

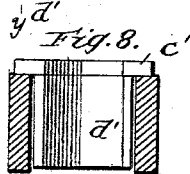
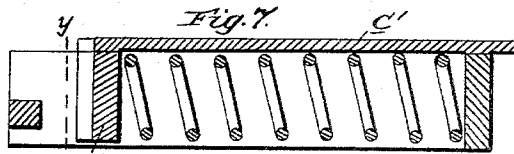
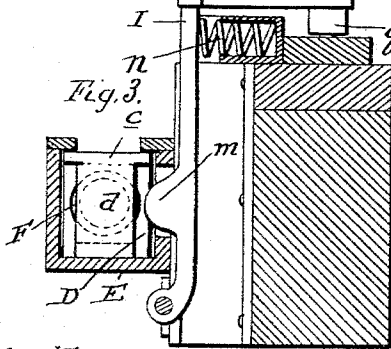
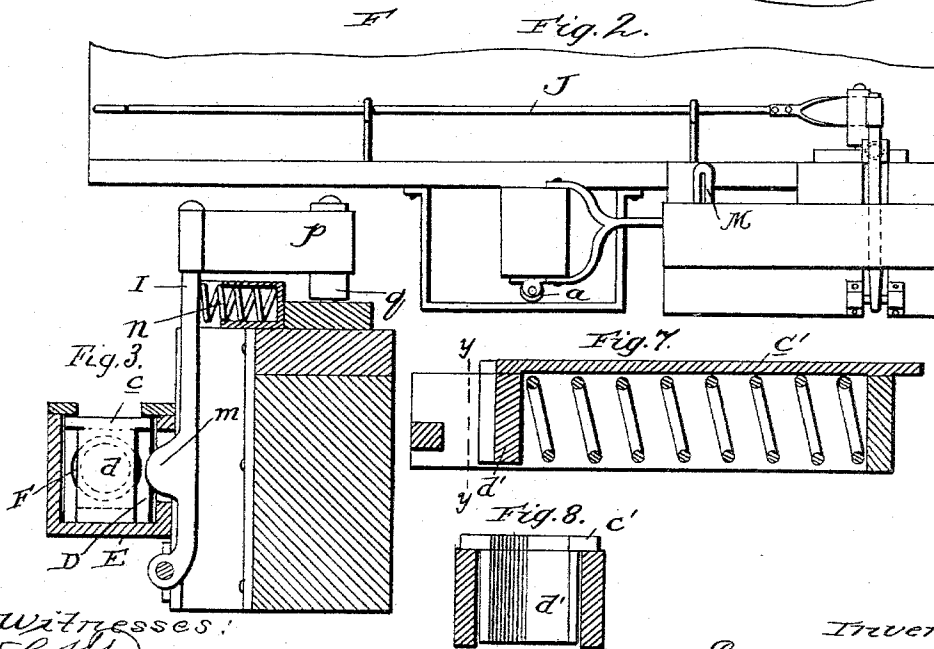
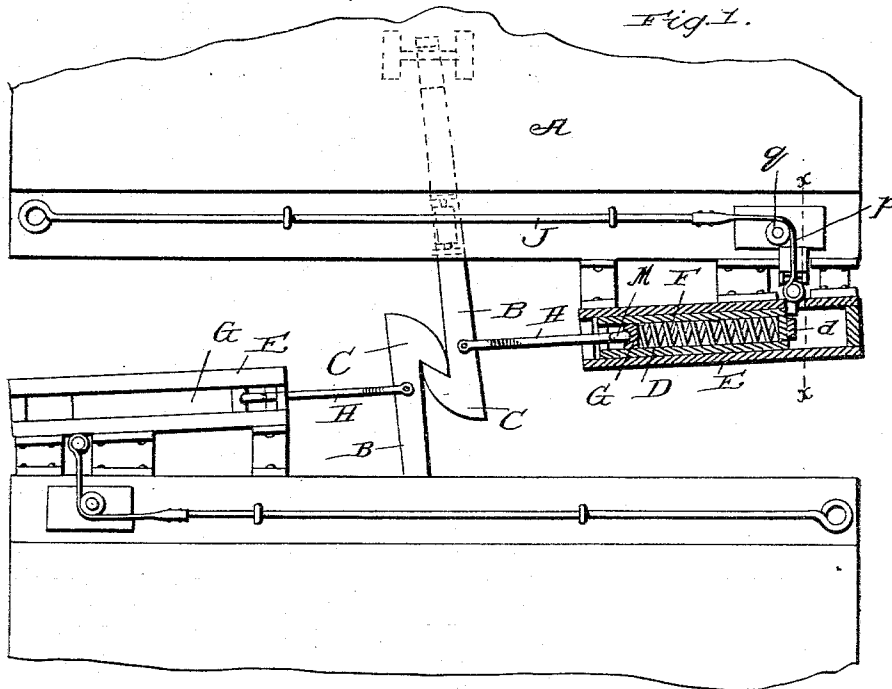
(No Model.)

