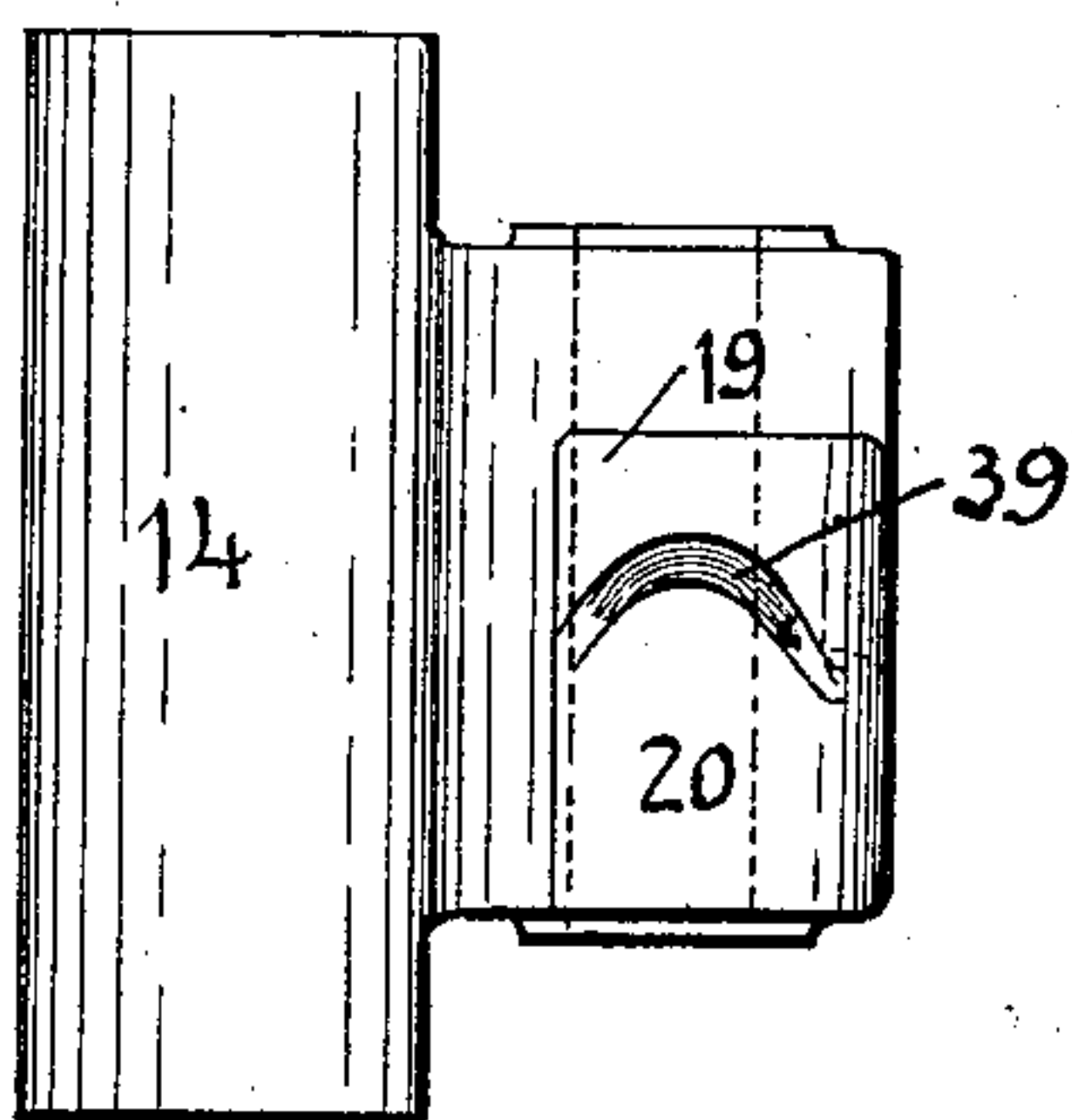


Fig. 2

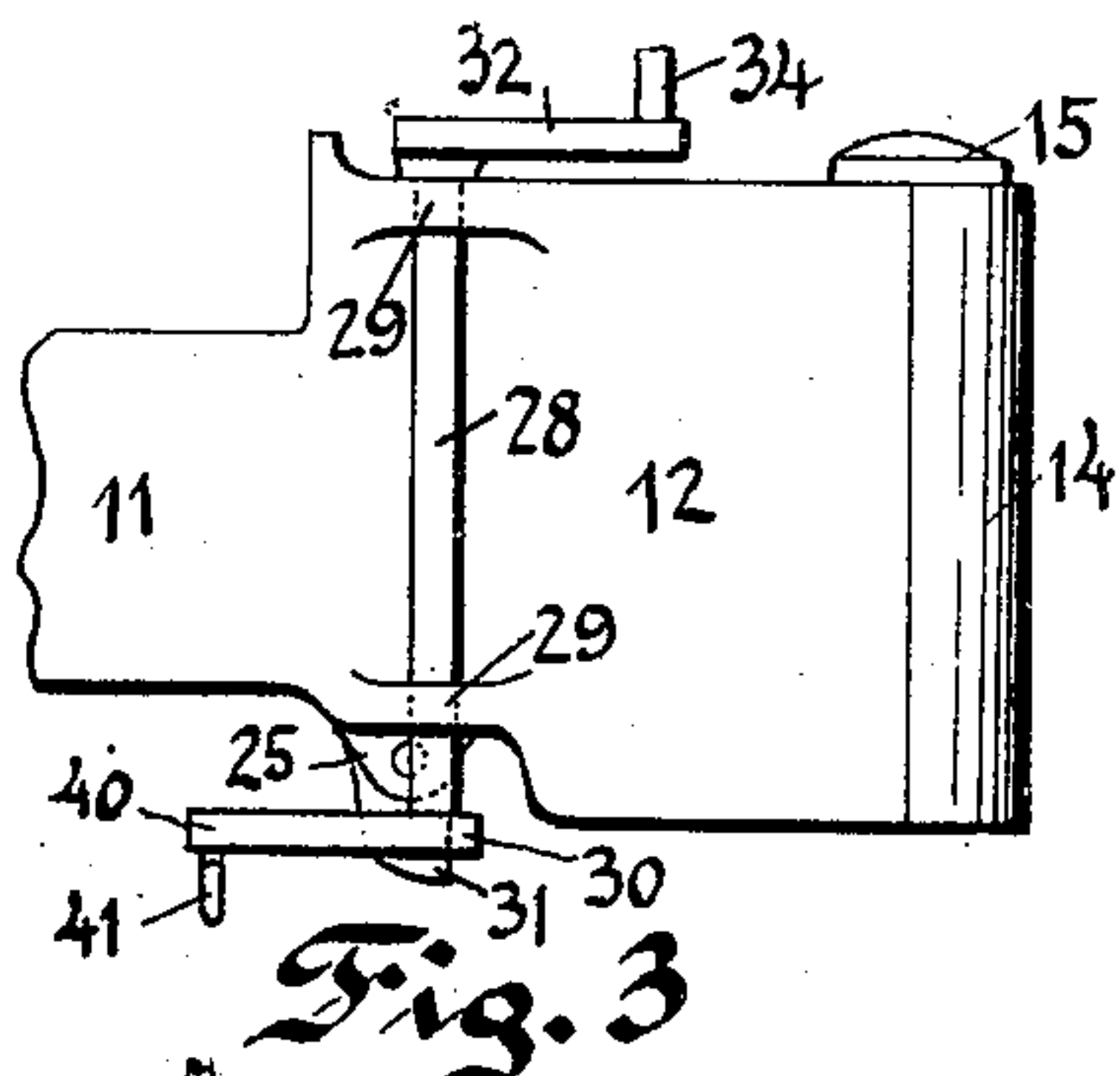


Fig. 3

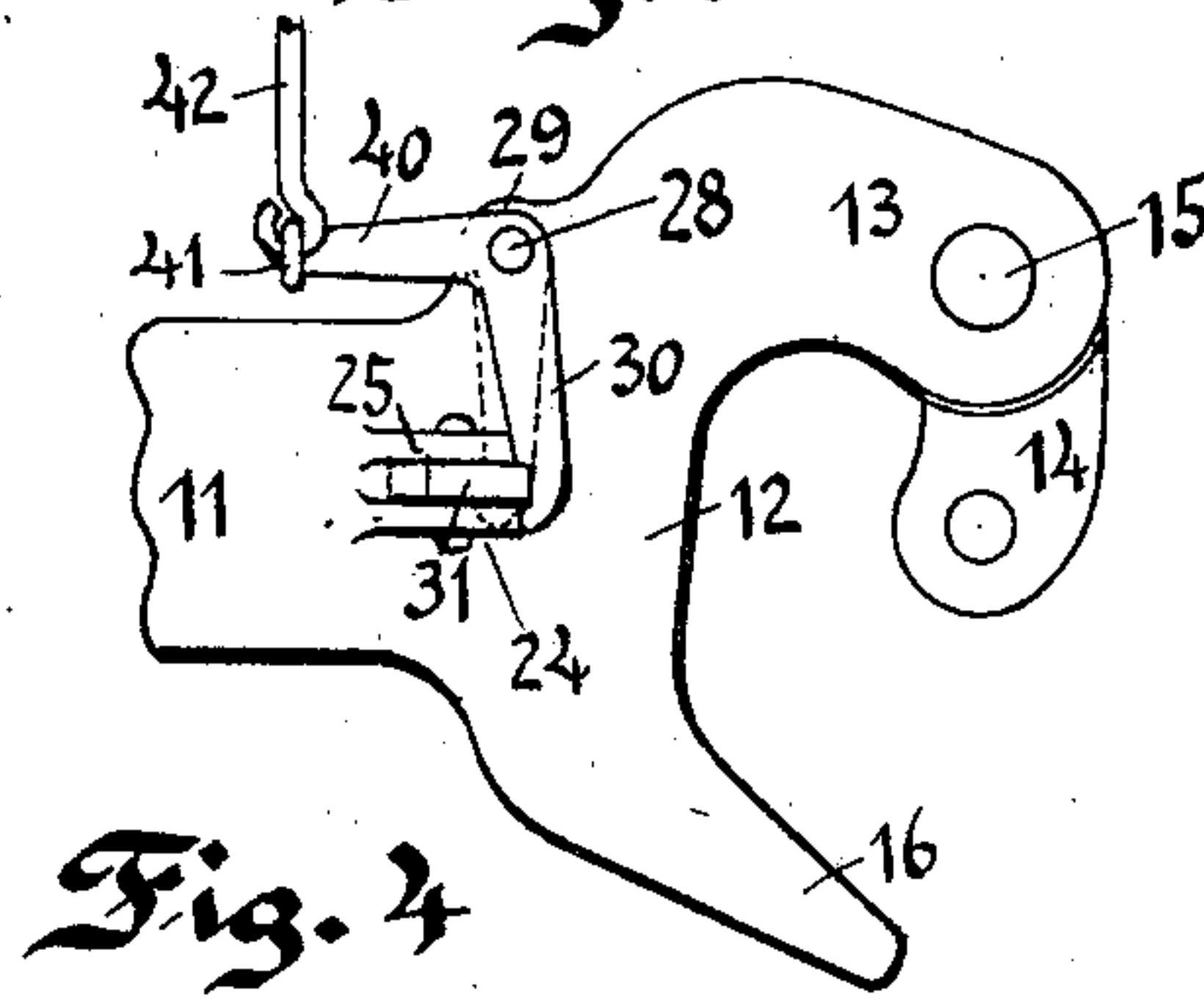


Fig. 4

Witnesses

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CAR-COUPLING.

No. 861,414.

Specification of Letters Patent.

Patented July 30, 1907.

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To all whom it may concern:

Be it known that I, FRED H. WENDT, of Marshfield, Wisconsin, have invented a Car-Coupler, of which the following is a specification.

5 This invention relates to car couplers of the automatic type having a pivoted knuckle which acts as the engaging element.

The object of my present invention is to construct an improved form of the coupler described and claimed in
10 my United States Letters Patent # 369,324, issued December 19, 1899.

The most important improvement in my new form of coupler consists in the lock-setting device, which is automatically unset when the coupler is opened, leaving the locking-block free to engage the heel of the
15 knuckle when the latter is closed.

Another feature of my present invention consists in providing the locking-block with an extra or additional weight, which acts to hold it down and prevent the
20 block from working up so as possibly to free the knuckle by the friction which takes place between the parts.

Another feature of my present invention consists in the novel means of unlocking the coupler, by which I dispense with pin devices, and use only a lever device.

25 My novel construction is illustrated in the accompanying drawings wherein

Figure 1 is a side elevation of the coupler, having part of the side wall broken away to show the interior mechanism, and the locking-block and weight shown
30 partly in section. Fig. 2 is an elevation of the knuckle from the inside, that is to say, in a plane at right angles to that of Fig. 1, looking toward the left. Fig. 3 is a side elevation of the drawhead from the side of the coupler opposite to that of Fig. 1. Fig. 4 is a bottom
35 plan view of the same.

In these drawings every reference numeral refers always to the same part.

