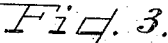
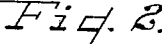
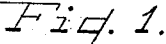


APPLICATION FILED APR:13, 1910.

2 SHEETS—SHEET 1.



Witnesses

Inventors

Carl P. Crabill

By

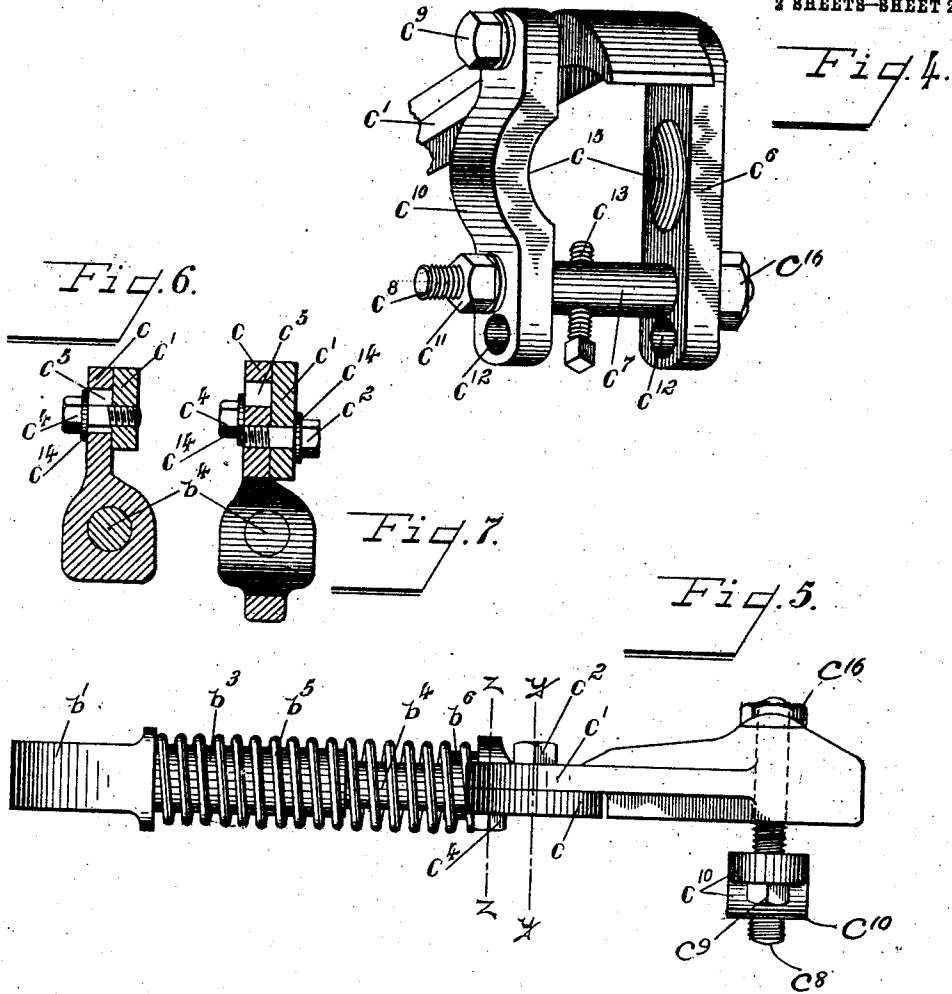
Attorneys

J. TURNER & P. P. CRABILL.
 BUFFER FOR AUTOMOBILES.
 APPLICATION FILED APR. 13, 1910.

974,212.

Patented Nov. 1, 1910.

2 SHEETS—SHEET 2.



Witnesses
Oliver Clarke
Chas. I. M. L.

Inventors
James Turner
Paul P. Crabill
 By *Staley & Norman*
 Attorneys

UNITED STATES PATENT OFFICE.

JAMES TURNER AND PEARL P. CRABILL, OF SPRINGFIELD, OHIO, ASSIGNORS TO THE
CENTRAL BRASS & FIXTURE COMPANY, OF SPRINGFIELD, OHIO, A CORPORATION
OF OHIO.

