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MEANS FOR LOADING AND UNLOADING CARS.


To all whom it may concern:

Be it known that I, JOSEPH C. KIMERER, a citizen of the United States, residing at Paris, in the county of Lamar and State of Texas, have invented certain new and useful improvements in Means for Loading and Unloading Railroad-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 The invention herein is directed to means used in connection with loading and unloading railway cars in the employment of an improved skid-gangway and means by which it is housed beneath the floor of the car and used in connection with the door openings at either side of the car, whereby the car can be loaded and unloaded from either door; or from the ground; or from one car to another on an adjacent track and dispensing thereby with the necessity of the use of the cattle-pen or chute with its attending trouble, expense and delay in pulling a car from the track to the pen and especially in the transferring a loaded disabled car from the train to the cattle-pen, and in the claim appended hereto I will point out the parts and combinations of parts which constitute my invention in connection with the accompanying drawings, in which,—

15 Figure 1 represents in side elevation so much of the body of a railroad car as embraces my invention and particularly showing my improved skid housed beneath the floor of the platform with its jointed end dependent against the side frame sill, and the side adlable door in open position to show the floor drop-platform raised and secured in the doorway when not in use. Fig. 2 is a transverse section of the car taken through the closed side doorways and showing the skid automatically held in position by its jointed ends hanging in contact with the side sills. Fig. 3 is a like section showing the skid drawn out from its housing-way at one side of the car extended to and supported by its hinge-jointed end within the housing-way of a car on an adjacent track and forming thereby a passage-way through the open doors of both cars for transferring stock or freight from one car to the other. Fig. 4 is a top view of the same end of each car being in section at each doorway. Fig. 5 is a transverse section showing the skid drawn out and supported on the ground and the gang-sides raised and fastened to the side of the car. Fig. 6 is a longitudinal section of the car floor showing the skid and its gang-sides housed. Fig. 7 is a perspective view of the skid with its gang-sides removed. Fig. 8 is a cross section of the skid with its hinged sides raised and showing in dotted lines the gang sides folded upon the skid when it is housed. Fig. 9 is a detail sectional view showing the catch and stop for limiting the withdrawal of the skid. Fig. 10 shows the adjustable jointing of the brace-rod.

The side sills 1, 1 of the floor frame of the car may be made of steel and connected at the side door-ways by a pair of transverse beams 2, 2, and for stock cars the floor 3, may be made of corrugated sheet iron to prevent slipping. Beneath the floor between the transverse beams and in alignment with the side doorways, a housing is provided for a skid, the housing being open at both ends at the top of the side sills to allow the skid to be drawn out at either side of the car and to be supported at one end when in use in said housing upon the side sill.

20 A row of roll bearings 4, is mounted in the opposite walls of the transverse beams and upon these the skid is supported at each of its side edges and adapted to be slid out at either side of the car, so that the housing is formed by the side sills, the floor, the transverse beams and the bearing rolls mounted therein. The skid is preferably formed of metallic side bars 5—5, connected by transverse rods 6, to which a platform 7, which may be of corrugated sheet iron is secured having at each end a section 8—8, of the skid hinged by knuckle-joints 9—9, so as to produce a rigid skid and gangway, and allow the ends to hang down. The skid has a width adapting it to fit between the transverse beams and a length of about fourteen feet adapting it to span the space between adjacent track-cars and supported in the housings; but the purpose of the hinged ends is to automatically hold the skid in its housing when not in use and this holding function is effected by making the length of the skid between its hinged ends so that the latter will flex at and be caused to hang down against the outside of the sills at each side of the car and thus serve as abutments for preventing the skid from endwise movement in its housing and allow it to be slid out only when the hinged ends are raised to the level of the side sills and in alignment with the skid platform. Each skid-bar is formed with ledge 10 which form ways by which the skid is seated and is slidable on the roll-bearings. Each skid-bar is preferably raised above these ledges to form guides and the means by which gang-sides 12, are hinged or connected which may be by staples 13 and hooks adapted to hold the gang sides in vertical positions on the skid to form the gang-way, to allow of their removal when the skid is to be used for loading and unloading freight, and to be folded upon each other upon the skid platform when the latter is slid into its housing out of the way and ready for use when wanted.

25 To accommodate the thickness of the skid including the knuckle-joints of the end sections, the upper edge of each side sill may be recessed at 14, beneath the floor to form the open ends 15, of the housing and the floor may be supported on the transverse beams above the sills to give the required width to the recesses for the insertion and withdrawal of the skid.

