(No Model.)

J. L. SHOUGH.

CAR COUPLING.

No. 524,030. Patented Aug. 7, 1894.

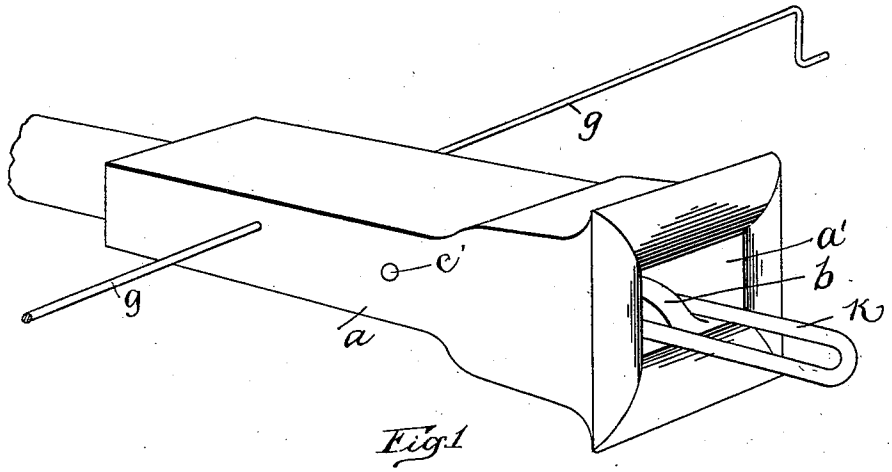

Fig. 1

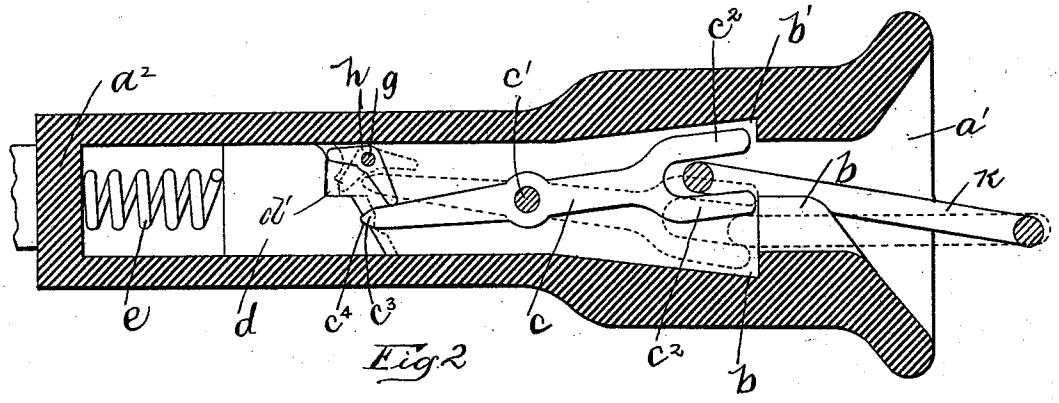

Fig. 2

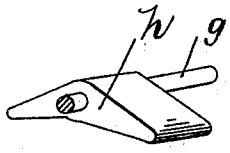

Fig. 3

WITNESSES:

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JACOB L. SHOUGH, OF NEAR SOMERSET, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 524,030, dated August 7, 1894.

Application filed January 11, 1894. Serial No. 496,501. (No model.)

To all whom it may concern:

Be it known that I, JACOB L. SHOUGH, a citizen of the United States, residing near Somerset, in the county of Perry and State of Ohio, have invented a certain new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention relates to the improvement of car couplers, and the objects of my invention are to provide an automatic car coupling of superior construction and arrangement of parts; to so construct the same as to retain the link in a horizontal position for coupling; to admit of the same being coupled with cars having the ordinary link and pin coupling; to construct the same in a simple, inexpensive and reliable manner and to produce other improvements which will be more specifically pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of one of the draw bars of my improved coupling. Fig. 2 is a central vertical section of the same and Fig. 3 is a detail view in perspective of a key or trigger employed as hereinafter described in the construction and operation of my device.

Similar letters refer to similar parts throughout the several views.

a represents a draw bar which, as shown in the drawings, is substantially of the usual external form, consisting of a hollow metallic body provided with an open forward end or flaring mouth *a'* and a closed rear end portion a^2. Within the slightly enlarged head of the draw bar and adjacent to the mouth thereof, I provide a short upwardly projecting central tongue *b*, the latter rising, as shown, from the floor of the draw bar. This tongue or projection *b* has its forward side inclined to form a continuation of the incline or bevel of the mouth *a'*.

