

No. 729,483.

PATENTED MAY 26, 1903.

J. C. YEISER.
CAR COUPLING.

APPLICATION FILED OCT. 22, 1902.

NO MODEL.

Fig. 1.

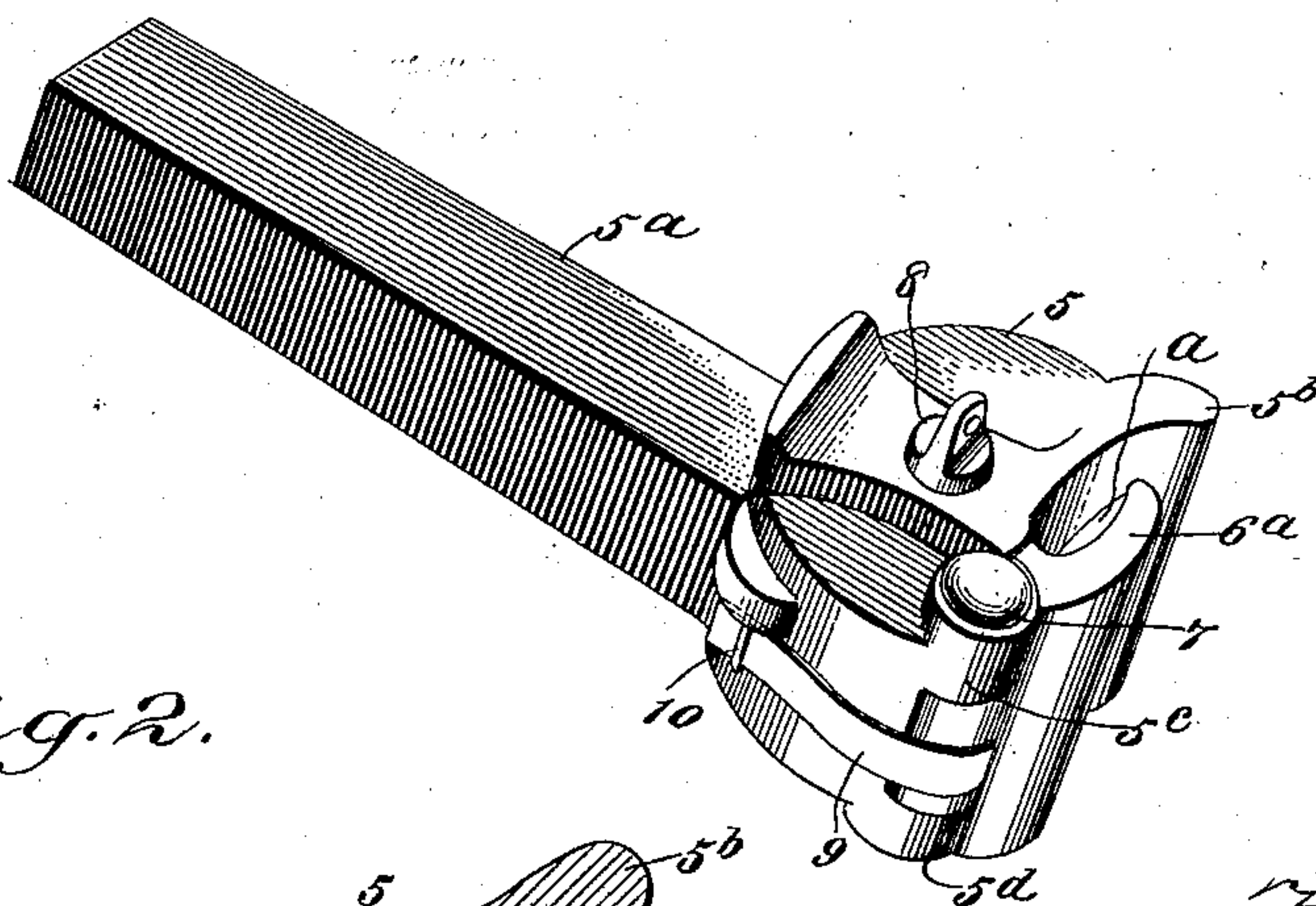


Fig. 2.

