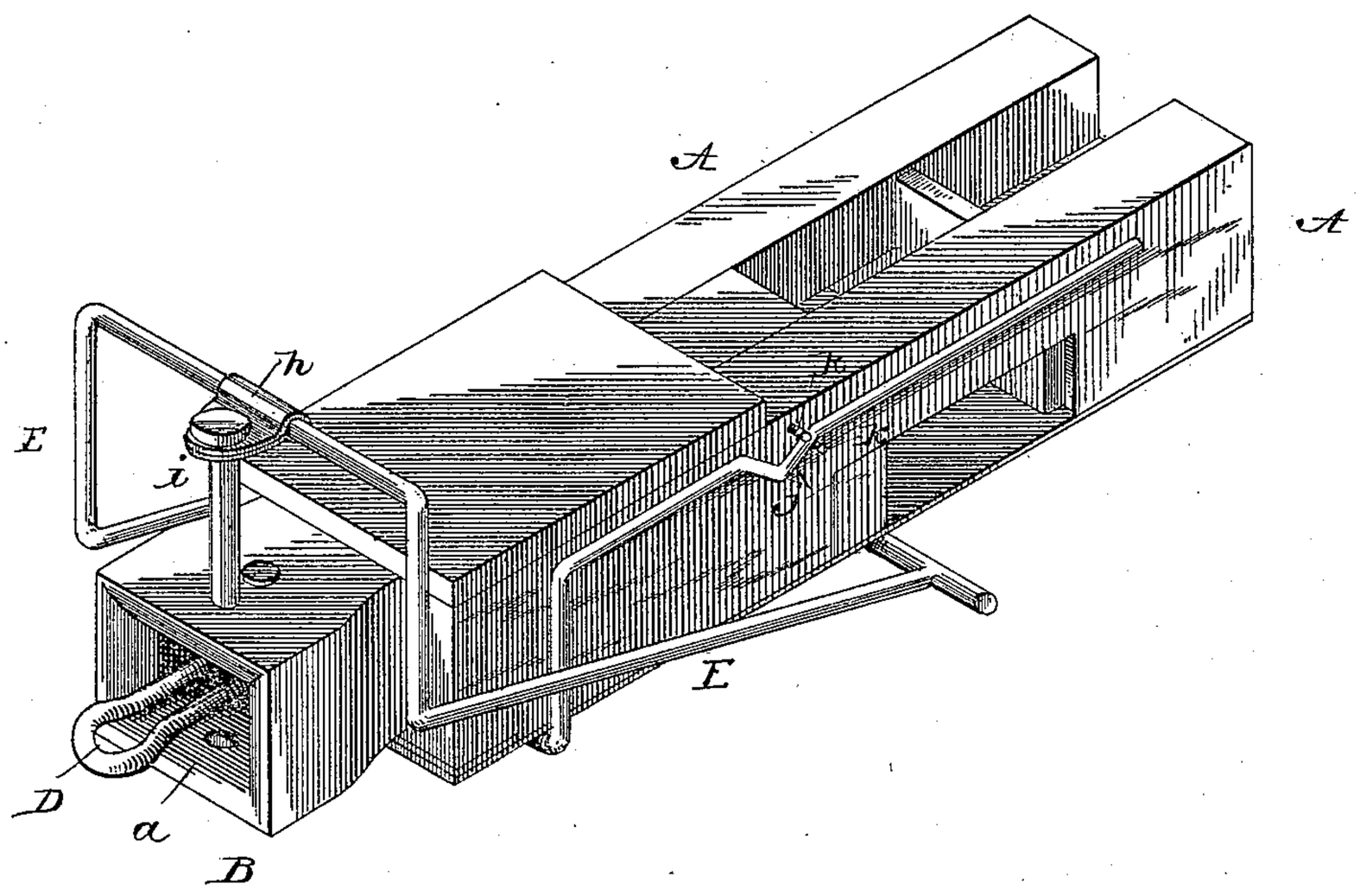
(No Model.) 3 Sheets—Sheet 1.

J. D. YOUNG.

CAR COUPLING.

No. 355,903. Patented Jan. 11, 1887.

Fig. 1.



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 2.

