(No Model.)

J. A. BLACKBURN.

CAR COUPLING.

No. 557,950. Patented Apr. 7, 1896.

Fig. 1.

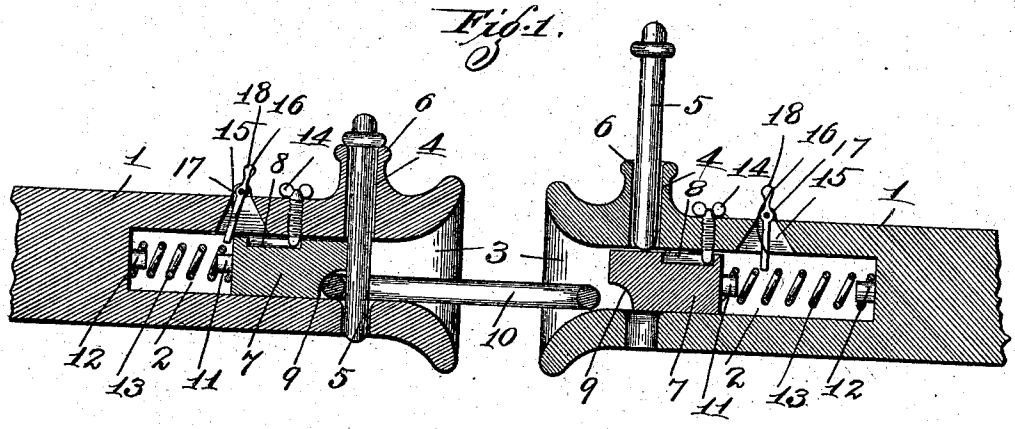


Fig. 2.

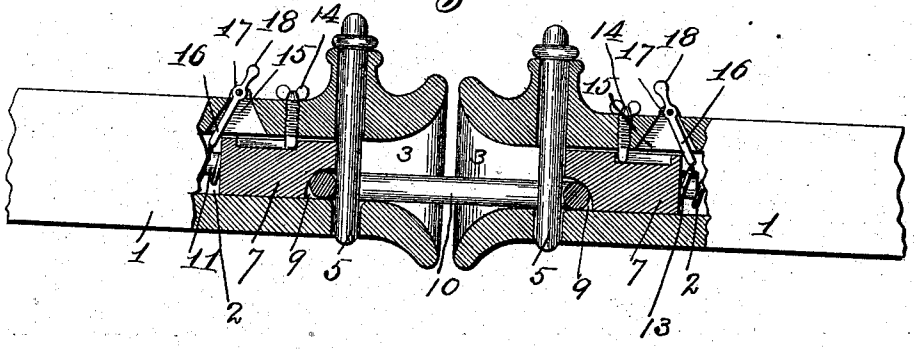
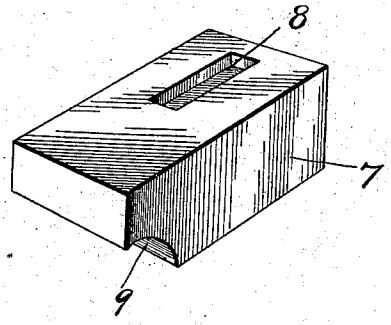


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. BLACKBURN, OF NORBORNE, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 557,950, dated April 7, 1896.

Application filed December 27, 1895. Serial No. 573,489. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BLACKBURN, of the city of Norborne, Carroll county, State of Missouri, have invented certain new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved car-coupling; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a longitudinal sectional view of a pair of my improved couplings, the same being shown in the position they assume just previous to effecting a coupling. Fig. 2 is a longitudinal sectional view analogous to Fig. 1, the draw-heads of the couplings being shown in the position they assume after a coupling has been effected. Fig. 3 is a view in perspective of a longitudinally-moving block made use of in the draw-head of my improved coupling.

In the construction of my improved device the draw-head 1, which is similar in form to the ordinary draw-head, is provided with the longitudinally-extending rectangular recess 2, the mouth of which in the end of the draw-head being flared, as indicated by 3. Passing vertically through the top and bottom portions of the draw-head, adjacent its forward end, are the alined apertures 4, through which the usual coupling-pin 5 passes. An integral sleeve 6 is formed on the top of the draw-head around the aperture or pin-hole 4, said pin-hole through the top of the draw-head communicating with the aperture through said sleeve.

