

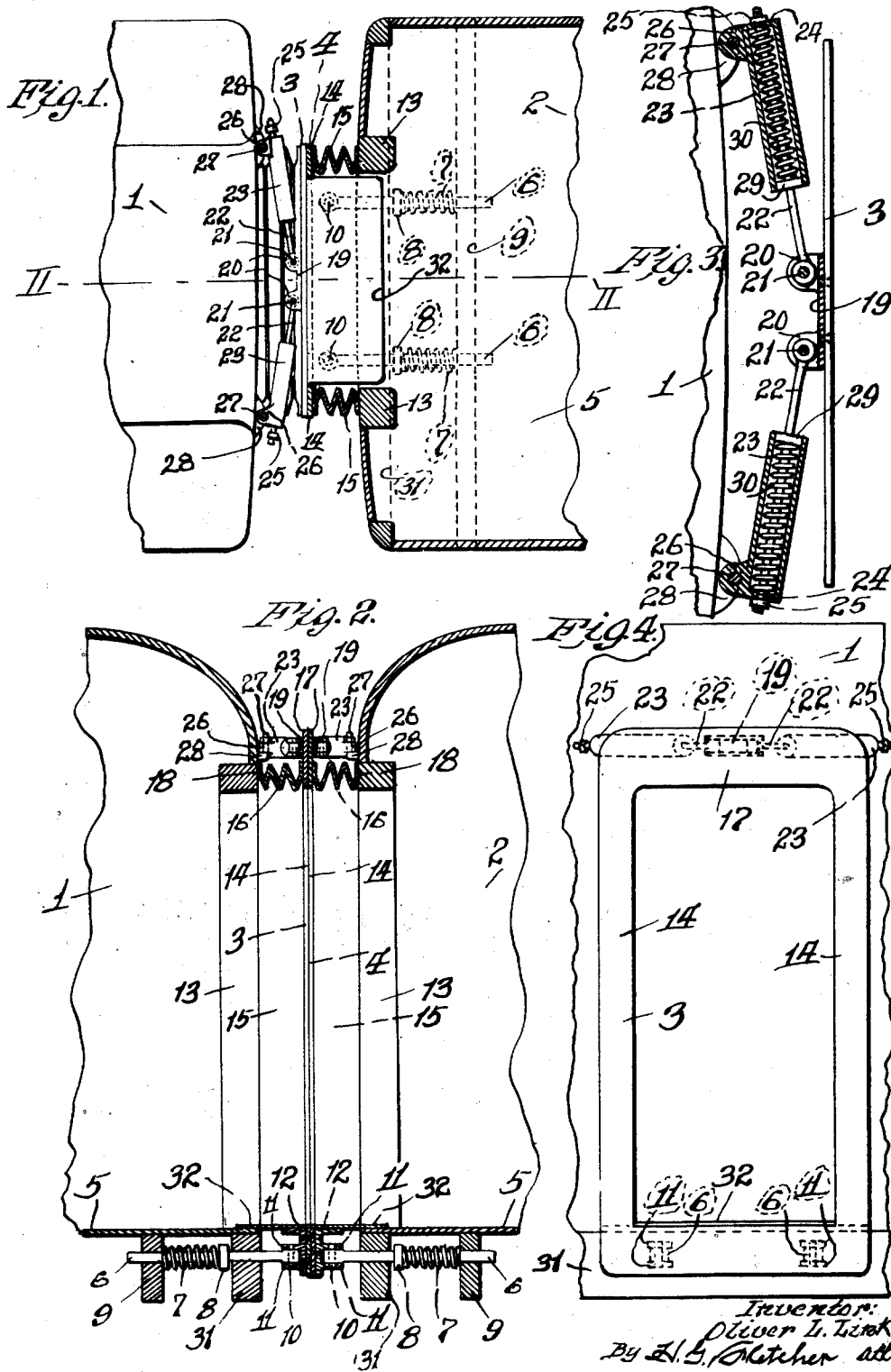
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UPPER BUFFING MECHANISM FOR THE DIAPHRAGM FACE PLATES
OF VESTIBULE RAILWAY COACHES

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UPPER BUFFING MECHANISM FOR THE DIAPHRAGM FACE PLATES OF VESTIBULE RAILWAY COACHES.

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- This invention relates to an improvement in an upper buffing mechanism for the diaphragm face plates of vestibule railway coaches, and has for its primary object the purpose of providing an improved resilient operating device.

Another object of the invention is in providing a buffing mechanism with a swivel action so that greater resilient flexibility is given thereto and to the diaphragm to which it is attached.

A further object of the invention is in providing a buffing mechanism of a pair of foldable pushing elements.

Other and further objects will appear in the specification and be specifically pointed out in the appended claims, reference being had to the accompanying drawings, exemplifying the invention, and in which:—

Figure 1 is a plan view partly in section of adjacent ends of a pair of coaches having this improved buffing mechanism attached to the end of one of the coaches and the diaphragm.

Figure 2 is a vertical section taken approximately on the line II—II of Fig. 1.

Figure 3 is an enlarged horizontal section of the buffing mechanism showing it secured to the diaphragm and to the end of the coach.

Figure 4 is a fragmentary end view of a coach and the diaphragm face plate thereof.