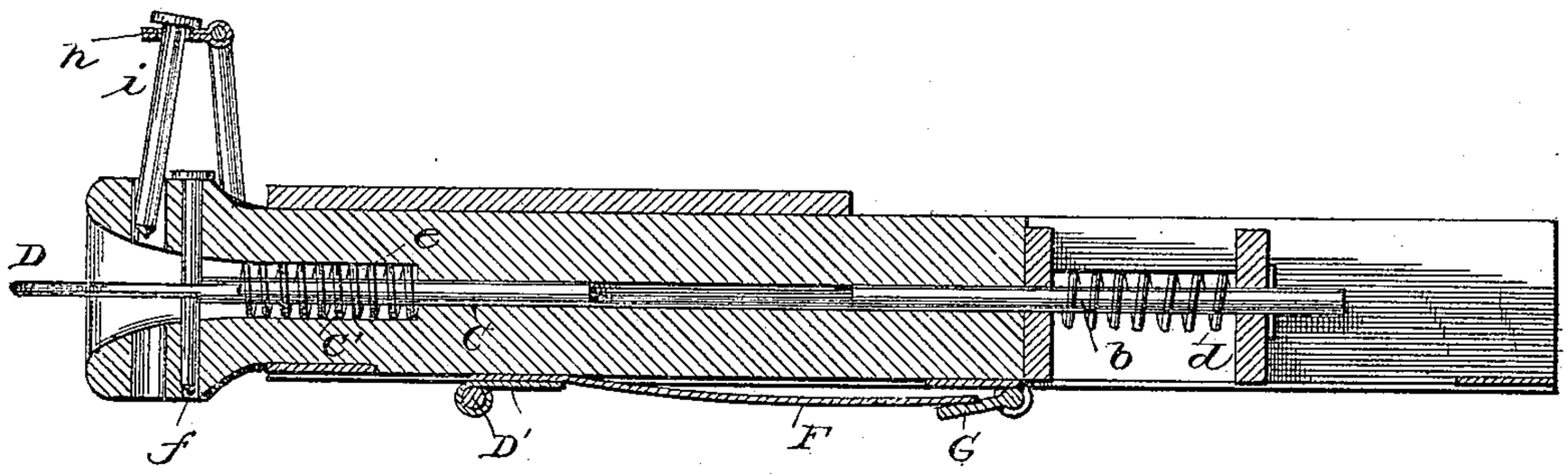


Fig. 3.