The body of the coupler is designated 11, and is of the ordinary form, having a draw-head 12 provided
40 with a jaw 13, to which is pivoted the knuckle 14 by means of a pin 15, and a cooperating jaw 16 on the opposite side. The body 11 is hollow interiorly, and in it is pivoted the triangular locking-block 17 upon a transverse pin 18, substantially as described in my aforesaid
45 patent. The lower front corner of the block 17 engages the heel 19 of the knuckle 14, or rather an extension 20 thereof, and when tilted into the raised position shown in full lines in the drawing clears the extension 20 and frees the knuckle. To aid in holding the locking-
50 block down and prevent it from working up by the slight rubbing action between the knuckle and locking-block, I may, if desirable, add the weight 21, which is pivoted to the rear end of the block by a pivot-pin 22, the weight 21 being amply sufficient to hold the lock-
55 ing-block depressed against any possible tendency to rise, and it will be seen, furthermore, that the raising

of the locking-block involves not only raising the weight 21, but also pushing it rearwardly, and it therefore acts as a sort of toggle which is in straightened position. 60

Instead of releasing the locking-block by a pin raised from the top, as shown in my former patent, I provide means for raising it from the lower side, this means consisting of an angular lever 23 pivoted on a pin 24 in ears 25 immediately below the locking-block; 65 the horizontal arm 26 of this lever extending along the bottom of the inner chamber of the coupler, and being preferably set in a recess 27 thereof. This lever when tilted into the position shown raises the locking-block by the arm 26 acting upon the rear end thereof, and 70 this tilting movement may, within the scope of my invention, be accomplished in various ways, but I have herein shown as a convenient means therefor a rock-shaft 28 pivoted on the back side of the draw-head in pivot lugs 29, and having on its lower end an 75 arm 30 which engages in the depending arm 31 of the lever 23, and the upper end of the shaft 28 is provided with an arm 32 and a pin 34. The arm 32 may be set in any convenient position, and when set in the position shown the coupler may be opened by simply 80 pushing against the pin 34 with a stick or other object, which does not necessitate close approach to the coupler. The shaft 30 is also provided with an arm 40 having an eye 41 in which engages a draw-rod 42 leading to the side of the car. 85

The lock-setting device consists of a hooked pawl or catch 35, which is pivoted to the lever 23 on the pin 36 about half way up the arm 26 thereof, said pawl moving in the recess 37 cored in the center of the locking-block. When in the lowered position shown 90 in dotted lines, this pawl is entirely within the said recess, but when raised is projected forward by the tilting movement, at the same time that the locking-block is tilted rearwardly, until the shoulder or hook 38 thereof engages over the front edge of the recess 37 95 as shown, whereby the locking-block is maintained in lock-set position. In this position it lies in the path of the upper edge of the extension 20, which, as indicated in Fig. 2, has a rounded cam-face 39, which as the knuckle opens strikes the end of the pawl 35, and 100 raises it until it disengages the edge of the recess 37, and thereby the locking-block is released, and all the parts fall back into the locking-position, as soon as the knuckle is fully opened. In closing, the knuckle simply strikes the front edge of the locking-block and 105 opens it in the usual manner. Should the lock-setting device accidentally become set after the knuckle is open, by any unnecessary movement to release the knuckle after it is opened, then in closing the inner end (that on the right of Fig. 2) of the cam-face 39 110 strikes the pawl 35 and disengages it from the locking-block in the same manner as before.

While I have hereinabove described the preferred form of my invention, I wish it understood that I do not limit myself to anyone of the particular features thereof, and I fully realize that it is capable of numerous modifications without departing from the principle thereof, and I consider such modifications and omissions may be made without departing from the principle of my invention.

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

1. A car-coupler comprising, in combination, a draw-head having an interior hollow chamber, a knuckle pivoted thereon and having a heel, a generally triangular locking-block pivoted on a transverse axis in position to engage said heel when in its lowered position and disengage it when in raised position, and a lever mounted on the underside of said draw-head and having a depending arm outside and a rearwardly extending horizontal arm inside the draw-head, whereby said locking-block is raised to release the knuckle when said depending arm is moved rearwardly.

2. A car-coupler comprising, in combination, a draw-head having an interior hollow chamber, a knuckle pivoted thereon and having a heel, a generally triangular locking-block pivoted on a transverse axis in position to engage said heel when in its lowered position and disengage it when in raised position, and a hooked pawl moving in a recess in said locking-block and adapted to engage said block with the hook thereof and hold it raised.

