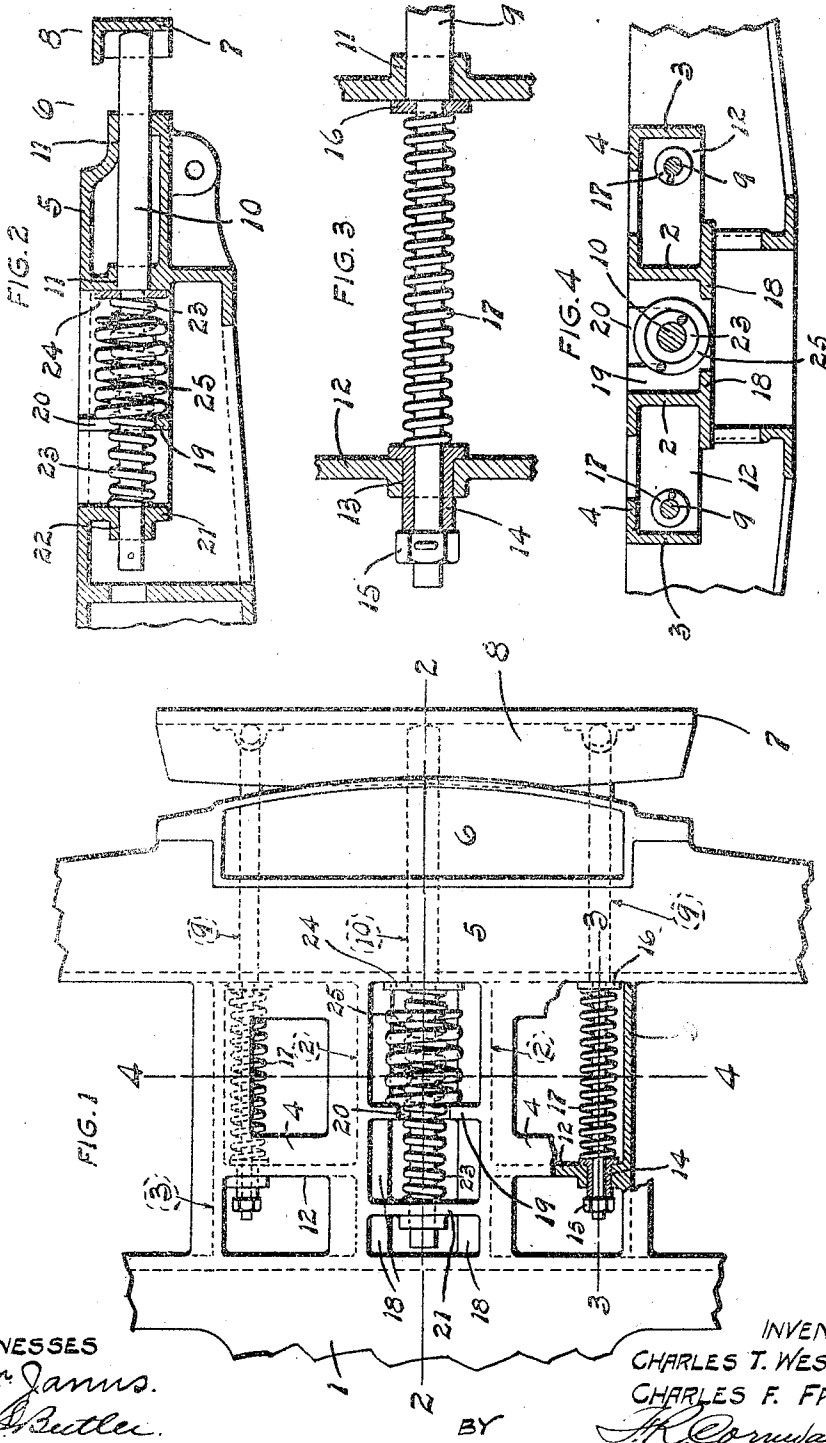


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 BUFFING MECHANISM FOR CAR PLATFORMS.
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1,051,039.

