(No Model.)

R. P. GARSED.

BUFFER.

No. 278,007. Patented May 22, 1883.

Fig. 1.

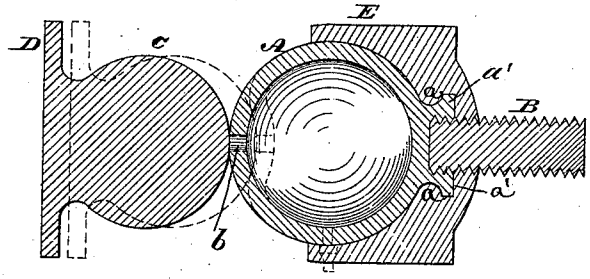


Fig. 2.

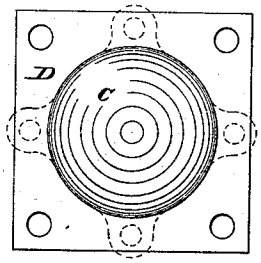


Fig. 3.

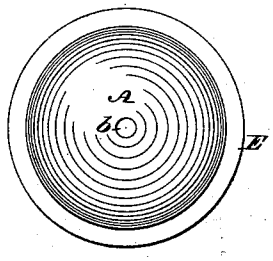
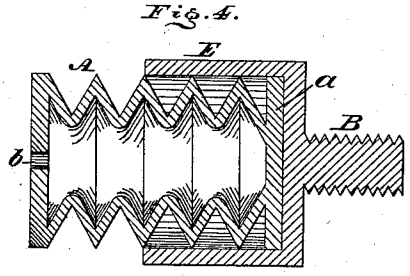


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT P. GARSED, OF NORRISTOWN, PENNSYLVANIA.

BUFFER.

SPECIFICATION forming part of Letters Patent No. 278,007, dated May 22, 1883.

Application filed March 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. GARSED, a citizen of the United States, residing at Norristown, in the county of Montgomery, 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, in which—

Figure 1 is a longitudinal section of the buffer embodying my invention. Figs. 2 and 3 are face views of the parts thereof. Fig. 4 is a longitudinal section of a modification.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of an expansible or elastic hollow body adapted to be filled with air, a jacket which serves to hold and protect the body, and a plunger which compresses said body and prevents the escape of air therefrom, whereby a powerful, durable, and serviceable buffer is produced, as will be hereinafter fully set forth.

Referring to the drawings, A represents a hollow body, which is formed of a sphere or ball of rubber or other suitable elastic material, and connected to a stem, B, by which the body may be secured in position.

C represents a plunger, which is constructed of wood, metal, or other suitable material of the form of a sphere, and having a flange, base, or ears, D, by which it may be secured in position.

E represents a jacket, which incloses a portion of the body A and is connected to the stem B, the neck *a* of the body and adjacent end of the stem being embedded in said jacket, the end of said neck being flanged, as at *a'*, the groove in the jacket being shaped to correspond with said neck and flange, thus securely connecting the body and jacket. In the center or the front of the body is an opening, *b*, whereby said body may be properly filled with air. The body and plunger are connected to platforms of cars, parts of machinery, or other objects where bumpers are required, the plunger being so located that it is directly opposite the opening *b* of the body. When the two parts A C approach, or one approaches the other, the plunger comes in contact with the wall of the opening *b* and covers said opening, so as to prevent the escape of air from the body. The air-filled body is then compressed and folded and acts as a cushion, both the elastic nature of the body and the air therein forming said cushion, whereby a powerful buffer is produced. During the compression of the body the jacket, which covers or envelops a large percentage of the surface of the body, serves to guard the body and prevent bursting thereof. When the parts A C separate, the part or body A under the action of the compressed air therein unfolds and resumes its spherical shape, the opening *b* being afterward uncovered, so that the body is always filled with air, ready to render the service required of it.

In Fig. 4 the body A is of the bellows form, the operation, however, being similar to that of the sphere or ball hereinbefore stated.

In lieu of the opening *b*, located as described, I may employ an opening in a different part of the body and apply thereto a check-valve, without, however, accomplishing different results, such valve being shown in dotted lines, Fig. 1.

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

1. The buffer consisting of a hollow sphere of elastic material, having an opening, *b*, and a plunger, C, substantially as described, whereby the plunger first closes the opening and compresses the air-filled sphere, both the air and sphere thus constituting a cushion, as stated.

2. The plunger and the jacket, in combination with the hollow body A, having a neck, *a*, with flange *a'*, and the stem B, substantially as and for the purpose set forth.

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Witnesses:

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