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SPEED REDUCING DEVICE FOR RAILWAY CARS

Filed Sept. 17, 1929.

Fig. 1.

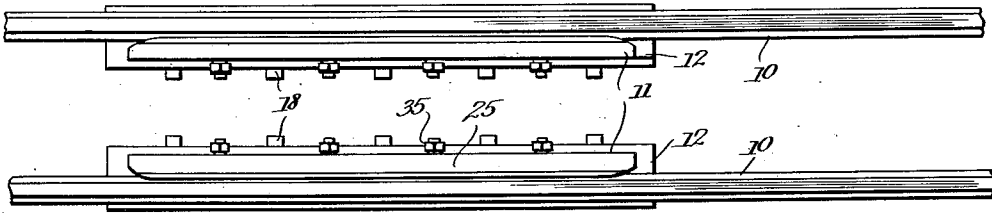
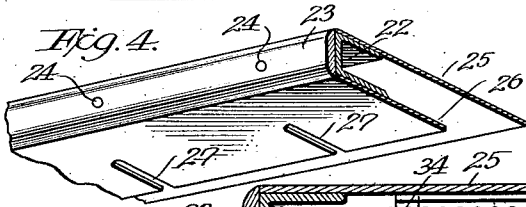
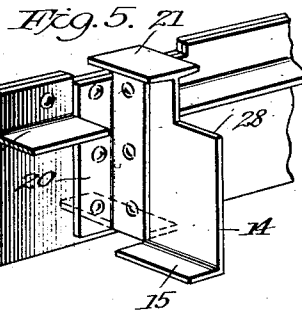
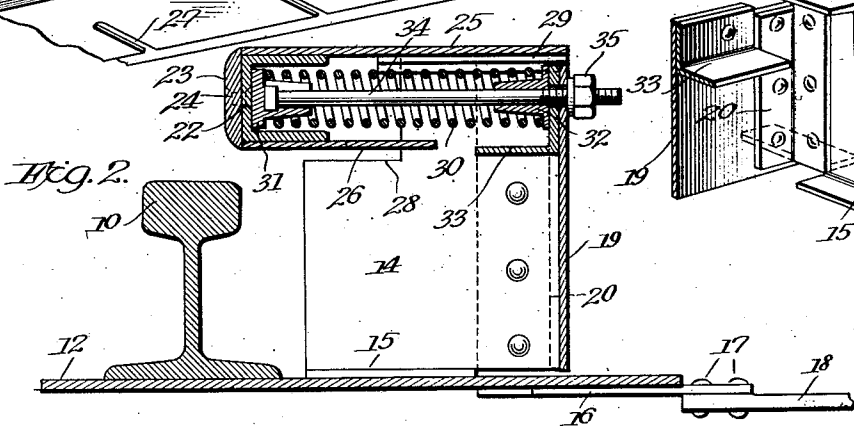
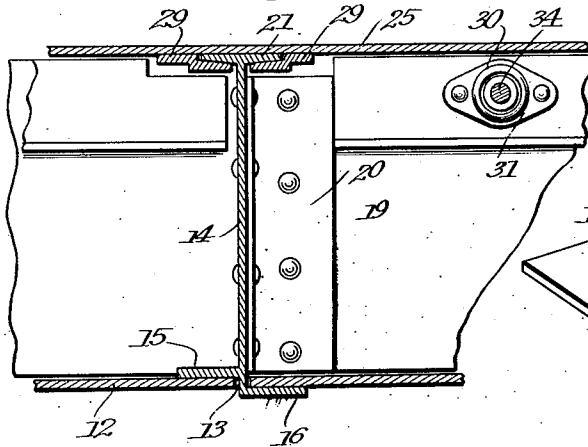
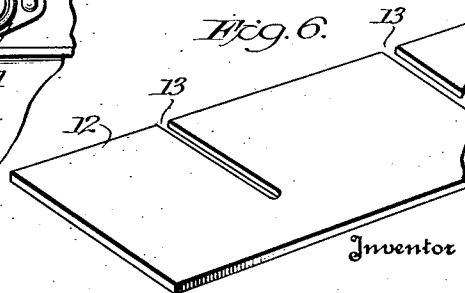


Fig. 3.



