

(No Model.)

M. HALL.
BUMPER FOR VEHICLE SPRINGS.

No. 477,114.

Patented June 14, 1892.

Fig. 1.

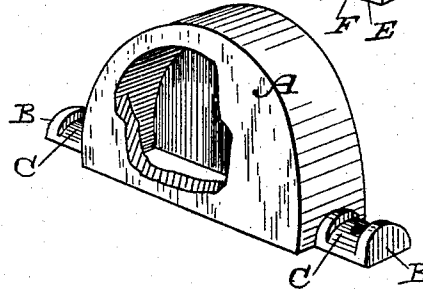
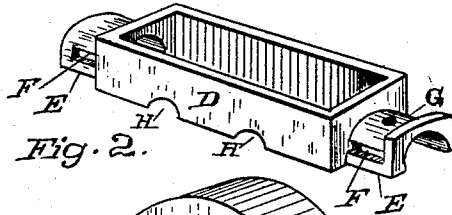
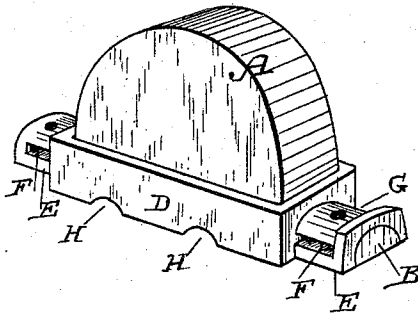
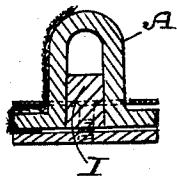


Fig. 3



Witnesses,
B. Hourse
J. A. Bayless

Inventor
Milton Hall
By Dewey & Co.
attys

UNITED STATES PATENT OFFICE.

MILTON HALL, OF SAN FRANCISCO, CALIFORNIA.

BUMPER FOR VEHICLE-SPRINGS.

SPECIFICATION forming part of Letters Patent No. 477,114, dated June 14, 1892.

Application filed August 24, 1891. Serial No. 403,595. (No model.)

To all whom it may concern:

Be it known that I, MILTON HALL, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Vehicle-Spring Bumpers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an elastic device or spring-bumper; and it consists of a semicircular and hollow elastic pad or block having extensions formed at each end and in combination therewith of a case adapted to inclose the lower portion and the extensions and a means for securing the same, together with certain details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a view of my device. Fig. 2 is a view showing the parts separated from each other. Fig. 3 is a modification of the device.

A is the body of my improved bumper or pad. It is made of rubber or other elastic material and has a hollow space or chamber made within it of such dimensions that, while leaving a considerable body of the material surrounding this chamber, it greatly increases the elasticity, and thus enables me to employ rubber which has been mixed with other substances without reducing the elasticity, and by this means I greatly reduce the cost, while at the same time maintaining the proper elasticity for the purpose. Upon each side of this pad are formed the projecting lugs B, which in the present case are shown semi-cylindrical in form and having grooves or channels formed across them at C.

D is the inclosing case or holder, which in the present case is a rectangular metallic frame having the semi-tubular projections E at each end. The interior of these projections correspond in shape with the lugs B, and they have slots F made through them to correspond with the grooved channels or depressions C on the lugs. This enables me to apply a clip to hold the bumper in place, the clip passing through the slots F and across the grooves or depressions C in the lugs. The exterior of these tubular extensions also have depressed channels G made upon them, so that, if desired, the clips may pass over these

and exterior to the whole device. The depth of the rectangular holder is such that a large portion of the semicircular bumper A projects outside of it, and when this device is employed for a carriage or other spring bumper it is secured by clips so that the elastic portion will be in position to receive the spring when the latter is shut up too closely, and thus relieve it from further strain. The lower edges of the holder have grooves or channels H made in them, which allows the device to be fitted over the clips by which the spring is held in place.

It will be manifest that this elastic bumper may be used in any place where it is desirable to have an elastic protection against violent blows, and by means of the holder which I have described it may be easily secured at any desired point. The tubular extensions of the holder also have holes made directly through them, as well as the interior lugs, so that the device may be attached wherever this can be done by simple screws passing through these holes, in the place of the clips before described.

The hollow elastic bumper may have an exterior covering of cloth or other flexible material to conceal and protect the rubber of which the body of the bumper is made.

In order to prevent the displacement of the hollow bumper from its inclosing frame by compressing it sidewise, a wooden or other rigid piece I fits in the lower part of the hollow bumper, which fills it at this point, so as to prevent side compression, but leaves the upper part hollow, so that it retains its full elasticity.

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

1. The bumper or relief-pad consisting of the semicircular elastic hollow block having the lugs or extensions by which it is secured and a non-elastic frame inclosing the lower portion of the pad, substantially as described.

2. The bumper or relief-pad consisting of the semicircular block having the hollow chamber made within it, lugs or extensions from each side of the block, having the grooves or channels made upon the exterior surface, a rectangular yoke inclosing the bumper, hav-

ing tubular extensions fitting over the lugs of the bumper, and grooves or channels for the reception of holding-clips which are fitted thereto, substantially as described.

- 5 3. A bumper or relief-pad consisting of the elastic hollow block with extensions or flanges and an inclosing yoke or frame by which it is returned and secured in place, in combination with a supplemental rigid piece fitted

within the mouth of the hollow pad to prevent undue compression at this point, substantially as described.

In witness whereof I have hereunto set my hand.

MILTON HALL.

Witnesses:

S. H. NOURSE,
J. A. BAYLESS.