Nov. 7, 1939. O. BRACHEAR 2,179,005

LIVE-STOCK LOADER

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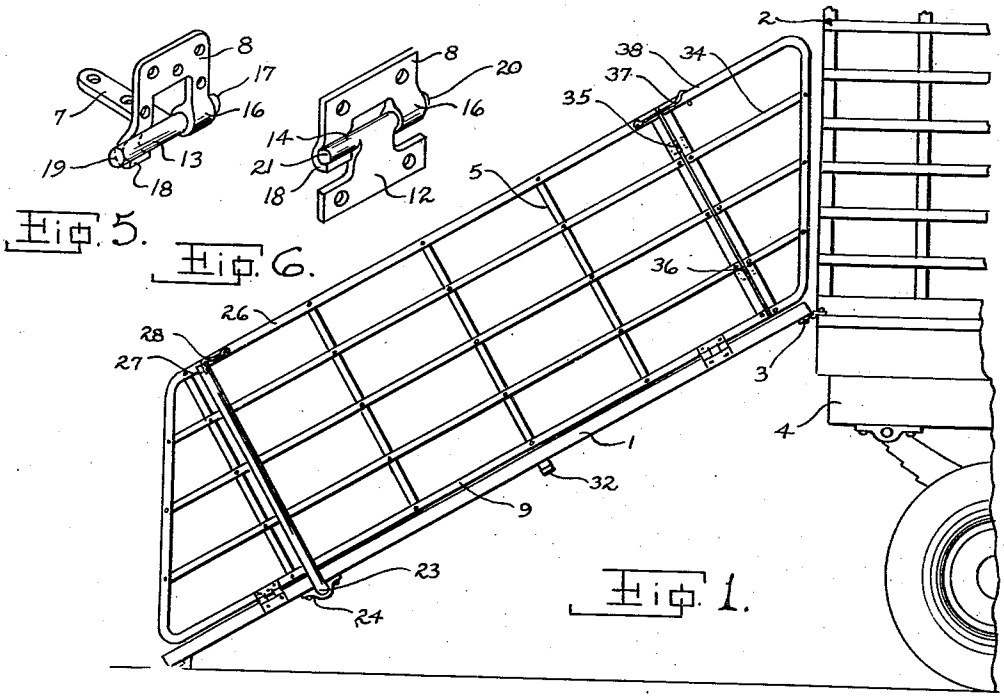


Fig. 1.

Fig. 5.

Fig. 6.

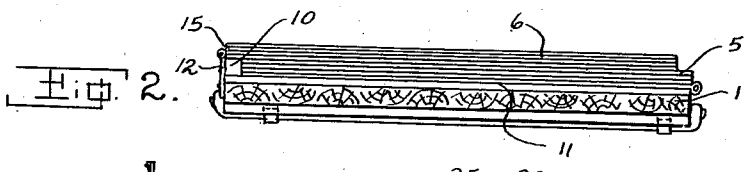


Fig. 2.

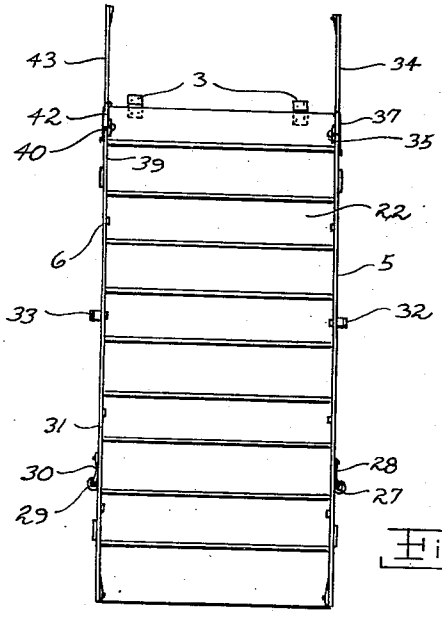


Fig. 3.

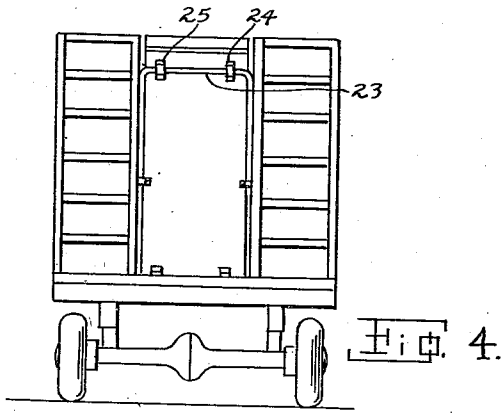


Fig. 4.

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LIVE-STOCK LOADER

Otto Brachear, Cornland, Ill.

Application June 15, 1938, Serial No. 213,895

5 Claims. (Cl. 296—61)

My invention relates to live-stock loaders or run-ways and more especially to loaders adapted to be used on live-stock trucks or used at a live-stock loading door or gate of a loading shed or pen; an object being to provide a substantial, compact, convenient and comparatively light loader that may be easily manipulated.