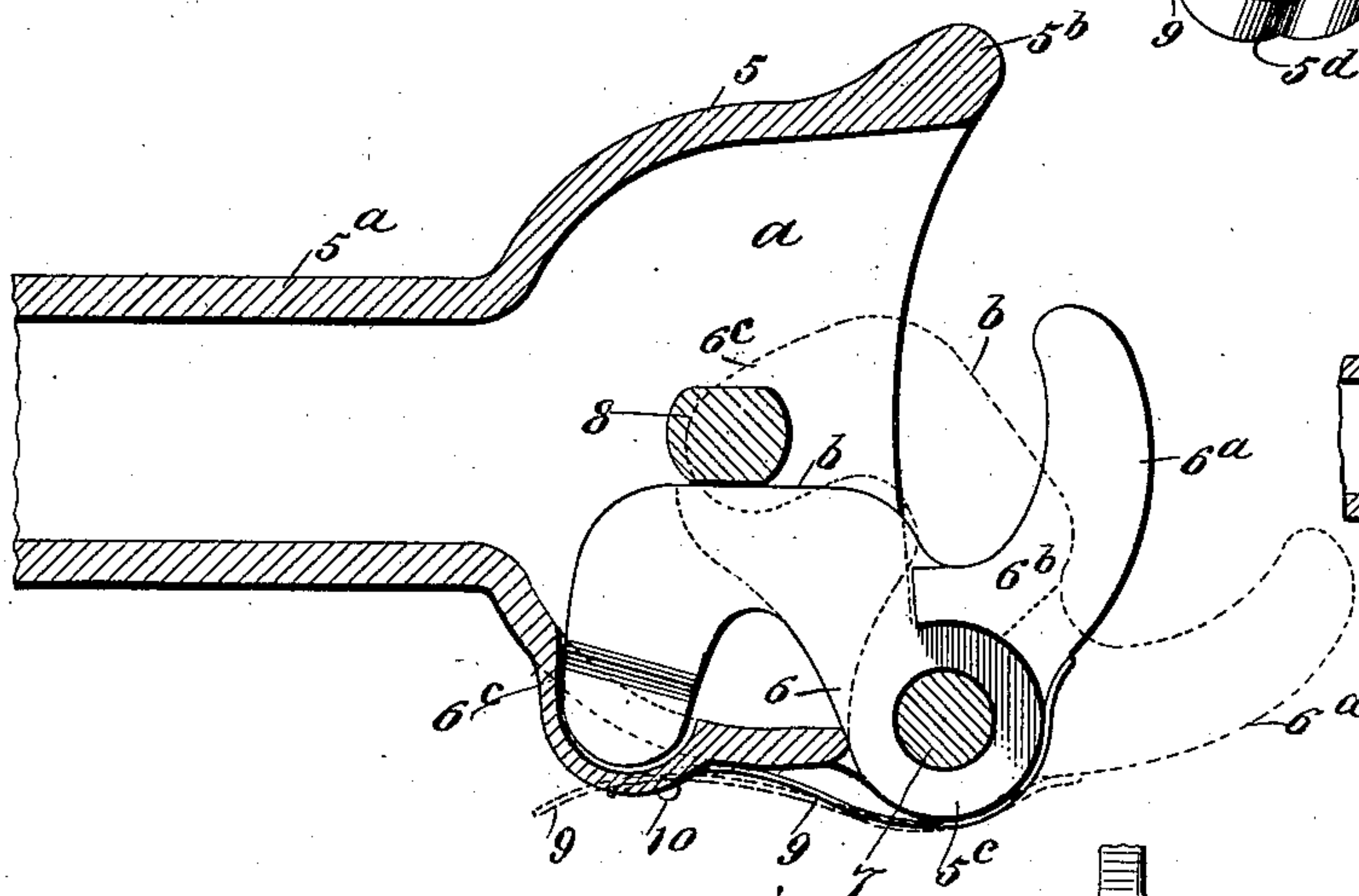


Fig. 4.

