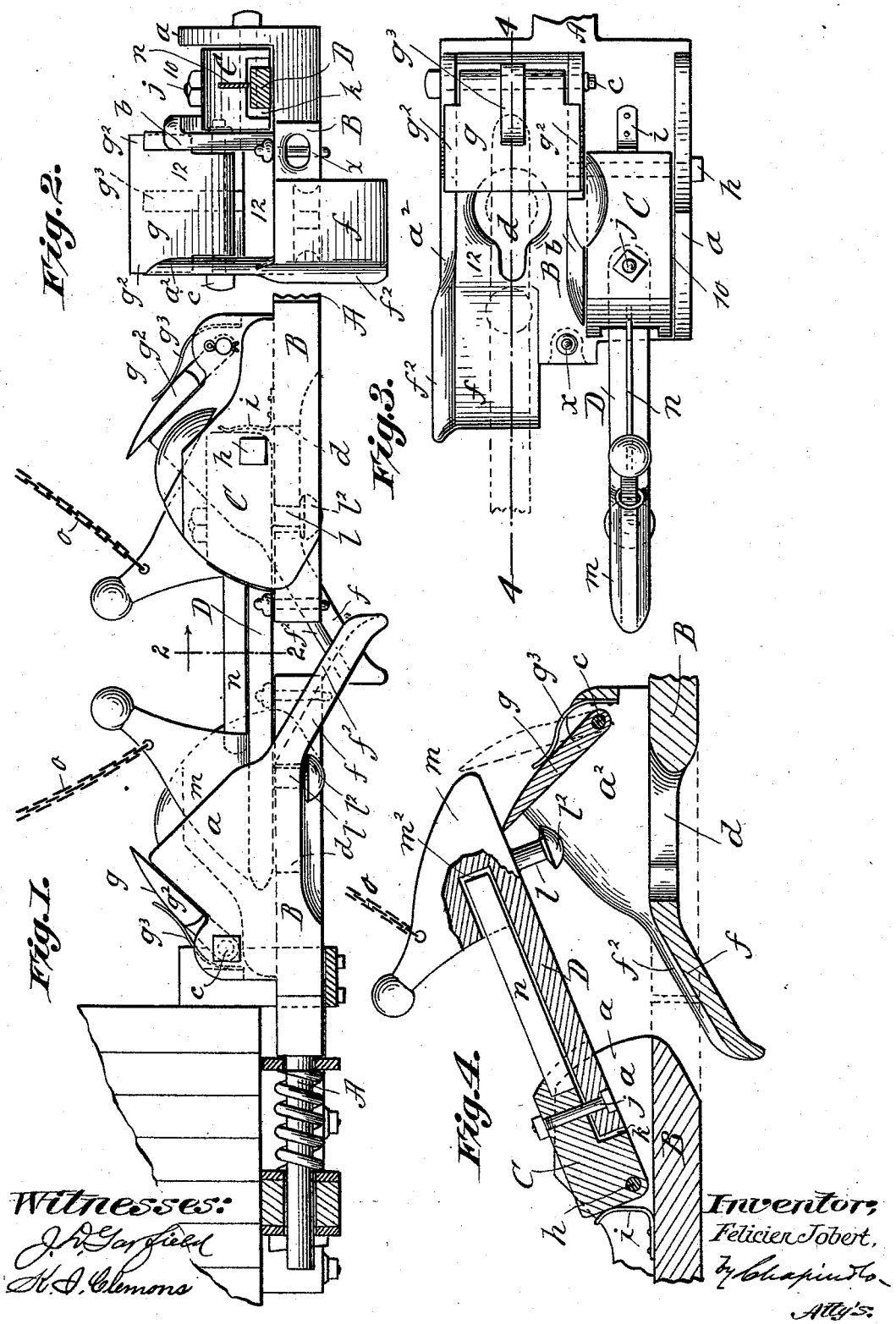
(No Model.)

F. JOBERT.

CAR COUPLING.

No. 522,343. Patented July 3, 1894.



UNITED STATES PATENT OFFICE.

FELICIEN JOBERT, OF EAST LONGMEADOW, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JULES WAUTHY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 522,343, dated July 3, 1894.

