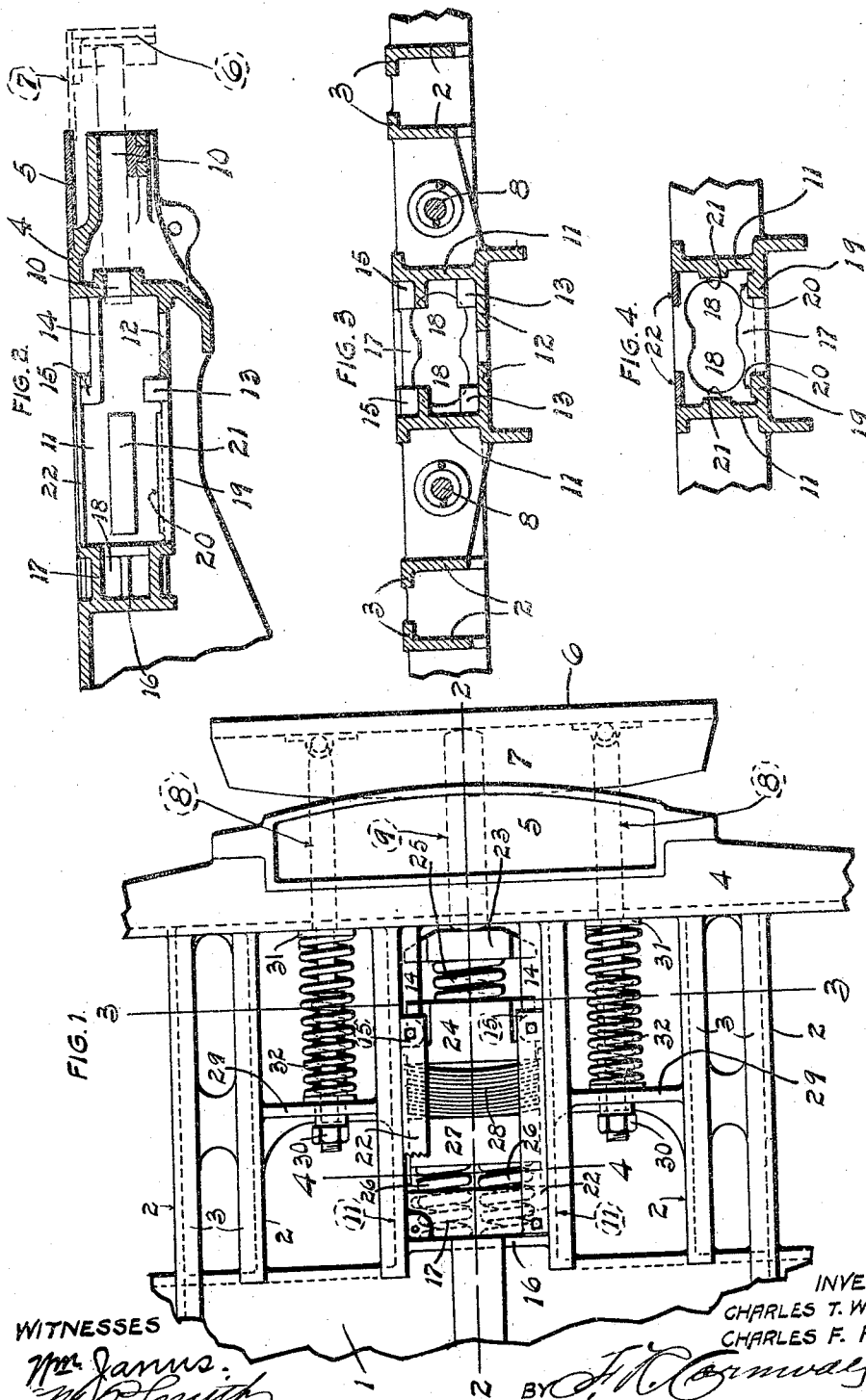


C. T. WESTLAKE & C. F. FREDE.
 BUFFING MECHANISM FOR CAR PLATFORMS.
 APPLICATION FILED NOV. 6, 1911.

Patented Dec. 10, 1912

1,046,696.



WITNESSES

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UNITED STATES PATENT OFFICE.

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TO DOUBLE BODY BOLSTER COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF
NEW JERSEY.

BUFFING MECHANISM FOR CAR-PLATFORMS.

1,046,696.

Specification of Letters Patent.

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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 with the buffing gear detached from the platform. Fig. 3 is a transverse section taken on line 3—3 of Fig. 1. Fig. 4 is a cross section taken on line 4—4 of Fig. 1.

