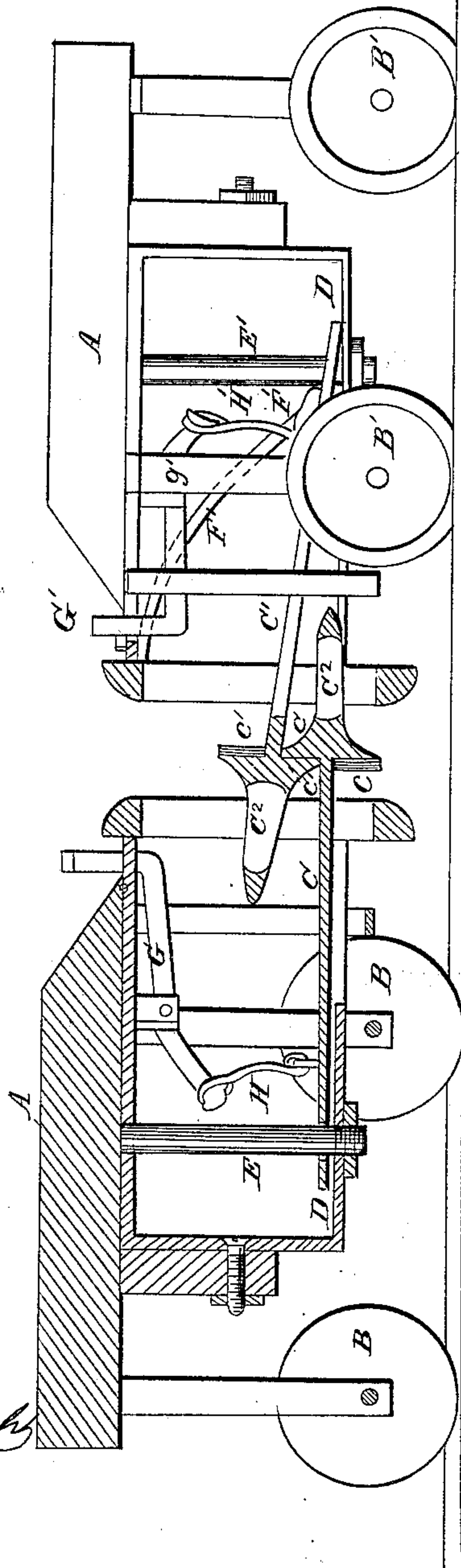


BIRCH & NOBLE.

Car Coupling.

No. 34,289.

Patented Feb. 4, 1862.



Witnesses
Octavius Knight
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UNITED STATES PATENT OFFICE.

THOMAS L. BIRCH AND JOHN C. NOBLE, OF WASHINGTON, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 34,289, dated February 4, 1862.

To all whom it may concern:

Be it known that we, THOMAS L. BIRCH and JOHN C. NOBLE, both of Washington, Washington county, Pennsylvania, have invented a new and Improved Car-Coupler; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, and being a side elevation, partly in section, of adjacent parts of two cars with our couplers attached.

The subject of our said invention is an automatic coupler, adapted to secure the cars when the latter are run together without requiring accurate adjustment of the parts, or setting them at any specific relative height; and the invention particularly consists in a certain construction and combination of coupling-hooks, and their accessories by means of which the said object is accomplished, as hereinafter more particularly explained.

A A may represent portions of the truck-frames, and B B B' B' the wheels.

C C' are coupling-bars resting upon bed-plates D D' and secured at their rear ends upon vertical rods or standards E E'.

F represents a spring, which presses upon each of the bars C C' at a short distance from its rear end so as to permit the elevation or depression of the forward end of the bar, but restore it instantly to a horizontal position when released and so retain it.

G G' are foot-levers fulcrumed at *g g'* and connected at their rear ends by means of links H H' with the bars C C' forward of the points at which the pressure of the springs F' is applied. The forward ends of the said levers project above the platform of the car, and by pressure of the foot upon one or the other of them the bar C or C' may be raised.

The bars C C' have at their forward ends inclined or tapering heads with hooks or shoulders *c c' c' c'* projecting upward and downward. They are also provided with apertures *c²*, by means of which a car with our improved coupler may be attached to one of another construction. The upper hooks may

be made concave and the lower ones convex, or vice versa, in order to permit the more free deflection of the bars when the cars are passing around curves.

The manner of using our improved coupler is as follows: The cars being run together, either of the bars C C' which happens to be the higher runs up upon the other, the springs F' yielding so as to permit one of the bars to rise and the other to descend sufficiently to allow the links H H' to pass, and the instant they pass they are securely locked together by the action of the springs. When it is desired to uncouple the cars, the brakeman, noticing at a glance which bar C or C' is uppermost, applies his foot to the lever G or G', which is attached thereto, and the cars are instantly detached.

It will be observed that the construction of the bars C and C' is similar in all respects and both are furnished with hooks above and below. It is therefore entirely immaterial which of the bars is uppermost when they come together, and an inequality in the height of the cars or in the surface of the rails will not interfere with the operation of the device. Furthermore, a hooked bar of similar form being applied to each end of every car any two cars will couple either way without a possibility of mismatching.

Having thus described our invention what we claim as new, and desire to secure by Letters Patent, is—

The combination of the similarly-formed double-hooked bars C C' *c c'*, springs F, and levers G', when the parts are so constructed and arranged as to adapt the hooks to lock together whichever is uppermost, substantially as hereinbefore explained.

The above specification of our improvement in car-couplings signed this 9th day of December, 1861.

THOMAS L. BIRCH.
JOHN C. NOBLE.

Witnesses:

OCTAVIUS KNIGHT,
JOHN J. ELLIOT.