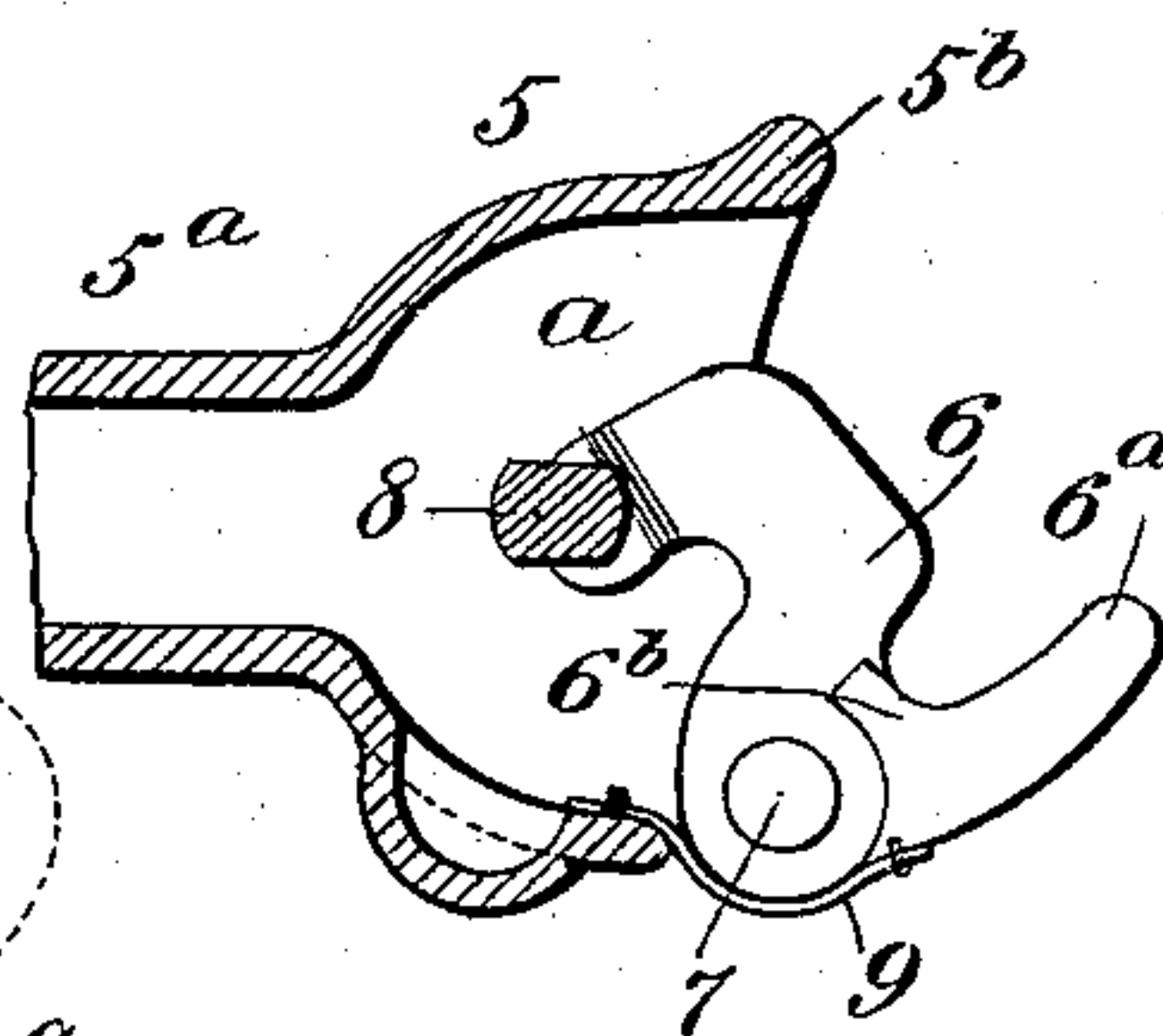
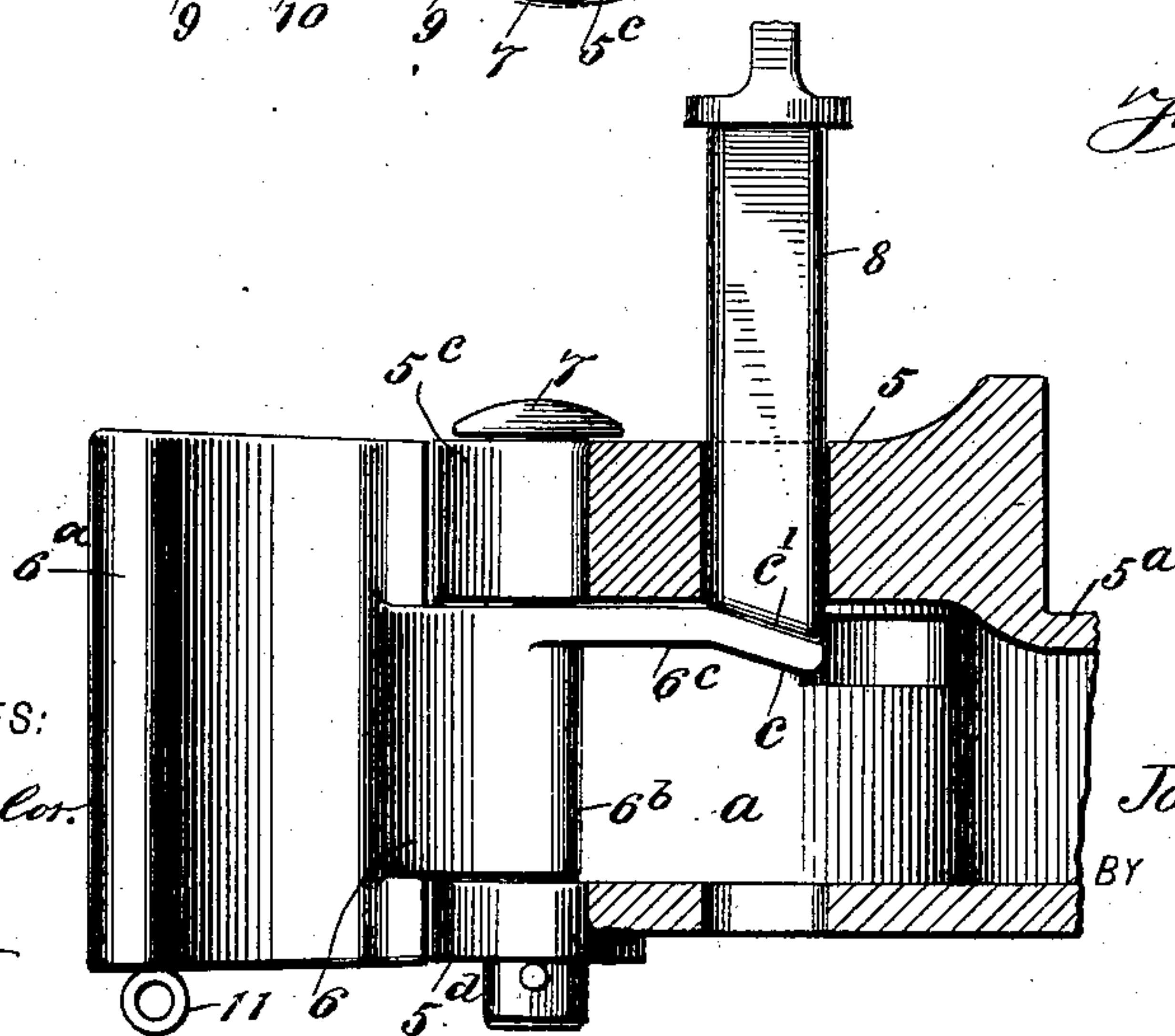