A further object of my invention is to provide a loader for live-stock that will meet the needs required of a portable run-way adapted to be carried along with a live-stock truck and laid down for loading or unloading stock and when carried on the truck as a closure therefor, will not be massive looking and awkward.

A further purpose of my invention is to provide a live-stock loader preferably made of a wood run-way and with cross cleats, and provided with side guards of metal detachably secured to the run-way and equipped with brace members adapted to hold the same substantially in place, when in use, in connection with a truck or loading shed; thus to provide a compact loader that will not be bulky but will be light in weight to manipulate and to use a closure for the rear end of the live-stock truck when the stock is loaded.

I attain the objects of my invention by the live-stock loader described in the annexed specification, recited in the claims and illustrated in the accompanying drawing, in which like reference numerals indicate like parts in the several figures.

Referring to the figures:

Fig. 1 is a side elevation of one of my live-stock loaders hingedly secured to a live-stock truck.

Fig. 2 is an end view of one of my loaders shown in its folded position.

Fig. 3 is a top view of my loader showing the side guards in place and the cleat members transversely disposed across the floor of the run-way.

Fig. 4 is a rear end view of a live-stock loader showing my live-stock loader folded up as a closure for the rear end of the truck body.

Fig. 5 is a perspective of one of the forms of my novel detachable type hinges for detachably supporting the side guards of my loader.

Fig. 6 is a perspective of a second form of my detachable type hinge used for the purpose of detachably supporting the side guards.

I am aware of the fact that there have been previous attempts made to design a practical live-stock loading chute for live-stock trucks and the like and in spite of previous efforts made in this connection, there has been need of improvement in such loading equipment as would make the same practical and desirable to use, compact and light in weight to manipulate and yet be strong enough to answer the purposes required of it.

I have demonstrated the fact that my live-stock loader meets these requirements in a very satisfactory manner with a loading equipment that is attractive in appearance, substantial in character and weighing approximately one-third as much as some of the more commonly used loaders.

The salient features of my invention are provided in a live-stock loader that is convenient, compact, light in weight and practical to handle as well as inexpensive to manufacture.

A wood run-way 1 is hingedly secured to a truck body 2 by hinge members 3 on a live-stock truck 4.

This run-way is provided with side guard members 5 and 6 secured alongside of run-way 1 by hinges which were designed expressly for this loader and constructed in a manner that will permit the side guards to be easily and conveniently taken off of the run-way if desired.

My side guard members 5 and 6 are preferably made of fabricated metal strips to permit them to serve effectively on the live-stock loader where they will have all the strength that is needed and yet be light in weight.

The hinges supporting side guards 5 and 6 are secured to run-way 1 on one side by a T bar member 7 with its co-operating hinge member 8 secured to side guards 5 on the bottom rail 9 of side guard 5; thus to detachably support guard 5 in its operative position along the side of run-way 1.

On the other side of the run-way, a flanking rail 10 holds side guard 6 up off of the floor 11 of run-way 1 far enough to permit side guards 6 to fold down over side guard 5 neatly in a plane parallel to the floor or the runway when the runway is not let down for loading live-stock.

This metallic side guard 6 is secured to rail 10 by a hinge member 12 having the integral hinge pin 13 serve the same purpose as hinge pin 14 on T bar 7 and hinge pin 13 supports side guard 6 through hinge plate 8 secured to the lower rail 15 of guard 6.

It will be noted that when it is desired to remove side guards 5 or 6, that one end 16 of hinge plate 8 engages end 17 of hinge pin 13 and end 18 of hinge pin 14. This end 16 of hinge plate 8 is shaped to define a sleeve which slidably engages ends 17 and 18 of hinge pin 14

and 15 respectively, while the opposite end 19 of hinge plate 8 is shaped to define a semi-cylindrical hook snugly engaging end 20 of hinge pin 15 and end 21 of hinge pin 14 by a flanking grip and by extending far enough up over the top of these hinge pins when the side guard is upright, to permit the weight of the side guard, falling upon hinge plates 8, to properly rest upon hinge pins 13 and 14 through sleeves 16 and semi-cylindrical by hook portions 19.

However, my live-stock loader may be completely disassembled very readily and when this is done, side guards 5 and 6 are pivotally moved outwardly over the sides of run-way 1 and the side guard 5 lays in a plane with the floor 22 or run-way 1 and its hinge plates 8, engaging T bar member 7, are moved with side guard 5 in this position in a manner permitting sleeve members 16 to slide off of ends 17 of hinge pins 13 as the opposite ends 18 of hinge plate 8 slide over from ends 19 toward the opposite ends 17 of hinge pins 13. This will disengage the hinge members supporting side guard 5 as sleeves 16 slide off the ends 17 of pins 13.

In like manner, a corresponding pair of hinge plates 8 secured to foot-rail 15 of the other side guard 6 are detachably supported on hinge members 12 secured to foot-rail 10; so that side guard 6 may be removed from run-way 1 by pivotally turning the same outwardly from the run-way until this side guard reaches a plane with the top surface of foot-rail 10, in which position sleeves 16 of hinge plates 8 of both the forward and the rear hinge will be together, slidably move off the ends 20 of hinge pin 14 while the opposite ends 18 of hinge plate 8 slidably move across the top of hinge pin 14 from ends 21 toward ends 20.