This invention relates generally to 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 the skeleton platform and buffer beam so that a form of buffing mechanism now in use on a number of passenger cars, and of a type accepted by the M. C. B., can be readily applied to the platform and buffer beam, and further to provide a construction wherein the operating parts of the buffing mechanism can be readily placed in or removed from position without detaching the vestibule or the buffer beam 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 arrangement of parts hereinafter more fully described and claimed.

Referring in detail to the accompanying drawings: the numeral 1 designates the end sill of a cast metal car underframe of the type now in general use, and formed integral with and projecting forwardly therefrom is a skeleton platform frame composed of a series of vertically disposed webs 2 the upper edges of which are provided with

flanges 3, and formed integral with or fixed to the forward ends of said webs 2 is a buffer beam 4 of the usual box shape. Located on top of the central portion of this buffer beam is a threshold plate 5, and positioned in front of the buffer beam 4 is a buffing member 6 provided on top with a horizontally disposed plate 7 which is adapted to slide beneath the threshold plate 5. The buffer 6 is carried by the forward ends of a pair of side buffer stems 8 and the central portion of said buffer bears against the forward end of a center buffer stem 9, and all of these stems are arranged to slide freely through corresponding openings 10 formed through the front and rear walls of the buffer beam 5.

The numeral 11 designates a pair of vertically disposed walls which are parallel with the webs 2 and which are formed integral with and extend lengthwise between the central portions of the end sill and buffer beam, and the space between these walls is occupied by the center buffing gear. Formed integral with the lower portions of these walls and extending rearwardly a short distance from the rear wall of the buffer beam is a horizontally disposed plate 12, and formed integral with the rear end of this plate immediately adjacent the walls 11 is a pair of lugs 13 which form stops to limit the forward movement of a spring follower plate, forming a part of the buffing gear hereinafter more fully described. Formed integral with the inner faces of the walls 11 in a plane below the upper edges thereof are horizontally disposed, longitudinally extending flanges 14 beneath which the ends of the forward follower plate of the buffing gear operates, and formed integral with the rear ends of these flanges 14 are lugs 15. Formed integral with the rear portions of the walls 11 adjacent the front wall of the end sill 1 is a transversely disposed wall 16, and formed integral therewith and with the walls 11 is a housing 17 in which is formed a pair of pockets 18 adapted to receive the rear ends of a pair of the center buffing gear springs. Formed integral with the lower portions of the walls 11 on the inner faces thereof, and extending from the lugs 13 to the housing 17 are horizontally disposed flanges 19 on top of which are formed bearing ribs 20, and which latter are engaged by parts of the center buffing gear. Formed on the inner faces of the walls 11 immedi-

ately above the bearing ribs 20 are longitudinally extending ribs 21 which serve as bearings for the ends of the buffing gear which operates upon the ribs 20.

5 The numeral 22 designates retaining plates for parts of the buffing gear located between the walls 11 and the ends of these plates rest upon and are fixed to the lugs 15 and the top of the housing 17.

10 The numeral 23 designates a front follower block which occupies a position in the pocket between the walls 11 immediately adjacent the rear wall of the beam 4, and the rear end of the center buffer stem 9 bears directly against this follower block. The
15 ends of this block occupy positions beneath the flanges 14, and thus said block is held in proper operative position during its backward and forward movements.

20 The numeral 24 designates an intermediate follower block positioned in the central portion of the pocket between the walls 11, and the ends of which intermediate block bear upon the ribs 20 and against the ribs 21. The
25 lugs 13 form stops to engage the ends of this intermediate follower block and limit the forward movement thereof. Interposed between the blocks 23 and 24 is a comparatively heavy coil spring 25.

30 The numeral 26 designates coil springs, the rear ends of which are positioned in the pockets 18, and bearing against the forward ends of said coil springs is a rear follower block 27, the ends of which bear upon the
35 ribs 20, and against the ribs 21, and said ends occupy positions beneath the retaining plates 22. Interposed between the blocks 24 and 27 is a series of curved leaf springs 28, the ends of which occupy positions beneath
40 the retaining plates 22 and bear upon and against the ribs 20 and 21 respectively.

Formed integral with the central portions of the walls 11 and the adjacent pair of webs 2 are transversely disposed plates 29
45 through which are formed openings which receive the rear ends of the side buffer stems 8. The ends of these side buffer stems which project through the openings in the plates 29 are threaded and receive nuts 30.

50 The numeral 31 designates follower plates which are mounted on the central portions of the side buffer stems 8 against the shoulders formed between the square or non-circular forward portions of said stems and
55 the rounded rear portions thereof, and mounted on the rounded rear portions of said stems and interposed between the follower plates 31 and the walls 29 are coil springs 32.