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SPEED REDUCING DEVICE FOR RAILWAY CARS

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This invention relates to speed-reducing devices for railway cars, and, more particularly, to a device to be associated with the tracks of a freight yard for the purpose of reducing the speed of cars which have been pushed up the yard lead and then cut loose to ride freely into the yard.

Devices of this character heretofore proposed have quite generally taken the form of a brake, or brakes, mounted in proximity to the tracks, and operated by a switchman upon signal from men riding the cars, the operating means including, generally, complicated compressed air apparatus or electric switches. Such devices are unsatisfactory for a number of reasons; being complicated, they are expensive to install and maintain, and they require the services of many men for efficient operation.

My invention, while in the nature of an improvement upon devices of this character heretofore proposed, departs from the general mode of operation in that I contemplate a device which shall normally be in operative position to offer resistance to the passage of the freight cars, and which does not require the services of switchmen and others to carry out its function.

My invention also contemplates the provision of a device of the character set forth which shall be of simple construction embodying few parts which can readily be assembled and disassembled.

A further object of my invention is to provide, in a device of this character, a brake member which is normally urged toward the track by resilient means such as springs which are entirely covered and thus shielded against inclement weather.

Other objects and advantages of my invention will appear as the description proceeds.

In the accompanying drawings, I have illustrated a practical embodiment of my invention; but it is to be understood that the drawings are illustrative, merely, and that my invention is susceptible of a wide range of modification without sacrificing any of its salient features or departing from its scope as defined in the appended claims.

In these drawings:

Fig. 1 is a plan view showing my car speed-reducing device associated with tracks of ordinary construction;

Fig. 2 is a vertical sectional view showing, on an enlarged scale, the details of construction of my device;

Fig. 3 is a fragmentary longitudinal section;

Fig. 4 is a fragmentary perspective view of the brake member;

Fig. 5 is a fragmentary perspective view showing a supporting upright and side-plate construction; and

Fig. 6 is a fragmentary perspective view of a tie-plate.

Referring to Fig. 1 of the drawings, the reference numerals 10 indicate a pair of tracks of ordinary construction, it being my intention that my car speed-reducing device shall be applicable to standard equipment everywhere in use. The reference numerals 11 indicate, generally, the speed-reducing devices of my invention and, as will be seen from an inspection of Fig. 1, there is one such device located at the inside and in close proximity to each of the tracks 10.

Each of the speed-reducing devices 11 includes a base or tie-plate 12 secured to the ties by any suitable means. This plate will be made of heavy gauge metal and, while it may be of any desired length, I prefer, in actual practice, to use plates about sixteen feet long. The tie-plate 12 is provided with a plurality of uniformly spaced slots 13 extending inwardly from one of its edges.

Slidably mounted in each of the slots 13 is a supporting upright 14 provided at its lower edge with oppositely bent flanges 15 and 16, the former of which rests on top, and the latter below, the tie-plate 12, as clearly shown in Fig. 3. The flange 16 extends beyond the edge of the tie-plate, as shown in Fig. 2, and is secured by suitable means, such as rivets 17, to a switch-rod 18 for a purpose hereinafter more fully brought out.

The supporting uprights 14 are connected by means of a side-plate 19 which is provided with angle-irons 20 secured, as by rivets, to the uprights 14. Thus, the uprights 14 and

side-plate 19 form a rigid structure which may, however, be readily dismantled for the purpose of making repairs and replacements.

Each of the uprights 14 is provided at its upper end with a flange 21 which supports the brake member of my device which will now be described. The brake member comprises a channel 22, the web of which is provided with a strip 23 of suitable metal or other brake material, the strip 23 being secured to the channel as by countersunk rivets 24, whereby it may be removed and replaced when desired. A top-plate 25 and a bottom-plate 26 are secured to the channel 22 by any suitable means. The plate 26 is provided with spaced slots 27 which are adapted to receive an edge of the uprights 14, the latter being cut away as at 28 to permit transverse sliding movement of the brake member with respect to the uprights. The top flange 21 of the uprights 14 is slidable in guides 29 secured to the lower face of the top-plate 25, as shown in Fig. 3.