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN CLARKE YEISER, OF AUSTIN, TEXAS, ASSIGNOR OF ONE-FIFTH TO
HENRY M. LITTLE AND EDWIN B. HANCOCK, OF AUSTIN, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 729,483, dated May 26, 1903.

Application filed October 22, 1902. - Serial No. 128,260. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLARKE YEISER, a citizen of the United States, and a resident of Austin, in the county of Travis and State of Texas, have invented new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description.

This invention relates to car-couplings of the Janney type, and has for its object to provide novel details of construction for a car-coupling of the class indicated, which greatly facilitate the connection of two car-couplings having the improvements and adapt the knuckle of the car-coupling to automatically swing open when free to do so.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved car-coupling. Fig. 2 is a partly sectional plan view of the same. Fig. 3 is a longitudinal sectional view of the draw-head and draw-bar thereon, showing the knuckle-jaw of the coupling in opened condition and held thus adjusted by a feature of the improvement and a coupling-pin supported upon a novel detail carried by the tailpiece of the knuckle, ready for descent by gravity when the knuckle-jaw is closed; and Fig. 4 is a partly sectional plan view showing a modification hereinafter more particularly described.

In the drawings, 5 indicates the draw-head, 5^a the draw-bar thereon, 5^b a horn at one side of the draw-head, projected therefrom laterally and forwardly, as usual, and 5^c 5^d two similar ears projecting from the respective top and bottom walls of the draw-head at the opposite side of the same. Between the ears 5^c 5^d a substantially L-shaped knuckle-block 6 is inserted and is pivotally connected therewith by an upright pivot-bolt 7, whereby the knuckle is held to rock and project its jaw 6^a away from the front of the draw-head.

