

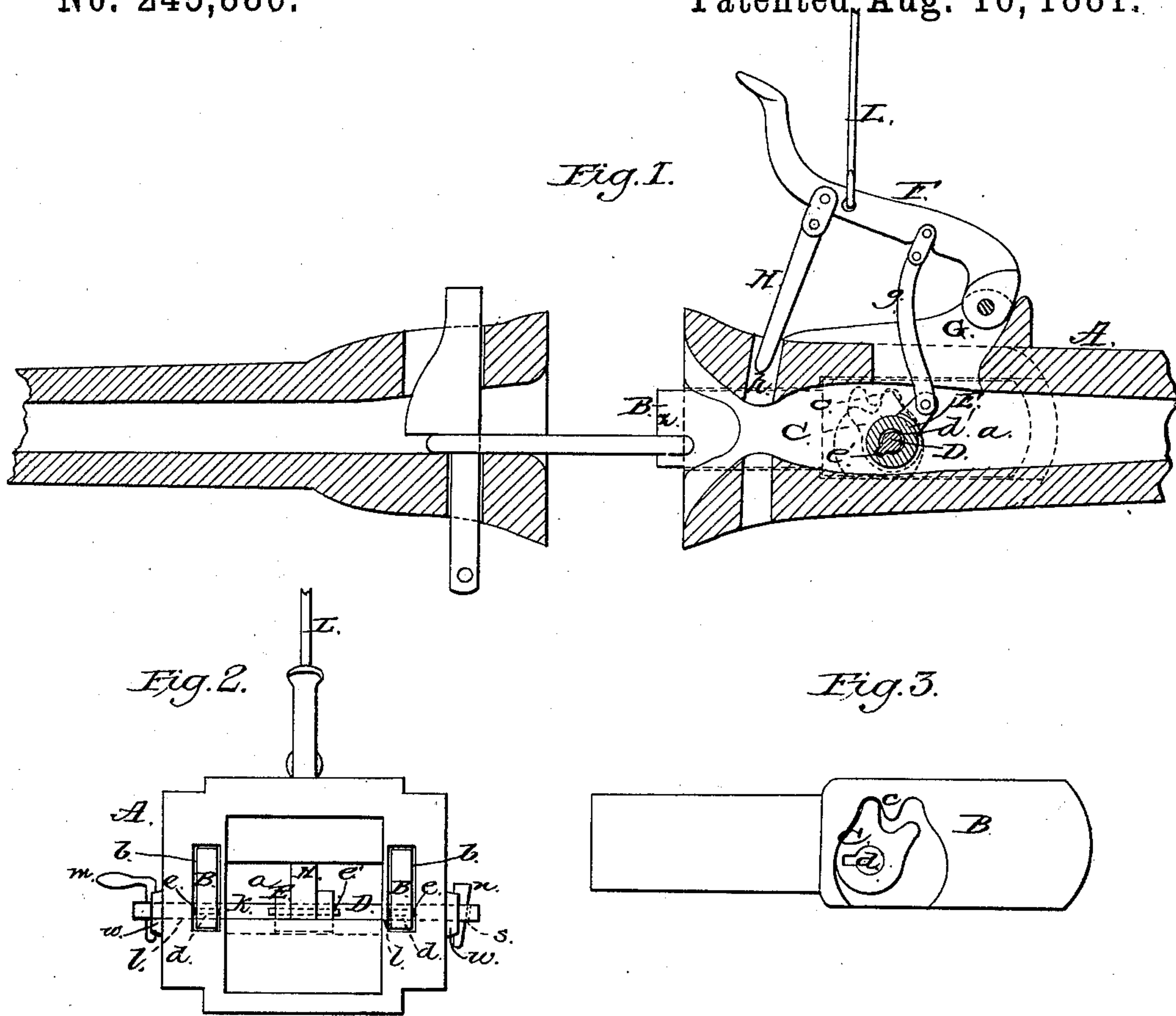
(Model.)

L. E. STEPHENS & G. W. POOL.

CAR COUPLING.

No. 245,886.

Patented Aug. 16, 1881.