Arranged to move longitudinally within the recess 2 is a rectangular block 7, in the top of which is formed a longitudinally-extending groove 8, and the lower forward corner of said block is provided with a segmental recess or cut-away portion 9, said recess being of such a size as that when the block 7 is located in the recess 2 the end of a link 10 will readily fit in said recess. Formed integral with the rear side of this block 7 is a lug 11, a similar lug 12 being formed integral with the end wall of the recess 2. Interposed between the block 7 and this end wall is an expansive coil-spring 13, its ends being positioned upon the lugs 11 and 12.

14 indicates a screw-bolt having wings upon its upper end, said screw-bolt passing downwardly through a suitably-formed screw-threaded aperture in the top of the draw-head, the lower end of said screw-bolt being located within the groove 8 in the top of the block 7. Formed in the top of the draw-head, immediately in the rear of this screw-bolt, is a vertical slot 15, in which operates the lower end of a lever 16, that is pivoted between ears 17, formed integral with the top of the draw-head on each side of said slot 15, and said lever is provided with an operating-handle 18.

To effect a coupling with my improved device, the block 7 in one of the draw-heads is moved rearwardly in the recess 2 by engaging the link 10 against the forward edge of said block until said forward edge passes to the rear of the alined apertures or pin-holes 4. This movement necessarily compresses the coil-spring 13, and power is stored therein. When the block has been thus moved rearwardly, the pin 5 is passed downwardly through the alined pin-holes 4 and through the link 10, the end of said link being now positioned within the recess 9 and behind the pin 5. As long as the parts of the draw-head are so positioned the link will be held in an approximately horizontal plane, such position being necessary in order that said link may enter the opposite draw-head without necessitating any operation or action on the operator's part to guide said link. The pin of the opposite draw-head must be drawn upwardly until its lower end passes out of the recess 2, which movement will allow the expansive coil-spring to move the block 7 outwardly to a point beneath the pin-hole or aperture 4 in the top of the draw-head. This will form a rest for the pin, and the same will be held in an elevated position until the link 10, held by the first-mentioned draw-head, engages in the recess at the forward end of the block in the second-mentioned draw-head and moves said block rearwardly, thus allowing the pin in the second-mentioned draw-head to drop through the link and to its normal position. Thus a coupling is effected in an entirely automatic manner, and one which does not re-

quire the operator to pass between the cars that are being coupled together.

In uncoupling, when either one of the pins is withdrawn and the draw-heads moved apart, the power stored in the coil-spring will cause the block 7 to move outwardly beneath the elevated pin. In this manner the coupling is set for operation at the same time the uncoupling is performed. Should the coil-spring become broken or inoperative, the block 7 can be moved outwardly by manipulating the lever 16. The screw-bolt 14 restricts the longitudinal movement of the block 7 and prevents the same from dropping out of the recess 2.

A coupling so constructed is simple, inexpensive, very durable, automatic in operation, and very effective in use.

I claim—

In a car-coupling, the combination with the draw-head 1, having the rectangular recess 2 flared at the mouth 3, said draw-head also having the alined apertures 4, of the coupling-pin 5 passing through the apertures 4, the sleeve 6 formed on the top of the draw-head 1, the rectangular block 7 arranged to move longitudinally within the recess 2, said block having the longitudinally-extending groove 8 and the segmental recess 9, the link 10 fitting in said recess, the lug 11 on said block 7, the lug 12 on the end wall of the recess 2, the expansive coil-spring 13 interposed between the block 7 and said end wall with its ends positioned upon the lugs 11 and 12, the screw-bolt 14 having wings upon its upper end, said bolt passing through the screw-threaded aperture in the top of the draw-head and into the groove 8 in the top of the block 7, the lever 16 pivoted between the ears 17 formed on top of the draw-head and operating in the slot 15 between said ears, and the handle 18 on said lever, as and for the purposes stated.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. BLACKBURN.

Witnesses:

C. B. DEAN,

JOHN T. BANKSTON.