

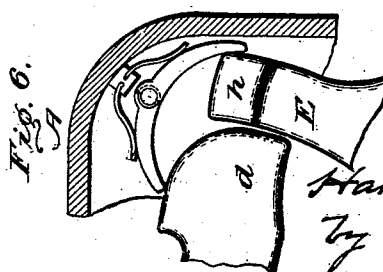
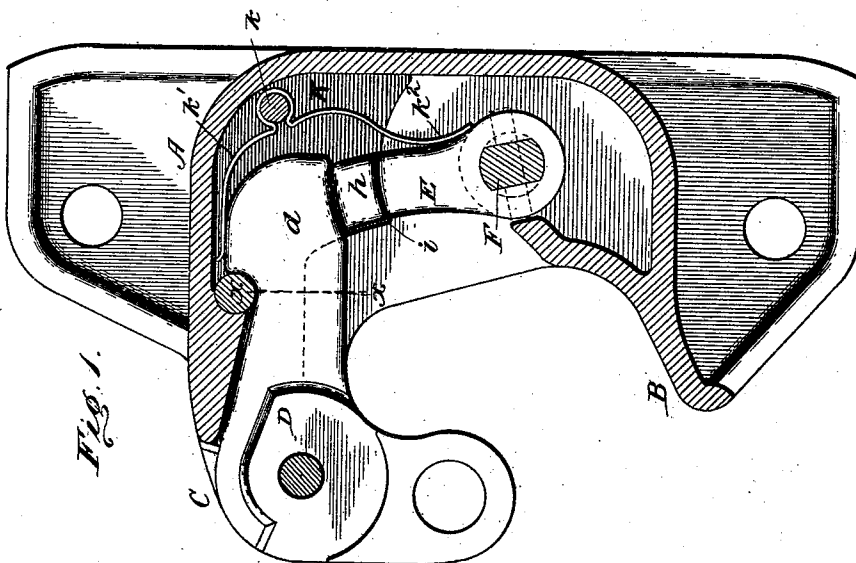
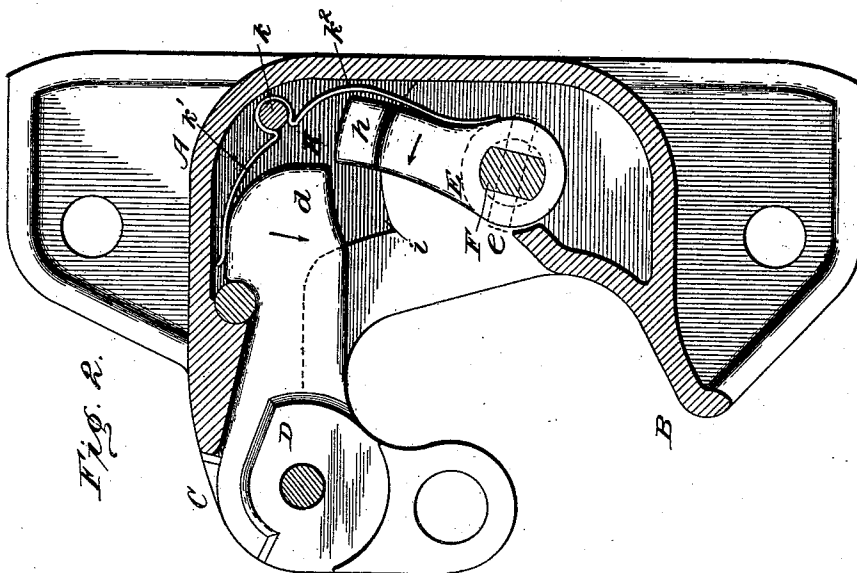
(No Model.)

2 Sheets—Sheet 1.

H. C. BUHOUP.
CAR COUPLING.

No. 491,207.

Patented Feb. 7, 1893.



