

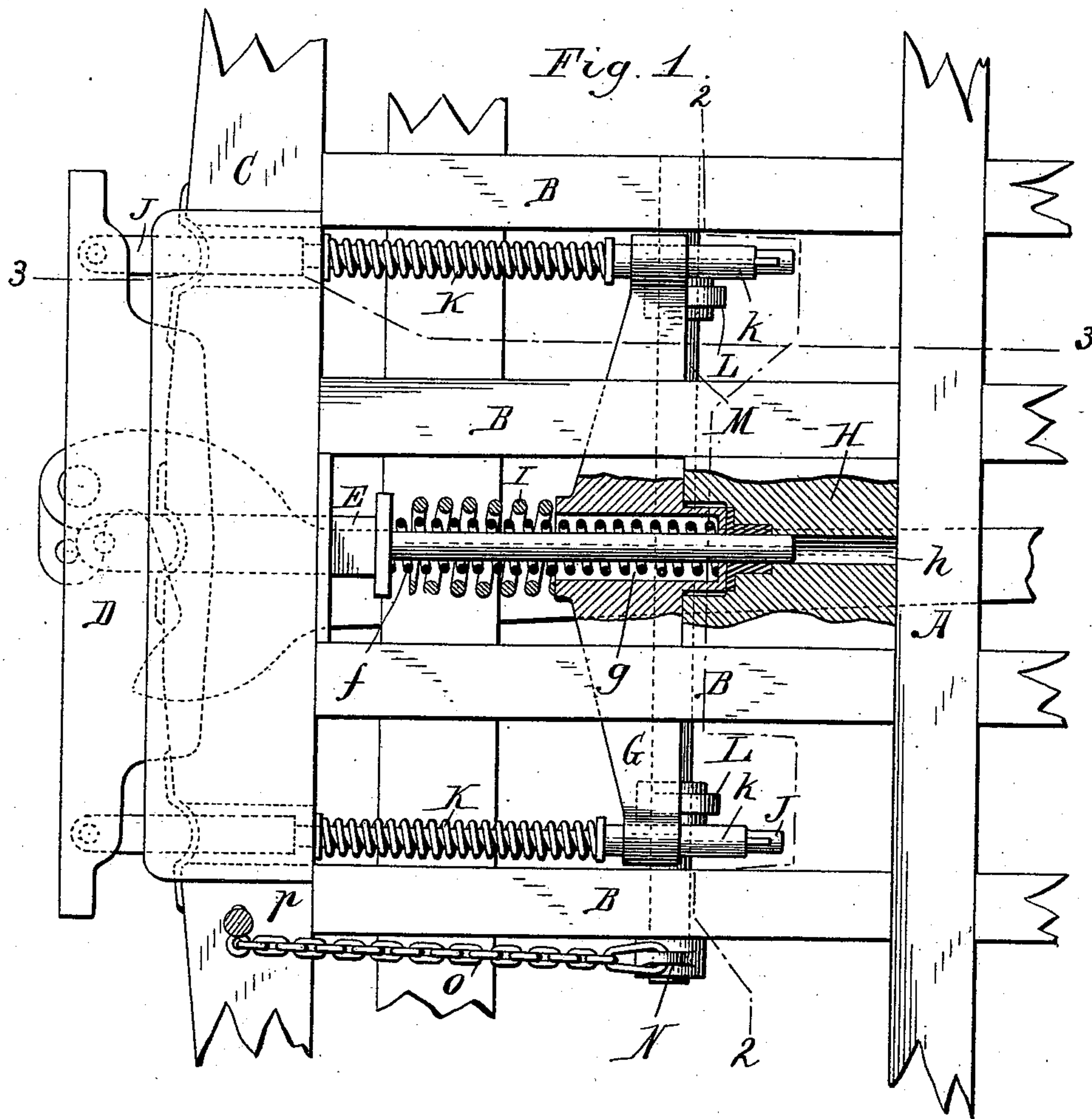
(No Model.)

2 Sheets—Sheet 1.

W. F. RICHARDS.
CAR BUFFER.

No. 541,629.

Patented June 25, 1895.



WITNESSES:

Chas. F. Burkhardt.
Emil Neuhart

W. F. Richards

INVENTOR.

By Wilhelm H. Bomer.

ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

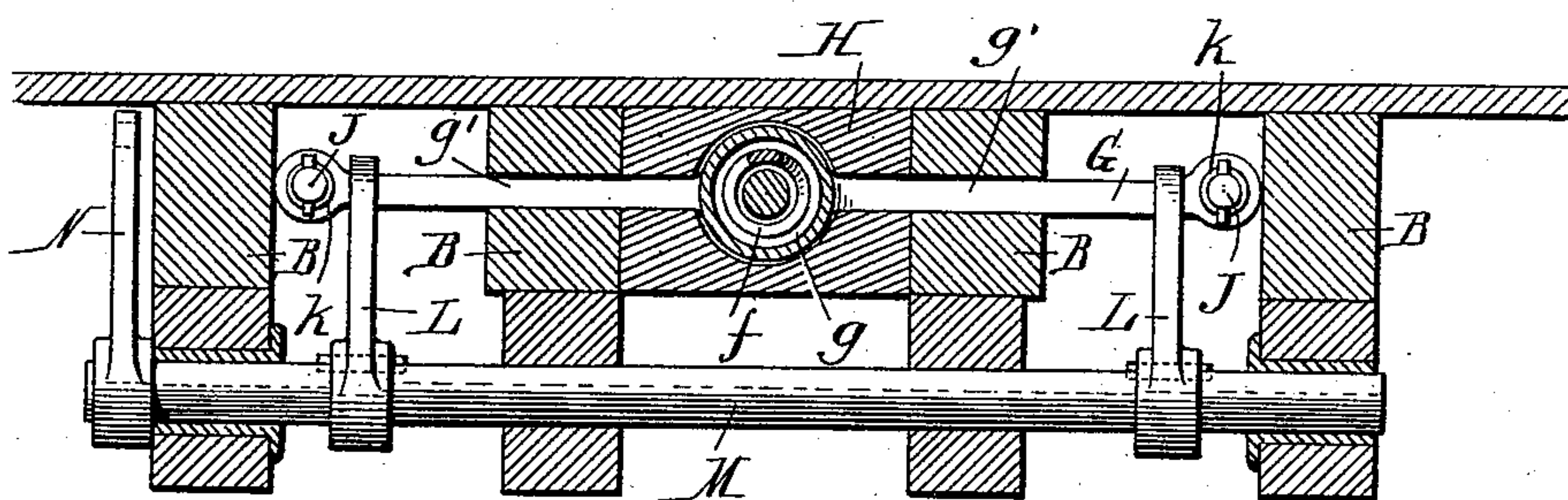
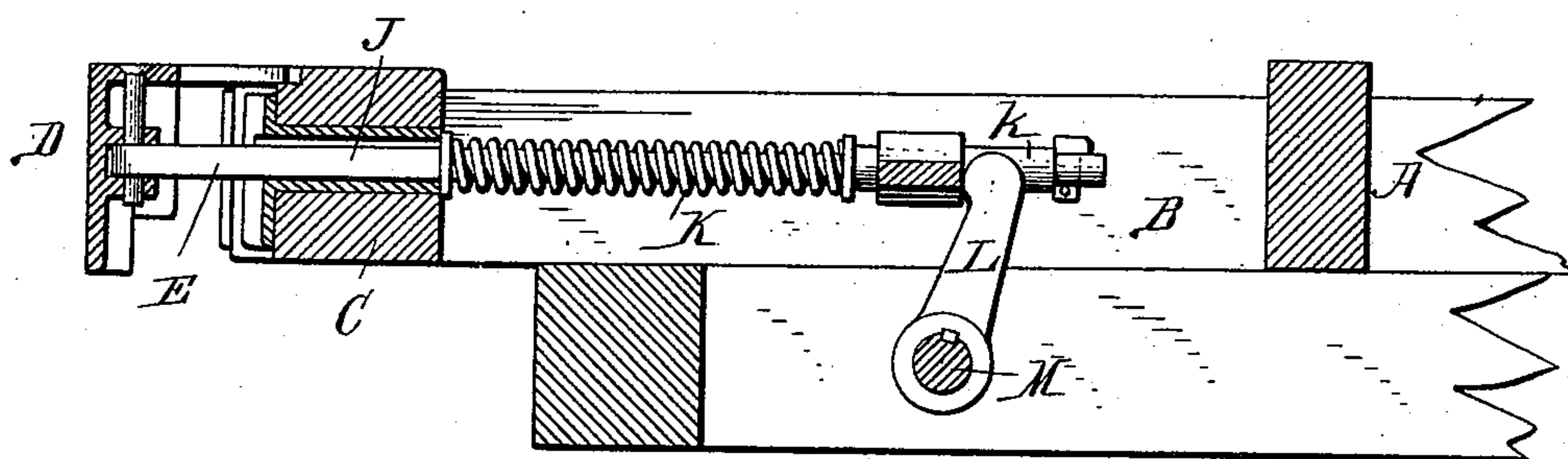


Fig. 3.



WITNESSES:

Chas. F. Burkhardt.
Emil Neuhart.

W. F. Richards INVENTOR.
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLARD F. RICHARDS, OF BUFFALO, ASSIGNOR TO THE GOULD COUPLER COMPANY, OF NEW YORK, N. Y.

CAR-BUFFER.

SPECIFICATION forming part of Letters Patent No. 541,629, dated June 25, 1895.

Application filed May 9, 1894. Serial No. 510,582. (No model.)

To all whom it may concern:

Be it known that I, WILLARD F. RICHARDS, a citizen of the United States, residing at the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Car-Buffers, of which the following is a specification.

