

(No Model.)

3 Sheets—Sheet 1.

S. TRUAX.
CAR COUPLING.

No. 360,831.

Patented Apr. 5, 1887.

Fig. 1.

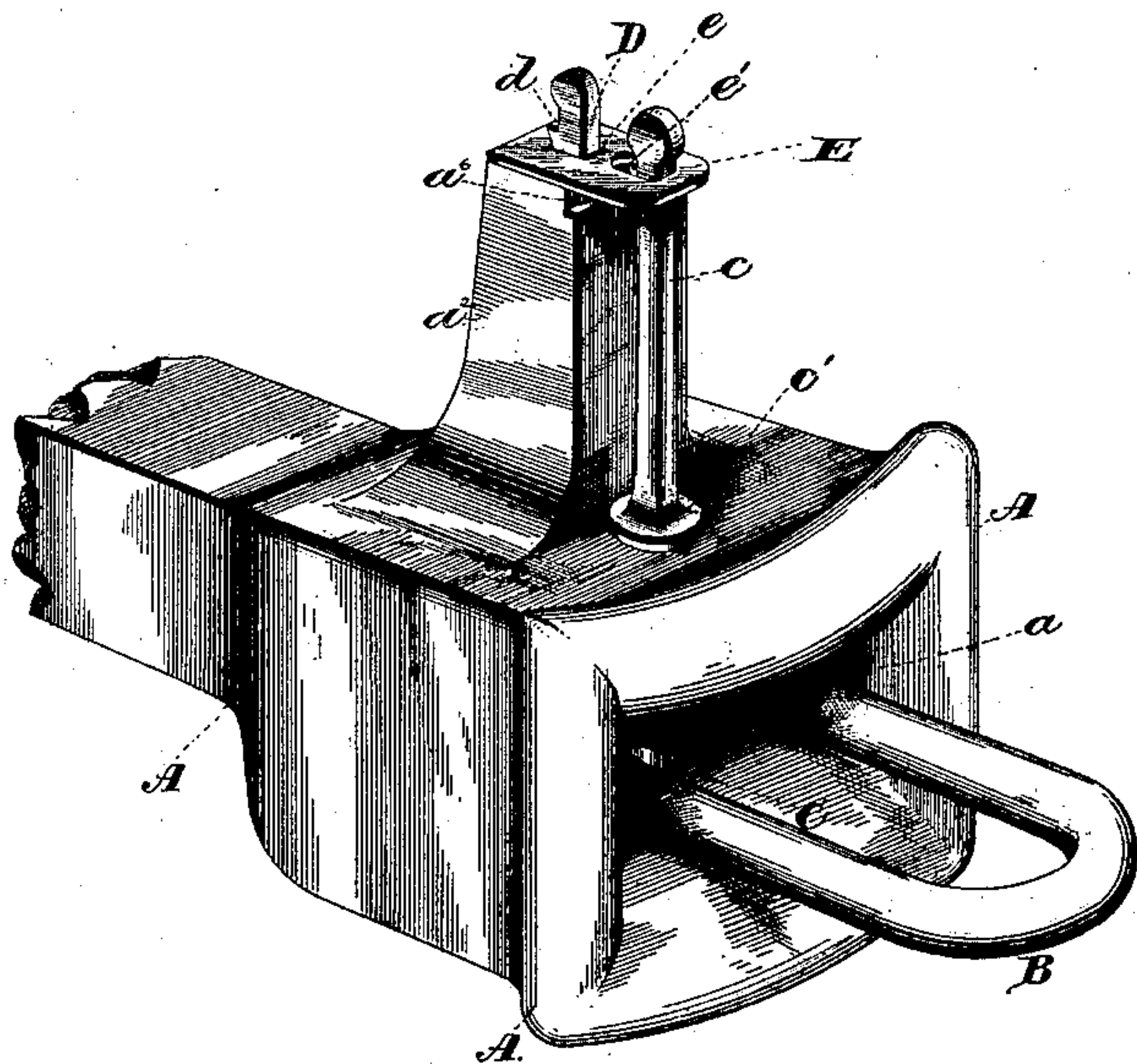
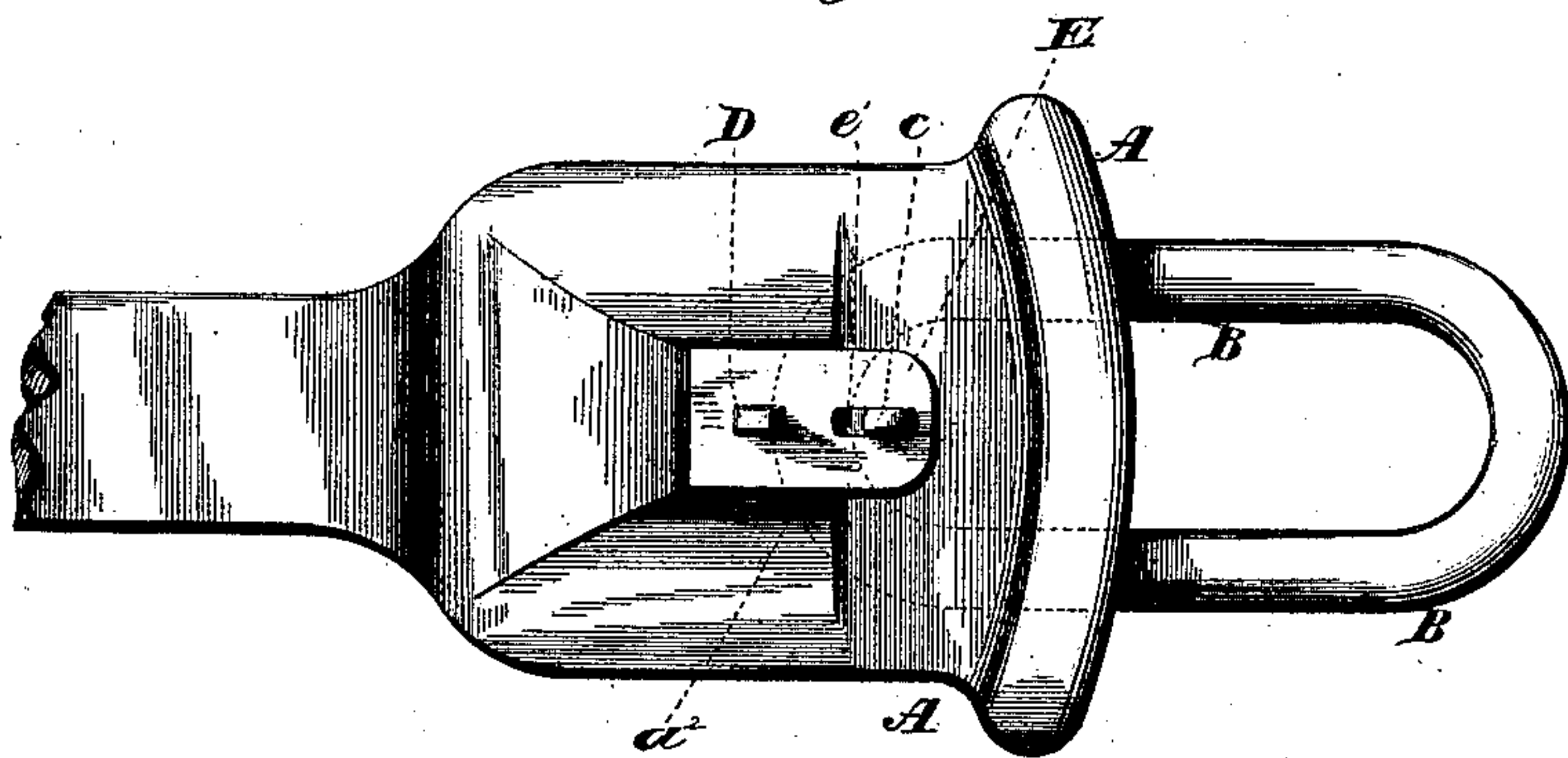


Fig. 2.