Thus side guard 6 may be disconnected from run-way 1 when it is desired to disassemble the loader.

When hauling live-stock, however, the loader is folded up as shown in Fig. 4, where it serves as a closure for the rear end of the live-stock truck. When it is desired to use my loader the run-way is let down as shown in Fig. 1 and the side guards 5 and 6 are hingedly unfolded and lifted to an upright position where they are supported by a U bar or U pipe 23 pivotally held by brackets 24 and 25.

The free ends of U pipe 23, when the loader is in use, reach up to the top rail 26 of side guard 5 where the open end 27 of this U pipe is engaged by a hook member 28 on top rail 26; while the other free end 29 of U pipe 23 has its open end engaged by a hook 30 secured to top rail 31 of side guard 6.

When U pipe 23 is not in use, it has its ends resting inside hook members 32 and 33.

When my loader is in operation, I have found it advisable to provide for side guard 5, a hinged extension gate 34 to close the gap between guards 5 and truck body 2 and this extension gate is supported by an upper hinge member 35 and a lower hinge member 36 while this extension gate is held in proper alignment with guard 6 by a hook member 37 engaging top rail 38 of extension gate 34.

On the other side of the loader, an extension gate 39 is supported by an upper hinge 40 and a lower hinge 41 and held in proper alignment with side guards 6 by a hook member 42 engaging the top rail 43 of gate 39.

These extension gates 34 and 39 are folded up, inwardly, against side guards 5 and 6 respectively when the loader is folded up and will be made of the same material as side guards 5 and 6.

When my loader would be used in this loading door situation, it is obvious that it could be folded up when not in use and used as a closure if desired for the loading shed doorway.

Having thus described the nature of my invention, what I claim is:

1. An improved live-stock loader comprising a platform provided with spaced transverse cleats and terminal hinges, a detachably hinged side guard on each side of said platform, a U bar pivotally supported in brackets across the under-side of said platform and hook members on each of said side guards and detachably engaging the ends of said U bar when the same is pivotally moved upwardly for the support of the guards, a hinged extension gate on the forward end of each of said side guards and a hook member for the detachable anchorage of said extension gate when in operative position; said loader thus adapted to be secured to the rear of a live-stock truck and folded up to close the rear end of the truck when the live-stock is loaded thereby.

2. An improved live-stock loader comprising a wood platform provided with spaced transverse wood cleats and terminal hinges, a detachably hinged metallic side guard on each side of said platform, a U bar pivotally supported in brackets across the under-side of said platform and hook members on each of said side guards for detachably engaging the ends of said U bar when the same is pivotally moved upwardly for the support of the guards, a hinged metallic extension gate on the forward end of each of said side guards and a hook member for the detachable anchorage of said extension gate when in operative position; said loader thus adapted to be secured to the rear of a live-stock truck and folded up to close the rear end of the truck when the live-stock is loaded thereby.

3. In a live-stock loader, the combination comprising a cleated run-way hinged to the rear of a live-stock truck, a pair of metallic side guards, each of which are detachably hinged to the side of said run-way, a pivoted U bar adjacent the lower end of the run-way and upwardly disposed when in use, a hook on each of said side guards adapted to detachably engage said U bar to hold the same in operative position, a pair of metallic extension gates respectively hinged to the forward ends of said side guards and adapted to guard the space between said hinged side guards and the rear end of said truck, hooks adjacent the forward ends of said side guards and detachably engaging said extension gates to hold the same in alignment with said side guards when in use.

4. In a live-stock loader having a cleated wood run-way, a pair of hinged metallic side guards having forward extension gates and a U pipe for the operative support of the side guards when in use, a pair of hinges detachably supporting each side guard and each hinge shaped to define a T bar member with the cross bar portion of the T forming a hinge pin, a second portion of said hinge shaped at one end to define a sleeve for slidably engaging one end of said hinge pin and at the other end shaped to define a half-cylindrical hook engaging the other end of said hinge pin; said hinge adapted to provide detachable support for said side guards whereby when it is desired to remove said side guards from the run-way, said U pipe may be let down pivotally and said side guards may be hingedly lowered out-

wardly from said run-way and thus slidably removed from its hinged connection.

5. As a new article of manufacture, a live-stock loader comprising a loading run-way made of wood and provided with a pair of spaced transverse wood cleats, a pair of hinged side guards, detachably hinged to the sides of said run-way, a pivotally supported U pipe open at the top when in upright position and hooks for detachably engaging said open upper ends thereof when the same is in use, a pair of hinged extension gates respectively secured to the forward end of said side guards and hook members for holding the same in operative position; said run-way shaped to accommodate supporting hinged members on the forward end thereof for engaging the rear end of the live-stock truck or on the rearward end thereof for hingedly engaging the sill of a loading door in a live-stock loading pen or shed.

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