3. A car-coupler comprising, in combination, a draw-head having an interior hollow chamber, a knuckle pivoted thereon and having a heel, a locking-block pivoted on a transverse axis in position to engage said heel when in its lowered position and disengage it when in raised position, and a pawl attached to a part of said coupler other than said locking-block and adapted to catch and hold said locking-block when raised; the end of said pawl being when in a lock-setting position in the path of the upper edge of the heel of said knuckle, and the latter being adapted to move said pawl to disengage the locking-block.

4. A car-coupler comprising, in combination, a draw-head having an interior hollow chamber, a knuckle pivoted thereon and having a heel, a generally triangular locking-block pivoted on a transverse pin at its upper front corner within said chamber, said locking-block being in position to engage said heel, means mounted on the underside of said draw-head and adapted to be actuated from the outside to raise said locking-block, and a hooked pawl mounted on said means and adapted to engage said locking-block and hold it in raised position.

5. A car-coupler comprising a draw-head having an interior chamber, a pivoted knuckle mounted thereon, a generally triangular locking-block in said chamber pivoted upon a transverse pin on its upper front corner, an uncoupling lever pivoted on a transverse pin on the under side of said draw-head and having a rearwardly extending arm adapted to raise said locking-block, and a shouldered pawl pivotally mounted on said arm and moving in a recess in the interior of said locking-block and extending through the latter when said locking-block is raised and engaging the edge of the block to hold it in raised position.

6. A car-coupler comprising a draw-head having an interior chamber, a pivoted knuckle mounted thereon a generally triangular locking-block in said chamber pivoted upon a transverse pin on its upper front corner, an un-

coupling lever pivoted on a transverse pin on the under side of said draw-head and having a rearwardly extending arm adapted to raise said locking-block, and a shouldered pawl pivotally mounted on said arm and moving in a recess in the interior of said locking-block and extending through the latter when said locking-block is raised and engaging the edge of the block to hold it in raised position; said heel having a cam-faced upper edge adapted to engage and push up said pawl to cause it to release said locking-block, when said knuckle is turned in or out.

7. A car-coupler comprising, in combination, a draw-head having an interior chamber, a knuckle pivoted thereon and having a heel, a generally triangular locking-block pivoted in said chamber upon a transverse pin at the upper front corner thereof, a lever pivotally mounted on the underside of said draw-head, and having a horizontal rearwardly extending arm on the lower side of said chamber, the other arm of said lever depending outside of said draw-head, and a bell-crank lever mounted on the outside of said draw-head and having one arm adapted to strike and move said lever and the other arm adapted to be actuated to move said bell-crank lever.

8. In combination with a car-coupler comprising a draw-head, a knuckle pivoted thereto, and a locking-block pivotally mounted within said draw-head, a weight pivoted to the rear or free end of said locking-block.

9. A car-coupler comprising, in combination, a draw-head having an interior chamber, a knuckle pivoted thereon and having a heel, a generally triangular locking-block pivotally mounted in said chamber upon a transverse pin at the upper front corner thereof and adapted to engage said heel, and a weight pivotally connected with the rear end of said locking-block.

10. A car-coupler comprising in combination a draw-head having an interior hollow chamber, a knuckle pivoted thereon and having a heel, a locking-block pivoted on a transverse axis in position normally to engage said heel, the front face of said locking-block being substantially vertical and the axis adjacent thereto whereby the tilting of said locking-block about its axis causes said front face to recede backward in a nearly horizontal arc out of the path of said heel, and means applied to the under side of said draw-head at the rear of said axis and having an upward movement for tilting said locking-block as aforesaid.

11. A car-coupler comprising in combination a draw-head having an interior hollow chamber, a knuckle pivoted thereon and having a heel, a locking-block pivoted on a transverse axis in position normally to engage said heel, the front face of said locking-block being substantially vertical and the axis adjacent thereto whereby the tilting of said locking-block about its axis causes said front face to recede backward in a nearly horizontal arc out of the path of said heel, means for tilting said locking-block as aforesaid, and a pawl permanently connected with a part of the coupler other than said locking-block and arranged to catch the latter when tilted to withdraw the front face thereof from the path of said heel and to hold it in said tilted position; said pawl having a part projecting in the path of the heel of said knuckle and arranged to be moved by the latter in opening to disengage the locking-block and allow it to resume its normal position.

In witness whereof I have hereunto signed my name in presence of two witnesses.

FRED. H. WENDT.

Witnesses:

CHARLES HAHN,
ELI CROTTEAN.