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F. W. FENTON

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MOBILE LOADING BOARDS FOR RAILWAY PLATFORMS AND THE LIKE

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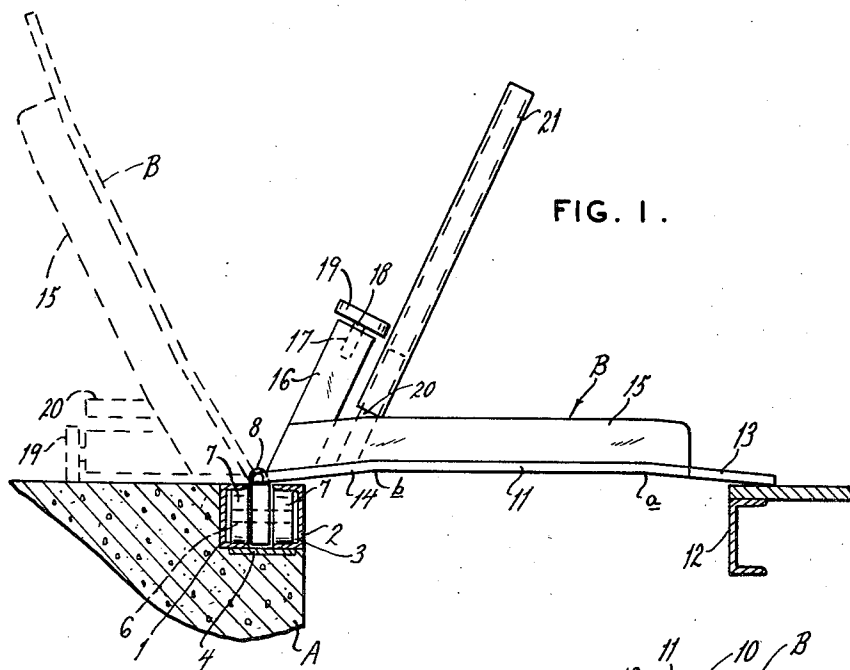


FIG. 1.

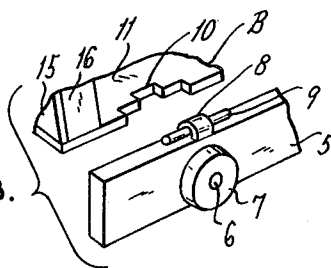


FIG. 3.

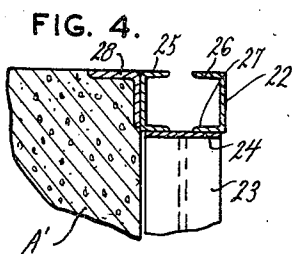


FIG. 4.

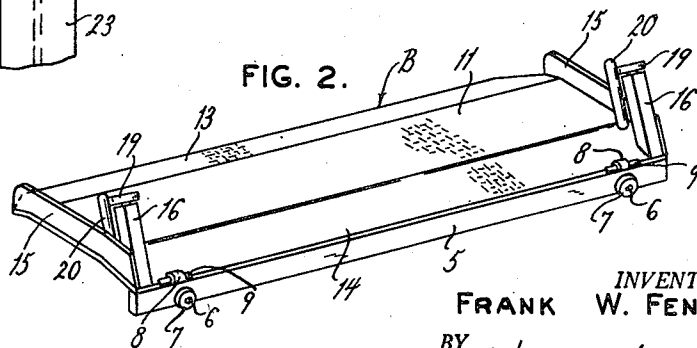


FIG. 2.

INVENTOR.  
FRANK W. FENTON

BY *Kalish & Gross*

ATTORNEYS

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## MOBILE LOADING BOARDS FOR RAILWAY PLATFORMS AND THE LIKE

Frank W. Fenton, St. Louis, Mo., assignor, by direct and mesne assignments, to Beacon Production Equipment Corporation, Centreville Township, Ill., a corporation of Illinois

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9 Claims. (Cl. 104—31)

This invention relates in general to freight loading means and, more particularly, to a loading board adapted for movement along a railway platform and the like.

It is the primary object of the present invention to provide a loading board adapted for movement along a rail installed in, or associated with, a loading platform for the expeditious loading and unloading of freight cars.

It is a further object of the present invention to provide a loading board mounted upon a carrier for pivotal movement between lowered or operative position where-in it effectively bridges the distance between a freight car and a platform and in upper or inoperative position where-in it is removed from the forward face of the platform to avoid untoward contact with freight cars.

It is an additional object of the present invention to provide a loading board of the character stated which incorporates a roller member spacedly removed from the face of the board for providing increased mobility when the board is in inoperative position and which serves as a guard when the board is in lowered position.

