

(No Model.)

R. P. GARSED.

BUFFER.

No. 266,458.

Patented Oct. 24, 1882.

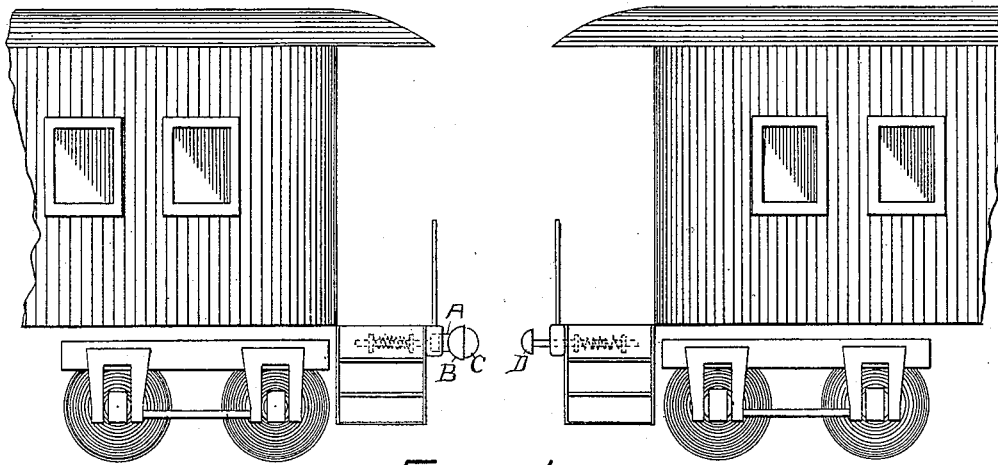


Fig. 1.

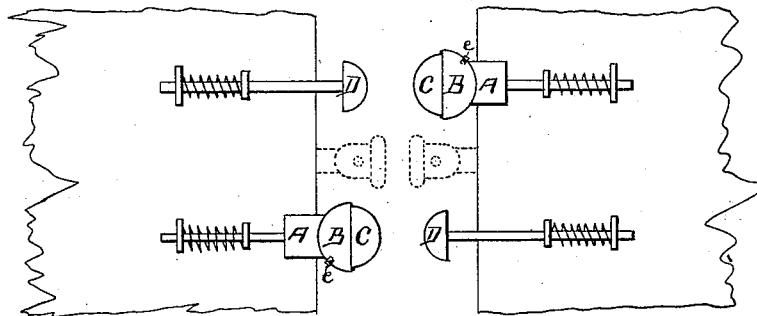


Fig. 2.

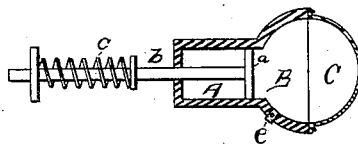


Fig. 3.

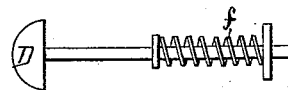
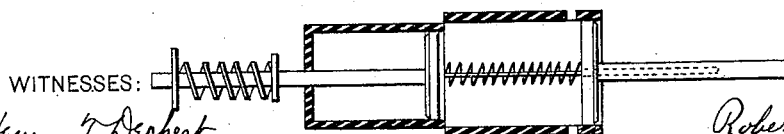


Fig. 4.



WITNESSES:
Henry T. Dechert.
Arthur L. Church.

Fig. 5.

INVENTOR

Robert P. Garsed
by his attorney
Chas A. Rutter

UNITED STATES PATENT OFFICE.

ROBERT P. GARSED, OF NORRISTOWN, PENNSYLVANIA.

BUFFER.

SPECIFICATION forming part of Letters Patent No. 266,458, dated October 24, 1882.

Application filed March 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. GARSED, of Norristown, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Improvement in Buffers, which improvement is fully set forth in the following specification and accompanying drawings.

The objects of my invention are to furnish a buffer for cars, doors, or other bodies subject to sudden shocks or jars, which will be at the same time efficient and inexpensive and which may be attached to any car at present in use.

In the accompanying drawings, forming part of this specification, and in which similar letters of reference indicate like parts throughout the several views, Figure 1 represents a side elevation of the ends of two cars furnished with my invention; Fig. 2, a bottom view of the cars, showing the general arrangement of the buffers; Fig. 3, a sectional view of the buffer proper; Fig. 4, a side elevation of the plunger, and Fig. 5 a modification of the buffer shown in Fig. 3.

My buffer consists of a metal cylinder, A, and air chamber or jacket B, covered with an imperforate rubber covering or thimble, C. The cylinder A is fitted with a piston, *a*, the rod of which extends some distance out of the cylinder, and is furnished with a shoulder against which bears a spring, *c*. The covering or thimble C being imperforate, I make use of a check-valve, *e*, placed in the casing of the air chamber or jacket B, in order to introduce air into the chamber and interior of the thimble.

In Fig. 5 is shown a modification of my buffer, and its action will be sufficiently explained by an inspection of the drawings.

Upon another car is a plunger, D, so placed that when the cars come together the plunger will strike against and force in the rubber covering or thimble of the buffer. The rod of this plunger should preferably be furnished with a spring, *f*. Upon a car the buffers are placed as shown in Fig. 2—*i. e.*, upon the rear car—the buffer upon one side of the

coupler and the plunger upon the other, and upon the front car the buffer opposite the plunger of the rear car and the plunger opposite the buffer.

The operation of the device is very simple, and is as follows, viz: The cars coming together, the plungers D strike against and force in the rubber coverings or thimbles C, compressing the air in B and C, and driving back the piston *a* and piston-rod *b*, and compressing the springs *c* and *f*. I hence make use both of the elasticity of the air and springs. When the cars draw apart the check-valve *e* opens and admits air to the air-chamber to take the place of any that may have escaped (through imperfect packing or otherwise) during compression.

It will be seen that the metal casing or jacket B prevents the rupture or displacement of the rubber covering or thimble C under the operation of the plunger, and also receives the violent force of the pressure of the air within it.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination, in a car or other buffer, of the cylinder A, jacket B, rubber thimble C, and piston *a*, substantially as and for the purposes described.

2. The combination, in a buffer, of the cylinder A, imperforate rubber covering C, piston *a*, and check-valve *e*, substantially as and for the purposes described.

3. The combination, in a buffer, of the cylinder A, imperforate covering C, piston *a*, and spring *c*, substantially as and for the purposes set forth.

4. The combination, in a buffer, of the cylinder A, piston *a*, and spring *c*, with the plunger D and its spring *f*, substantially as and for the purposes described.

R. P. GARSED.

Witnesses:

LOUIS KUEBLER,
CHAS. A. RUTTER.