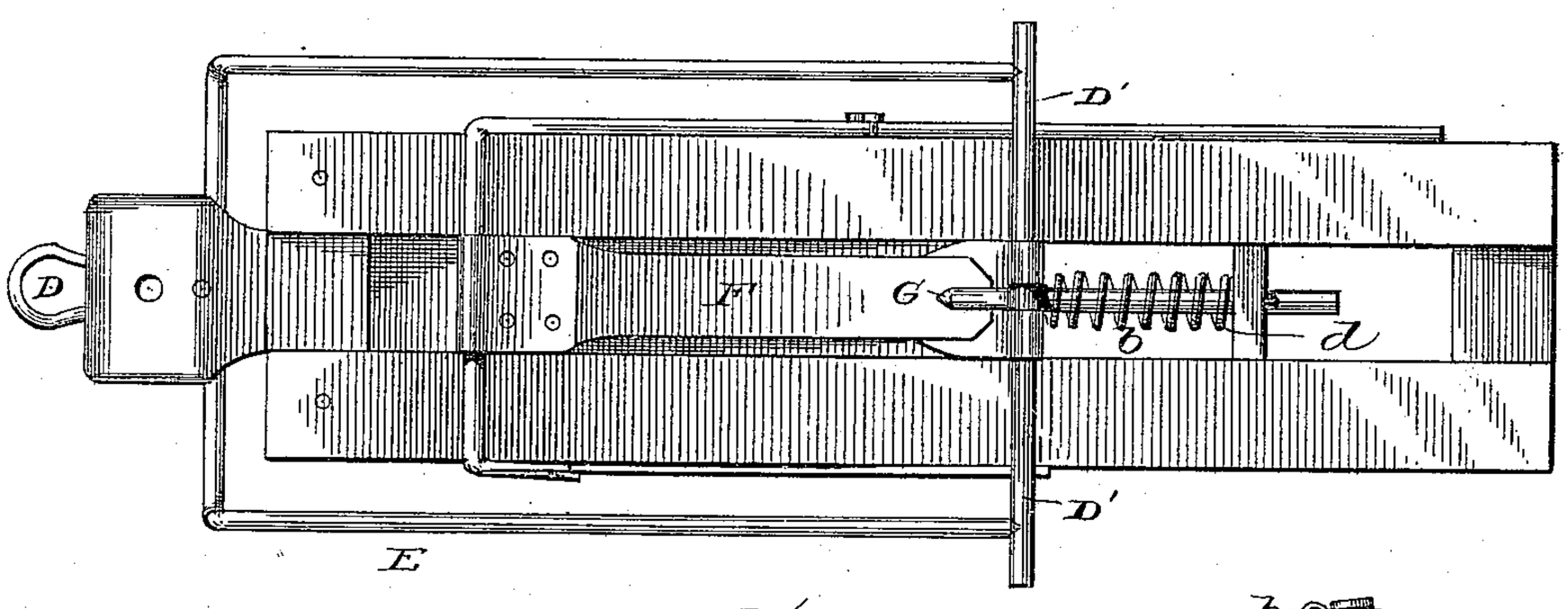
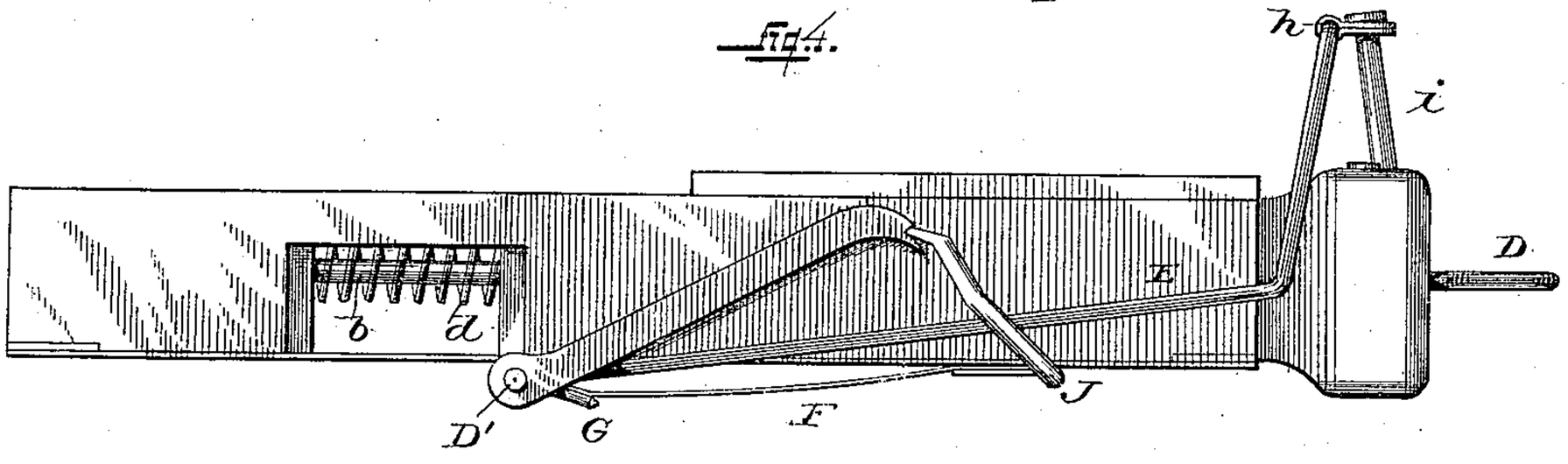


Fig. 4.



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CAR COUPLING.

No. 355,903. Patented Jan. 11, 1887.

Fig. 5.