WITNESSES

John A. Ellis.
Philip C. Masi.

INVENTOR

Lawrence E. Stephens
George W. Pool
by Audusant Smith
their ATTORNEYS

UNITED STATES PATENT OFFICE.

LAWRENCE E. STEPHENS AND GEORGE W. POOL, OF MCKINNEY, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 245,886, dated August 16, 1881.

Application filed July 2, 1881. (Model.)

To all whom it may concern:

Be it known that we, LAWRENCE E. STEPHENS and GEORGE W. POOL, of McKinney, in the county of Collin and State of Texas, have invented a new and valuable Improvement in Car-Couplers; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of our invention. Fig. 2 is an end view of one of the draw-heads with our improvements attached, and Fig. 3 is a detail view of one of the toothed slides and segment.

This invention has relation to car-coupling devices in which the pin is designed to be dropped through the link automatically or by the action of the draw-heads as the cars come together.

The invention consists in the construction and novel arrangement of the rack-bars seated in ways recessed in the sides of the draw-head, toothed segments engaging therewith, a shaft carrying said toothed segments, and also bearing within the cavity of the draw-head a vibratory arm and a setting-lever, from which the coupling-pin is suspended, connected to said vibratory arm, all as hereinafter set forth.

In the annexed drawings, the letter A designates the draw-head, having the central cavity, *a*, and the side ways or recesses, *b*, in which are seated the rack-bars B, having the teeth *c*. In said ways or recesses are also located the toothed segments C, which have key-slots *d* to receive the splines *e* of the transverse shaft D. This shaft is also provided with a central spline, *e'*, which passes through the key-slot *d'* of the arm E, which is located within the link-cavity of the draw-head, in the rear part of said cavity.

Above the draw-head is located the setting-lever F, which is pivoted to a bearing, G, on the top of said draw-head, and is connected by the curved rod or bar *g* to the end of the arm E. The coupling-pin H is connected by means of a pivot to the forward portion of the

setting-lever, and is suspended thereby through an aperture, *h*, in the top of the draw-head.

Between the keys or splines *e* and *e'* of the shaft D are its journals *k*, which rest in bearings *l* in the walls of the draw-head, said bearings being usually in the form of key-slots, and designed to permit the ready withdrawal of the shaft, when necessary, for repairs of the interior mechanism.

A rod, L, is usually connected to the setting-lever F, and is designed to extend upward through suitable bearings on the end of the car, so that the setting-lever may be operated from the top of the car.

On each end of the shaft D is placed a slotted washer, *w*, and a key or handle is arranged to engage with one end of said shaft, as shown at *m*. At the other end of the shaft is arranged a key or wedge, *n*, working through a slot, *s*, in the shaft, and in contact with the outer face of the washer, these devices being designed to increase the frictional contact of the shaft through the washer and draw-head when desirable.

The operation is as follows: When the setting-lever is raised the coupling-pin is lifted, and by means of the arm or tumbler E the shaft and its segments are turned, moving the racks or toothed slides B forward so that they project from the face of the draw-head. In this position the parts are designed to be held by the inertia of the toothed slides and the frictional contact of the end washers of the shaft with the sides of the draw-head. As the draw-heads of cars approach each other for coupling the projecting portions or ends *z* of the toothed slides are driven back, turning the shaft by means of the toothed segments C, and, through the medium of the tumbler or arm E and the connection *g*, causing the setting-lever and its suspended coupling-pin to fall.

Instead of using the pivoted connection *g* between the arm E and the setting-lever, a trigger may be employed.

It is designed, usually, to have the opposite draw-head made with a longitudinal slot through its top, and a heavy shouldered pin, being passed through the slot, is intended to engage with the rear end of the link and hold it level.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

5 The draw-head having the recesses *b* in its side walls, the toothed slides B and toothed segments C therein, the transverse shaft D, tumbler E, setting-lever F, suspended pin H, and connection or trigger between the tumbler and setting-lever, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

LAWRENCE EARNEST STEPHENS.
GEORGE WASHINGTON POOL.

Witnesses:

R. C. WHITE,
S. D. HEARD.