

(No Model.)

U. N. STRICKLER.

CAR COUPLING.

No. 368,738.

Patented Aug. 23, 1887.

Fig. 1.

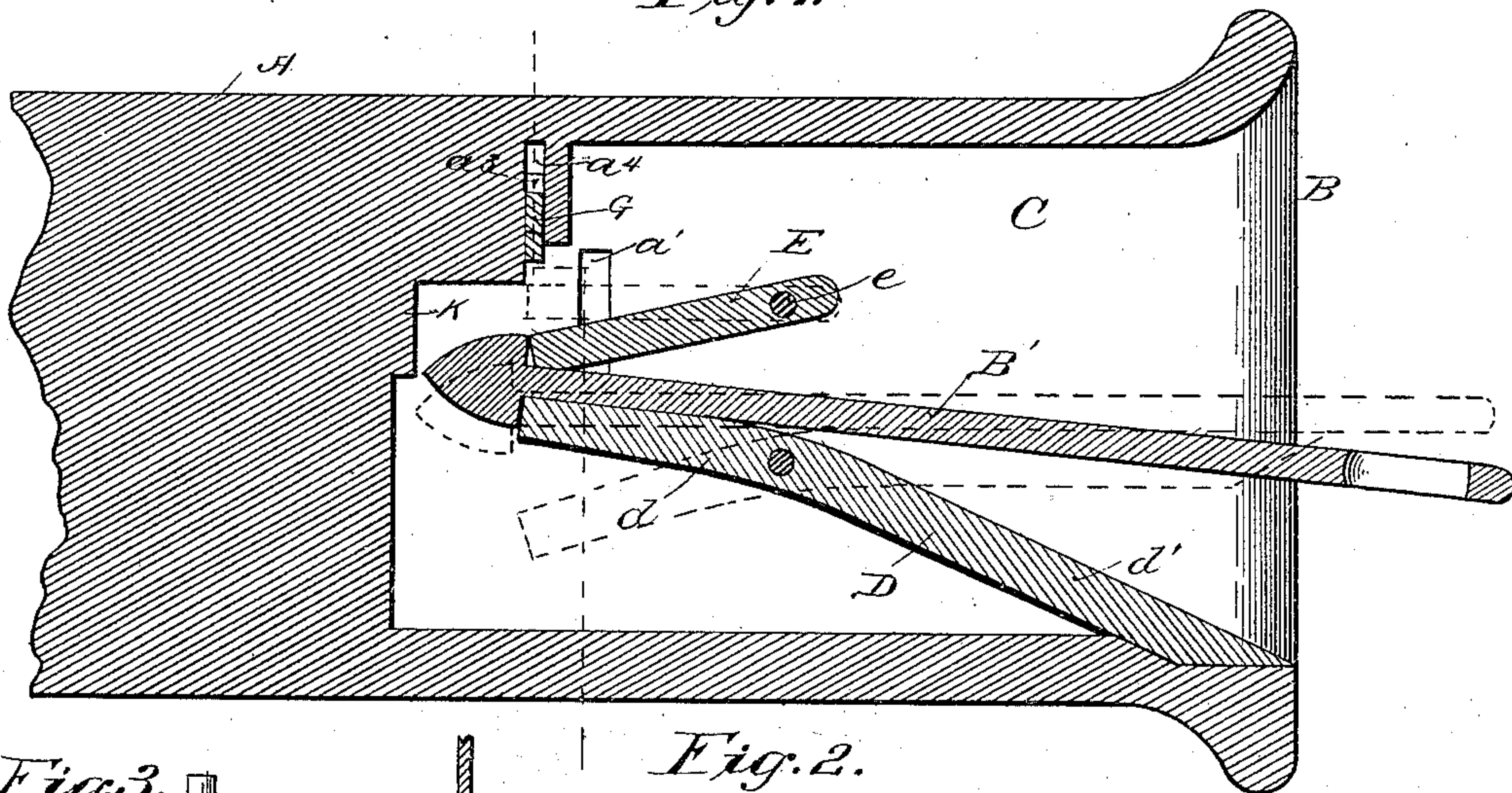


Fig. 2.

