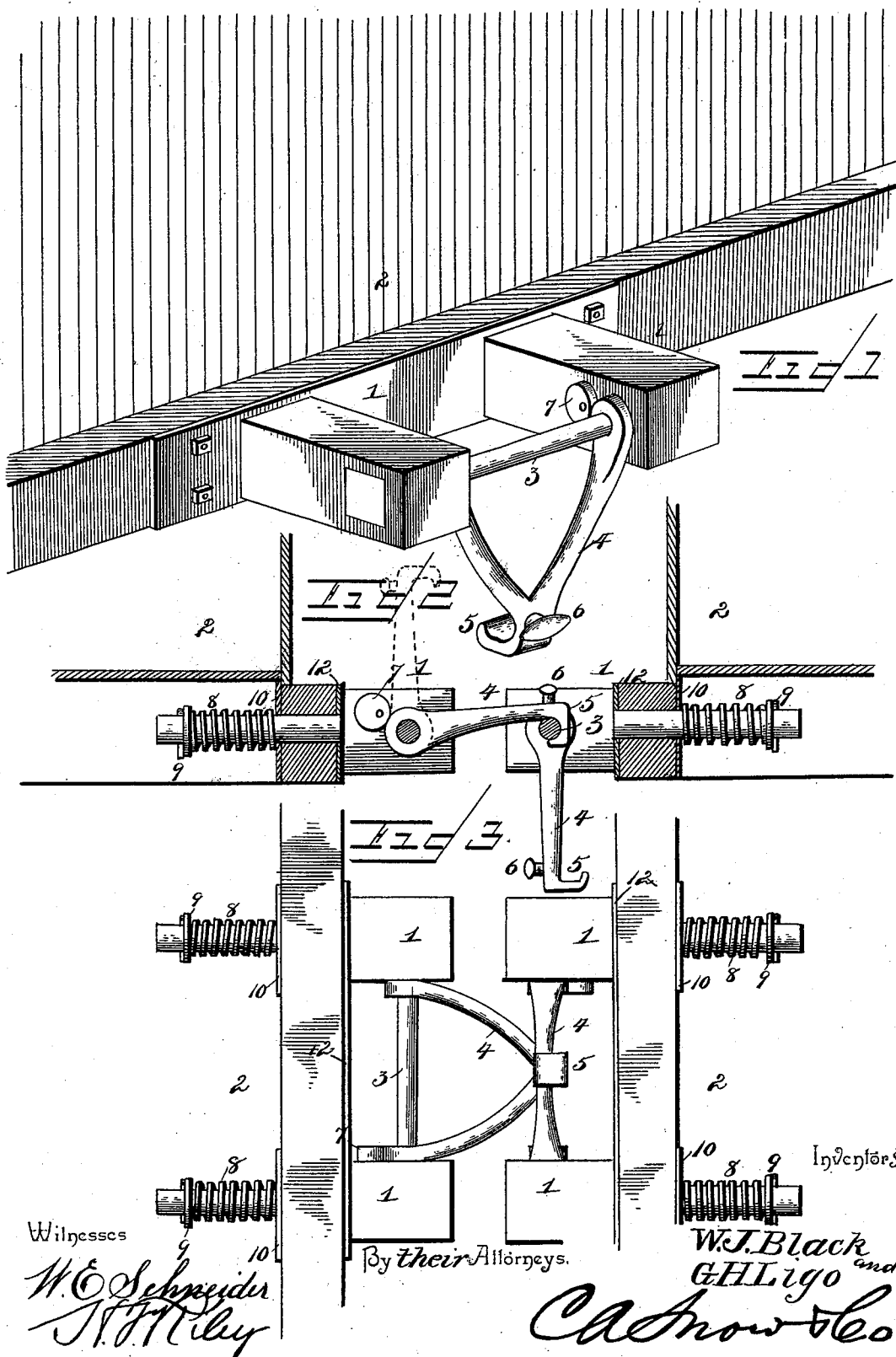


(No Model.)