It is a still further object of the present invention to provide a mobile loading board which constitutes a permanent part of the loading platform, which is reliable and durable in usage, and which is economical in manufacture.

It is an additional object of the present invention to provide a mobile loading board of the character stated which embodies rail structures which may be either set within the loading platform or supported on structural members independent thereof.

With the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts presently described and pointed out in the claims.

In the accompanying drawing—

Figure 1 is a side view of a loading board constructed in accordance with and embodying the present invention showing the loading board in full lines in operative position between a platform and a freight car and in dotted lines in inoperative position;

Figure 2 is a perspective view of the loading board and the carrier member;

Figure 3 is a fragmentary exploded perspective view of the hinge formation; and

Figure 4 is a transverse sectional view of a modified type rail installation constructed in accordance with and embodying the present invention.

Referring now by reference characters to the drawing which illustrates practical embodiments of the present invention, A designates a loading structure or platform, preferably constructed of concrete, of the type customarily associated with warehouses and freight departments of commercial establishments for disposition adjacent and parallel to railroad sidings for facilitating the loading and unloading of freight cars. Suitably disposed within the platform A, for integration therewith, in its upper and outward edge portion is a pair of parallel channel members 1, 2, extending longitudinally along the platform A from end to end thereof and having their upper faces flush with

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the working surface of the platform A. Said channel members 1, 2, are presented for opening inwardly toward each other in registration so that the inner faces of their side flanges form a track or rail, generally designated 3; said channel members 1, 2, being maintained in spaced relation by securement, as by welding, of their lower side flanges on the under faces thereof to an elongated base plate 4, of suitable bar stock, set within the platform A.

Extending into the space intermediate the channel members 1, 2, is a carrier bar 5 having its upper margin aligned planar-wise with the working surface of the platform A and being transversely drilled adjacent each of its ends for rigidly receiving short rods 6 on each projecting end of which is mounted for free rotation a roller 7 peripherally contoured for smooth rolling movement along the track 3. Welded, or otherwise secured, at intervals along the upwardly presented margin of the carrier bar 5 are clips 8 for hinge-forming engagement about pins 9 fixed within stepped recesses 10 provided along the normally rearward transverse margin of a plate 11 of a loading board, generally denoted B, fabricated preferably of cold rolled steel, whereby said plate 11 is adapted for swingable movement with relation to the platform A. Said plate 11 is dimensioned for bridging the normal gap or space between the platform A and a railway freight car, fragmentarily indicated at 12 in Figure 1, to accommodate thereacross loading trucks, tractors, and the like, having its forward transverse margin free for resting disposition upon the floor of the car 12. The plate 11 is angulated as at a and b to provide rearward and forward ramp sections 13, 14, respectively, inclined preferably at an angle approximately 6° to the central portion thereof. Upstanding from each lateral margin of the plate 11 is a curb or flange 15 terminating at its forward margin spacedly from the forward free edge of the plate 11 and having their rearward margins forwardly inclined to prevent obstructing contact with the surface of the platform A when the plate 11 is in raised or inoperative position (see Figure 1). Adjacent the rearward portion of each of the curbs 15 is a likewise forwardly inclined boss-like element 16 having a short axial bore 17 for fixedly receiving a rod 18 on the outer projecting end of which is mounted for free rotation a roller or wheel 19 adapted for engagement with the working surface of the platform A when the board B is in inoperative position for effectively limiting the movement rearwardly thereof as well as for enhancing the mobility of the board B by rolling movement along said working surface. When the plate 11 is in lowered or operative position, the roller or wheel 19 will present a yielding surface, as it were, so that individuals or work-handling means coming into inadvertent contact therewith will tend to be deflected therefrom and, hence, said roller 19 will minimize the danger of damaging accident. Adjacent each of the bosses 16 and inclined at like angles thereto is a stem or male member 20 welded at its lower end to the plate 11 for removably receiving thereon a tubular or pipe section 21 which conveniently provides a lever to permit facile lowering or raising of the plate 11 as well as serving, if desired, as a push bar to effect traversing movement of the board B along the platform A by means of the roller 7 and the rail 3 and the rollers 19.