Witnesses
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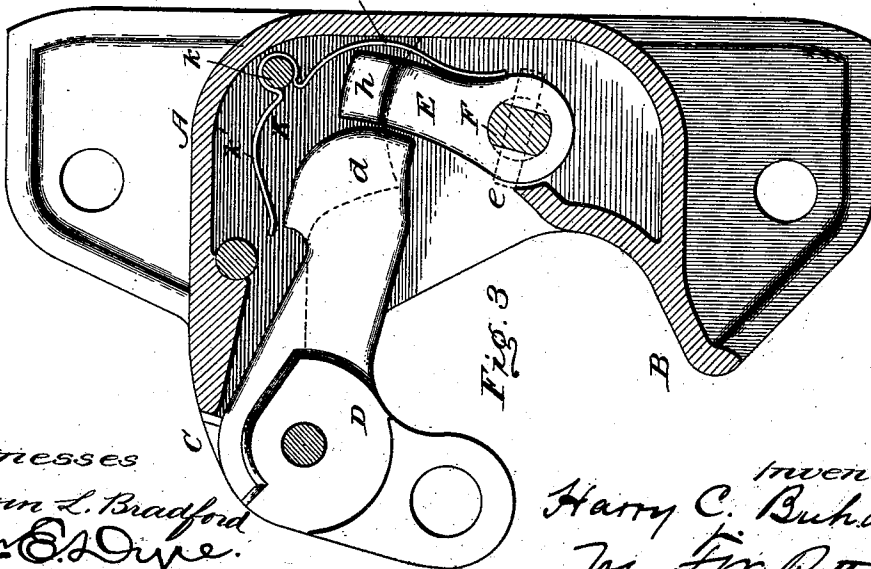
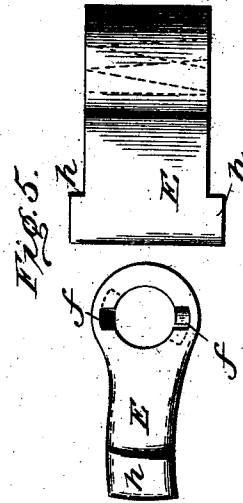
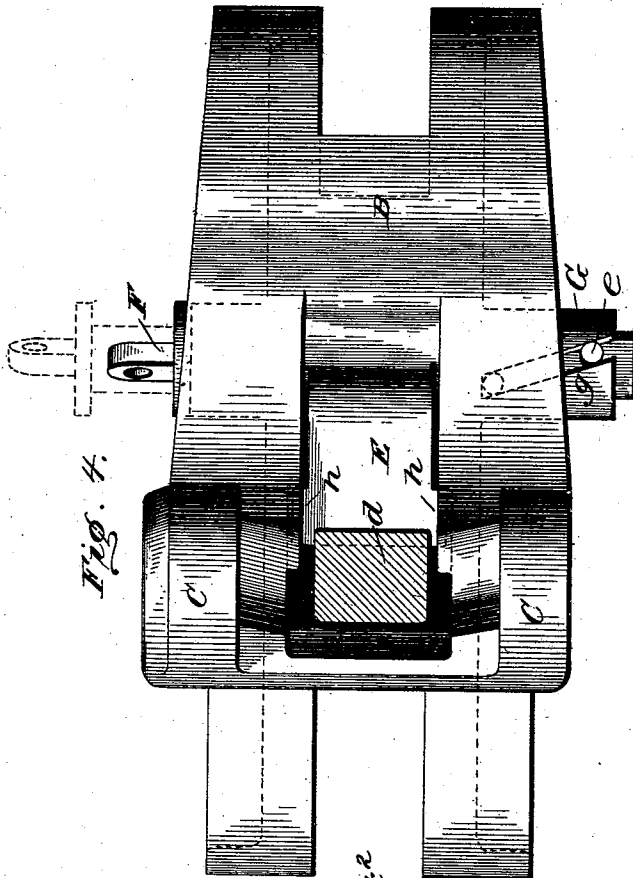
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UNITED STATES PATENT OFFICE.

HARRY C. BUHOUP, OF CHICAGO, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 491,207, dated February 7, 1893.

Application filed August 25, 1892. Serial No. 444,086. (No model.)

To all whom it may concern:

Be it known that I, HARRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Couplings; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, wherein—

Figure 1 is a plan view, partly in section, of a coupler head embodying my invention, the operative devices being shown in the positions they occupy when coupled. Fig. 2 is a plan, thereof, partly in section showing the positions the parts occupy at the instant the parts are set for uncoupling. Fig. 3 is a plan, partly in section, showing the relation the parts assume in either coupling or uncoupling. Fig. 4 is a front elevation of the coupler, the parts occupying the positions shown in Fig. 1, the tail-piece of the knuckle being in section on the line $x-x$ Fig. 1, and the remainder of the knuckle removed. Fig. 5 is a detail view of the wing lock (or locking block) showing a modified construction, for actuating the same by the pin. Fig. 6 is a view of a modified form of spring mechanism for actuating the knuckle or revolving hook coupler.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of that class of "twin jaw" couplers wherein the knuckle or revolving hook coupler, is automatically actuated either directly or indirectly, by spring mechanism, and consists, generally stated, in the combination with a spring actuated knuckle and wing lock of a pin and inclines for actuating the wing lock, as will hereinafter more fully appear, and finally be pointed out in the claims.

For purposes of illustration I have chosen that class of twin jaw couplers, generally known as the "Janney type"—but herein disclaim any intention of limiting the invention thereto.

