Oct. 4, 1932. R. R. SHIRLEY 1,881,065

FEED MANGER

Filed May 19, 1928

Fig 1

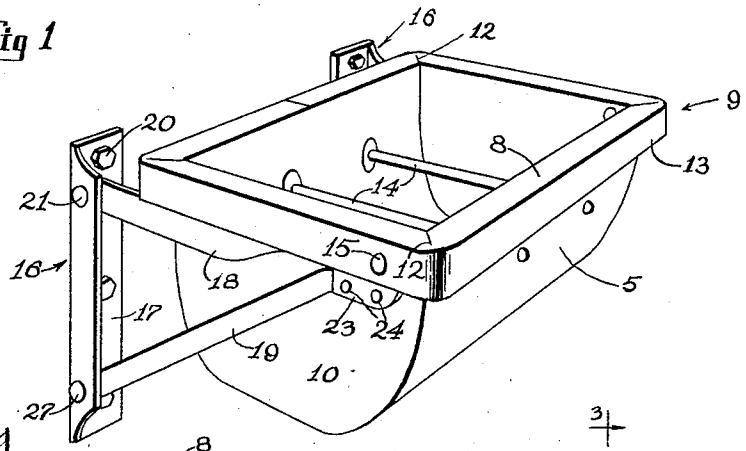


Fig 2

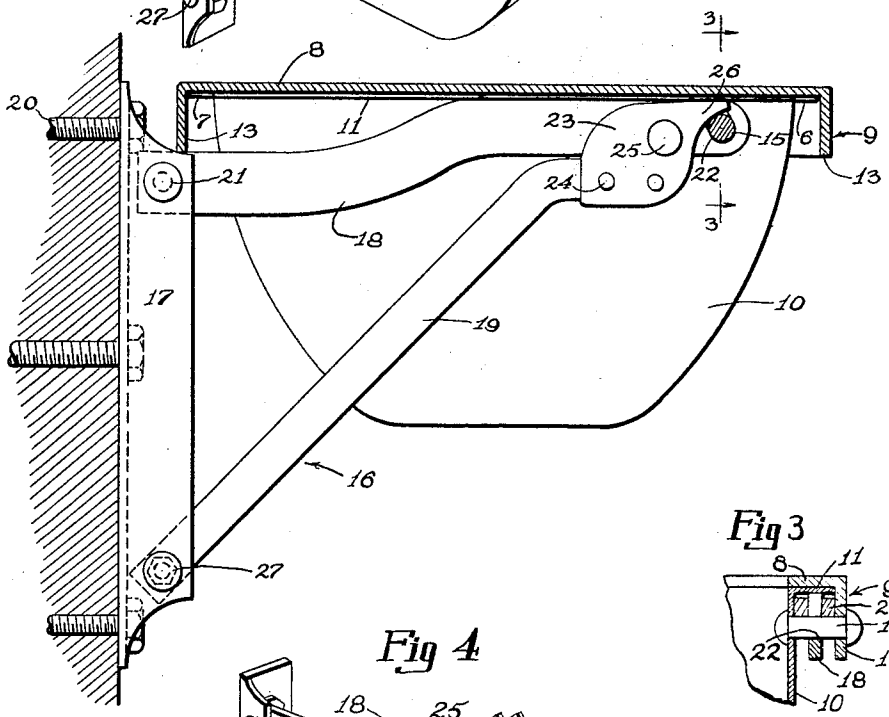
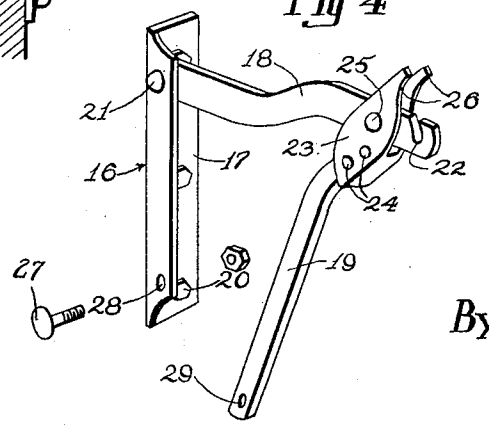


Fig 3

Fig 4



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UNITED STATES PATENT OFFICE

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FEED MANGER

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This invention relates to feed mangers particularly adapted for use in the feeding of horses and cattle.

One of the principal objects of my invention is to provide a manger having the feed bucket quickly attachable or detachable to and from a pair of brackets on which the same is arranged to be tiltably mounted, it being evident that it is of considerable advantage to be able to tilt the bucket for the purpose of quickly ridding the same of dirt, sour feed, or refuse before fresh grain is placed therein. The quickly attachable and detachable feature is not only of advantage in permitting the bucket to be removed easily for thorough cleaning and sterilizing, which becomes necessary every now and then, but also in making it a much easier matter at the time of installing the mangers to fasten the brackets to the wall, the brackets in some instances being shipped to the purchaser beforehand along with a template for the proper locating of each bracket with respect to its companion bracket, as, for example, where a building in which the mangers are to be installed is under construction and it is desired to pour the concrete walls with bolts in place to fasten the mangers. In other words, the detachability of the bucket from the brackets greatly facilitates installation by enabling the handling of the brackets separately and unencumbered by the bucket.