Witnesses:
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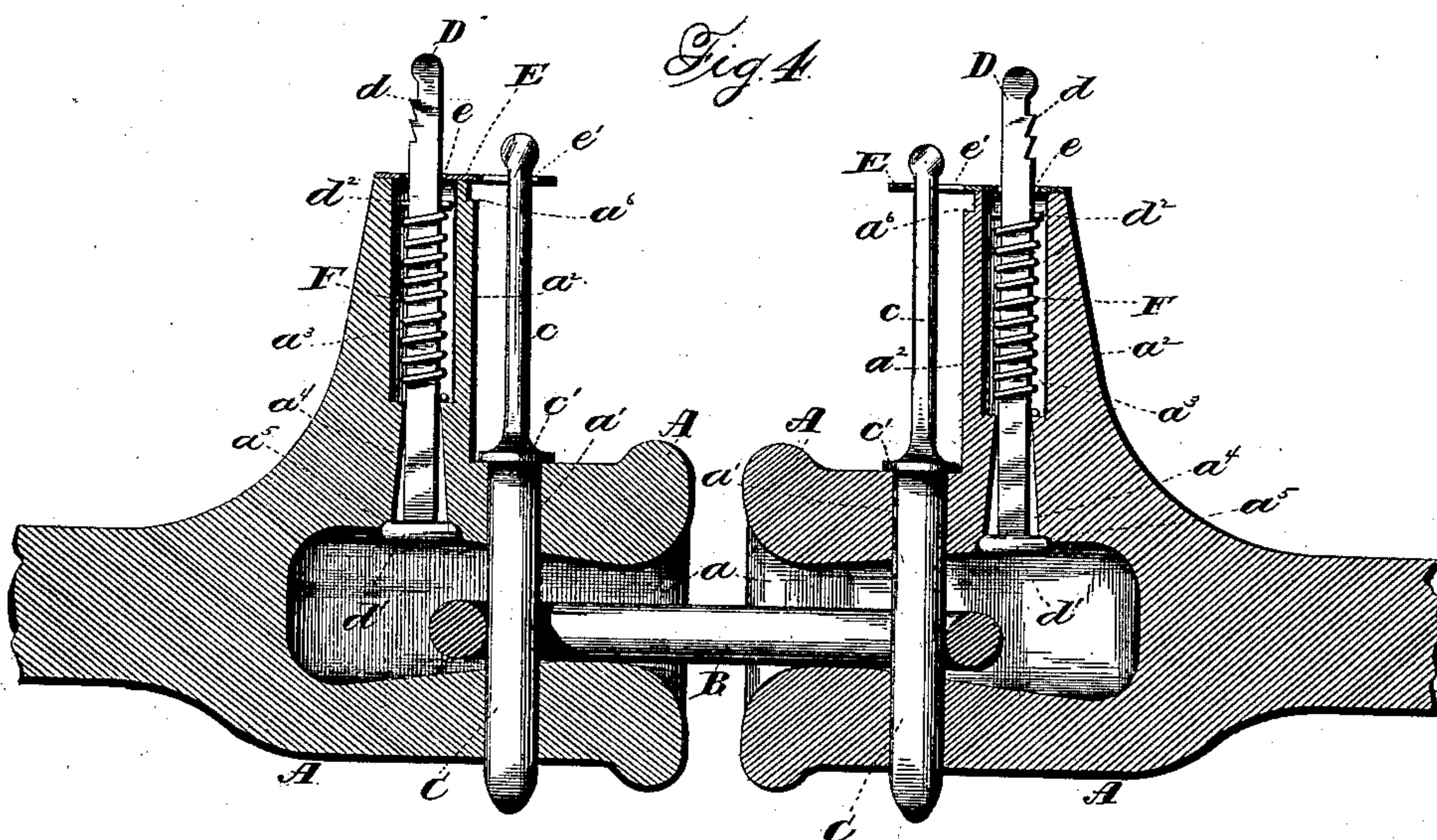
