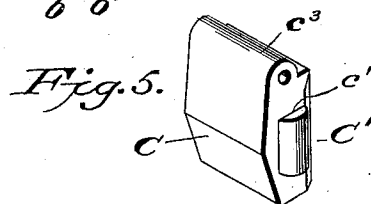
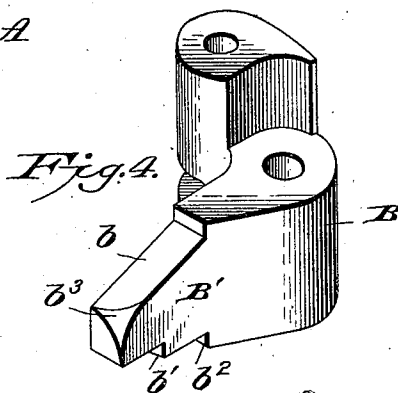
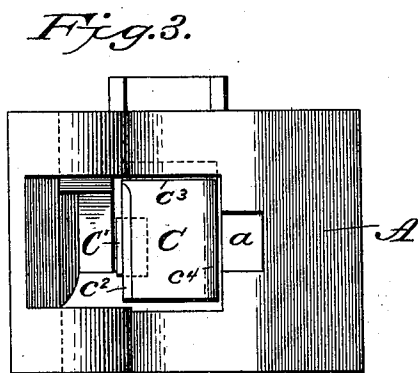
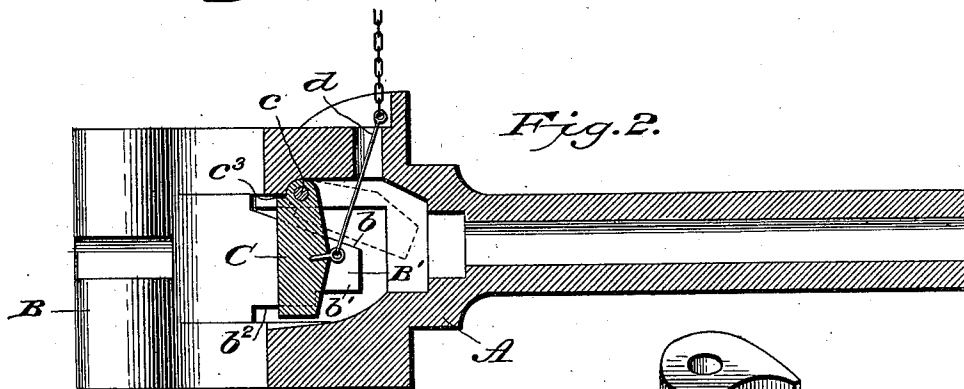
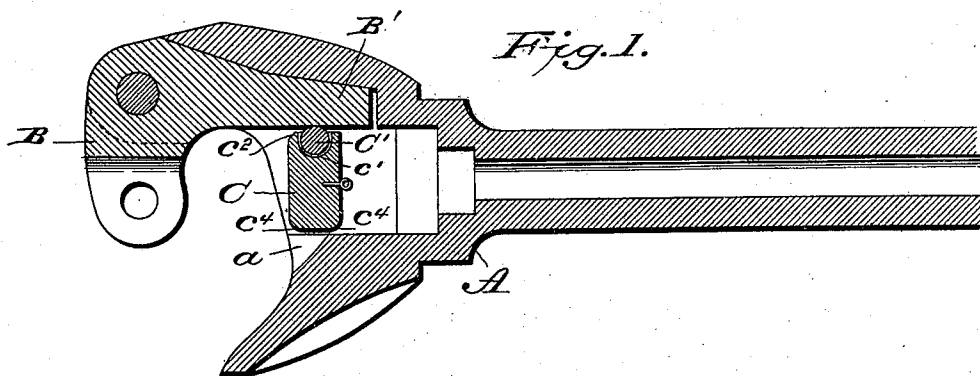


(No Model.)

C. F. BAKE.
CAR COUPLING.

No. 574,233.

Patented Dec. 29, 1896.



WITNESSES
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UNITED STATES PATENT OFFICE.

CYRUS F. BAKE, OF FULLERTON, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 574,233, dated December 29, 1896.

Application filed October 22, 1896. Serial No. 609,643. (No model.)

To all whom it may concern:

Be it known that I, CYRUS F. BAKE, a citizen of the United States of America, residing at Fullerton, in the county of Nance and State of Nebraska, have invented certain new and useful Improvements in Car-Couplings; and I 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to car-couplings of the style known as the "Master Car-Builders'" type, sometimes designated as "twin-jaw;" and it consists in certain details of construction, hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a horizontal sectional view of a car-coupling constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a front elevation, the knuckle being removed. Fig. 4 is a detail perspective view of the knuckle. Fig. 5 is a detail perspective view of the pivoted vertical latch.

