

(No Model.)

W. E. BURRISS.
CAR COUPLING.

No. 513,875.

Patented Jan. 30, 1894.

Fig: 1.

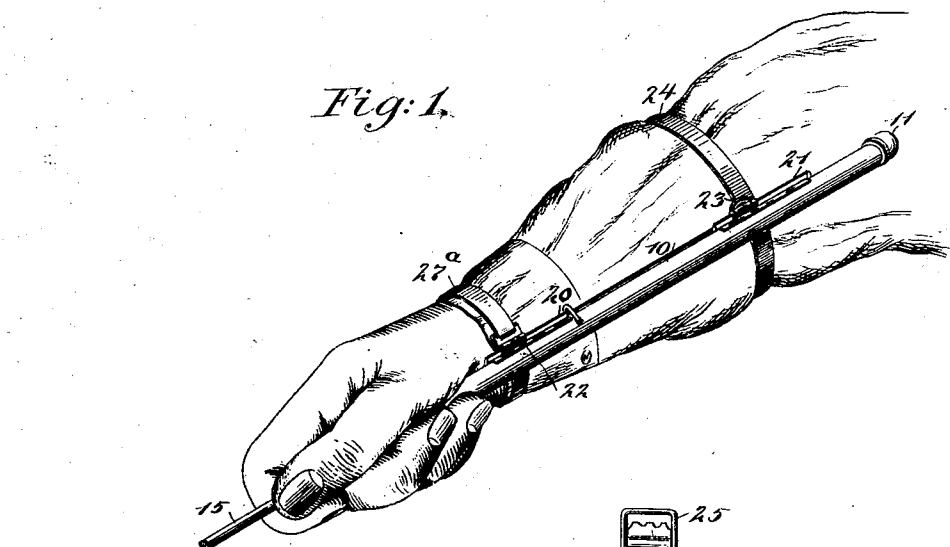


Fig: 2.

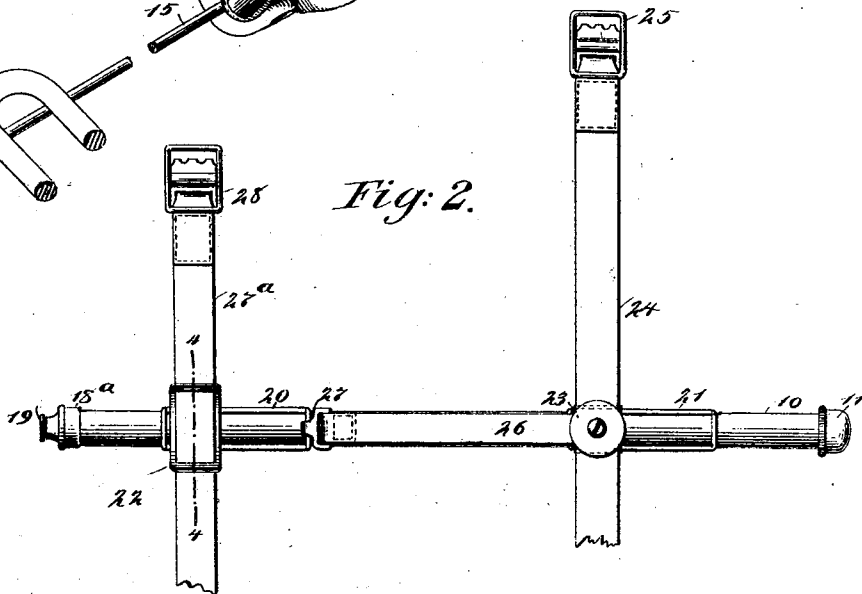


Fig: 3.

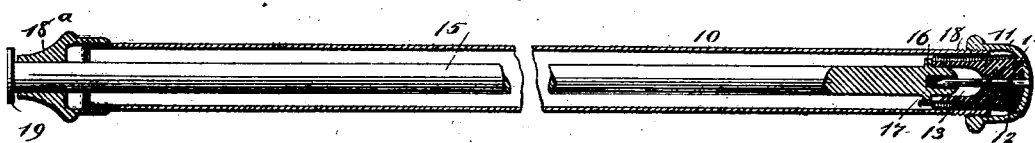
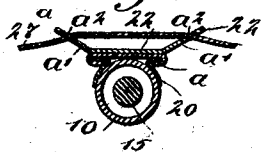


Fig: 4.