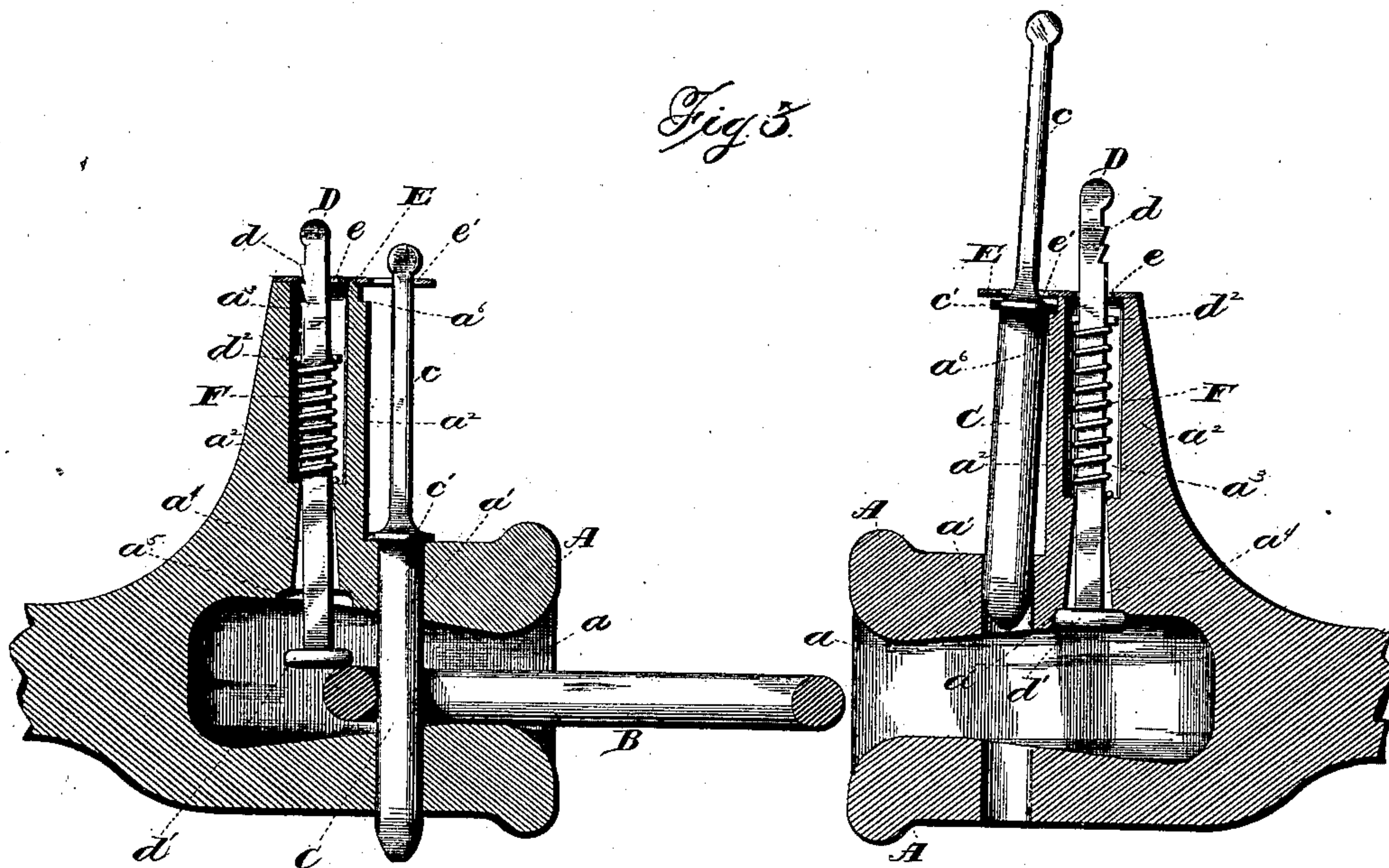
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3 Sheets—Sheet 3.