60 Under normal conditions the expanded side buffer springs 32 hold the buffer 6 at its outer limit of movement, as shown in Fig. 1, and during the coupling of two cars the buffer 6 is moved inward toward the
65 buffer beam 4, and as a result, all of the

buffer stems are likewise moved inward, thereby simultaneously compressing all of the springs of the buffing gear, and as said springs are compressed they yieldingly resist the inward movement of the buffer and
70 buffing mechanism until the buffer has been moved to a point where the coupling of the cars is effected.

During the movement of the parts of the buffing gear occupying the pocket between
75 the walls 11 the follower blocks 24 and 27 and the ends of the curved leaf springs 28 bear upon the ribs 20 and against the ribs 21. These parts are held in operative position by the plates 22 and the forward fol-
80 lower block 23 is held in operative position by the ribs 14.

By our improved construction, which is comparatively simple and can be readily
85 manufactured, the skeleton platform and buffer beam are arranged to readily accommodate an accepted form of buffing gear, and thus the platform and buffing beam are combined to provide a very strong and service-
90 able construction, and the various parts of the buffing gear can be easily and quickly placed in proper position upon the beam and platform or removed therefrom with-
95 out detaching the vestibule or the buffer from its stems, and thereby said construction is especially advantageous and 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
100 changes in the size, form and construction of the various parts of our improved buffing mechanism can be made and substituted for those herein shown and described without
105 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 under-
110 frame end sill, of a skeleton platform integral therewith, a buffer beam, a pair of vertically disposed walls forming a part of the platform and extending between the end sill and buffer beam, buffing gear supporting
115 flanges integral with the inner faces of said walls, buffing gear bearing ribs integral with said flanges and with the inner faces of the walls, and a spring housing integral with
120 said walls between the rear ends thereof.

2. In a buffing mechanism of the class described, the combination of a car underframe-
125 end sill, a buffer beam of a series of longitudinally extending vertically disposed walls between the central pair of which walls is formed a pocket adapted to receive the center stem buffer gear, buffer gear support-
130 ing flanges formed integral with said central pair of walls, buffing gear bearing ribs formed on said supporting flanges, and the

inner faces of the central pair of walls, buffing gear stop lugs, arranged in pairs on the inner faces of said central pair of walls, buffing gear retaining plates detachably applied to said walls, transversely disposed plates integral with the center pair of walls, and the adjacent side walls, which last mentioned plates are perforated to form bearings for the rear ends of the side buffer stems.

3. In a buffing mechanism of the class described, the combination with a car under-frame end sill, of a skeleton platform integral therewith, a buffer beam, a pair of vertically disposed walls forming a part of the platform and extending between the end sill and buffer beam, buffing gear supporting flanges integral with the inner faces of said walls, buffing gear bearing ribs integral with said flanges and with the inner faces of the walls, lugs on said supporting flanges for parts of the buffing gear operating thereon, retaining flanges integral with the upper portions of the forward ends of said walls, lugs on the rear ends of said retaining flanges which lugs are in vertical alignment with the lugs on the supporting flanges, and a spring housing integral with said walls between the rear ends thereof.

4. In a buffing mechanism of the class described, the combination with a car under-frame end sill, of a cast metal platform comprising a series of longitudinally extending vertically disposed webs between a pair of which webs is formed a pocket for the center buffing gear, an end sill integral with the platform buffing gear, supporting flanges integral with the webs at sides of the pocket, buffing gear retaining flanges integral with the webs at the forward end of the pocket, removable retaining plates for the

center buffing gear, which removable plates are positioned at the sides of the pocket to the rear of the fixed retaining flanges, a spring housing integral with the webs at the rear end of the pocket and buffing gear bearing ribs on the supporting flanges and the inner faces of the webs at the sides of the pocket.

5. In a buffing mechanism of the class described, the combination with a car under-frame end sill, of a cast metal platform comprising a series of longitudinally extending vertically disposed webs between a pair of which webs is formed a pocket for the center buffing gear, an end sill integral with the platform buffing gear, supporting flanges integral with the webs at sides of the pocket, buffing gear retaining flanges integral with the webs at the forward end of the pocket, lugs integral with the rear ends of said flanges, removable retaining plates for the center buffing gear, which removable plates are positioned at the sides of the pocket to the rear of the fixed retaining flanges, a spring housing integral with the webs at the rear end of the pocket, buffing gear bearing ribs on the supporting flanges and the inner faces of the webs at the sides of the pocket, and lugs formed on the supporting flanges, which lugs together with the lugs on the ends of the projecting flanges form stops to limit the forward movement of parts of the buffing gear.

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. KUEHL,

HAL C. BELLVILLE.