

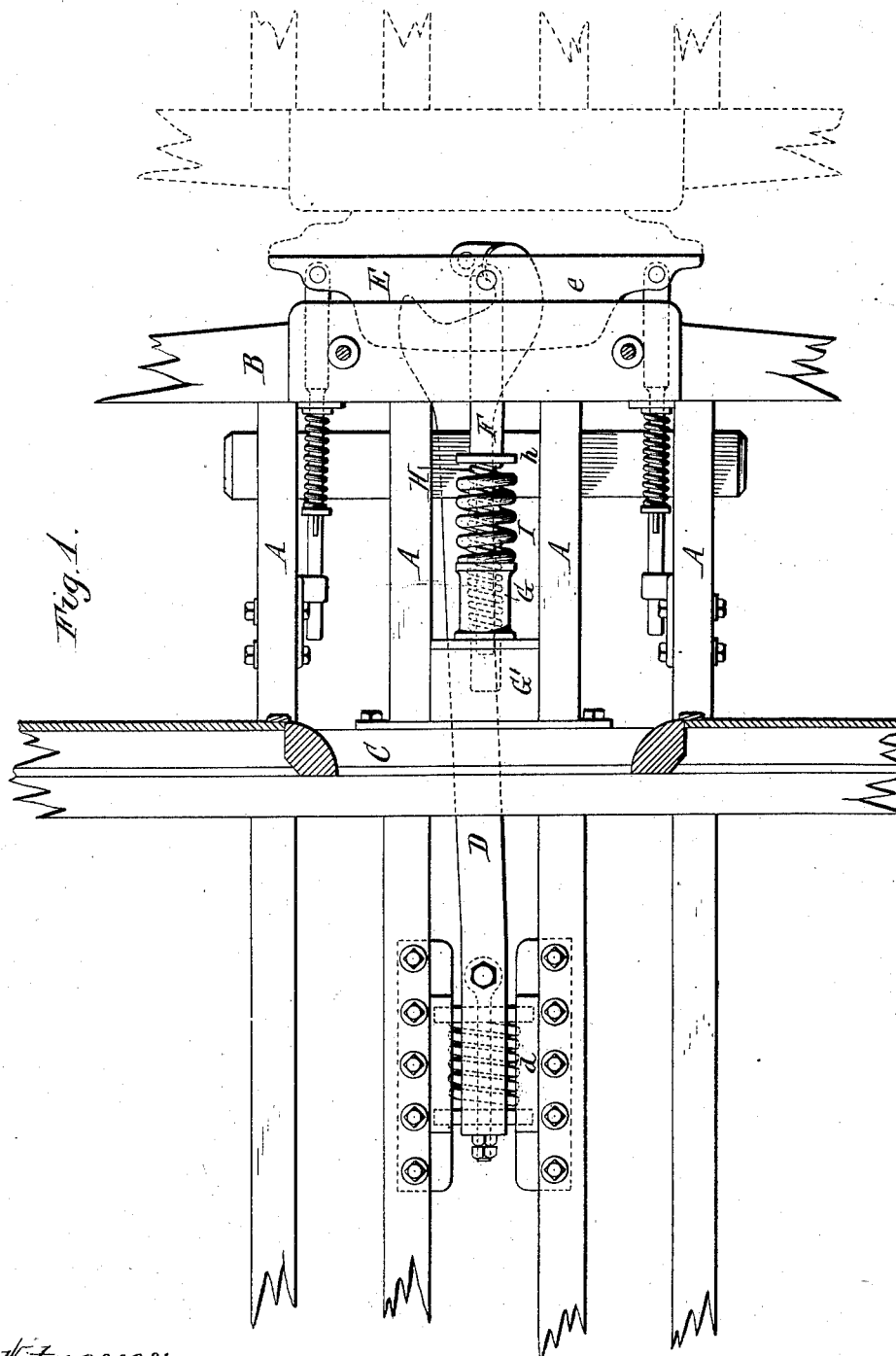
(No Model.)

2 Sheets—Sheet 1.

M. E. WALLACE.  
CAR BUFFER.

No. 489,135.

Patented Jan. 3, 1893.



Witnesses:  
Emil Neuhart  
Chas. F. Durthardt.

Martin E. Wallace, Inventor.  
By Wilhelm Pönnner  
Attorneys.