Referring by numerals to the accompanying drawings 1 and 2 designate respective coaches and disposed between the ends of said coaches are a pair of diaphragm face plates 3 and 4 respectively and located beneath the platform 5 of each coach is a pair of horizontally disposed pushing bars 6 each of said pushing bars being adapted to be moved outwardly by a coil spring 7 which is mounted on each of said bars, each of the springs 7 is adapted to engage at one end against a collar 8 which is rigidly secured to each bar 6 whereas the opposite end of each spring is adapted to engage against a cross member 9 which is mounted in each coach. The springs 7 each tend to push a respective bar 6 outwardly.

Each of the bars 6 at their extending ends are pivotally secured at 10 between respective pairs of ears 11 which are horizontally extended from a pair of angle members 12, one of the members 12 being transversely secured to the diaphragm face plate 3 whereas the other member 12 is transversely secured

to the diaphragm face plate 4 at the lower ends of said face plates.

Each coach is provided with a pair of doorposts 13 and secured to each post and to the side portions 14 of each of the diaphragm face plates 3 and 4 is a foldable material 15, such as fabric, the foldable material extending upwardly the approximate height of each of the diaphragm plates and joining with transversely disposed portions of material 16 which are secured between the upper portion 17 of each diaphragm face plate and the car ends as designated at 18 in Fig. 2.

Secured to the upper portion or cross member 17 of each of the diaphragm face plates 3 and 4 is a bracket 19 and formed on each bracket are horizontally disposed pairs of ears 20 and pivotally secured at 21 between each pair of ears is a push rod 22, each of said push rods being oppositely disposed and are each mounted in a respective cylinder 23 each of said cylinders having an end wall 24 through which the extending end of a respective push rod is passed and mounted on each extending push rod end is a holding nut 25.

Each of the cylinders 23 at its closed end is provided with a lug 26, each of said lugs being pivotally secured on a pin 27 of a respective bracket 28, said brackets being secured to the respective ends of the coaches 1 and 2.

Each of the push rods 22 is provided with a rigidly secured collar or shoulder 29, each of said collars being disposed in a respective cylinder 23 and are adapted to slightly engage the interior wall of said cylinder, and mounted on each rod 22 of each cylinder is a coil spring 30 each of said springs at one end adapted to engage the end wall of a respective cylinder whereas the opposite end of each of said springs is adapted to bear against a respective collar 29 of each push rod 22.

Each angle member 12 of each coach is located outwardly of each cross sill 31, and secured to each member 12 is a horizontally disposed apron 32, each apron at one end resting on the platform 5 of each respective coach.

When a pair of coaches are coupled together as shown, the diaphragm face plates 3 and 4 are held in abutting relation by reason of the action of the springs 7 on respective push rods 6 and the springs 30 on the pushing rods 22 and in which the foldable connecting material between the diaphragm

face plates and respective coaches will be expanded thereby providing a closed passage between the coaches.

When coaches which are mounted together as described are being traveled, there is considerable shifting displacement given between the ends of coaches by reason of the action of the draw-head springs of the couplings and therefore a continued flexing is carried on in the walls of the material 14 and 16 which provides a passage-way between the coaches and by reason of the diaphragm face plates 3 and 4 being of considerable height the flexing movement is much greater adjacent the upper ends of the face plates by reason of the swinging center of the coaches being much lower. For this reason applicant's improved buffing mechanism is provided because a greater resilient flexibility is given at the upper ends of the diaphragms by reason of the push rods 22 being foldable inasmuch as they slide within respective cylinders 23. In this connection the swinging cylinders 23 permit the diaphragm face plates to be moved towards or away from the coach ends as well as permitting the face plates to a lateral swing thereby preventing the face plates particularly at the upper ends from gapping apart.

It is to be noted that the pivots 27 of the cylinders 23 are off set from the cylinders, this off set disposition of the pivots causing an outward thrust to be given to the pushing rods 22 and in which the pushing rods will tend to swing at all times towards the diaphragm face plates and in which the pivots 27 and pushing rods 22 cannot be placed in direct pushing alinement.

Each cylinder 23 on its under side is provided with an elongated opening 33 for permitting dirt or water accumulation to fall from the cylinders.

What I claim is:—

1. The combination of a railway coach and a diaphragm face plate, and a pushing element swingingly secured at one end to said

coach, and at its opposite end to said face plate, one of the pivots of said element being out of pushing alinement therewith.

2. The combination of a railway coach and a diaphragm face plate, and a pair of pushing elements swingingly secured at one end to said coach and at their opposite ends to said face plate, the pivot at one end of each element being off-set from a respective element.

3. The combination of a railway coach and a diaphragm face plate, and a resilient telescoping pushing device swingingly secured at one end to said coach and at its opposite end to said face plate, one of the swinging pivots of said device being out of alinement therewith.

4. The combination of a railway coach and a diaphragm face plate, and a telescoping pushing device swingingly secured at one end to said coach and at its opposite end to said face plate, said device having an off-set swinging pivot.

5. The combination of a railway coach and a diaphragm face plate, and a pair of pushing elements each pivoted at one end to said coach and at their opposite ends to said face plate, said pivots at one end of said elements being nearer together than the pivots at the opposite ends of said elements, said pivots at one end of said elements being out of alinement with said elements.

6. The combination of a railway coach and a diaphragm face plate, a pair of pushing rods pivotally supported at one end, a pair of cylinders each having an off-set supporting pivot at one end, said rods at their extending ends being mounted in respective cylinders, and resilient means supported in each cylinder cooperable with respective rods for tending to push said rods from said cylinder, said rods and said cylinders having cooperable relation with the coach and the diaphragm face plate.

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