2 Sheets—Sheet 1.

E. ATTAWAY.
CAR COUPLING.

No. 531,825.

Patented Jan. 1, 1895.



Witnesses:

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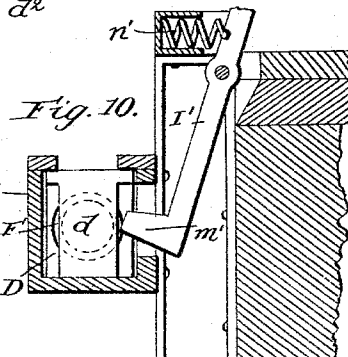
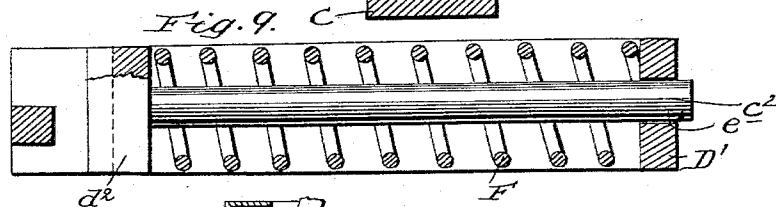
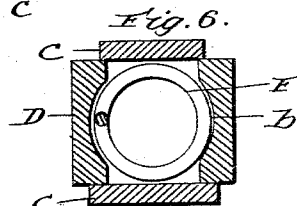
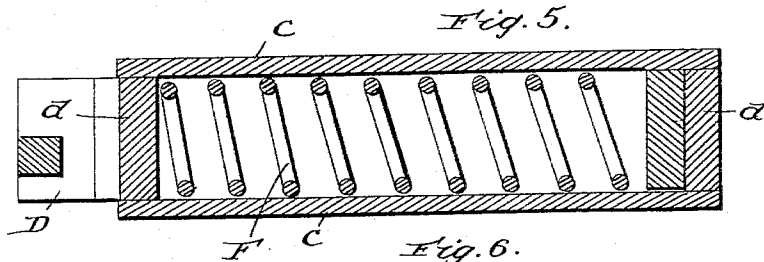
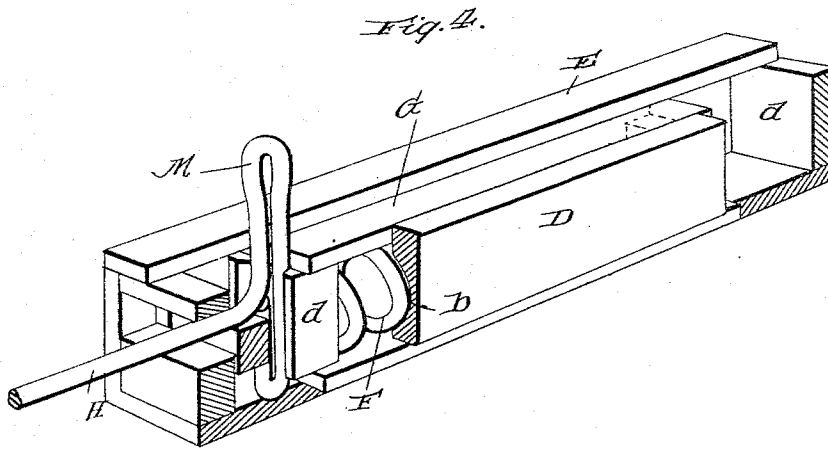
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

ELISHA ATTAWAY, OF GRAND CANE, LOUISIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 531,825, dated January 1, 1895.