BUFFER FOR AUTOMOBILES.

974,212.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed April 13, 1910. Serial No. 555,234.

To all whom it may concern:

Be it known that we, JAMES TURNER and PEARL P. CRABILL, citizens of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Buffers for Automobiles, of which the following is a specification.

This invention relates to improvements in buffers especially adapted for automobiles.

An object of the invention is to provide a buffer which may be quickly and readily attached to the vehicle without the necessity of alterations, as the drilling of holes in the frame of the machine or the removal of any of the parts thereof.

A further object of the invention is to provide means whereby the buffer may be adjusted so as to maintain the buffer springs and bar in a straight horizontal position with respect to the machine to which it is applied.

A further object of our invention is to provide means whereby the shock of a collision in large part will be brought directly upon the frame or other part of the vehicle to which the buffer is attached instead of upon the connections between the buffer and the vehicle.

A further object of the invention is to simplify and make more effective the operation of devices of this character.

The invention consists in the construction and combinations of the parts hereinafter described and set forth in the claims.

In the accompanying drawings:—Figure 1 is a perspective view showing the front portions of the frame of a motor vehicle with our improved buffer attached thereto. Fig. 2 is a side elevation of a portion of the vehicle frame showing our improved device attached thereto. Fig. 3 is a section on the line $x-x$ of Fig. 2. Fig. 4 is a perspective view of the clamp for securing the device to the frame or other part of the vehicle. Fig. 5 is a top plan view of the device, the movable clamping member being shown in a different position of adjustment from that shown in Fig. 4. Fig. 6 is a section on the line $z-z$ of Fig. 5. Fig. 7 is a section on the line $y-y$ of Fig. 5.

Like parts are represented by similar characters of reference in the several views.

In the said drawings, a represent the forward portions of the frame of a motor vehicle, which frames are of the usual channel construction, and a' are the semi-elliptic springs pivotally connected at the forward ends of the channels in the usual way.

b is the buffer bar of our improved device, which extends transversely across the front of the vehicle and is constructed in the usual and ordinary manner. This bar extends through and is secured to collars b' , each of said collars being provided with a set-screw b^2 for the purpose. Each of these collars has a rearwardly extending sleeve b^3 , which is slidably mounted upon a rod b^4 which projects forwardly from the head or frame which clamps the device to the vehicle, this head or frame consisting essentially of two parts c and c' , pivotally connected together in the manner hereinafter more fully described. A coiled spring b^5 placed about the sleeve b^3 and the boss b^6 on the forward part of the head portion c , serves to normally project the collar b' and hence the buffer bar forwardly; a pin b^7 extending through the rod b^4 with its ends projecting laterally therefrom and into slots b^8 in the said sleeve b^3 serves to limit the forward movement of the sleeves under the stress of the springs.

As before stated, the respective portions c and c' of the head or frame are pivotally connected together, the pivot being in the nature of a screw bolt c^2 (Fig. 7) which extends through the part c' and is screwed into the bar c . The respective parts of the head are adapted to be clamped together by a clamping bolt c^4 which extends through a curved slotted opening c^5 in the part c and is screwed into the part c' (Fig. 6), a washer c^4 being interposed between the head of the bolt and the side of the part c , as shown. The respective parts of the head where they are pivoted together are faced off so as to provide a neat joint between the same. The part c is shaped to conform to the contour of the forward end of the channel frame and fits this end. The part c' is conformed more or less to the contour of the top of the channel frame a , and is adapted to be fitted thereto. Depending from the rear portion of the part c' is a stationary clamping member c^6 , which may be formed integrally with