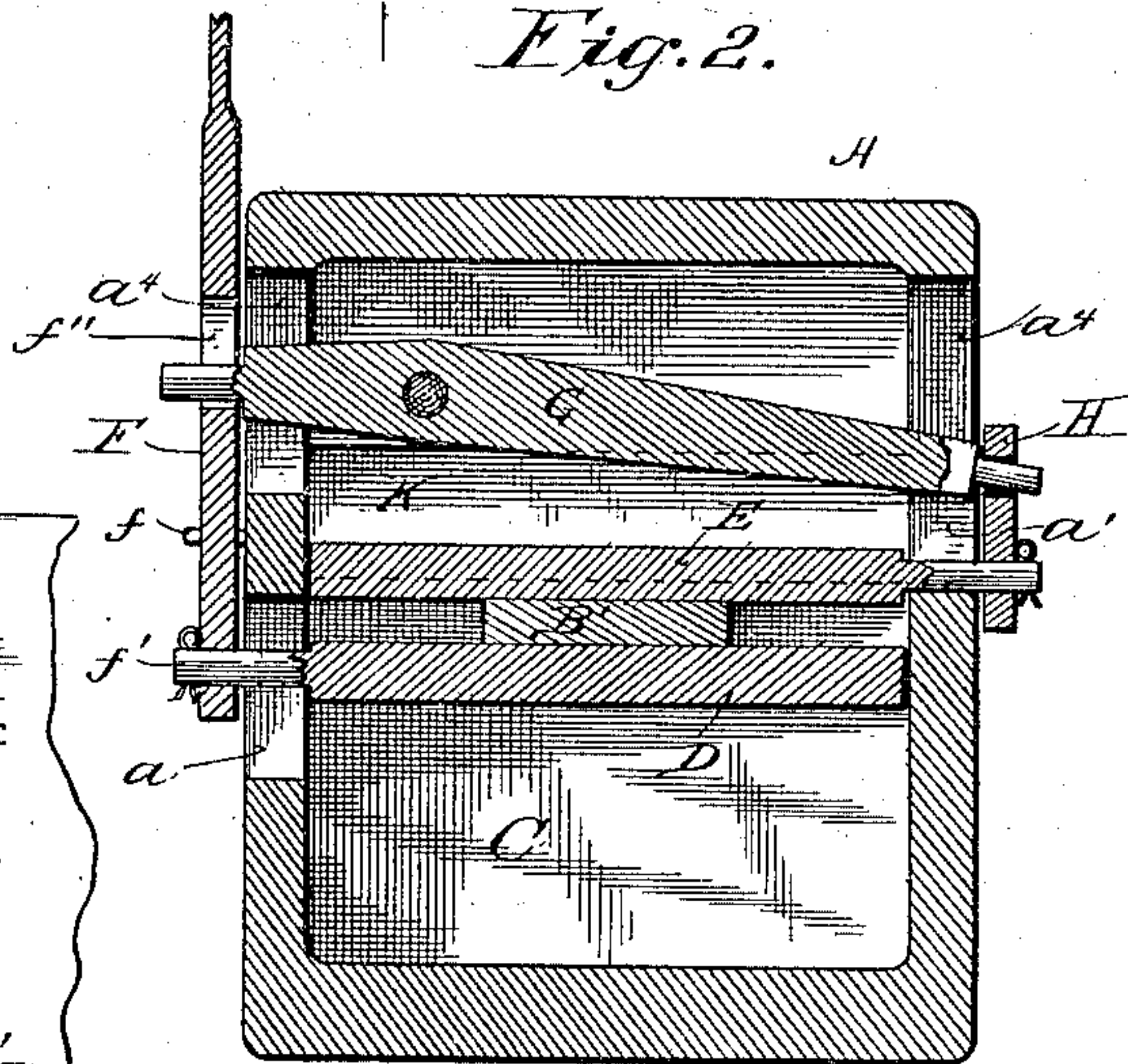
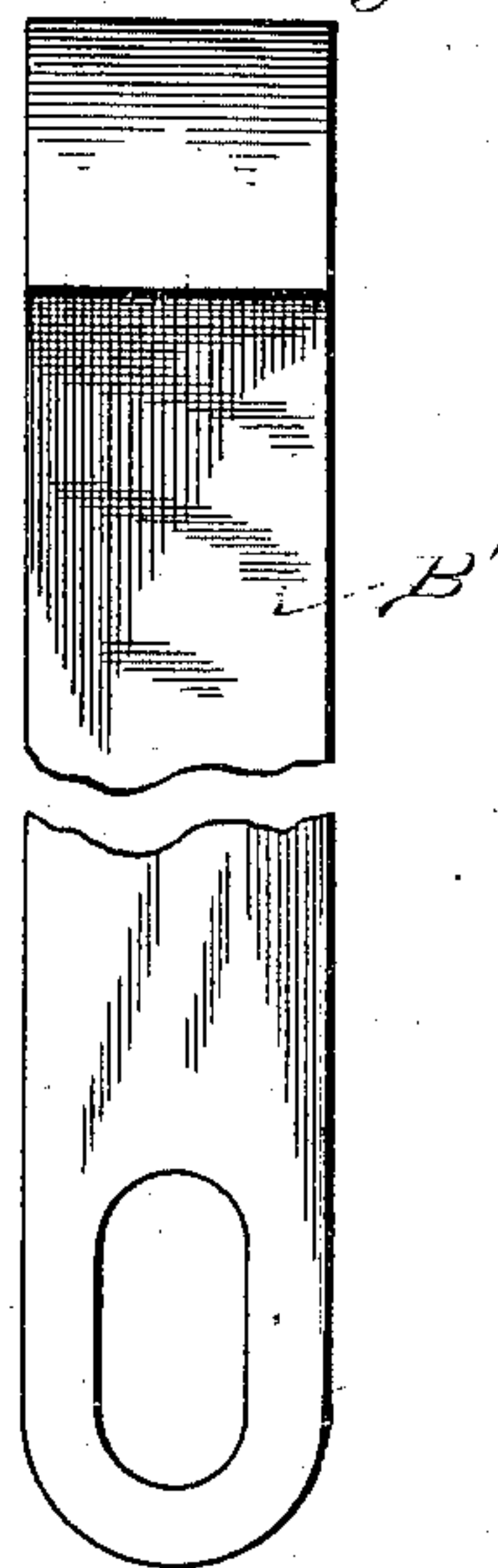