This invention relates to that class of car buffers or platform extensions in which the rear ends of the buffer springs bear against a movable abutment or follower which may be adjusted forwardly for increasing the tension of the springs after coupling the cars, so as to more effectually check the oscillations of the cars.

My invention has the object to simplify the means for operating the follower or movable abutment of the buffer springs.

In the accompanying drawings, consisting of two sheets, Figure 1 is a top plan view, partly in section, of the platform of a railway car equipped with my improved buffer, the flooring being omitted to expose the parts below the same. Fig. 2 is a vertical cross-section in line 2 2, Fig. 1. Fig. 3 is a longitudinal section in line 3 3, Fig. 1.

Like letters of reference refer to like parts in the several figures.

A is the end sill of the car body; B, the longitudinal timbers of the stationary platform, and C the cross timber connecting the outer ends of the longitudinal timbers.

D is the transverse buffer or yielding platform extension which is pivoted centrally to the outer end of the main buffer bar or stem E, in a well known manner.

f is the light extension spring of the buffer which surrounds the contracted rear portion of the main buffer stem and bears with its front end against the usual collar or shoulder of said stem and with its rear end against the bottom of a horizontal socket *g* formed centrally in a transverse follower or abutment bar G. The rear portion of the buffer stem passes through an opening arranged in the bottom of the socket *g* and slides in an opening *h* formed in a stationary block H, in line with the opening of the socket. The follower G is guided in horizontal slots or recesses *g'* formed in the longitudinal timbers of the platform, as shown in Fig. 2.

I is the usual heavy buffer spring which surrounds the light extension spring and bears with its rear end against the front side of the follower G.

J J represent the side stems of the buffer which are pivoted at their front ends to the buffer, and K K are the auxiliary buffer springs arranged on the side stems. The latter are guided with their front portions in openings formed in the cross timber C. Their rear portions may be guided in openings formed in the end portions of the follower, but they preferably slide in tubes *k*, as described and shown in Letters Patent of the United States, granted to me April 11, 1893, by which construction the side springs serve to hold the buffer from rattling when the cars are uncoupled, as well as to right the same.

Any other suitable spring mechanism for extending the buffer may be employed, if desired.

L L represent arms or levers whereby the follower G is moved forward after coupling the cars for applying a supplemental tension to the spring of the buffer. These levers are secured to a transverse rock shaft M arranged below the follower and bear with their free upper ends against the rear side of the follower. The rock shaft M is journaled in bearings arranged in the longitudinal timbers of the platform and is provided at one end with an arm or lever N for turning it. To the free end of this arm is attached an operating chain or cord *o* which may be connected at its front end with any suitable device for pulling it forward so as to turn the rock shaft M, but the same is preferably secured to the usual upright shaft *p*, mounted on the platform, from which the car coupling is operated, so that upon turning said shaft forwardly, the chain is wound upon the same and caused to turn the rock shaft forward, thereby swinging the tensioning levers L in the same direction, moving the follower G toward the end of the platform and increasing the tension of the buffer springs.

When the parts are in their normal position, before the cars are coupled, the follower G is in its rear most position and bears against the rear ends of its guide slots. In this position, the follower acts merely as a stationary rear

abutment for the several springs, and upon coupling the cars, the buffer is pressed inward in the ordinary manner. After coupling the cars, the operating shaft *p* is turned in the proper direction to cause the tensioning levers to push the follower forward so as to further compress the springs of the buffer, the shaft being held against backward movement by the usual ratchet wheel and pawl with which it is provided. The additional pressure thus exerted upon the buffer causes it to be pressed with correspondingly increased force against the buffer of the opposing car, thereby restraining the movements of the buffers upon each other and checking the disagreeable swaying motion of the car, permitted by ordinary buffers.

When the cars are to be uncoupled, the shaft *p* is released to allow the follower to return to its former position under the pressure of the buffer springs and permit the latter to expand to their normal tension. By this backward movement of the follower the levers *L* are also returned to their former position. The resistance of the springs being now comparatively small, the cars can be easily uncoupled.

I claim as my invention—

1. The combination with the main platform of the car, the buffer or platform extension and a buffer spring, of a follower forming the rear abutment of said spring, a transverse rock shaft arranged below said follower and having an actuating arm disconnected from the draft gear of the car, whereby said shaft may be operated independently of the draft gear, and a tensioning lever mounted on said rock shaft and bearing against said follower, substantially as set forth.

2. The combination with the main platform, the buffer or platform extension and its spring mechanism, of a follower forming the rear abutment of said spring mechanism, a transverse rock shaft having an actuating arm, a tensioning lever mounted on said rock shaft and engaging with said follower, an upright operating shaft mounted on the car platform, and a chain or cord extending from the actuating arm of the rock shaft to said operating shaft, substantially as set forth.

Witness my hand this 7th day of May, 1894.

WILLARD F. RICHARDS.

Witnesses:

JNO. J. BONNER,

ELLA R. DEAN.