Shown in Figure 4 is a modified type of rail structure designated 22 for association with platforms A' wherein it is inconvenient to set the rail structure. The rail structure 22 incorporates a plurality of vertically disposed structural members 23 such as angle sections and the like disposed at intervals adjacent the forward vertical face of the platform A' and suitably anchored within the ground; the upper end of said structural members 23 terminating spacedly from the plane of the working surface of the platform A'. Supported appropriately on the upper ends of the structural members 23 are horizontally

disposed, elongated plate members 24 to the upper face of which is secured, as by welding, the under face of the lower side flanges of channel members 25, 26, opening inwardly toward each other and in spaced relation, as the channel members 1, 2, hereinabove described, to provide a rail 27 for the carrier bar 5. The web portion of the channel member 25 is welded to an angle section 28 set in the platform A along its upper forward edge.

It will thus be seen that the loading board B is at all times available for quick and accurate positionment along the platform A for alignment with the opening of a freight car 12. The mobility provided by the rollers 7 and 19 permits the board B to be easily shifted to desired location and since the plate 11 is dimensioned for adequate bridging of the distance between a freight car 12 and the platform A, there is totally obviated the necessity of any laborious and time-consuming efforts such as are required in the positionment and adjustment of currently used expedients. When the board B is in operative position, loading and unloading vehicles may freely move thereon with the curbs 15 providing, in effect, guard-rails to prevent untoward movement of such vehicles. At the completion of the particular operation, the plate 11 is swung upwardly, by means preferably of the tubular section 21, to a point slightly past the vertical, wherein it will be spaced rearwardly from the forward vertical face of the platform A and, hence, be removed from any undesired contact with freight cars moving along the siding.

With the loading board B in inoperative position, the bosses 16 will be disposed in parallel relation to the working surface of the platform A so that the rollers 19 will be disposed for support thereof, as well as enhancing its mobility.

It is, of course, apparent that any number of loading boards B may be utilized with the rail 3, this consideration being wholly dependent upon the length of the platform A as well as the number of freight cars 12 ordinarily handled by the particular user.

Although the loading board B herein presented is initially intended for use where the distance between the vehicular floor and the loading platform is predetermined, it is obvious that the dimensions thereof may be appropriately varied so that in the event there was a differential in elevation between the platform and the vehicular floor the board B could be effectively used for spanning the distance therebetween. Thus, due to the arc of movement of the board B a range of elevational differentials between the platform A and the floor of the car 12 could be accommodated.

Additionally, it is inherent in the structure of the loading board B that it may be so constructed as to have a roll-over load capacity to support trucks and tractors having substantial loads.

It is to be understood that changes and modifications in the form, construction, arrangement, and combination of the several parts of the mobile loading board for railway platforms and the like may be made and substituted for those herein shown and described without departing from the nature and principle of the present invention.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. For use with a platform for the loading and unloading of vehicles presented adjacent thereto, the combination with a rail secured to the platform for extension therealong, of a loading board comprising a plate for bridging the distance between the platform and a vehicle disposed adjacent thereto, a wheeled carrier bar disposed on the rail for movement therealong, said plate being pivotally secured to said carrier bar on the upper surface thereof for movement between lowered or bridging position, and raised or inoperative position, a boss-like element projecting outwardly from the normally upper face of said plate, roller means mounted on said boss-like element for peripheral engagement with the platform when the plate is in inoperative position to support same

and to assist movement thereof when in said raised position.

2. For use with a building platform for the loading and unloading of vehicles presented adjacent thereto, the combination with a track fixed in the platform and extending therealong, of a loading board comprising a plate for optionally bridging the distance between the platform and a vehicle presented adjacent thereto, said plate being angulated to provide normally rearward and normally forward ramp-like portions with a central section therebetween, curb members upstanding from the lateral margins of said plate to serve as guard-rails, a carrier bar disposed in said track, rollers mounted on said carrier bar for moving the same along said track, the upper surface of said carrier bar being substantially flush with the upper surface of the platform, said plate being hingedly secured to the upper surface of said carrier bar for rockable movement between lowered or operative position and elevated or inoperative position, and roller means maintained on the plate for assisting movement thereof when in inoperative position upon movement of the carrier bar along the track.

3. For use with a building platform for the loading and unloading of vehicles presented adjacent thereto, the combination with a rail fixed in and disposed beneath the working surface of the platform adjacent the outer face thereof, of a loading board comprising a plate adapted for optionally bridging the distance between the platform and a vehicle presented adjacent thereto, said plate being transversely angulated to provide normally forward and normally rearward ramp-like portions, curb members upstanding from the lateral margins of the plate to serve as guard-rails, a carrier bar, roller members mounted on said carrier bar for movement thereof along said rail, said plate being pivotally mounted at its normally rearward transverse margin to the carrier bar, the normally forward margin of said plate being free, means for facilitating the facile pivotal movement of said board between lowered or operative position to permit loading or unloading of a vehicle and raised or inoperative position, a boss-like element secured to said plate and projecting therefrom, and a roller member supported by said boss-like element and rotatable about the axis thereof engaging by its periphery the working surface of the platform when said board is in raised or inoperative position to assist in the movement thereof during movement of the carrier bar along said rail to permit expeditious positionment of the board relative to a vehicle.