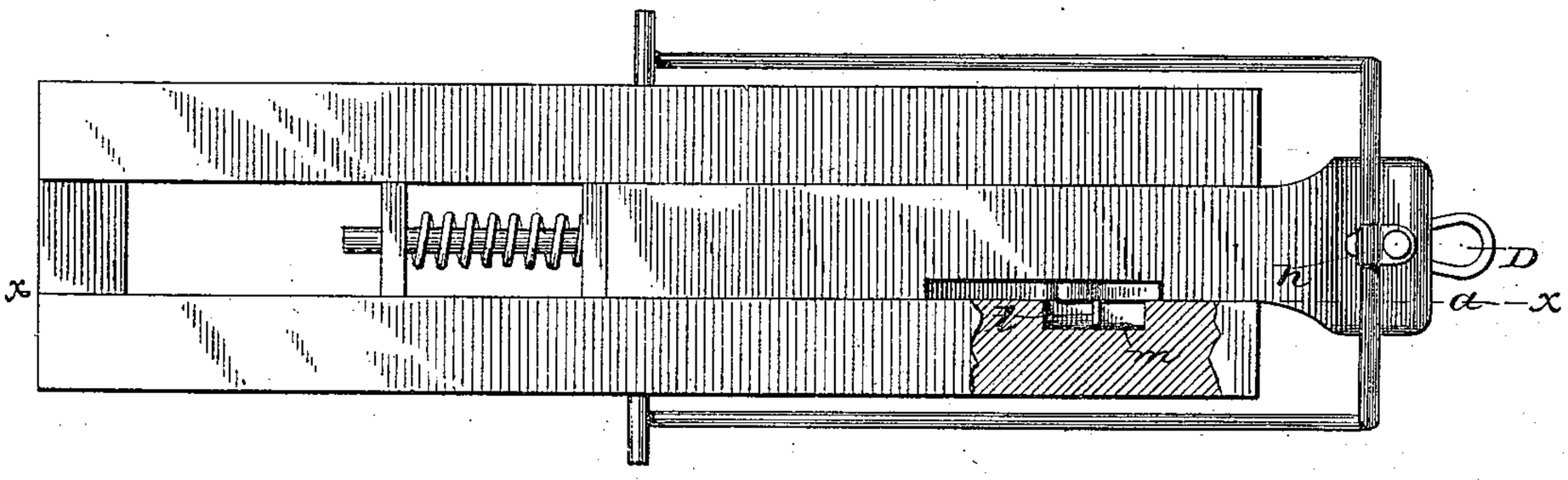
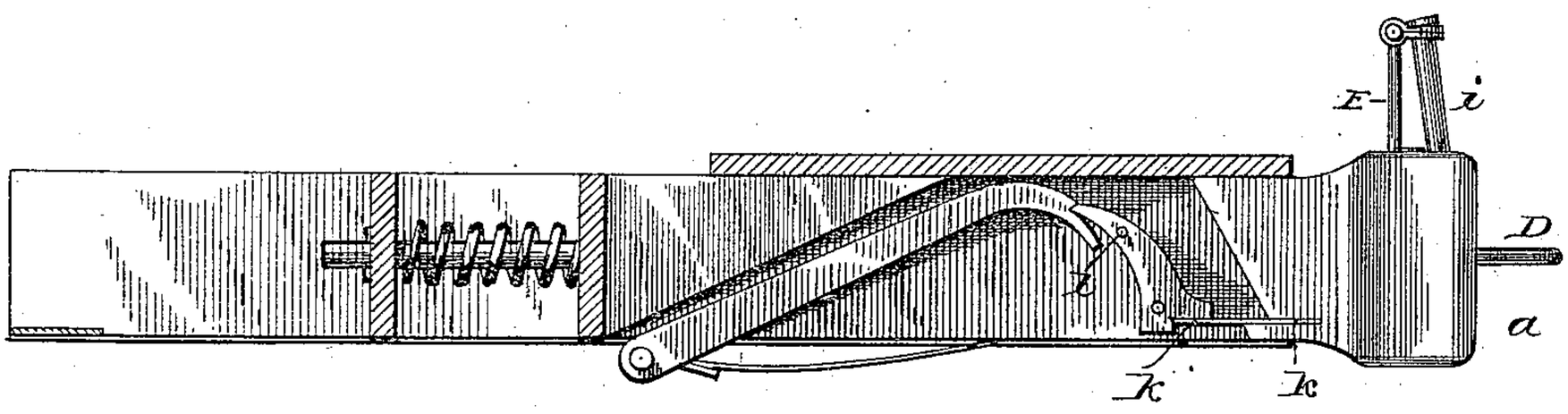


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES D. YOUNG, OF ELGIN, TEXAS, ASSIGNOR TO HIMSELF AND R. S. TINNIN, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 355,903, dated January 11, 1887.

Application filed September 7, 1886. Serial No. 212,921. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. YOUNG, a citizen of the United States, residing at Elgin, in the county of Bastrop and State of Texas, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-couplings, the object of the invention being to provide a coupling which shall be automatic in its action, which shall be simple in its construction, effective in its operation, strong and durable, and one which may be employed in connection with the various styles of draw-heads now in ordinary use.

The invention consists in certain features of construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a car-coupling embodying my invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a bottom view. Fig. 4 is a side elevation. Fig. 5 is a plan view, partly in section, of a modification; and Fig. 6 is a longitudinal vertical section on the line *x x* of Fig. 5.

Corresponding parts in the several figures are denoted by the same letters of reference.

Referring to the drawings, A represents the usual buffers or beams designed to be permanently secured to the under side of a car.

