

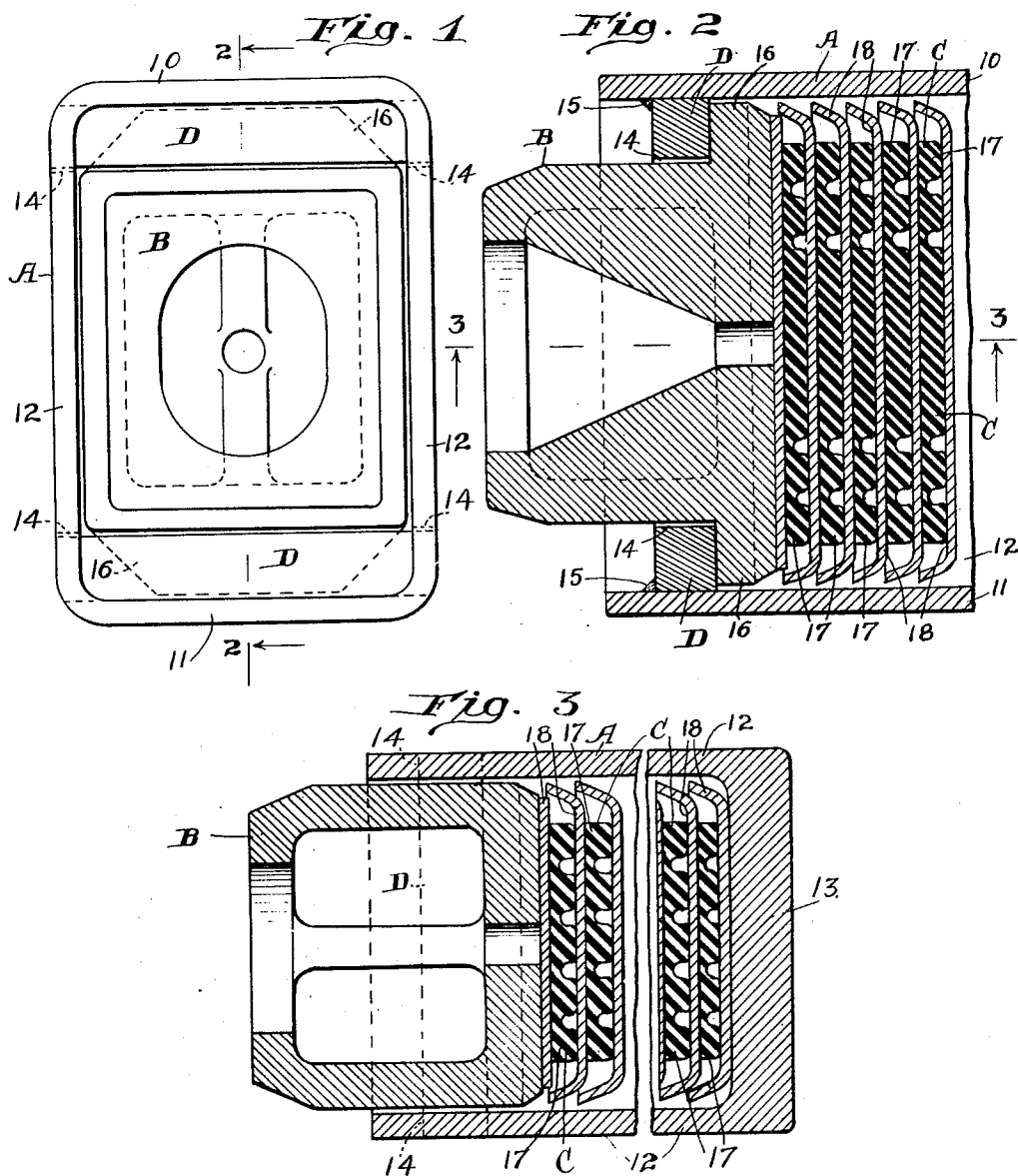
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SHOCK ABSORBING MECHANISM FOR RAILWAY DRAFT RIGGINGS

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SHOCK ABSORBING MECHANISM FOR
RAILWAY DRAFT RIGGINGSGeorge E. Dath, Mokena, Ill., assignor to W. H.
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1

2

This invention relates to improvements in shock absorbing mechanisms especially adapted for railway draft riggings, and more particularly to means for holding the parts of such a mechanism assembled.

One object of the invention is to provide a shock absorbing mechanism comprising a casing closed at one end and open at the other end, a compressible cushioning unit within the casing, and a pressure transmitting member adapted to receive the actuating force and transmit it to the cushioning unit, wherein simple and efficient means is provided in the form of stops associated with the casing and engageable by the pressure transmitting member to limit outward movement of the same and hold the mechanism assembled.

Other objects of the invention will more clearly appear from the description and claims herein-after following.