WITNESSES:

John A. Kinnic
C. Sedgwick

INVENTOR

W. E. Burris
BY
Munn & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM E. BURRISS, OF KANSAS CITY, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 513,875, dated January 30, 1894.

Application filed February 15, 1893. Serial No. 462,520½. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. BURRISS, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Improvement in Hand - Couplers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in hand couplers, and has for its object to provide a device capable of being attached to the arm of a person employed in coupling and uncoupling cars, in such manner that the device when not in use will be concealed beneath the coat sleeve if a coat is worn, and will be out of the way, not interfering in the least with the use of the hand of the arm wearing the device.

A further feature of the invention is to provide a device which may be elongated extensively and conveniently in a manner to extend from the body of the device a rod or bar which may be held in its extended position by the hand of the operator, the rod or bar being adapted for use in guiding a link when cars are being coupled, thus obviating the necessity of the operator standing between the cars, and protecting life so often lost by train men in effecting coupling.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the device, illustrating its application and the manner in which it is used. Fig. 2 is a side elevation of the device, illustrating the attachment of the straps to the body, through the medium of which the device is secured to the arm of the operator. Fig. 3 is a longitudinal vertical section through the device; and Fig. 4 is a vertical transverse section, taken practically on the line 4—4 of Fig. 2.

In carrying out the invention the body of the device consists of a tube 10 of any approved material or of any desired length. This tube at its upper end is provided with a cap 11, which is preferably screwed upon the

body, as illustrated in Fig. 3. Within the capped end of the tube a plug 12 of rubber or like material is located, the said plug being of less diameter than the diameter of the tube. The inner end of the plug is provided with a longitudinal recess or cavity 13, and the upper end of the plug is fitted snugly to the inner end surface of the cap 11. The inner end of the plug is somewhat reduced in diameter from its outer end, and a pin 14, secured to the central portion of the cap is passed through the plug into its recessed portion, as is likewise shown in Fig. 3.

A coupling rod 15, is located within the body or tube 10, and the inner end or head of the rod is provided with a flange 16, and in the inner extremity of the rod a cavity or aperture 17, is produced. A spiral spring 18, is coiled around the plug 12, and one end of the spring is securely attached to the flange of the coupling rod, while the opposite end is firmly secured to the cap. The spring tends to normally hold the flange portion of the rod against the inner end of the elastic plug, and when the rod is in that position the pin 14 of the cap of the body enters the recess in the rod. When the rod is in its normal position its outer end extends a slight distance beyond the outer end of a sleeve 18^a, preferably of conical shape, the said sleeve being screwed upon the outer end of the body tube; and the outer extremity of the coupling rod 15, is provided with a cap 19, preferably of disk form.

Upon one side of the body tube 10 slide-ways are produced, the slide-ways being two in number and designated in the drawings as 20 and 21, one slide-way being located at each side of the center of the body. The slide-ways are made fast to the body in any suitable or approved manner. A link 22, is held to travel upon the outer slide way 20, and the said link consists of a plate, as shown in Fig. 4, comprising a horizontal or straight central portion *a* and end sections *a'*, which extend in opposite directions at an angle to the central portions, the end sections of the link being provided with openings *a''*, the openings being preferably in alignment and transversely made. The link is prevented from leaving the slide way by forming stops at the ends of the latter, as shown in Fig. 2.

A button 23 has sliding movement upon the

inner slide-way 21, and this slide-way is likewise provided with stops at both ends. The button is adapted to clamp a strap 24, at or near the central portion thereof, the strap being provided at one end with a buckle 25 or like device, the opposite end of the strap being fitted for locking engagement with the buckle. The button 23, is also adapted to clamp one end of an elastic strip or strap 26, which elastic strap or strip is provided at its opposite end with a hook 27, or like device, adapted for engagement with the inner stop of the slide-way 20. The fastening strap 24, stands at a right angle to the elastic strap 26, and by means of the elastic strap the button 23, is normally held at the lower end of its slide-way, although the body of the device, when the strap 24, is fastened to an arm, may be carried a certain distance outward, thereby expanding the strap 26, but when the body is released it will automatically return to its normal position, that is, with the button at the lower end of its slide-way. A second strap 27^a, is passed through the openings in the sliding link 22, and the strap 27^a, is also provided at one end with a buckle 28, or equivalent fastening device.