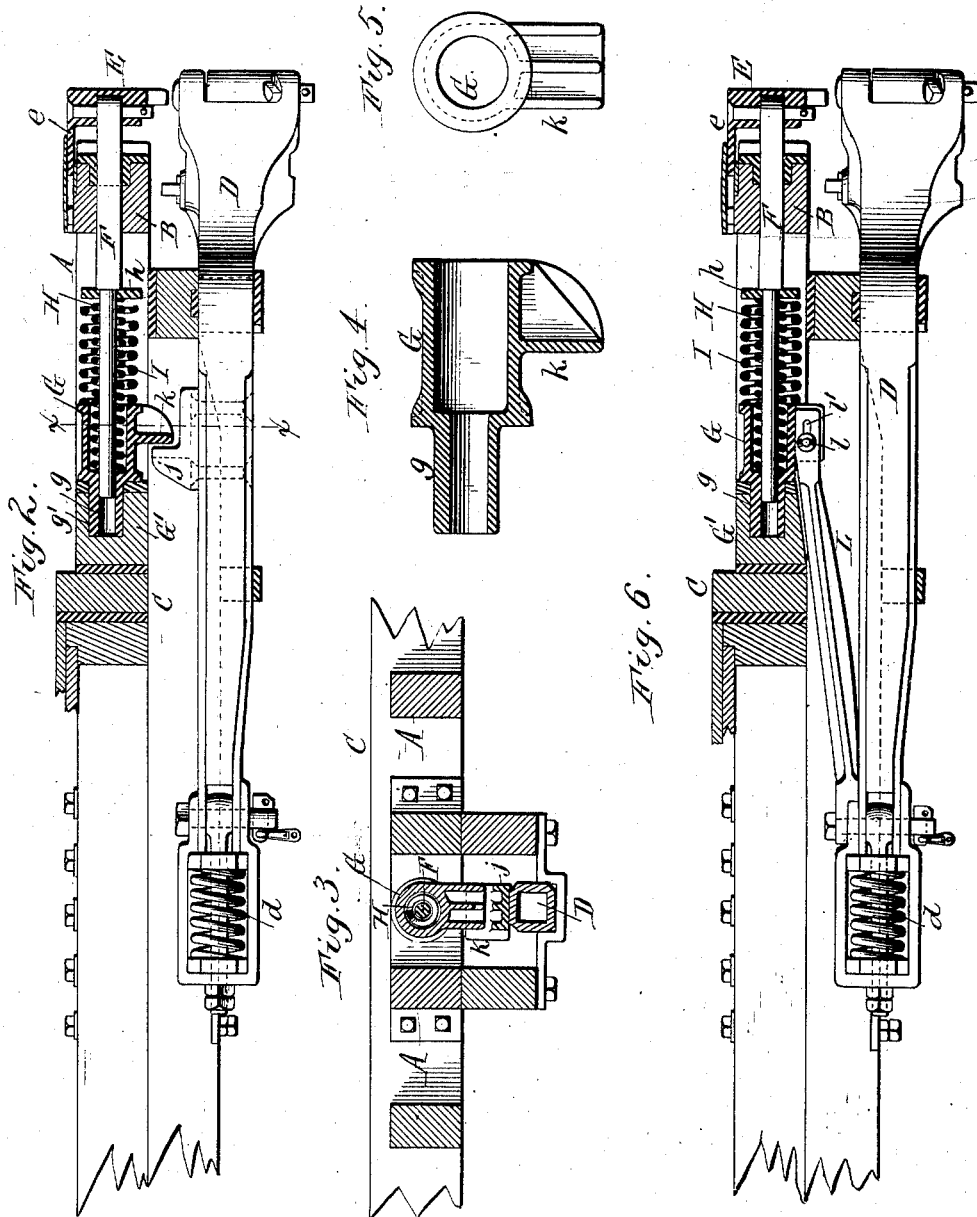
(No Model.)

2 Sheets—Sheet 2.

M. E. WALLACE.  
CAR BUFFER.

No. 489,135.

Patented Jan. 3, 1893.



Witnesses:

Emil Neuhart.  
Chas. F. Burkhardt.

Martin E. Wallace Inventor.  
By Wilhelm Bonner.  
Attorneys.

# UNITED STATES PATENT OFFICE.

MARTIN E. WALLACE, OF AURORA, ILLINOIS, ASSIGNOR TO THE GOULD  
COUPLER COMPANY, OF NEW YORK, N. Y.

## CAR-BUFFER.

SPECIFICATION forming part of Letters Patent No. 489,135, dated January 3, 1893.

Application filed September 29, 1892. Serial No. 447,245. (No model.)

### *To all whom it may concern:*

Be it known that I, MARTIN E. WALLACE, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Car-Buffers, of which the following is a specification.

This invention relates to that class of railway cars which are provided with a spring buffer or platform extension which bears against the platform of an adjoining car, in which the spring mechanism of the platform is caused to move outward with the draw bar. These buffers or platform extensions are usually provided with a heavy buffer spring which opposes violent shocks received by the cars and a light spring which serves principally to push out the platform extension and keep it in yielding contact with the platform of an adjoining car.