I will now proceed to describe the invention more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings A, indicates the coupler head which may be of any desired pattern

provided with the usual guard arm B, ears C, and pivoted knuckle D, provided with the tail-piece d adapted to swing within the head A.

E indicates a wing-lock, or locking block, either pivoted on, or having for its pivot, the pin F. In case, as preferred, the pin F forms the pivot of the wing lock E, said pin may be provided at its lower end with a transverse pin e , the ends of which latter pin rest and move in inclined slots g formed in an annular boss G on the under side of the head A, so that when the pin F is raised to the position indicated in dotted lines, Fig. 4, said pin will be rotated and carry the wing lock E with it. If desired, however, the inclines may be formed in the eye of the locking block or wing lock E—as at f , Fig. 5—in which case the ends of pin e will terminate in said inclines within the eye of the wing lock, and the vertical rise of the pin E (to the position shown in dotted line Fig. 4) will cause the wing lock to rotate on the pin instead of with the pin.

The outer end of the locking block or wing lock E is usually formed with projections $h h$, adapted to enter recesses $i i$ in the top and bottom walls of the head A, to limit the movement of the locking block and, while in the construction chosen for purposes of illustration the rear face of the wing lock is adapted to form a bearing for the spring K, and its front face is curved to accommodate the sweep of the tail-piece d , it is to be understood that the particular form of the wing-lock or locking-block E will be adapted to the particular form of spring mechanism used—as is well understood by the skilled mechanic—familiar with couplers.

In carrying out my invention I have selected, a bow-shaped spring K, pivoted, at substantially its center k , in the head A, with one of its arms k' extending back of the tail piece d of the knuckle, and the other, k^2 , back of the wing-lock E, and so arranged with relation thereto, that one or the other of said parts $k' k^2$ must be moved out of its normal position in the act of coupling or uncoupling, and one arm of the spring or spring mechanism put temporarily in tension, or under compression. It will be evident to a person skilled in the art that this spring mechanism for automatically actuating the knuckle is not nec-

essarily a single spring, as two or more springs may be used, nor need it be only a spring, as a spring actuated two-part pivoted casting or block (of the general character shown in Fig. 6) may be arranged to perform the same function and be the full equivalent of the spring K, shown in Figs. 1 to 3.

The construction being substantially of the character hereinbefore pointed out, will operate as follows—When the co-acting elements—viz. the knuckle or revolving hook coupler, the locking block, or wing lock, and the spring mechanism which actuates the knuckle, occupy the relative positions shown in Fig. 1 (coupled), or that shown in Fig. 3 (uncoupled, or set for coupling) the spring mechanism is relieved from compression. If now the pin (F) is raised to the position shown in dotted lines in Fig. 4, the transverse pin (e) moving on the inclines (g or f, as the case may be) causes the rotation of the wing lock and the compression of the spring mechanism (as indicated in Fig. 2). If this occur in the act of uncoupling, the instant the end of the wing lock E passes the tail-piece of the knuckle, the resiliency of the spring mechanism, (which has been compressed by the wing-lock) will forcibly project the tail-piece of the knuckle in the direction of the arrow shown thereon and automatically either uncouple or set the knuckle for coupling up as the case may be. If however, this occur in the act of coupling up then the pressure will be maintained on the spring mechanism by the tail-piece of the knuckle until it (the tail-piece) has passed the end of the wing-lock E whereupon the resiliency of the spring will come into play to move the wing lock forward in the direction of the arrow marked thereon and lock the knuckle, as shown in Fig. 1.

I am aware that spring actuated wing locks, and spring actuated knuckles have heretofore been devised, and also that a spring adapted to actuate both the knuckle or pivoted jaw and the lock have heretofore been combined therewith, and I do not herein claim the same, neither do I limit my invention to the character of spring mechanism for actuating the knuckle and lock herein shown and described, as any equivalent of such element may be employed at the will of the constructor. But

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

1. In a twin jaw coupler, the combination with a knuckle or revolving hook coupler, of a wing-lock, a pin, and inclines for actuating the wing lock from the pin; substantially as and for the purposes specified.

2. In a twin jaw coupler, the combination with a knuckle, or revolving hook coupler, and a wing-lock, of a pin and inclines for actuating the wing-lock, and a spring for actuating the knuckle from the wing-lock; substantially as and for the purposes specified.

3. In a twin jaw coupler, the combination with a knuckle or revolving hook coupler, of a wing-lock, a pin and inclines for actuating the wing-lock, and a pivoted bow spring for actuating the knuckle from the wing-lock; substantially as and for the purposes specified.

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

HARRY C. BUHoup.

Witnesses:

F. W. RITTER, Jr.,
WM. E. DYRE.