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Fig. 5

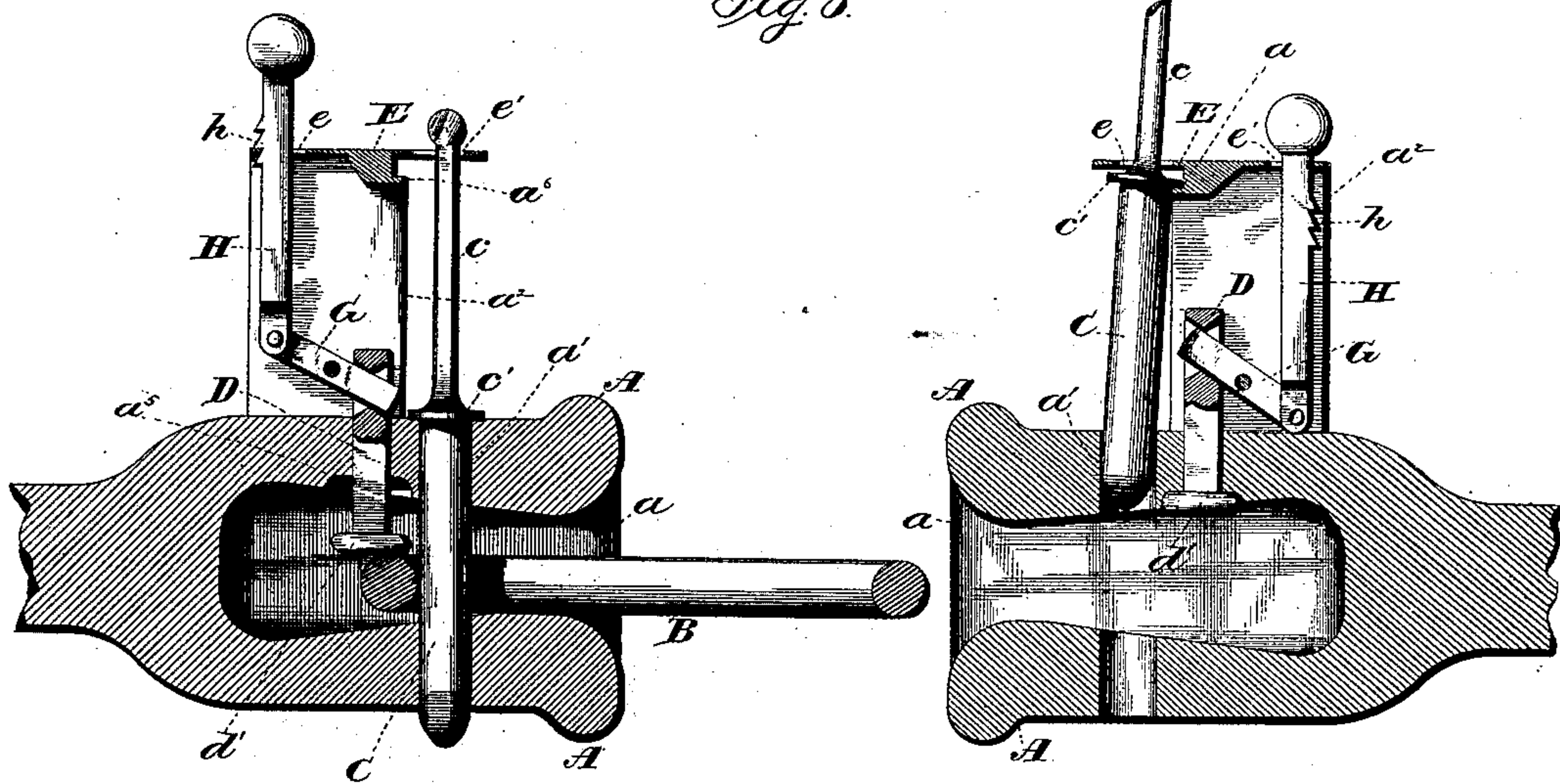
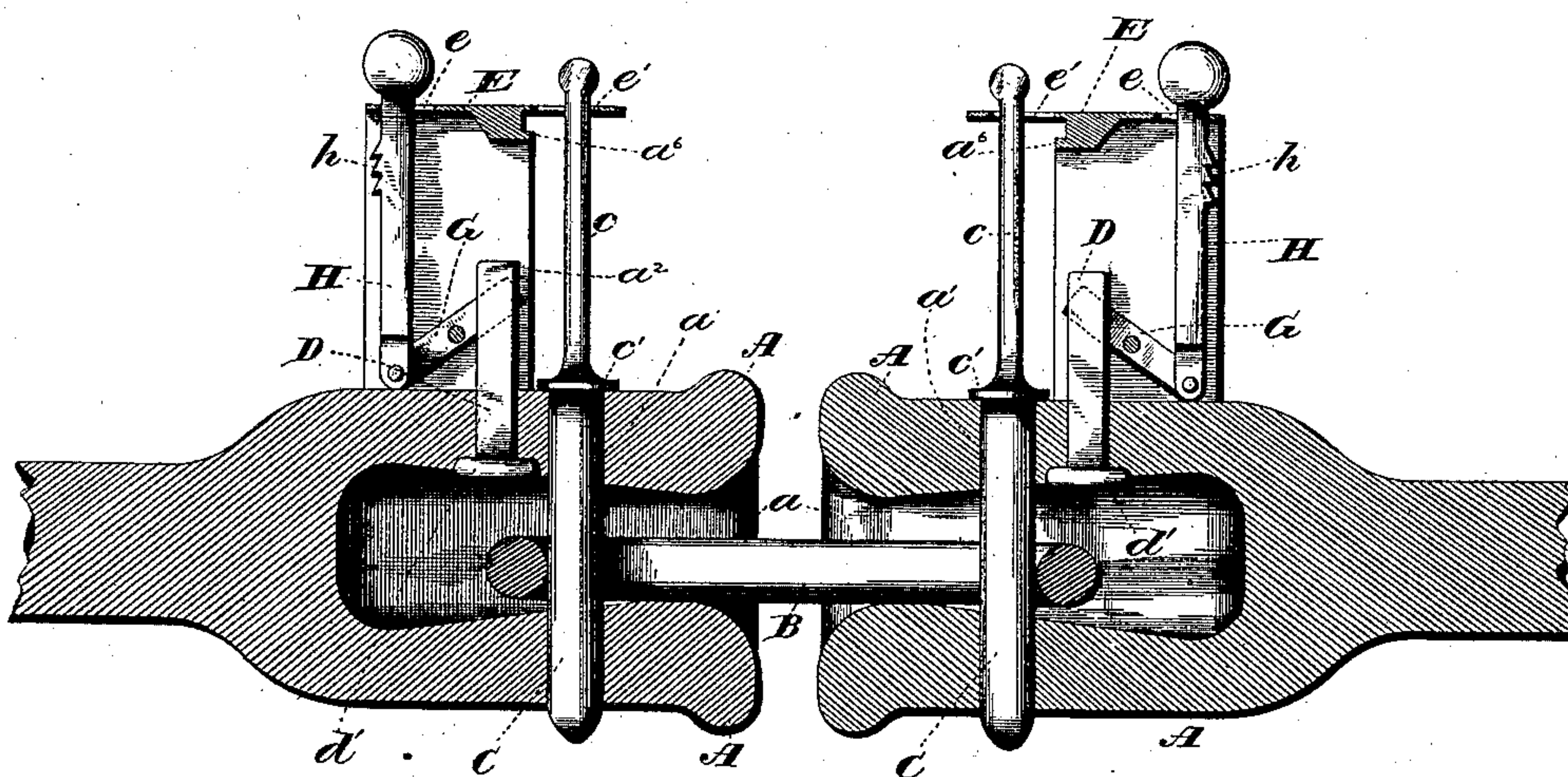


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

SEWALL TRUAX, OF TRUAX LANDING, WASHINGTON TERRITORY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 360,831, dated April 5, 1887.