The plug 12 serves a dual purpose; it acts first as a cushion receiving the inner end of the coupling rod 15, and thereby preventing undue jar or strain upon the body when the rod is withdrawn from the body and released and returned to its normal position within it, and secondly, the plug, by reason of its cavity 13, serves as a suction device, acting to hold the inner end of the rod in engagement with it, while the pin 14 serves as a guide, insuring the proper return of the head of the rod to its seat against the plug.

In operation, the lower strap 27^a, is passed around the wrist portion of the operator's arm, as shown in Fig. 1, and is buckled in place, while the upper strap 24, is passed around the upper portion of the arm either above or below the elbow, as in practice may be found most desirable. When the device is so attached it will normally stand in such position that its lower end will be above the hand, and consequently if a coat is worn it will be concealed, and the operator may manipulate the hand of the arm to which the device is attached as readily as though the device were not there.

In operation, the end of the rod 15 is grasped and drawn outward its entire length, expanding the spring 18 at the same time, and by the same movement the body of the device is drawn downward the length of the slides 20 and 21, thereby expanding the strap 26. When the rod is withdrawn it is held between the thumb and fingers of the hand, and the rod may then be passed between two opposing cars to guide or to remove a link from a coupler; or it may be passed beneath the link of one coupler to hold it in position to enter the drawhead of an opposing coupler, the operator meanwhile standing at the

sides of the sills of the car and out of the way of harm. After the rod has served its purpose it is released and is automatically returned within the body of the device by the spring 18; at the same time the body is released, whereupon the elastic strip or strap 26 will carry the body upward in direction of the elbow until the button 23 has reached the lower end of the slide-way, and as heretofore stated, at that time the device will not interfere with the movements of the hand.

This device is exceedingly light, it is simple and it is durable, and it is capable of being expeditiously and conveniently applied to the arm and is not at all in the way, and it provides a means whereby the coupling links of cars may be manipulated without endangering the life of the manipulator.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with the extensible hand coupling device, of attaching devices for securing the outer part or body of the device to the operator's arm; the said body being adapted to be slid upon its attaching devices, substantially as set forth.

2. The combination with the extensible hand coupling device, of straps having slide ways upon which the body of the device is mounted to slide longitudinally and a spring connecting the body with its attaching mechanism for returning the body to its normal position, substantially as set forth.

3. A coupling device, the same consisting of a hollow body provided with a cushion at its inner end, a rod normally located within the body and capable of being withdrawn therefrom, and a spring connected with the body and with the rod, the spring acting to maintain the end of the rod in engagement with the cushion, as and for the purpose set forth.

4. In a coupling device, the combination, with a body, of a spring-controlled extension rod located within the body, and a cushion adapted to receive an end of the rod when drawn within the body, as and for the purpose set forth.

5. In a coupling device, the combination, with a body section and an extension rod having sliding movement in the body, of an elastic cushion contained at one end of the body, adapted to receive a head formed upon one end of the rod, and a spring connected with the body and with the rod, the cushion being provided with a recess in which the extremity of the rod enters, substantially as and for the purpose set forth.

6. In a coupling device, the combination, with a body and an extension rod having sliding movement therein, the rod being provided at its inner end with a flange and a recess, of a cushion located within one end of the body and provided at its inner end with a recess, the recess being adapted to receive the inner extremity of the rod and the end of the cushion adapted for contact with the flange of the rod,

a guide pin passed through the cushion and adapted to enter the aperture in the inner end of the rod, and a spring attached to the body and the rod, normally maintaining the latter within the body, as and for the purpose set forth.

7. In a coupling device, the combination, with a body section and a spring-controlled extension rod having sliding movement in the body, of straps having sliding connection with the body, and an elastic connection between one of the straps and the body, as and for the purpose set forth.

8. In a coupling device, the combination,

with a body section, and a spring controlled 15
extension rod located therein, of slide-ways
formed upon the body at opposite sides of its
center, a clamp having sliding movement in
one of the slide-ways, the clamp carrying a
strap, a link likewise carrying a strap and hav- 20
ing movement in the lower slide-way, and an
elastic connection between the body and the
clamp, near the lower slide-way, as and for
the purpose specified.

WILL. E. BURRISS.

Witnesses:

G. M. DURST,

T. E. TABER.