Immediately in rear of the tongue *b* and within the head of the draw bar, I preferably provide in the upper and lower sides thereof a slight enlargement of the hollow or offset therein, as indicated at *b'*.

c represents a coupling arm which, as indicated at *c'*, is pivoted at a point in rear of the center of its length within the draw bar and between the two side walls thereof. The forward end portion of this arm *c* is enlarged and said enlarged portion is bifurcated or separated into parallel fingers c^2 having rounded outer ends. The rear end of the arm *c* is preferably rounded or tapered as indicated at c^3. In rear of this arm *c* I provide within the draw bar hollow a block *d* adapted to fit and slide within said draw bar. Between the rear portion of the block *d* and the closed end a^2 of the draw bar is interposed a coil spring *e*. The front face of the block *d* is provided at about the center of its height with a receding step or horizontal shoulder *d'* thereby imparting a greater thickness to the lower half of the block than the upper. The forward face of the lower half of the block is, as shown, inclined or beveled and thereby caused to recede toward the upper end thereof.

Passing loosely through the draw bar side walls and fulcrumed therein is an operating rod *g*, said rod passing through the draw bar at a point adjacent to the upper side thereof. Upon the rod *g* and within the draw bar hollow is fixed a key or trigger piece *h*, the latter consisting of two projecting arms or wings arranged at a wide angle with each other. One of these wings or arms normally projects, as shown, within the offset in the upper portion of the block face.

The operation of my improved car coupling is substantially as follows: By rotating the operating rod *g* which may be made to project outward on opposite sides of the car on which the draw bar is applied in the usual manner, the key or trigger piece *h* may be so turned as to cause its rear arm to come into contact with and press rearwardly the block *d* and thus allow the remaining key arm to press downward the rear end portion of the coupling arm *c*, the rear end of the latter thus being made to bear against the inclined face of the spring actuated block *d* or rest within a slight depression or seat c^4 formed therein. This downward movement of the rear portion of the arm *c* results, as shown in full lines in Fig. 2 of the drawings, in the bifurcated head thereof being so elevated as to bring the forward end of its lower finger c^2 slightly above the tongue *b*. With the parts in this position an ordinary coupling link *k* is inserted endwise within the draw bar mouth between the tongue *b* and the upper side of the head of

the draw bar. The link end thus inserted comes into contact with the rounded outer end of the lower arm finger c^2 and results in pressing said arm c downward. This downward movement of the arm end or head results in the rear end of said arm escaping from the depression or seat c^4 of the block d and in said arm end slipping up the incline of said block until past the shoulder d' thereof. By this upward movement of the rear portion of the arm c, it will be seen that that wing of the key h which is in contact therewith will be elevated and the remaining wing thereof will press against the upper portion of the block serving to force said block backward and thereby assist in the escape of the arm c therefrom. The dropping of the forward end of the arm c to the position indicated in dotted lines in the drawings, and the consequent dropping of the inserted end of the link results, as shown, in said link engaging with the rear or inner side of the tongue b from which position it will be prevented from escaping partly by said tongue and partly by the upper finger c^2 of the arm head. It will also be observed that said arm finger will serve to retain the link in a horizontal position and thereby obviate the necessity of lifting the outer end of the link to make the desired connection with the coupling of another car.

From the construction and operation which I have described it will be seen that a simple, reliable and effective coupling device is produced by means of which cars may be automatically coupled together without the necessity of the brakeman or other employé going between the cars and thereby endangering his life.

It will be observed that the parts of my improved coupler are few and of such arrangement and construction as to withstand great wear and long usage, and that a car having my improved coupling thereon may be readily coupled with the ordinary form of link and pin coupling as well as with a corresponding coupling.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In a car coupler the combination with a hollow draw bar and a tongue formed as described in the mouth thereof, of a pivoted arm or bar c within said draw bar, a bifurcated head upon said arm, a spring actuated block d arranged in the rear portion of said draw bar, the forward face of said block having an inclined surface, an operating rod passing through said bar and a key or trigger piece fixed thereon as described, said trigger piece having diverging arms, substantially as and for the purpose specified.

JACOB L. SHOUGH.

In presence of—
F. A. SIEGEL,
C. C. SHEPHERD.