At suitably spaced points along the device, I have provided resilient means in the form of springs 30 inserted between the brake member and the side-plate 19. Bearing cups 31 are secured to the inner face of the web of the channel 22 and similar cups 32 are secured to an angle 33 riveted or otherwise secured to the inner face of the end-plate 19. The bearing cups 31 are provided with T-slots or keyhole openings to receive the head of a bolt 34 which passes through the cups 32, the angle 33, and the end-plate 19, the projecting end of the bolt being provided with an adjusting nut 35. The springs 30 tend normally to urge the brake member toward the track and, thus, the brake member offers yielding resistance to the passage of the wheels of the cars riding on the track.

From an inspection of Fig. 2, it will be seen that the top-plate 25 extends to and overlies the edge of the end-plate 19, thus covering the springs 30 and shielding them from accumulation of snow and ice. This figure also shows that the springs 30 are completely housed by the arrangement of the channel 22, the plates 25 and 26, the end-plate 19, and the angle 33.

It is believed that from the foregoing description, the construction of my speed-reducing device will be readily understood by those skilled in the art. The operation of my device will also readily be understood and it may be summarized as follows:

Fig. 2 discloses my speed-reducing device in normal operative position, the brake member being located in close proximity to the track and extending a slight distance, say four inches, above the track so that it will engage the side or flange of a wheel. The brake material and the force of the springs 30 cooperate to offer yielding resistance to the passage of the wheel, it being understood that it is

not my intention that the device shall completely stop the cars but only offer such resistance to their passage as will be effective to reduce their speed from, say, twelve miles per hour to two or three miles per hour. The brake member, as stated, will normally be in position to function as above described, but it may be desirable to render the device inoperative, at times, and for this purpose the switch-rods 18 are operated by any suitable means to draw the uprights 14 and associated elements outwardly through the slots 13 in the tie-plate 12. By this arrangement, the brake member is moved away from the track a suitable distance to permit free passage of the wheels of the cars.

I claim:

1. A speed-reducing device for railway cars including a tie-plate provided with slots, uprights movably mounted in said slots, and a brake member slidably supported on said uprights.
2. A speed-reducing device for railway cars including a tie-plate provided with slots, uprights movably mounted in said slots, means joining said uprights, and a brake member slidably supported on said uprights.
3. A speed-reducing device for railway cars including a tie-plate provided with slots, uprights movably mounted in said slots, means joining said uprights, a brake member slidably supported on said uprights, and means connecting said brake member to said joining means.
4. A speed-reducing device for railway cars including a tie-plate provided with slots, uprights movably mounted in said slots, means joining said uprights, a brake member slidably supported on said uprights, and resilient means connecting said brake member and said joining means.
5. A speed-reducing device for railway cars including a tie-plate provided with slots, uprights movably mounted in said slots, a brake member supported on said uprights, and means connected to said uprights for adjusting them in said slots.
6. A speed-reducing device for railway cars including a tie-plate provided with slots, uprights movably mounted in said slots, a brake member supported on said uprights, a flange on said uprights extending beyond said tie-plate, and means connected to said flange for adjusting the uprights in said slots.
7. A speed-reducing device for railway cars including a plurality of uprights, an end-plate connecting said uprights, a channel-shaped brake member supported on said uprights, a plate on the brake member overlying said end-plate, and springs connecting said brake member and said end-plate, said springs being covered by the plate on the brake member.
8. A speed-reducing device for railway cars including a plurality of uprights, an

end-plate connecting said uprights, a brake
member slidably supported on said uprights,
springs joining said brake member and said
end-plate, and means to adjust the tension
5 of said springs.

In testimony whereof, I affix my signature.

ALVIN A. JOHNSON.

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