

(No Model.)

C. BICKMEIER.
CAR COUPLING.

No. 518,910.

Patented Apr. 24, 1894.

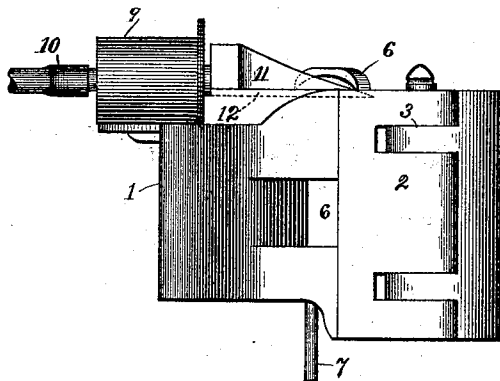


Fig. 1

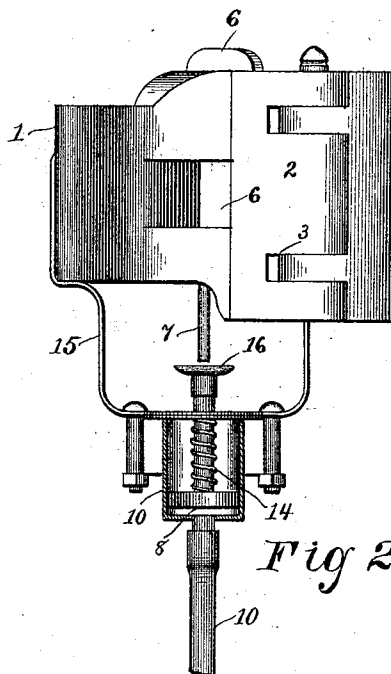


Fig. 2

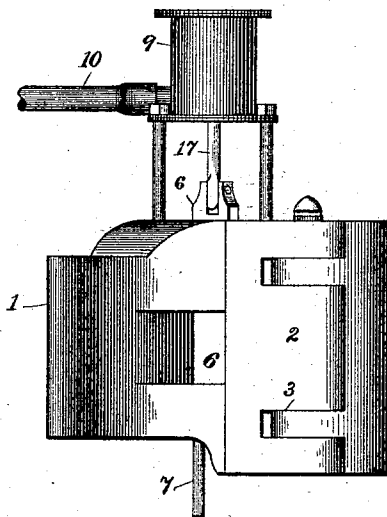


Fig. 3

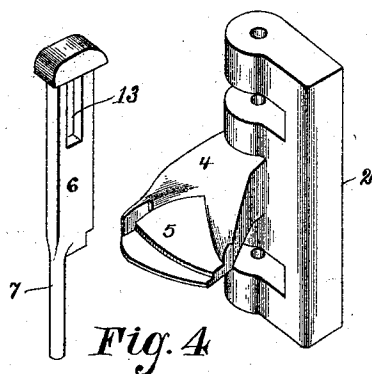


Fig. 4

Witnesses

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CHARLES BICKMEIER, OF BELLAIRE, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 518,910, dated April 24, 1894.

Application filed December 19, 1893. Serial No. 494,115. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BICKMEIER, of Bellaire, county of Belmont, State of Ohio, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce an improved car coupler and means for operating the same by the aid of compressed air.

In the accompanying drawings: Figure 1 is a front elevation of my coupler, showing a pneumatic pin lifting device connected with the head of the pin, and located at one side thereof. Fig. 2 is a similar view, showing the pin lifting device connected with the bottom of the pin. Fig. 3 is a similar view, showing the pin lifting device arranged directly over the pin. Fig. 4 is a view of the pin and knuckle detached, to illustrate their relations to each other.

Referring to the figures on the drawings: 1 indicates a coupler head and 2 a knuckle, of the Janney type, pivoted thereto, as indicated at 3. The knuckle is provided with a wing 4 grooved, as indicated at 5. This wing, in practice, is retained, so as to hold the knuckle in the coupling position, by a vertically movable pin 6 carried in the coupler head. The pin 6 has an extension piece 7, by which the pin is guarded throughout the limit of its movement. For lifting the pin I prefer to employ a pneumatically operated piston 8 carried in a cylinder 9 secured to the coupler head. A hose 10 communicates with a source of compressed air, not illustrated. The piston may be located to one side of the pin and

carry a beveled ended finger 11, moving in a groove 12 and in the line of a recess 13 in the head of the pin, as illustrated in Fig. 1. By this arrangement the movement of the piston forces the inclined edge of the finger under the pin head and lifts the pin. When the air pressure is relieved the piston is immediately retracted by a coiled spring 14 carried between the piston head and the end of the cylinder. Instead of this mechanism, which I prefer, the piston may be located underneath the extension 7 of the pin and carried upon a frame 15. When the piston is driven forward a pin support 16 strikes the end of the pin extension and lifts it so as to allow the knuckle to turn upon its pivot. This mechanism is illustrated in Fig. 2 of the drawings.

In Fig. 3 a superimposed cylinder and piston are shown, in which a link connection 17 is made between the piston and the pin and the compressed air is forced into the cylinder under the piston, as illustrated.

What I claim is—

The combination with a coupler head, of a pivoted knuckle, a vertically movable pin, a recess in the head of the pin, a cylinder, a spring-actuated piston, and a beveled ended finger carried by the piston and in line with the recess in the pin, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

CHARLES BICKMEIER.

Witnesses:

JAMES S. JOHNSTON,
JOHN ZWEIG.