said part, c' . The depending portion c^6 has secured thereto at its lower end a laterally projecting rod c^7 , which terminates in a reduced screwthreaded portion c^8 ; said rod c^7 being secured to the depending portion c^6 by the nut c^{10} , screwed onto a reduced portion of the rod c^7 , which reduced portion projects through a perforation in the part c^6 . The head part c' has a screw-threaded opening located on the opposite side of the depending portion c^6 adapted to receive a clamping screw, the head of which is represented by c^9 . c^{10} is a movable clamping member which coöperates with the stationary clamping member c^9 and is perforated at its top and bottom so as to receive the clamping screw c^9 and also the reduced screwthreaded portion c^8 . After the head has been placed in position upon the frame channel, a , it may be clamped securely thereto by tightening the clamping screw c^9 and the nut c^{11} upon the screwthreaded portion c^8 . The lower portions of each of the clamping members c^9 and c^{10} may be provided with a series of perforations as indicated at c^{12} so as to accommodate the device to different sizes of channel frames. The rod c^7 is also provided with a set screw c^{13} which is tightened against the bottom of the channel frame, a , to assist in holding the device in position. Each of the clamping members are recessed as indicated at c^{15} in order to accommodate in some cases both heads in the channel frame.

After the device has been firmly clamped to the channel, by loosening the clamping bolt c^4 , the portion c of the head may be adjusted so as to cause the rod b^4 thereon to project in a straight horizontal position and hence maintain the buffer springs and other parts in a horizontal position so that any thrust upon any of the parts may be a direct one.

It will be seen by this construction that the device may be attached to a vehicle without the necessity of altering or removing any of the parts of the vehicle and that a large part of the shock of a collision will be brought directly upon the ends of the channel frame, a .

Having thus described our invention, we claim:

1. In a buffer for vehicles, a buffer bar, and means on each side of the vehicle for connecting said bar thereto, said means comprising a two-part head adapted to be secured to said vehicle, the respective parts of said head being pivoted together, together with devices for clamping the respective parts of said head together, substantially as specified.

2. In a buffer for vehicles, a buffer bar, a two-part head on each side of said vehicle together with means for attaching said heads thereto, sliding connections between said heads and said bar, buffer springs in-

terposed between said bar and heads and means for adjusting the position of the respective parts of each head with reference to each other, substantially as specified.

3. In a buffer for vehicles, a buffer bar, a two-part head on each side of said vehicle together with means for connecting said head thereto, means for yieldably connecting said bar to said heads, and means for adjusting the respective parts of each of said heads with reference to each other, substantially as specified.

4. In a buffer for vehicles, a buffer bar, a head on either side of the vehicle secured to a projecting part thereof, such as the channel frame, said head lying on the top of said projecting part and being also extended around the forward end thereof, means for clamping said head to said projecting part, and means for yieldingly connecting said buffer bar to said heads, substantially as specified.

5. In a buffer for vehicles, a buffer bar, a two-part head connected to said vehicle on either side thereof, one part of each of said heads having a forwardly projecting portion, rearwardly projecting portions on said bar having a sliding connection with said head portions, springs interposed between said bar and head portions, and means for adjustably securing the respective parts of each of said head portions together, substantially as specified.

6. In a buffer for vehicles, a buffer bar, a two-part head on each side of said vehicle, adjustable clamping devices on said heads for clamping the same to said vehicle, means for adjustably connecting the parts of each of said heads and means for yieldably connecting said bar to said heads, substantially as specified.

7. In a buffer for vehicles, the combination with projecting parts of said vehicle, such as the channel frames, of a buffer bar, a supporting head for each end of said bar, each of said heads lying on the top of one of said projecting parts and being extended about the forward end thereof, means for clamping the rear end of said head to said projecting part, and means for yieldably securing said buffer bar to said heads, substantially as specified.

8. In a buffer for vehicles, the combination, with the channel frames of said vehicle, of a buffer bar, a two-part head secured to each of said channel frames, means for adjustably securing the parts of each of said heads together, and yieldable connections between said bar and said heads, substantially as specified.

9. In a buffer for automobiles, a buffer bar, a two-part head on each side of the vehicle and connected therewith, means for yieldably supporting said bar from said heads, the parts of each of said heads being

pivotaly connected together, said pivotal connection comprising a pivot located on one of the parts, a slotted opening in one of said parts and a clamping screw extending through said slotted opening for securing the parts together, substantially as specified.

In testimony whereof, we have hereunto set our hands this 6th day of April 1910.

JAMES TURNER.

PEARL P. CRABILL.

Witnesses:

CHAS. I. WELCH,

MARTHA A. WIPERT.