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WITNESSES
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BUFFING MECHANISM FOR CAR-PLATFORMS.

1,051,039.

Specification of Letters Patent.

Patented Jan. 21, 1913.

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To all whom it may concern:

Be it known that we, CHARLES T. WESTLAKE and CHARLES F. FREDE, citizens of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Buffing Mechanism for Car-Platforms, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of a cast metal platform with portions of the buffer beam and end sill and showing the buffing mechanism in position thereon. Fig. 2 is a longitudinal section taken approximately on the line 2—2 of Fig. 1. Fig. 3 is an enlarged section taken on the line 3—3 of Fig. 1. Fig. 4 is a transverse section taken approximately on the line 4—4 of Fig. 1.

This invention relates generally to improvements in railway car platform construction and more particularly to the buffing mechanism applied to cast metal platforms, such as are now in general use in passenger car construction, and the principal objects of the invention are:—To construct a skeleton platform and buffer beam so that a form of buffing mechanism of accepted M. C. B. type and now in use on a number of passenger cars may be readily applied to said and buffer beam and, further, to provide a construction wherein the operating parts of the buffing mechanism can readily be placed in or removed from position without detaching the vestibule of buffer from its stems, thereby permitting the buffing mechanism to be easily and quickly repaired when any of the operating parts have become broken or unfit for service.

With the above objects in view, our invention consists in certain novel features of construction and arrangements of parts hereinafter more fully described and claimed.

Referring in detail to the accompanying drawings, 1 designates the end sill of a car under-frame of the type now in general use

on passenger cars and formed integral therewith and projecting forwardly from the central portion of said end sill, is a pair of vertically disposed webs 2. A corresponding pair of webs 3 is formed integral with the end sill 1 to the sides of the webs 2 and the upper portions of the pairs of webs 2 and 3 are united by integral horizontally disposed plates 4.

The webs 2 and 3, together with the plates 4, form a platform frame and formed integral with or fixed to the forward end of this platform frame, is a buffer beam 5 of the usual box-shape, and located on top of the central portion of this buffer beam and projecting forwardly therefrom, is a threshold plate 6.

The numeral 7 designates a buffing member of the usual type provided on its top with a plate 8, which is adapted to slide beneath the threshold plate 6. The buffer 7 is carried by the forward ends of a pair of side buffer stems 9 and the central portion of said buffer bears against a center buffer stem 10, and said center stem together with the side stems, are arranged to slide freely through corresponding openings 11 formed in the front and rear walls of the buffer beam 5.

The forward portions of all of the buffer stems are preferably square or non-circular in cross-section and the rear portions of said stems which occupy positions within the platform are preferably round in cross-section.

Formed integral with the webs 2 and 3 and with the plates 4 connecting the same, are transversely disposed plates 12, in which are formed openings 13, the same being in alinement with the side buffer stem openings through the buffer beam 5, and loosely mounted in these openings 13, are sleeves 14, which serve as bearings for the rear portions of the side buffer stems. The rear ends of the buffer stems project through these sleeves 14 and receive nuts 15. Positioned on the rounded portions of the side buffer stems and bearing against the shoulders between said rounded portions and the square or non-circular forward portions, are disks or follower plates 16, and mounted on the

rounded portions of the side buffer stems between said follower plates and the sleeves 14 are compression springs 17.

Formed integral with the lower edges of the central pair of webs 2 are horizontally disposed strengthening flanges 18, and formed integral with said webs 2 above the flanges 18, at a point adjacent center between the end sill 1 and buffer beam 5, is a transversely disposed plate 19 in the center of which is formed an opening 20.

Formed integral with the rear portions of the webs 2 is a transversely disposed wall 21, in the center of which is formed an opening 22 which is in alinement with the opening 20 and with the openings for the center bearing stem in the buffer beam 5.