Application filed February 7, 1887. Serial No. 226,805. (No model.)

To all whom it may concern:

Be it known that I, SEWALL TRUAX, of Truax Landing, in the county of Garfield, and in Washington Territory, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

10 Figure 1 is a perspective view of my coupling as preferably constructed. Fig. 2 is a plan view of the upper side of the same. Figs. 3 and 4 are, respectively, central longitudinal sections, upon vertical lines, of two couplings about to become connected and after such connection has taken place; and Figs. 5 and 6 are like views of a modification of the same.

Letters of like name and kind refer to like parts in each of the figures.

20 The design of my invention is to enable cars to be coupled without requiring that any portion of the coupling mechanism be manipulated during such operation; and to this end such invention consists, principally, as an improvement in car-couplings, in the combination of a draw-head and a vertical longitudinally-movable bar which is normally held with a yielding pressure at the upper limit of its motion, is adapted to be moved downward into and locked in engagement with the rear portion of an inserted link, and is adapted to be automatically released from such engagement and returned to its normal position when said link enters another draw-head, substantially as and for the purpose hereinafter shown and described.

It consists, further, as an improvement in car-couplings, in the combination of a draw-head, a vertical longitudinally-movable bar which when moved to or near the lower limit of its motion is adapted to engage with and lock a coupling-link in substantially a horizontal position, and a coupling-pin that is adapted to be raised to and set in an elevated position and to be released therefrom by the entrance of a link into the draw-head, substantially as and for the purpose hereinafter specified.

It consists, finally, as an improvement in car-couplings, in the combination of a draw-head, a vertical longitudinally-movable bar which is normally at the upper limit of its

motion and when moved to the lower limit of its motion is adapted to engage with and hold a coupling-link in a substantially horizontal position, and a coupling-pin that is adapted to be set in an elevated position and to be released therefrom by the entrance of a link into the draw-head, substantially as and for the purpose hereinafter shown.

In the application of my invention to practical use, I employ a draw-head, A, that has the usual general form, and within its outer end is provided with a bell-mouth recess, *a*, for the reception of a coupling-link, B, which link when inserted within said recess is locked in place by means of a coupling-pin, C, that passes through a corresponding vertical opening, *a'*, provided in said draw-head, and through the inner portion of said link.

Immediately in rear of the upper end of the coupling-pin opening *a'* a boss, *a''*, extends from the upper side of the draw-head A upward to a height substantially equal to the vertical dimensions of said head at such point, and within such boss is formed a round straight opening, *a'''*, that extends from its upper end downward about one-half the distance between the same and the link-recess *a*. From the lower end of said opening *a'''* to said recess *a* extends a second smaller opening, *a''''*, which preferably is rectangular in horizontal section, and from its upper end to near its lower end increases in width from front to rear, and at said lower end is provided with a horizontal enlargement, *a''''''*.

Within the openings *a'''* and *a''''* is loosely fitted a bar, D, which has throughout its length substantially the dimensions of the upper smaller portion of said opening *a''''*, and is adapted to have free longitudinal motion and to swing upon its longitudinal center in a line with the longitudinal axis of the draw-head. The upper end of said bar is reduced in size from front to rear, so as to form upon the rear side a shoulder, *d*, while upon its lower end is a horizontal enlargement or head, *d'*, that corresponds to and fits into the recess *a''''''*.

The upper end of the opening *a'''* is inclosed by means of a plate, E, which is provided with a slot, *e*, that has such size and shape as to enable the upper end of the bar D to pass freely through the same, while when the upper end of said bar is moved rearward the

shoulder d may be caused to engage with the lower side of said plate, and in such position operates to hold said bar against upward pressure.