The tailpiece 6^b of the knuckle, and which

occupies the cavity *a* in the draw-head, is projected angularly from the coupling-jaw 6^a, so as to have one side edge *b* thereof disposed at one side of and adapted for contact with a coupling-pin 8, held to slide vertically in opposite perforations formed in the upper and lower walls of the draw-head. Upon the upper side of the tailpiece 6^b a plate-like extension 6^c is formed or secured, said plate having such angular form as adapts its free end to project toward the side wall of the draw-head having the ears 5^c 5^d thereon, and this end of the extension of the tailpiece 6^b may occupy a pocket formed in said side wall when the knuckle 6 is in closed adjustment, as shown in Fig. 2.

The free end of the extension 6^c is bent downward so as to give it a suitable slope, as represented at *c* in Fig. 3, and the lower end of the coupling-pin 8 is correspondingly beveled, as at *c'*, whereby the pin by the consequent impinge of its rear side upon the defining-wall of the perforation in the draw-head is held vertical when the knuckle-jaw is open.

An important feature of the invention consists in the provision of simple and reliable means for automatically opening the knuckle or, in other words, swinging the jaw 6^a outwardly when the pin 8 is elevated so as to have clearance from the tailpiece of the knuckle 6.

I prefer to employ a plate-spring 9 for the indicated purpose, and to this end said spring is attached by its forward portion upon the joint-leaf of the knuckle-jaw, as is indicated in Figs. 1 and 2, the free portion of the spring, that is suitably bent, extending rearward and having its rearward end impinged upon the side of the draw-head. Normally the spring 9 is nearly straight, except that it has an outward curvature at its free end, and the latter is held engaged with the side wall of the draw-head by a staple-loop 10, projecting from side wall. As the spring is placed under moderate tension when the knuckle-jaw 6^a is open, it will be evident that closure of the jaw can only be effected by pressure on its front face, which may occur when another coupling is impinged thereon.

Upon a forcible closure of the jaw 6^a, so as to permit the pin 8 to drop by gravity along-

side of the tailpiece 6^b, and thus hold the jaw closed, the tension of the plate-spring 9 will be increased, and manifestly the elevation of the pin 8 will permit the force of the spring to measurably straighten it and cause an automatic opening of the jaw 6^a, thus insuring the release of a like coupling-jaw with which the released jaw was coupled.

As the coupling-pin will assume an upright position, resting on the inclined portion of the extension-plate 6^c, when the jaw 6^a is open, it will be seen that the simple act of pressing the jaw 6^a rearward, by impact of another coupling-jaw thereon, will rock both of said jaws into closed condition and drop the coupling-pins, thus effecting an automatic coupled connection of two cars having the improved couplings.

To enable the manual opening of the coupling-jaw 6^a in case the spring 9 breaks, I provide a looped projection 11 on the lower edge of the coupling-jaw for the attachment of one end of a flexible connection that may be thence extended to a desired point for manipulation as occasion may require.

In the modification shown in Fig. 4 the spring 9 is fastened at one end to the outer face of the knuckle-block 6 and its other end is extended back of the knuckle-block between the latter and the draw-head and its extremity is fastened to the interior of the draw-head.

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

1. In a car-coupling, the combination with the draw-head and a rockable coupling-jaw, of a curved spring secured by one end upon the exterior of the coupling-jaw and having its other end loosely secured upon the exterior of the draw-head, substantially as set forth.

2. In a car-coupling of the Janney type, the combination with the draw-head, the rockable coupling-jaw, and the coupling-pin adapted to hold the jaw closed, of a plate-spring held secured by one end on the coupling-jaw, and slidably engaged upon the side wall of the draw-head by a staple-loop, so as to adapt the force of the spring to throw the coupling-jaw open when the pin is raised.

3. In a car-coupling, the combination with the draw-head, and a coupling-pin vertically slidable therein, said pin having its lower end beveled, of a knuckle comprising a coupling-jaw, a tailpiece on said jaw provided with a flanged extension that is beveled downwardly toward its free end and whereon the beveled end of the coupling-pin may rest, these beveled contacting surfaces serving to hold the pin upright and elevated when the coupling-jaw is open, and means to pivot the knuckle rockably on the draw-head, substantially as set forth.

4. In a car-coupling, the combination of the draw-head having a chamber, a coupling-jaw pivoted in said draw-head, an extension on the coupling-jaw, a coupling-pin vertically slidable in the draw-head, the extension on the coupling-jaw being adapted to hold the pin in an elevated position when the jaw is open, and a tensioned spring bearing upon the exterior of the coupling-jaw and upon the draw-head for automatically throwing open said jaw when the pin is removed, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN CLARKE YEISER.

Witnesses:

J. BOULDIN RECTOR,
A. N. LEITNAKER.