Application filed May 4, 1894. Serial No. 510,101. (No model.)

To all whom it may concern:

Be it known that I, ELISHA ATTAWAY, a citizen of the United States, residing at Grand Cane, in the parish of De Soto and State of Louisiana, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in car couplings, and it has for its general object to obviate the objectionable necessity of a trainman remaining between the cars in order to couple the same, by providing a coupling embodying means adapted to hold the draw heads in such a position that they will automatically engage each other and interlock when the cars come together.

Other objects and advantages will appear from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1, is a plan view of two cars equipped with my improved coupling; the draw heads being shown in their connected position. Fig. 2, is a detail front elevation of one car with the draw head in position to automatically engage the draw head of another car. Fig. 3, is an enlarged, detail section taken in the plane indicated by the line *x, x*, of Fig. 1. Fig. 4, is an enlarged perspective view, partly in section, illustrating the spring box and its frame or housing together with the spring backed plunger and the link which connects the same with the draw-head. Fig. 5, is a vertical longitudinal section of the spring box and spring backed plunger. Fig. 6, is a transverse section of the same. Fig. 7, is a vertical longitudinal section illustrating a modified form of spring backed plunger. Fig. 8, is a transverse section taken in the plane indicated by the line *y, y*, of Fig. 7. Fig. 9, is a vertical, longitudinal section illustrating another modified form of spring-backed plunger, and Fig. 10, is a detail section illustrating a modified construction of trigger for holding the spring box in its operative position.

Referring by letter to said drawings, and more particularly to Figs. 1, to 6, thereof—A,

indicates railway cars which may be of the ordinary or any approved construction.

B, indicates the draw bars of my improved coupling which are loosely connected to the cars and are provided with caster wheels or rollers *a*, so that they may be easily swung laterally, and C, indicates the draw heads or hooks which are formed at the outer ends of the draw bars and are beveled so as to enable them to automatically engage each other when the cars come together, as will be presently described.

D, indicates the spring boxes of the coupling which are arranged and adapted to be moved in the housings or frames E, connected to the cars. The said spring boxes D, may be of any suitable construction, but I prefer in practice to provide their vertical side walls with concave grooves as *b*, so as to enable them to receive and hold the coil-springs F. These coil springs F, bear at one end against the outer end of the boxes and at their opposite end against the slidable plungers G, which are connected by links as H, with the draw bars B; and it will therefore be seen that when the spring boxes are locked against movement, as will presently be described, the coiled springs F, through the medium of the devices mentioned, will exert a pressure against the draw bars so as to enable the draw heads to interlock or engage with each other when the cars come together and will also serve to securely hold the draw-heads in engagement so as to prevent casual disconnection of the cars.

The plungers G, may be constructed as shown in Figs. 1 to 6, where they comprise upper and lower bars *c*, and end blocks *d*, or they may be made as shown in Figs. 7, and 8, which disclose a plunger comprising a single longitudinal bar *c'*, and a single end bar *d'*; or as shown in Fig. 9, which discloses a slightly modified spring box D', having an aperture *e*, in its outer end wall, and a plunger comprising an end block *d²*, and a shank *c²*, which takes through the coiled spring and the aperture *e*, as illustrated.

The spring boxes D, are loosely arranged in the housings or frames E, as before stated, and it is therefore necessary, in order to enable the draw heads to engage each other and remain in engagement, to provide means for

locking the spring boxes against movement so that the springs G, can exert a pressure against the draw heads. I prefer to employ for this purpose spring pressed triggers such as the triggers I, shown in Fig. 3, or the triggers I', illustrated in Fig. 10. The triggers I, which are the more preferred, are fulcrumed at their lower ends and are provided at an intermediate point of their length with projections *m*, adapted to extend through the housings or frames E, and engage and hold the boxes D; and the said triggers I, which are normally held in a position to engage the boxes D, by coiled springs as *n*, are designed to be drawn out of engagement with said boxes through the medium of the slidable rods J, which extend transversely of the car as illustrated in Fig. 1, and are connected with the triggers by straps *p*, which take around sheaves as *q*.