The rear rounded portion of the center buffer stem extends through the opening 20 and projects through the bearing 22. Formed in the plate 21 and positioned on the rounded rear portion of this center buffer stem, is a comparatively small compression spring 23, the rear end of which bears against the wall 21 and the forward end of which bears against a disk or follower plate 24, which latter bears against the shoulder between the square or non-circular portion of the center buffer stem and the rounded rear portion thereon.

The numeral 25 designates a comparatively strong compression spring which encircles the forward portion of the comparatively light spring 23 and the rear end of said spring 25 bears against the transversely disposed plate 19.

Under normal conditions, the springs 17 and 23 maintain the buffer 7 at its outer limit of movement and when said buffer is moved inward toward the beam 3 during the coupling of 2 cars, said springs will be compressed to a certain degree or until the follower plate 24 engages against the forward end of the heavy spring 25 and said spring 25 will now be thrown into action and together with the springs 17 and 23, will yieldingly resist the further inward movement of the buffer and buffing gear, until said parts have been moved to such a degree as to permit the coupling of the cars. During these movements, the buffer stems move freely through their various bearings and all of the springs mounted on said buffer stems readily combine to yieldingly resist the inward movement of the buffer in the desired manner.

The construction herein described is comparatively light in weight provides a strong and rigid support for the buffing gear and the entire buffing mechanism can be easily and quickly placed in operative position upon the platform and buffer beam or removed therefrom without detaching the vestibule or the buffer beam from its stems,

and therefore, said construction is especially desirable when it is necessary to make repairs or to renew any parts which have become worn or broken in service.

It will be readily understood that minor changes in the size, form and construction of the various parts of our improved mechanism can be made and substituted for those herein shown and described without departing from the spirit of our invention, the scope of which is set forth in the appended claims.

We claim:—

1. In a buffing mechanism of the class described, the combination with a car underframe end sill of a cast metal platform integral with said end sill, a buffer beam integral with the platform, a buffer in front of the buffer beam, buffer stems extending from the buffer through the buffer beam into the platform, comparatively light buffer springs located on the buffer stems within the platform a comparatively heavy compressed spring encircling a portion of the spring mounted on the center buffer stem and a transversely disposed slotted plate integral with the platform between the end sill and buffer beam, which slotted plate forms a bearing for the rear end of the heavy compression spring.

2. In a buffing mechanism of a class described, an end sill, a cast metal platform integral therewith, which platform comprises a series of vertically disposed webs and top plates integral with said webs, a buffer beam integral with the platform through which buffer beam is formed a series of buffer stem openings, bearings formed on the underside of the platform for the rear portions of the buffer stems a slotted plate integral with the underside of the platform, which slotted plate forms a bearing for one of the buffer stem springs and longitudinally extending strengthening flanges integral with and extending rearwardly from the slotted plate.

3. In a buffing mechanism of the class described, the combination with an end sill and buffer beam, of a one-piece skeleton platform arranged between the end sill and buffer beam, which platform comprises a series of longitudinally extending, vertically disposed webs, and a horizontally disposed perforated top plate connecting each outer vertically disposed web with the adjacent inner vertically disposed web, a slotted plate between the central pair of vertically disposed webs, transversely disposed plates between the central pair of vertical webs and the side vertical webs, and bearings formed in said last mentioned transversely disposed webs, of side buffer stems operating through the buffer beam and engaging in the bearings formed in the transversely disposed

webs, springs on said buffer stems, a center buffer stem operating through the buffer beam and through the slotted plate, and a pair of springs on said center buffer stem, one of which springs passes through the slotted plate and the other one of which springs bears against said slotted plate.

In testimony whereof we hereunto affix

our signatures in the presence of two witnesses, this 28th day of October, 1911.

CHARLES T. WESTLAKE.
CHARLES F. FREDE.

Witnesses:

B. E. KUHLE,
HAL C. BELLVILLE.