Application filed February 6, 1894. Serial No. 499,288. (No model.)

To all whom it may concern:

Be it known that I, FELICIEN JOBERT, a citizen of the Republic of France, residing at East Longmeadow, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to improvements in automatic car couplings.

The object of the invention is to produce a novel coupling which is unusually certain and efficient in operation and which permits an easy uncoupling when purposed. And the invention consists in constructions and combinations of parts all substantially as will hereinafter fully appear and be set forth in the claims.

Reference is to be had to the accompanying drawings in which the present improved coupling is fully and clearly illustrated and in which—

Figure 1 is a side elevation of the couplings for two cars as in their coupled relations. Fig. 2 is a front end view of one of the couplings, the coupling-bar being indicated in cross section as taken on the line 2—2, Fig. 1. Fig. 3 is a plan view of one of the couplings. Fig. 4 is a vertical, longitudinal, sectional view showing the coupling-bar of one coupling as brought into its uncoupling position relative to the other coupling. The plane of this sectional view is indicated by the line 4—4, Fig. 3.

Similar characters of reference indicate corresponding parts in all of the views.

The draw-bar, A, of each coupling, is designed to be set under the car as usual. The draw-bar has at its head or forward end a comparatively broad horizontal platform, B, which has at each side the longitudinally extending vertical cheek pieces, a, a^2, and the intermediate longitudinal vertical cheek-piece, b, which divides the coupling head into the two compartments, 10 and 12, which are open upwardly and forwardly as shown.

The base of the compartment, 12, has the slot, d, which is widened at the rear, and said base has the forward and downwardly inclined continuation, f. At the rear of this compartment, 12, is a plate, g, which has a forward and upward inclination, it being by its rear part pivotally mounted upon the transverse bolt, c, which extends between the cheek-pieces, a^2, b, to be swung upwardly from its position of rest which is had by its lateral extensions, g^2, upon the inclined rear edge of the cheek-pieces, a, b, as shown in Figs. 1 and 4, to the position indicated in dotted lines in said Fig. 4. The spring, g^3, holds this latch-like plate to rest in its stated normal position. Upon the outer edge of the said inclined part, f, is the upturned guard or guide lip, f^2. There is fitted within the forward part of the other compartment, 10, a block, C, which is pivotally held, as insured by the bolt, h, which passes through and between the cheek-plates, a, b, and through the lower rear corner portion of said block. This block may, therefore, by its forward portion swing upwardly. The spring, i, exerts the pressure to hold the block in its level position.

D represents the coupling-bar which, as seen at j, is pivoted within the transversely widened aperture, k, in the bottom of the block, by means of the vertical bolt shown, so that the bar may have a proper degree of lateral swing as usual in car couplings.

The coupling-bar at its forward extremity has the depending stud, l, with the enlargement, l^2, at its lower end,—the size of these parts being determined with reference to the dimensions of the aforesaid slot, d,—that is to say, the enlargement is smaller than the widened part of the slot and yet greater than the narrowed part of the slot, while the neck of the stud may freely move endwise along said narrowed slot portion. The coupling-bar is also constructed with an integral nose, m, which inclines upwardly and rearwardly from its forward end, its upper extremity constituting a handle-lever. This extension has within its rear edge a narrow-vertical forwardly extended recess, m^2, into which projects the free forward end of a flat spring, n. This flat spring stands with its longitudinal edge upward, and has its rear end set or fixed firmly within the forward part of the said block, C. This spring, while it permits the lateral deflection of the coupling-bar, as occasionally incidental to its operation, normally

exerts the tendency to maintain the bar in the proper longitudinal line. Chains, *o*, may be connected to the said extensions, they thence extending to the tops of the car whereby the coupling-bars may be given their vertical movements without the person necessarily coming down to the bottom of the car.

The operation of the couplings will be now described, it being understood that duplicate couplings are mounted upon the adjoining ends of two cars, so that the coupling-bar, D, of each is in line with the slotted compartment, 12, of the other. As the cars approach, the coupling-bar of each coupling, by its stud, *l*, rides upon the incline, *f*, of the other coupling and finally the studs fall through the enlarged portions of the slots, *d*. Now as the cars are drawn and slightly separate, as it will be seen they may, the necks of the studs are brought against the forward boundaries of the slots, *d*, and the stud enlargements which are now overlaid by the sidewise boundaries of the narrowed part of the slots are prevented from unduly rising and becoming disengaged.