5 The bar D is held with a yielding pressure at the upper limit of its motion by means of a spiral spring, F, which is coiled around its upper portion within the opening or chamber a^3 , with one end in engagement with the lower
10 end of said chamber and its opposite upper end in engagement with a pin, d^2 , that passes horizontally through said bar at a point below the shoulder d .

The length of the bar D is such that when
15 said bar is moved to and locked at the lower limit of its motion the enlargement or head d' will impinge upon the upper side at the rear end of a link, B, (when in position within the draw-head A,) and operate to hold said link
20 in a horizontal position, so as to enable its outer end to enter the recess of another draw-head. When said link enters the second draw-head, it will be moved rearward within the draw-head with which it was previously en-
25 gaged, and by such motion will cause the lower end of said bar D to be moved rearward and its upper end forward, so as to disengage the shoulder d from the plate E, when, by the action of the spring F, said bar will be moved to
30 the upper limit of its motion, and said link left free to adapt itself to the varying positions of the engaging draw-heads. If desired, two or more shoulders d may be provided, so as to permit said bar D to be locked in different
35 vertical positions, and thus enable the height of the outer end of the link to be varied as may be required to adapt it to enter two draw-heads having different relative elevations above the track.

40 In order that the coupling-pin C may be locked in an elevated position, so as to permit of the entrance of a link into the draw-head recess a , and may then automatically drop into engagement with the link, said pin is pro-
45 vided at its upper end with a spindle, c , which extends upward and passes through an opening, c' , that is provided in the front extended portion of the plate E. Within the front side, at the upper end of the boss a^2 , is formed a
50 horizontal shoulder, a^6 , which, when the coupling-pin is raised to the upper limit of its motion, is adapted to engage with the projecting head c' of said pin and lock the same in such elevated position. When thus arranged, the
55 jar caused by the impingement of another draw-head will cause said coupling-pin to be disengaged, when it will drop to place and into engagement with the link.

60 In Figs. 5 and 6 is shown a modification in construction, in which the spring for holding the bar D in an elevated position is dispensed

with and in its place is used a centrally-pivoted lever, G, which has one end connected with said bar and its opposite end connected with a weighted rod, H; that from thence extends
65 upward through the plate E. The weight of said rod is sufficient to overbalance said bar and cause the latter to remain at the upper limit of its motion, except when moved there-
70 from. When said rod H is drawn upward so as to depress said bar D, it is locked in position by the engagement of a lateral lug, h , with the upper side of the plate E.

In constructing new car-couplings with my improvements, the boss a' is preferably cast
75 upon and forms part of the draw-head A; but, if desired, said part may be constructed separate from and afterward attached to the draw-head.

Having thus described my invention, what
80 I claim is—

1. As an improvement in car-couplings, the combination of a draw-head and a vertical longitudinally-movable bar which is normally
85 held with a yielding pressure at the upper limit of its motion, is adapted to be moved downward into and locked in engagement with the rear portion of an inserted link, and is adapted to be automatically released from such
90 engagement and returned to its normal position when said link enters another draw-head, substantially as and for the purpose shown and described.

2. As an improvement in car-couplings, the combination of a draw-head, a vertical longi-
95 tudinally-movable bar which when moved to or near the lower limit of its motion is adapted to engage with and lock a coupling-link in substantially a horizontal position, and a coupling-pin that is adapted to be raised to and set
100 in an elevated position and to be released therefrom by the entrance of a link into the draw-head, substantially as and for the purpose specified.

3. As an improvement in car-couplings, the combination of a draw-head, a vertical longi-
105 tudinally-movable bar which is normally at the upper limit of its motion, and when moved to the lower limit of motion is adapted to engage with and hold a coupling-link in a substan-
110 tially horizontal position, and a coupling-pin that is adapted to be set in an elevated position and to be released therefrom by the entrance of a link into the draw-head, substan-
115 tially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of January, A. D. 1887.

SEWALL TRUAX.

Witnesses:

GEO. S. PRINDLE,
HENRY C. HAZARD.