A designates the draw-head, which is connected to the car body or frame in the usual manner and is provided at its forward end with a projection to which the knuckle B is pivoted. The upper edge *b* of the operating-arm B' of the knuckle B is inclined downward, so that the end will strike lower down on the vertical latch C, hereinafter described, and enable it to more easily raise said latch. This inclination also allows the end of the operating-arm to pass under the latch and only raise it a short distance up and back out of its vertical position. The upper and lower edges of the operating-arm are notched, as shown at *b*¹ and *b*², and one of the upper corners is beveled or rounded, as shown at *b*³, to present a curved surface that will impinge against the latch in passing under the same. The inner part of the draw-head is so constructed that when the knuckle is swung to a closed and locked position the end of the arm thereof will lie within a recess, and one side of the mouth of said draw-head is pro-

vided with an opening or recess *a*, through which the reduced end of the arm passes.

It will be here noted that the arm of the knuckle, when the latter is closed, bears against the draw-head for only a short distance of its length and that the bottom of the chamber in said draw-head is curved or inclined downward toward the mouth to prevent accumulation of dirt or other matter that would affect the proper operation of the coupling.

C designates the vertical latch, which is pivoted in the upper part of the draw-head upon a transverse pin *c*, and with this latch the end of the arm B' engages when the knuckle is swung upon its pivot in coupling the cars. This latch is provided in its edge which adjoins the recess or seat for the arm B' with a recess *c*, in which is journaled a roller C', said roller projecting slightly beyond the latch that it may engage the operating-arm, and the edge of the latch in front of this roller is beveled, as shown at *c*².

By providing the roller C' and beveled or rounded edges *c*² and *c*⁴ it will insure the prompt falling of the latch, and being present less exertion will be required to lift the latch when the coupling is made and the arm is in engagement therewith. The latch is also provided with a shoulder *c*³ in front of its pivot; and this shoulder contacts with the upper part of the draw-head to prevent said latch from swinging too far forward by limiting such movement.

To the latch C is connected a rod *d*, that extends through an opening in the draw-head, as shown, and may be connected to any suitable means for lifting or operating the latch. The rod may be operated by the mechanism shown in my prior patent, dated February 18, 1896, and numbered 554,970.

In operation as the knuckle is closed in coupling the cars the rounded or beveled corner *b*³ of the operating-arm B' will strike against the outer face of the latch C and lift said latch to permit the arm to pass beyond the same, and when said latch falls to its vertical position the smooth face of the operating-arm will engage the roller C', and thus permit the latch to be easily raised in uncoupling the cars. When the operating-arm B' is swung, the end of said arm which is reduced

by the cut-away portions forming the notches b' and b^2 will lie within the recessed side of the draw-head, the end of said arm being positioned rear of the latch. The second notch b^2 has its vertical wall on a line with the vertical wall adjoining the inclined portion b , so that the bearing-surfaces of the coupling-arm in the draw-head will be equal at the top and bottom.

It will be noted that when the cars are coupled the latch effectually covers the opening or mouth of the draw-head and that a very long operating-arm is permissible by providing the recess a in the mouth of the draw-head.

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

1. The combination in a car-coupling, of the draw-head having a chamber with a forwardly-inclined bottom and a mouth with a recess or opening a in one side; a knuckle presenting an operating-arm having the upper edge b inclined downward; together with a pivoted vertical latch C , and a roller C' journaled in said latch to be engaged by the operating-arm of the knuckle, substantially as shown and for the purpose set forth.

2. The combination, in a car-coupling, of the draw-head having a chamber with a recess in one side and a mouth with an opening a opposite said recess; a knuckle presenting an operating-arm B' having an upper inclined

edge, and a rounded corner; together with a pivoted vertical latch C having a beveled forward edge c^2 and a recess c' adjoining the same, and a roller C' journaled in said recess to engage the operating-arm, the parts being organized substantially as shown and for the purpose set forth.

3. The combination with the draw-head having a knuckle pivoted thereto, of the vertical latch C pivoted in the draw-head and provided with a shoulder c^3 at its upper end, a rounded corner c^2 , and a recess c' in one edge; and a roller C' journaled in said recess to bear against the operating-arm of the knuckle when the latch is being raised, substantially as shown and for the purpose set forth.

4. The combination with the draw-head having a knuckle pivoted thereto, of the vertical latch C pivoted in the draw-head and provided with a shoulder c^3 , a rounded edge c^4 , a rounded corner c^2 , and a recess c' ; together with a roller C' journaled in said recess to bear against the operating-arm of the knuckle when the latch is being raised, substantially as shown and for the purpose set forth.

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

CYRUS F. BAKE.

Witnesses:

E. S. BAILEY,
J. F. STORCH.