In the accompanying drawing forming a part of this specification, Figure 1 is a front elevational view of my improved shock absorbing mechanism. Figure 2 is a longitudinal, vertical sectional view, broken away, corresponding substantially to the line 2-2 of Figure 1. Figure 3 is a broken, longitudinal, horizontal sectional view of the mechanism shown in Figure 1, corresponding substantially to the line 3-3 of Figure 2.

As illustrated in the drawing, my improved shock absorbing mechanism comprises broadly a casing A, a pressure transmitting plunger B, a cushioning unit C, and stop bars D-D fixed to the casing for limiting outward movement of the pressure transmitting plunger and holding the mechanism assembled.

The casing A is in the form of a tubular member of rectangular, transverse cross section, having horizontally disposed, top and bottom walls 10 and 11, vertically disposed side walls 12-12, and a transverse vertical end wall 13. The casing A is closed at its rear end by the wall 13 and is open at the front end. The side walls 12-12 are provided with transversely aligned, square openings 14-14 and 14-14 therethrough, adjacent the top and bottom of the casing and spaced inwardly from the open end of the latter, said openings being adapted to receive the stop bars D-D.

The stop bars D-D are in the form of elongated members of square cross section, disposed at the top and bottom sides of the casing and having their ends engaged in the openings 14-14 and 14-14. After the bars D-D have been assembled with the casing, they are preferably welded in place, as indicated at 15-15 in Figure 2.

The pressure transmitting plunger B is in the form of a casting having top and bottom, vertically disposed, transversely extending, projecting flanges 16-16 at its inner end disposed in back of the stop bars D-D and engageable with the latter to limit outward movement of the plunger.

The plunger B projects outwardly of the casing and is adapted to receive the actuating force.

The cushioning unit C is arranged within the casing A and is interposed between the plunger B and the closed rear end of the casing. The cushioning unit illustrated is of well-known design and comprises a series of rubber mats 17-17 alternated with metal spacing plates 18-18.

In assembling the mechanism, the cushioning unit C is placed within the casing before the stop bars D-D are applied to the same. After the cushioning unit has been placed within the casing, the plunger B is pushed into the open end of the former and the mechanism slightly compressed to bring the flanges 16-16 of the plunger in back of the openings 14-14 and 14-14 of the opposed walls 12-12 of the casing. While the mechanism is held in this partly compressed condition, the bars D-D are placed in position through the openings 14-14 and 14-14 and welded in place. The mechanism is then permitted to expand to engage the flanges 16-16 of the plunger B with the stop bars.

My improved shock absorbing mechanism is particularly adapted for use in connection with railway draft riggings to absorb the draft and buffing shocks, being interposed between the usual front and rear follower members of the draft rigging.

The operation of the improved mechanism is as follows: Upon relative movement of the followers of the draft rigging toward each other, the mechanism is compressed therebetween, forcing the plunger B inwardly of the casing A and compressing the cushioning unit C. When the actuating pressure is reduced, the parts are returned to the normal position shown in Figure 3 by the expansive action of the cushioning unit C, outward movement of the plunger B being positively limited by engagement of the flanges 16-16 thereof with the stop bars D-D.

I claim:

1. In a shock absorber, the combination with a casing having lengthwise extending, top and bottom walls and opposed, lengthwise extending side walls, said casing being open at one end, said side walls having top and bottom sets of transversely aligned openings therethrough, adjacent

3

said open end of the casing; of a cushioning unit within the casing; a pressure transmitting plunger slidably telescoped within the open end of the casing and engaging said cushioning unit; transversely disposed, top and bottom stop bars fixed to said casing, each bar having its opposite ends seated in the corresponding set of openings of said side walls of the casing; and laterally outwardly projecting flanges on opposite sides of said plunger at the inner end thereof engageable with said stop bars to limit outward movement of said plunger.

2. In a shock absorber, the combination with a casing open at one end and having a pair of opposed, laterally spaced walls extending lengthwise thereof, and a second pair of laterally spaced, opposed walls connecting said first named walls and extending lengthwise of said casing, said first named walls being provided with sets of transversely aligned openings, the openings of each set being adjacent one of said second named walls; of a pressure transmitting plunger slidably telescoped within the casing; a transversely disposed, fixed stop bar adjacent each of said second named walls and having its opposite ends seated in the openings of the corresponding set of said first named walls; laterally projecting flanges on opposite sides of said plunger at the inner end thereof engaged in back of said stop bars respectively; and a cushioning unit within said casing on which said pressure transmitting plunger bears.

4

3. In a shock absorber, the combination with a casing having a pair of opposed, laterally spaced walls extending lengthwise thereof, and a second pair of laterally spaced, opposed walls connecting said first named walls; of a pressure transmitting plunger slidably telescoped within the casing; a pair of transversely disposed stop bars within said casing, said bars of said pair being located at opposite sides of said plunger, one of said stop bars being welded to one of the walls of said second named pair and the other of said stop bars being welded to the other wall of said second named pair; laterally projecting flanges on said transverse plunger at the inner end thereof engaged in back of said stop bars respectively; and a cushioning unit within said casing on which said pressure transmitting plunger bears.

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