The object of my invention is to so construct this spring mechanism that the heavy buffer spring assists in holding the platform in its projected position when the draw bar is pulled outward, so as to relieve the light spring and preserve its power.

In the accompanying drawings consisting of two sheets:—Figure 1 is a sectional top plan view of the platform of a railway car provided with my improvement, the flooring being omitted to expose the parts below. Fig. 2 is a central longitudinal section of the platform. Fig. 3 is a transverse section in line  $x-x$ , Fig. 2. Fig. 4 is a detached longitudinal section of the socket or rear abutment of the buffer and platform extension springs. Fig. 5 is a front view of said socket. Fig. 6 is a longitudinal section of a modified construction of my improvement.

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

A represents the longitudinal timbers of the stationary car platform; B the end or cross timber thereof, and C the end sill of the car.

D is the draw bar of the car arranged underneath the stationary platform and having the usual buffer spring or springs  $d$ .

E is the buffer or movable platform extension which preferably consists of a transverse vertical buffer plate carrying at its upper end

a horizontal threshold plate  $e$  which extends inwardly over the end timber B.

F is the buffer bar or stem which carries the platform extension E and which is guided with its outer portion in an opening formed in the end timber B. The rear portion of the buffer bar passes through a longitudinally movable socket or follower G and is guided in a tubular stem  $g$  formed at the rear end of the socket. This tubular stem is loosely fitted in a cylindrical recess  $g'$  formed in a buffer block G' secured between the longitudinal timbers A of the stationary platform.

H represents the light spiral spring whereby the buffer or extension platform E is pushed outward. This spring surrounds the rear portion of the buffer bar F and bears with its front end against a collar or shoulder  $h$  formed on the buffer bar and with its rear end against the bottom of the socket or follower G. The latter abuts against the front side of the buffer block when in its rearmost position.

I is the main spring of the buffer or platform extension which receives the heavy shocks which overcome the resistance of the light extension spring H. This main spring surrounds the buffer stem F and is interposed between the front end of the socket or follower G and the shoulder  $h$  of the buffer stem. The main spring is shorter than the platform extension spring so as not to come into action until after the extension spring has been compressed.

$j$  is a lug or projection arranged on the upper side of the draw bar D and  $k$  is a similar lug arranged on the under side of the socket or follower G in the path of the lug on the draw bar, so that when the draw bar is pulled outward, its lug strikes the lug of the socket and causes the latter to move outwardly with the draw bar. This outward movement of the socket causes the light extension spring to be further compressed between the bottom of the socket and the collar  $h$  of the buffer bar and also causes the main spring to move forward and bear with its front end against the collar  $h$ , so as to resist the inward movement of the platform extension. The tension of the light spring is thus maintained and equalized in all positions of the platform ex-

tension, and the main spring is at the same time utilized for assisting in projecting the platform extension and keeping it in contact with the platform of an adjoining car, thereby relieving the light spring and preventing weakening of the same.

In the modification of the invention shown in Fig. 6, the outward movement of the draw bar is transmitted to the movable socket or rear abutment of the springs by a coupling bar L. This bar is connected to the socket by a horizontal pin l attached to a lug arranged lengthwise on the under side of the socket and passes through a longitudinal slot l' formed in the front end of the coupling bar. This slot permits the outer end of the coupling bar to slide inwardly on the pin l without affecting the socket.

I claim as my invention:—

1. The combination with the stationary platform of a railway car, the longitudinally movable draw bar and a buffer or platform extension movable on the stationary platform, of a follower guided on the stationary platform, a buffer spring bearing with its inner end against said follower, a platform extension spring also bearing with its inner end against said follower and extending normally beyond the outer end of the buffer spring, whereby the inner ends of both of said springs are moved forward with the follower and means, substantially as described, whereby the outward movement of the draw bar is imparted to said follower, substantially as set forth.

2. The combination with the stationary platform of a railway car, the longitudinally movable draw bar, and a buffer or platform-extension movable on the stationary platform, of a follower-socket guided on the stationary platform, a platform extension spring bearing with its inner end against the bottom of said follower-socket, a buffer spring bearing with its inner end against the front end of said socket, whereby the inner ends of both of said springs are moved forward with the socket, and means, substantially as described, whereby the outward movement of the draw bar is transmitted to said follower socket, substantially as set forth.

3. The combination with the stationary platform of a railway car, and a buffer platform movable on the same, of a follower-socket guided on the stationary platform, a platform-extension spring bearing with its inner end against the bottom of said socket, a buffer spring abutting with its inner end against the front end of said socket, and the longitudinally movable draw bar having a lug or projection adapted to engage against the projection of the follower socket when the draw bar is pulled outward, substantially as set forth.

Witness my hand this 19th day of September, 1892.

MARTIN E. WALLACE.

Witnesses:

F. P. HUNTLEY,  
W. S. BEAUPRE.