In using the skid with its gang-sides raised I provide...
for holding them in such positions by a swing-plate 16, mounted upon each side of the door-frame and when swung out against the gang-sides are locked by a suitable latch 17, pivoted to the swing plate the latch 5 shown being adapted to rest upon the upper edge of the gang-side so as to straddle and hold and brace the gang side and swing plate together at the door-way. When the skid is housed the door-way drop-platform 18 is swung up and held by arms 19, pivoted to the sides of the door-frame, so as not to interfere with the movements of the stock in the car. In this way each end of the gang-sides is supported and locked at the car sides when the gang-skid is used as the means of transferring stock from one car to another as stated. But when the skid gang-way is used for loading bogs and sheep from the ground the outer end of each gang-side is also supported by a brace rod 20, adjustably connected by a swivel joint 21, to a bar 22, mounted in bearings at the side sill at each side of the car door, and fastened to the outer end of the raised gang-side by a pin 23, or otherwise and when so fastened the brace-rod is fixed by a pin 24, or otherwise to the sill bar. In using the skid for loading and unloading freight cars the gang-sides are removed. The gang-sides may be made of galvanized iron piping and a lining of woven wire, and the door-way swing-plates are preferably made of sheet iron.

When the construction is such that the top of the skid is on a level with the car floor then the door-way drop platform 18, may be dispensed with. When the skid is housed and its hinged ends are hanging against the side sills the sliding car doors 25, are closed and the opening in the car side is closed by a drop-slide 26, fitted in guides on the outer side of said door as shown in Fig. 1 where the drop slide is shown as raised. In the way described the skid can be used at either side of the car for all purposes and at all places where a car may be loaded and unloaded. The skid can be fitted in cars already in service by raising the floors the proper height to form the housing for the skid and with it two men can do the work of loading and unloading of four or five men in using the cattle pen.

It is important to note that the provision for rendering the skid self fastening when housed by utilizing its hinged ends as hanging abutments in contact with the car sides gives the advantage of housing skids having a length greater than the transverse width of the car. This self fastening is rendered automatic by the act of inserting the skid into its housing because in such movement the hinged ends will fall and engage the sides of the car as soon as the joints of the hinged ends register with the sides of the car and this so far as I know and can find is a novel construction in housing and securing a skid of greater length than the width of the car. When so inserted each hinging end of the skid against the side of the car forms a stop that prevents the skid from moving endwise in its housing while allowing it to be easily withdrawn at either side of the car by raising one of its hinged ends and pushing it into the housing so that it may be withdrawn from the other side and in this way it is conveniently handled and in this the depending ends serve as handles by which to pull or push the skid from its housing.

It is also important to note that the gang-sides are of the same length of the middle skid section so that the sides can be folded thereon and housed therewith. The usual sidable door-ways are provided and each may have a recess in its lower edge to allow the skid to be drawn out or pushed in from either side without opening the door.

I have stated that the length of the skid is fourteen feet and it will be understood that the platform is nine feet which is the width of the car and that the hinged ends are each two and a half feet that making the skid five feet longer than the width of the car which gives the advantage of a longer and less steep incline in loading and unloading from the ground, for obviously a skid nine feet long would be too steep for loading and unloading cattle. Moreover, it is this length of skid which gives the advantage of connecting cars of adjacent tracks for loading and unloading from one car to another; nor could the loading and unloading be effected with safety without the gang-sides.

I have stated that the gang brake rods 20, are adjustable and this is to adapt them to be connected with the gang-sides in the different positions in which they may be used and for this purpose the bar 22, is free to turn in its bearings and is provided with holes for the adjustment of pins 24 as in Fig. 10.

The function of the hinged plates is illustrated in Fig. 8, but when the skid and its gang-sides are housed and the plates and the drop platform are folded together as in Fig. 1 the drop platform is held up by the drop arm 19 and the plates are held in folded relation against the drop-platform by a drop-臂 27 pivoted on the inner side of the car seen in Fig. 1. The plates however, may be lifted off their pindle hinges.

The skid may be entirely removed from its housing, but I provide for retaining therein by catches 28, fixed to the side sills and adapted to engage pins 29, at each side at the ends of the hinged skid sections, so that when desired the skid can be drawn out its full length so that its hooks 28, will automatically engage the sill hooks and from which engagement the hooks can be freed by lifting the skid when it is desired to entirely remove it.

I claim:

1. In a railroad car having loading and unloading side door-ways, and a transverse open housing floor-way thereat, a skid adapted to fit into said housing-way and having a length including a hinged section at each end greater than the transverse width of the car the intermediate skid section being a rigid platform corresponding to the width of the car, whereby the hinged ends are adapted to project and depend in contact with each side of the car as the means for securing the skid in its housing.