The trigger I', illustrated in Fig. 10, is fulcrumed at an intermediate point of its length and it is provided at its lower end with a toe *m'*, which is normally held by the spring *n'*, in the position illustrated so as to lock the spring box in its operative position. The triggers I', when employed may be moved through the medium of any suitable mechanism or by hand as is most desirable.

In the practical operation of my invention when it is desired to couple two cars, the parts are so adjusted that the triggers will engage the outer ends of the spring boxes; and consequently it will be seen that when the draw heads come together, the springs F, will retract and allow them to pass each other and will then force and hold them in positive engagement so as to effectually prevent a casual disconnection of the cars.

When it is desired to uncouple the cars it is simply necessary for the trainman to draw upon the rods J, so as to disengage the triggers from the spring boxes, when he can, by grasping the hand pieces M, of the links H, easily move one or both of the spring boxes and the draw heads connected therewith in opposite directions so as to disconnect the said draw-heads and permit the cars to draw apart. It is only necessary to move one draw head and the spring box connected therewith in order to uncouple the cars and it will therefore be seen that a trainman standing at the side of the cars can uncouple the cars without going between them.

It will be seen from the foregoing description taken in conjunction with the drawings that my improved coupling is very cheap and simple and that with it two cars may be coupled together without the necessity of the trainman going between them and that when coupled there is no liability of the cars being casually disconnected, which is an important advantage.

I have in some respects specifically described the construction and relative arrangement of the several parts of my improved coupling in order to impart a full and

exact understanding of the same, but I do not desire to be understood as confining myself to such specific construction and arrangement as such changes or modifications may be made as fairly fall within the scope of my invention.

Having described my invention, what I claim is—

1. In a car coupling, the combination with a draw bar loosely connected to a car and having a head at its outer end; of a movable box carried by the car, a slidable plunger connected with the draw bar, a spring interposed between the movable box and the plunger, and a trigger adapted to lock the movable box against movement in a direction away from the draw bar, substantially as specified.

2. In a car coupling the combination with a draw bar loosely connected to a car and having a head at its outer end; of a slidable spring-backed plunger carried by the car, and a link connecting the plunger and the draw bar and having a hand piece M, substantially as and for the purpose set forth.

3. In a car coupling, the combination with a draw bar loosely connected to a car and having a head at its outer end; of a movable box arranged in a frame or housing carried by the car, a slidable plunger connected with the draw bar, a spring interposed between the movable box and the plunger, a trigger adapted to lock the movable box against movement in a direction away from the draw bar, and an endwise-movable rod arranged transversely of the car and connected with the trigger, substantially as and for the purpose set forth.

4. In a car coupling the combination with a draw bar loosely connected to a car and having a head at its outer end; of a movable box carried by the car, a slidable plunger, a spring interposed between the movable box and the plunger, a trigger adapted to lock the movable box against movement in a direction away from the draw bar, and a link connecting the slidable plunger and the draw bar and having a hand piece M, all substantially as and for the purpose set forth.

5. In a car coupling, the combination with a draw bar loosely connected to a car so as to permit of its being swung laterally and having a head at its outer end; of a movable box arranged in a frame or housing carried by the car and disposed at one side of the draw bar, a slidable plunger mounted on the movable box, a link connecting said plunger and the draw bar and having a hand piece M, a coiled spring interposed between the movable box and the plunger, a trigger adapted to lock the movable box against movement in a direction away from the draw bar, a slidable rod disposed transversely of the car and mounted in guides thereon, and a strap taking around a sheave and connecting the slidable rod and the trigger, substantially as and for the purpose set forth.

6. In a car coupling, the combination with a

draw bar loosely connected to a car so as to permit of its being swung laterally and having a head at its outer end and also having a caster wheel or roller adapted to travel on a
5 bearing connected to the car; of a movable box arranged in a frame carried by the car and disposed at one side of the draw-bar, a slidable plunger, a spring interposed between the movable box and the plunger, a trigger
10 adapted to lock the movable box against

movement in a direction away from the draw bar, and a link connecting the slidable plunger and the draw bar and having a hand piece M, all substantially as specified.

In testimony whereof I affix my signature in 15 presence of two witnesses.

ELISHA ATTAWAY.

Witnesses:

D. R. BITTISEN,
D. B. HUDSON.