4. For use with a platform for loading and unloading vehicles presented adjacent thereto, the combination with a rail extending along the platform and defined by spaced channel sections opening toward each other with the upper surface of the upper flanges thereof substantially flush with the platform, of a loading board comprising a plate for bridging the distance between the platform and a vehicle, a bar member disposed in the space between said channels, and roller members mounted on said bar for movement along the rail by rolling along the inner faces of the flanges of said channel members, said roller members supporting said bar so that its upper face is substantially co-planar with the platform, said plate being at one of its ends pivotally connected to the upper face of said bar whereby displacement of the latter along the track by the rollers will permit selected positionment of the board along the platform.

5. For use with a platform for loading and unloading vehicles positioned adjacent thereto, the combination with a guideway secured to the platform for extension therealong, of a loading board comprising a plate for bridging the distance between the platform and a vehicle, said plate being angulated to form normally forward and rearward ramp portions inclined with respect to the central portion, a guide member for movement along said guideway, said plate being hingedly connected on its rearward margin to said guide member for movement between

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lowered or bridging position and raised for inoperative position, boss-like elements projecting upwardly from the normally upper face of the plate adjacent its rearward margin at the opposite ends thereof, and rollers mounted on each of said boss-like elements for rotation about the axis of said boss-like elements, whereby when said plate is in inoperative position the rollers will be in engagement with the platform to support the board in said position and to enhance the mobility thereof during movement of the guide member in the guideway.

6. For use with a building platform for the loading and unloading of vehicles presented adjacent thereto, the combination with a track fixed in the platform and extending therealong, of a loading board comprising a plate for optionally bridging the distance between the platform and a vehicle presented adjacent thereto, said plate being angulated to provide normally rearward and normally forward ramp-like portions with a central section therebetween, curb members upstanding from the lateral margins of said plate to serve as guard-rails, a carrier bar disposed in said track, rollers mounted on said carrier bar for moving the same, said plate being hingedly secured to the upper surface of said carrier bar for rockable movement between lowered or operative position and elevated or inoperative position, and roller means maintained on the plate for assisting movement thereof when in inoperative position upon movement of the carrier bar along the track.

7. For use with a platform for loading and unloading vehicles presented adjacent thereto, the combination with a rail extending along the platform and defined by spaced channel sections opening toward each other with the upper surface of the upper flanges thereof substantially flush with the platform, of a loading board comprising a plate for bridging the distance between the platform and a vehicle, a bar member disposed in the space between said channels, and roller members mounted on said bar for movement along the rail by rolling along the inner faces of the flanges of said channel members, said plate being at one of its ends pivotally connected to the upper face of said bar whereby displacement of the latter along the track by the rollers will permit selected positionment of the board along the platform.

8. For use with a platform for loading and unloading vehicles positioned adjacent thereto, the combination with a guideway secured to the platform for extension therealong, of a loading board comprising a plate for bridging the distance between the platform and a vehicle, a guide member for movement along said guideway, said plate being hingedly connected on its rearward margin to said guide member for movement between lowered or bridging

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position and raised or inoperative position, boss-like elements projecting upwardly from the normally upper face of the plate adjacent its rearward margin at the opposite ends thereof, and rollers mounted on each of said boss-like elements for rotation about the axis of said boss-like elements, whereby when said plate is in inoperative position the rollers will be in engagement with the platform to support the board in said position and to enhance the mobility thereof during movement of the guide member in the guideway.

9. For use with a building platform for the loading and unloading of vehicles presented adjacent thereto, the combination with a rail fixed in and disposed beneath the working surface of the platform adjacent the outer face thereof, of a loading board comprising a plate adapted for optionally bridging the distance between the platform and a vehicle presented adjacent thereto, a carrier bar, roller members mounted on said carrier bar for movement thereof along said rail, said plate being pivotally mounted at its normally rearward transverse margin to the carrier bar, the normally forward margin of said plate being free, means for facilitating the pivotal movement of said board between lowered or operative position to permit loading or unloading of a vehicle and raised or inoperative position, a boss-like element secured to said plate and projecting therefrom, and a roller member supported by said boss-like element and rotatable about the axis thereof engaging by its periphery the working surface of the platform when said board is in raised or inoperative position to assist in the movement thereof during movement of the carrier bar along said rail to permit expeditious positionment of the board relative to a vehicle.

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