2. In a railroad car having loading and unloading side door-ways, a transverse open housing-floor-way thereat, a pair of transverse beams, a row of roll bearings mounted on the opposite wall of each of said beams, forming said housing, and a skid supported upon said roll bearings and having a length including a hinged section at each end, greater than the transverse width of the car, the intermediate section being a rigid platform corresponding to the width of the car adapted thereby the hinged ends to depend in contact with each side of the car to secure said skid within said housing.

3. In a railroad car having loading and unloading side door-ways, and a transverse open housing way thereat, a skid adapted to fit into said housing way and having a length including a hinged section at each end, greater than the transverse width of the car, the intermediate section being a rigid platform corresponding to the width of the car, and a pair of gang-sides hinged to the skid be-
between its hinged ends adapted to be folded upon the skid, and means whereby said gang-sides are supported when in use.

4. In a railroad car having loading and unloading side door-ways, and a transverse open housing-way thereof, a skid adapted to fit into said housing way and having a length including a hinged section at each end greater than the transverse width of the car, the intermediate section being a rigid platform corresponding with the width of the car, a pair of gang-sides hinged to the skid between its hinged ends, a pair of plates each hinged to the sides of the door-way and adapted to be swung out in lapping relation to the gang-sides, and a latch pivoted on each plate and adapted to be engaged with said sides to secure and brace them when in use.

5. In a railroad car having loading and unloading side door-ways, and a transverse housing way thereof, a skid adapted to fit into said housing way and having a length including a hinged section at each end greater than the transverse width of the car, the intermediate section being a rigid platform corresponding with the width of the car, a pair of gang-sides hinged to the skid between its hinged ends, and means whereby each end of each gang-side is secured and braced to the car when in use.

6. In a railroad car having loading and unloading side door-ways, a transverse open housing thereof, a skid adapted to fit into said housing-way having a length including a hinged section at each end greater than the transverse width of the car, the intermediate section being a rigid platform corresponding to the width of the car, a pair of gang-sides hinged to the skid between its hinged ends, a pair of plates each hinged to the sides of the door-way and adapted to be swung out in lapping relation to the gang-sides, means carried by said door-way plates adapted to engage and secure the inner ends of said gang-sides, and a pair of brace rods each pivoted to the side sills and adapted to engage and secure the outer ends of said gang-sides in loading and unloading from the ground.

7. In a railroad car having loading and unloading side door-ways, a transverse housing thereof, a skid adapted to fit into said housing way having a length including a hinged section at each end greater than the transverse width of the car, the intermediate section being a rigid platform corresponding to the width of the car, and a drop platform hinged to the side of the car at the door-way and adapted to rest upon said rigid platform and to be turned up into the door-way when the skidable door is closed.

8. In a railroad car having loading and unloading side door-ways, a transverse open housing-way thereof, a skid adapted to fit into said housing way having a length including a hinged section at each end greater than the transverse width of the car, the intermediate section being a rigid platform corresponding to the width of the car, a pair of gang-sides hinged to the skid between its hinged ends, means for securing the inner ends of said gang-sides to the car, and means for securing the outer ends of said gang-sides to the car consisting of a pair of brace-rods, a bar fixed to the sill at each side of the door-way, and means for adjustably connecting one end of each brace rod to said bar, the other end of the brace-rods being adapted to be connected to the outer end of the gang-side.

9. In a railroad car having loading and unloading side door-ways, a transverse housing floor way thereof, a skid having a length including a hinged section at each end greater than the transverse width of the car, the intermediate section being the width of the car adapting thereby the hinged ends to depend in contact with each side of the car for the purpose stated.

10. In a railroad car having loading and unloading side door-ways, a skid slidable in a floor housing thereof and having a length including a hinged section at each end greater than the transverse width of the car, the intermediate section being the width of the car, and supporting bearings for the skid.

11. In a railroad car having loading and unloading side door-ways, a skid of three hinged sections slidable in a floor housing thereof and the intermediate section whereof having a length equal to the width of the car, gang-sides hinged to said middle section, and means for connecting and bracing both ends of each gang-side to the car, and the said gang-sides having a length and a width adapting them to be folded upon each other upon the middle section.

12. In a railroad car having loading and unloading side door-ways, a skid slidable in a floor housing thereof and having a length including a hinged section at each end greater than the transverse width of the car adapting thereby the hinged ends to depend in contact with each side of the car, slidable side doors, each having a recess at its lower end corresponding to the width of the skid, and a slide adapted to close said door recess when the door is closed.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH C. KIMBER.

Witnesses:

J. F. McMuRey,
JAN. W. DEMERSE.