Fig. 4.



Witnesses

H. S. Rohrer
W. E. Sharr

Inventor

Ulrich N. Strickler
L. Sward Bacon

By

Attorney

UNITED STATES PATENT OFFICE.

ULRICH N. STRICKLER, OF MIDDLETOWN, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 368,738, dated August 23, 1887.

Application filed June 9, 1887. Serial No. 240,751. (No model.)

To all whom it may concern:

Be it known that I, ULRICH N. STRICKLER, a citizen of the United States, residing at Middletown, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; 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.

My invention relates to an improvement in car-couplers; and it consists in the construction and combination of the parts, which will be more fully hereinafter described, and pointed out in the claims.

The object of my invention is to provide an automatic coupler for railway-cars which will be simple in its construction, efficient in its working, strong, durable, and cheaply manufactured. I attain this object by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate the same parts in the several views, and in which—

Figure 1 is a longitudinal vertical section showing the link in a locked adjustment and in an unlocked adjustment in dotted lines. Fig. 2 is a front view in cross-section. Fig. 3 is a side view showing the actuating-arm. Fig. 4 is a view of the link or coupling bar.

In the drawings, A represents the draw-head, which is adapted to be constructed in the usual manner, and attached by any suitable means to the draw-bar, whereby it is connected with the car. The front portion of the draw-head A is provided with a link-opening, B, which has its lower inner surface cut away at an incline, as shown in Fig. 1. The central portion of the draw-head A has a rectangular chamber, C, made therein, which extends longitudinally therethrough, and into which the link-opening B leads.

B' is the coupling bar or link, made with an arrow or enlarged head at each end, or with an enlarged head at one end and an opening or slot at the other, as shown, and with an open or soled shank, as may be desired, thus allowing it to be used with other styles of couplers.

a and a' are vertical slots cut in the sides of the draw-head, respectively, the slot a being situated somewhat lower than the slot a' .

A groove, a^2 , is cut transversely in the un-

der side of the top of the draw-head in a direct alignment with slots a a' and extends out through the sides, forming openings a^4 a^4 therein, for purposes more fully hereinafter described.

Situated within the chamber C is a series of jaws, D and E, the latter being pivoted near its upper end to the vertical walls of the chamber by rods or bolts e , inserted in the edges of the jaw, extending out and secured in suitable bearings in said walls, thus allowing the lower end of jaw E to be actuated up and down—up by force applied and down by its own weight. The lower edge of the jaw E is cut at right angles, as shown, and is so placed as to extend a short distance beyond the slots a a' in the sides of the draw-head. The lower jaw, D, is constructed with an upper or locking portion, d , and is bent or curved downward at a point somewhat forward from the upper portion, d . At this point it is secured by journals or rods to the vertical walls of the chamber C in a manner similar to that of the jaw E, heretofore described, thus allowing end d to be actuated up by the weight of end d' and down by force applied. The rear edge of this jaw D is also cut at an angle, and extends back even with the lower edge of the jaw E. The forward or lower portion of jaw D is extended forward at an incline toward the link-opening B, its lower or outer edge being chamfered or beveled to correspond with the lower inclined surface of the opening B, at which point the lower portion of the jaw terminates, its end being projected out even with the edge of the draw-head. By this arrangement the lower jaw will assume a position as shown in Fig. 1, having its forward end resting on the beveled part of the front or link-opening portion, and its rear or inner end directly under the rear lower end of jaw E and in close proximity thereto. Owing to the chamfering on its front end, it is prevented from obstructing the passage of the link into the draw-head.