W. J. BLACK & G. H. LIGO.
CAR COUPLING.

No. 507,707.

Patented Oct. 31, 1893.



UNITED STATES PATENT OFFICE.

WILLIAM J. BLACK AND GEORGE H. LIGO, OF INDIAN RUN, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 507,707, dated October 31, 1893.

Application filed July 8, 1893. Serial No. 479,948. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. BLACK and GEORGE H. LIGO, citizens of the United States, residing at Indian Run, in the county of Mercer and State of Pennsylvania, have invented a new and useful Car-Coupler, of which the following is a specification.

The invention relates to improvements in car couplings.

The object of the present invention is to improve the construction of car couplings, and to provide one which will be simple and inexpensive in construction and which will be capable of automatic coupling and ready uncoupling, and which will not necessitate persons going between cars during coupling.

The invention consists in the construction, and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings:—Figure 1 is a perspective view of a car coupling constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view showing a portion of two cars coupled, the coupling hook of one of them being shown elevated in dotted lines. Fig. 3 is a reverse plan view of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1—1 designate a pair of draw heads projecting outward from the car 2, and connected by a transverse bar 3, on which is journaled a coupling hook 4, which is adapted to engage the bar 3, of a similar car coupling, whereby cars are coupled. The hook 4, is approximately V-shaped and is provided at its apex with a depending head 5, to engage the bar 3, of another car coupling, and is provided at the inner ends of its sides with bearing openings to receive the bar 3, which is preferably rounded the entire distance between the draw-heads 1. At its outer end the hook is provided on its upper face with a T-shaped lug 6, to which may be attached any suitable means for enabling the coupling hook to be elevated from the top and sides of the car to avoid going between the cars.

Preparatory to coupling, the hook 4, is elevated as illustrated in dotted lines in Fig. 2 of the accompanying drawings, and is sup-

ported by a disk 7, which is eccentrically mounted at the inner side of one of the draw-heads and is adapted to be adjusted by rotation to support the coupling hook at the desired position, which is slightly beyond the vertical, to cause the coupling hook to fall by a slight jar incident to cars coming together and to engage the transverse bar of a companion coupling. The draw-heads are slidingly mounted on the car and are cushioned by springs 8, which are disposed on the shanks of the draw-heads and interposed between keyed collars 9, and plates 10, of the adjacent end sill 11. The end sill of the car has a plate 12 secured to its outer face against which the draw-heads bear; and the jars incident to coupling are amply sufficient to cause the coupling hook to fall.

It will be seen that the car coupling is simple and comparatively inexpensive in construction, that it is capable of automatic coupling, and that it does not necessitate persons going between the cars.

The coupling hook may be readily lifted out of engagement with the opposed transverse bar as easily as an ordinary coupling pin is lifted out of engagement with the link; and it cannot become accidentally thrown out of such engagement by the jolts and jars incident to the passage of the train.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

The draw-heads are solid and project from the car to form bumpers and have separate shanks upon which the said springs 8, are mounted.

What we claim is—

1. In a car-coupling, the combination of parallel draw-heads, a transverse bar connecting the draw-heads, and a coupling hook having separated sides journaled on the transverse bar and adapted to engage the transverse bar of a similar car-coupling, substantially as described.

2. In a car coupling, the combination of parallel draw-heads, a transverse bar connecting the same, a coupling hook journaled on the transverse bar and adapted to be swung upward to a vertical position preparatory to

coupling, and to fall by the jars incident to coupling, and a disk eccentrically mounted on one of the draw-heads and arranged in rear of the coupling hook and forming a support for the same when the coupling hook is elevated, substantially as described.

3. In a car coupling, the combination of the two separate solid draw-heads forming bumpers and having independent shanks, spiral cushioning springs arranged on the said shanks, and the coupling hook pivotally

mounted between the draw-heads, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM J. BLACK.
GEORGE H. LIGO.

Witnesses:

ANDREW A. MONTGOMERY,
WALTER E. LIGO.