B represents the draw-head, mounted between said beams and adapted to have a sliding movement. Said draw-head is provided with the usual flaring mouth, *a*, as shown.

At the rear end of the draw-head is provided a rearwardly-extending rod or bar, *b*, which passes through a cross-beam connecting the buffers A, and on said rod or bar, between the beam and rear end of the draw-head, is provided a spiral spring, *d*, designed to relieve the draw-head of strain and prevent all jars and shocks.

Within a passage, *e*, of the draw-head is mounted a rod, C, carrying at its forward end a link, D, which is firmly secured thereto, and upon said rod C is mounted a spiral spring, C′.

When the cars are coupled, the forward movement or strain to the link is prevented by means of a coupling-pin, *f*, which passes through openings in the draw-head and through the link. By this arrangement, when the cars are coupled, the link gives as it strikes the draw-head of the adjacent car, and all liability of its becoming broken is thereby avoided.

Upon the under side of the draw-head, at or near the rear end thereof, is journaled a shaft, D′, to which is rigidly secured a yoke, E. This yoke E has a closed front end, which extends to a point on a line with the pin-openings *g* in the draw-head, and is then bent upwardly above the draw-head.

Extending outwardly from the bent closed end of the yoke is a nib or lug, *h*, having an opening through which passes a coupling-pin, *i*, to engage the pin-openings in the draw-head.

To expedite the lowering of the yoke and to hold it in its lowered position when the cars are coupled, a flat spring, F, is secured to the under side of the draw-head and bears against an arm, G, extending from the shaft D. This spring and arm may be omitted, however, if desired, since the weight of the yoke will be sufficient in most cases to cause it to drop, and maintain its lowered position until raised to uncouple the cars.

To hold the yoke and the pin which it supports in a raised position, so that the cars will be automatically coupled when brought together, I have journaled a pawl to the under side of the draw-head, and this pawl is adapted to engage a toothed arm, J, secured to the shaft D and extending forwardly therefrom. By this means, when the yoke is raised to uncouple the cars, the pawl is brought into engagement with the toothed arm, and as the latter is rigid with the yoke the latter is supported.

The pawl is extended to the other side of the buffers and there continued rearwardly, and is bent to form an angular portion, *j*, which passes between two pins, *k*, projecting from the buffers, so that as the draw-head is moved rearwardly by the concussion of the cars coming together said angular portion is raised, thus raising the pawl from the toothed arm and allowing the yoke and its pin to fall.

In the modification shown in Figs. 5 and 6 the toothed arm extends along the side of the

draw-head, and a pawl is pivoted to the latter to engage said arm, and a flat spring, *k*, secured to the draw-head, bears against the pawl and holds it in engagement with the toothed arm.

To release the toothed arm from engagement with the pawl, a pin is provided, which pin *l* projects from the pawl and engages a slot, *m*, in the buffer, so that as the draw-head is moved rearwardly the pin will, when it strikes the rear end of the slot or recess, lift the pawl from the toothed arm and allow the yoke to drop.

Any well-known arrangement may be employed for uncoupling the cars—for instance, a chain leading to the top of the car and there connected with a suitable lever.

By the employment of a coupling constructed as thus described all necessity of going between the cars is avoided, the cars are automatically coupled without any attention on the part of the train-hands, and the coupling is certain and effective.

Having thus described my invention, what I claim is—

1. The combination, with a draw-head, of a yoke carrying a pin, a toothed arm extending from the yoke, a pawl to engage said arm, and means for releasing the pawl to allow the yoke to drop, substantially as set forth.

2. The combination, with a draw-head, of a shaft carrying a yoke, the latter supporting a coupling-pin, a toothed arm extending from said shaft, a pivoted pawl to engage said arm, and an extension of said pawl, said extension being formed with an angular portion and passing between two pins, as set forth.

3. The combination, with a draw-head, of a journaled shaft carrying a yoke supporting a coupling-pin, an arm extending from said shaft, a spring bearing against said arm, and latch devices for supporting the yoke and automatically releasing it when the cars are brought together, substantially as set forth.

4. The combination, with the buffer-beams A, of a draw-head sliding between them, a spring bearing against the rear end of the draw-head, a sliding rod in the forward end of the draw-head, a link secured to said rod, a spiral spring bearing against the link, and a pin passing through the link, substantially as set forth.

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

JAMES D. YOUNG.

Witnesses:
E. BANEKE,
JAMES MCDERMOTT.