Now to uncouple, the cars are brought together so as to slacken up the draft on the couplings and to bring the studs, *l*, *l*, under the enlarged rear areas of the slots, *d*, *d*, whereupon the coupling-bars are to be both swung up (see the one so swung in Fig. 4) this swinging movement causing the upswing of the plate, *g*, until the nose of the coupling-bar has passed it, when the said plate snaps back to its place and serves to hold the bars elevated and from dropping back into the slot. Now, when one car is drawn away from the other so that the studs are out of registry, or out of possibility of engagement with the slots of the opposite couplings, the coupling-bars fall back to their level positions ready for the next coupling operation.

Each coupling head has a hole whereby the ordinary coupling pin (as indicated at *x*) and link may be employed in case a car having this coupling is to be coupled to a car having some other form of coupling with which the present novel features would not coact.

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

1. In a car coupling, a coupling head or horizontal support with one sidewise portion provided with the slot, *d*, which is wider at the rear, and with the downward and forward inclination, *f*, and having supported at its other side portion the forwardly extending and vertically swinging coupling-bar which is provided with the depending stud, *l*, which has the lower end enlargement, l^2, substantially as and for the purpose described.

2. In a car coupling, a coupling head or horizontal support, B, with one sidewise portion provided with the vertical slot, *d*, and the downward and forward inclination, *f*, with the upturned side lip, f^2, and having supported at its other side portion the vertically swinging and forwardly extending draw-bar which is provided with the depending stud, *l*, substantially as described.

3. In a car coupling, a coupling head or horizontal support, B, with one sidewise portion provided with the slot, *d*, and the downward and forward inclination, *f*, and having at the rear of and above said slot the upwardly and forwardly inclined plate, *g*, which is pivotally mounted to swing rearwardly, and having supported at its other side portion the vertically swinging draw-bar which is provided with the depending stud, *l*, substantially as described.

4. In a car coupling, a coupling head comprised in the horizontal support, B, with one sidewise portion provided with the vertical slot, *d*, and the downward and forward inclination and having at the other side the block, C, which is pivotally secured at its rear lower corner, and having the aperture, *k*, and the coupling-bar provided with the stud, *l*, having its rear end portion pivoted to the block within said aperture to swing transversely independently of the block and to have a bodily vertical swinging movement with the block, substantially as and for the purpose set forth.

5. In a car coupling, the combination with the coupling head of a forwardly extending coupling-bar which at its rear is pivotally mounted for a lateral swinging movement, a flat spring having its rear end confined in a support which is independent of the said coupling-bar, and which extends longitudinally along the bar to an engagement with a forward part thereof, and exerting a stress thereon to maintain the bar in the longitudinal line of the coupling, substantially as described.

6. In a car-coupling, the combination with the head having the block, C, pivoted thereon for an upward and downward swinging movement and having the recess, *k*, of the forwardly extended coupling-bar, D, connected by the pivot at its rear end within said recess, *k*, for a bodily swinging movement vertically with the block, and for an independent sidewise swinging movement, and having at its forward part an upward projection, *m*, with the narrow recess, m^2, and the flat spring *n*, having its rear end connected to the block and extending along the bar and entering said recess, m^2, substantially as described.

7. In a car coupling, the combination with a coupling-head comprising the horizontal base, B, provided with the slot, *d*, and with the downwardly and forwardly inclined extension, *f*, and the longitudinal cheek-plates, *a*, a^2, *b*, of the forwardly and upwardly inclined plate, *g*, pivoted at the rear of and above the said slot, between two of the ear-

pieces, and the block, C, pivoted at the other sidewise part of the base between two of the ear-pieces and having the draw-bar, D, movable vertically with the block and so pivotally connected therewith as to move sidewise independently of the block and having the depending stud, *l*, and the spring, *n*, acting between the said block and coupling-bar, substantially as and for the purpose set forth.

FELICIEN JOBERT.

Witnesses:
WM. S. BELLOWS,
K. I. CLEMONS.