To separate the inner or locking ends of the jaws D and E, so as to allow of the withdrawal of the link, I provide a vertical arm, F, which extends up to the platform or top of the car. It is extended down the side of the draw-head over the openings a and a^4 , and is held in place by ties or bands f , which allow of a free ver-

tical movement of the same and prevent any side movement. The lower end of the arm F is connected with the rear end, d , of the jaw D by a suitable pin or bar, f' , which extends through the slot a into the edge of the jaw D.

An elongated slot, f^2 , is made in the arm F directly over the opening a^4 , in which is placed the end of a transversely-arranged lever, G, which is journaled in groove a^3 by suitable studs or pins having bearings in the vertical walls of the groove a^3 . This lever G is carried out through the opening a^4 , and is connected with a link, H, which extends down the side of the draw-head directly over the slot a' , at which point it is connected with the rear lower end of the jaw E by a pin or bar, h , which extends through the slot a' , having its inner end secured to the said jaw and its outer end secured to the said link H.

To retain the jaws in a separated position, I make a rectangular groove, i , in the side of the arm F of a size to correspond to the width of bands f , so that it is only necessary to force the said arm down until the groove i comes directly opposite the said band, and then draw the arm back and force the band into the groove, thus holding the arm down and the jaws apart.

K is a block secured to the back of the inside of the draw-head directly back of the ends of the jaws. By this arrangement it will be seen that as the link in an adjacent draw-head is forced into the opening B it immediately strikes the front inclined portion, d' , of the jaw D, and, owing to its inclination, is led up and forced between the rear or locking ends of the jaws, which immediately close after the head of the link has passed beyond their edges, and thus couple the links, the weight of the lower inner end of jaw E and the front end of jaw D forcing the same together or against the shank of the link. To overcome the weight of the ends of the jaws D and E, and thereby separate their locking-edges, so as to release the link, the arm F is pressed down by the pressure of the foot, or otherwise, thereby pressing the rear end, d , of the lower jaw down and forcing the opposite end of lever G up, which forces the lower end of jaw E up.

It will be seen that by the peculiar construction of the jaw D, I am enabled to secure a more perfect working of the coupler, for when the end d is lowered the end d' is raised to a horizontal position, and, owing to the curve in the jaw, the head of the link is brought in contact with the face of the end d and allowed to be withdrawn without coming in contact with the edge of the same, as would be the case if the jaw were otherwise constructed. By this construction I am also enabled to raise or lower the protruding end of the link when it is wished to insert it into an adjacent draw-

head of a different height. The link lying on the inclined surface of the jaw D will be raised to a horizontal position, or vice versa, when the end of the jaw is tilted up or lowered. By the end of the lever G being placed in the elongated slot f^2 , I am enabled to force the arm F down for a short distance without pressing down the said lever, and thereby raising the jaw E. I may thus raise and lower the link for a short distance without disturbing the jaw E, and thereby prevent any danger of the link becoming detached.

When it is wished to hold the link in a horizontal position without using the lower jaw, I place the ends of the same under the block K on the back of the draw-head.

I am aware that many minor changes in the construction and arrangement of the parts of my coupler can be made and substituted for those shown and described without departing in the least from the nature and principle of my invention.

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

1. A car-coupler consisting of a draw-head having a series of locking-jaws mounted therein, adapted to be forced together by the weight of the ends thereof, the lower one of said jaws being constructed with a curved upper surface, and mechanism for operating said jaws, substantially as described.

2. In a car-coupler, the combination, with the pivoted jaws D and E, of the lever G and means for actuating the same, substantially as described.

3. In a car-coupler, a series of pivoted jaws adapted to be actuated up and down, respectively, by a slotted arm, F, and lever G and the connections, substantially as described.

4. In a car-coupler, a series of locking-jaws, D and E, an arm, F, connected with the jaw D by a pin passing through a slot in the side of the draw-head, a lever, G, mounted in the upper portion of the same, its end being secured to said arm F and to a link, H, the lower end of which is secured to the jaw E by a pin passing through a slot in the side of the draw-head, substantially as described.

5. A car-coupler having a series of locking-jaws, D and E, with mechanism for operating the same, and a link or bar, B', having one end enlarged and the other end formed with a slot or opening therein, for the purposes specified, substantially as described.

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

ULRICH N. STRICKLER.

Witnesses:

WM. A. CROLL,
WM. T. STURRY.