Still another object of the invention is to provide a feed manger practically devoid of sharp edges and protruding parts, such as exposed bolts, which are highly objectionable in that the animals are always apt to bump themselves and be cut or bruised thereby. With this thought in mind the manger bucket is built up without the use of rivets and has a frame reenforcing the rim thereof which serves as a protecting apron not only for the raw edges of the sheet metal where the walls of the bucket are attached to the frame but also for the pivotal connections between the bucket and its supporting brackets.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of a feed manger embodying my improvements;

Fig. 2 is an enlarged side elevation with the angle iron frame cut away to disclose the nature of the detachable pivotal mounting of the manger bucket on the brackets;

Fig. 3 is a sectional detail on the line 3—3 of Fig. 2 looking in the direction indicated; and

Fig. 4 is an isolated perspective of one of the brackets, indicating how the same may be fastened to the wall separately for the subsequent mounting of the manger bucket thereon, or may have bolts removed therefrom to permit removal of the bucket.

The same reference numerals are applied to corresponding parts throughout the views.

My invention is illustrated herein as applied to a manger the bucket of which has an open top, generally rectangular in form, and downwardly converging front and back walls so that the feed will be easily accessible and the refuse and stale feed may be emptied therefrom by simply tilting the bucket. The manger bucket is supported on brackets in such novel manner that it may not only be tilted to the emptying position, and will be limited in its tilting movement by contact of one of the parts thereof with the brackets, but may, as stated before, be removed and replaced with ease and facility. The particular construction and resultant advantages of the manger bucket and its supporting brackets will now be described.

The front, back and bottom of the manger bucket are suitably formed from a single piece of sheet metal, designated by numeral 5, giving the proper depth and width to the bucket as clearly appears in Fig. 2, the front and rear edges 6 and 7 being bent outwardly for welding, soldering, or otherwise fastening the same to the inwardly directed horizontal flange 8 of an angle iron frame 9, which bounds and defines the rim of the bucket and provides the desired strength and rigidity therefor. In like manner, the side walls 10 have their upper edges bent outwardly, as indicated at 11, for attachment to the flange 8 of the frame 9. The latter is suitably made in one piece with the

flange 8 notched out at 12 to permit bending of the vertical flange 13 at the corners of the frame. The flange 13 being downwardly directed gives an apron effect across the front, the sides, and the back of the bucket concealing the raw edges which would otherwise be exposed as a result of the bending out of the edges of the walls at 6, 7 and 11. The flange 13, besides giving protection against possible injury to the animal in the manner referred to, makes for neatness in appearance as will be evident by observation of Fig. 1. Furthermore, this type of construction is advantageous in that it avoids the necessity for using rivets and when the bucket is made up as described and properly galvanized, it is absolutely water-tight and practically indestructible. The cross bars indicated at 14 are provided for the purpose of preventing the wasting of feed and to act as a check on too rapid eating.

A manger bucket built up along the sturdy lines described weighs upwardly of ten pounds, depending on the size, and it is, therefore, of advantage at the time of installation if the bucket can be detached from its supporting brackets so that the latter may be fastened in place separately. The detachability of the bucket is also advantageous in service as it permits easy removal and replacement of the bucket for thoroughly cleaning and scouring the same. Accordingly I have provided for detaching the bucket at its pivotal connections 15 with the supporting brackets 16. The studs for the pivots 15 are provided by rivets which penetrate the flange 13 of the rim frame 9 and the adjoining side wall 10 of the bucket, the headed ends of the rivets being neatly rounded so as not to be objectionable. The brackets 16 are each made up of an upright wall piece 17 and two arms 18 and 19 reaching outwardly therefrom and arranged to be anchored thereto. The wall piece 17 is attached to the walls of the stall by heavy lag screws or bolts 20 depending on whether the wall is of wood or cement construction. The arm 18 is bolted or riveted to the upper end of piece 17, as at 21, and extends outwardly therefrom alongside the manger bucket beneath the rim frame 9 thereof. The outer end of the arm is offset upwardly, as indicated, and has a slot 22 therein opening from the top thereof wherein the pivot stud 15 may be seated, as indicated in Fig. 2. The arm 19, on the other hand, has a coupler 23 riveted on the outer end thereof, as indicated at 24, which provides a pivotal connection with the arm 18 at 25, suitably by means of a rivet. The coupler 23 receives the arm 18 in its bifurcation, as clearly indicated in Fig. 4, and the extremities 26 of the coupler are arranged when the arm 19 is in one position to permit the free entry of the stud 15 into the slot 22, as shown in Fig. 4, but when the arm 19 is in another position, as shown in Fig. 2, the extremities 26 of the coupler 23 lock the pivot stud 15 securely against exit from the slot 22. When the arm 19 is in the latter position a bolt 27 may be inserted through openings 28 and 29 provided, respectively, in the wall piece 17 and arm 19 to secure the parts together in the assembled relation. In other words, the bolt 27 for each bracket 16 holds the arms 18 and 19 rigid in their normal position but, upon removal thereof, the arm 19 may be swung to an open position, as indicated in Fig. 4, to permit the removal of the manger bucket. Obviously, the rim frame 9 neatly encloses the connections between the bucket and its supporting brackets, (see Fig. 1). Nothing is left projecting which could possibly result in injury to the animal.

When the manger bucket is in place on its supporting brackets it will be observed that the flange 13 of the rim frame 9 at the back rests on top of the arms 18 so that the bucket is supported at the back as well as at the front, the front supports being obviously provided at the pivots 15. The pivots 15 manifestly permit the tilting of the bucket from the normal position shown to an emptying position, and are sufficiently close to the front to eliminate the likelihood of the same being tilted by the animal. Observing Fig. 2, it will be obvious that when the bucket is swung about the pivot 15 as a center in a clockwise direction the flange 13 at the front thereof will come into engagement with the brackets 16 after the bucket has been swung through approximately 90°, where the rim frame 9 is standing in an approximately vertical position.

It should be understood that while I have illustrated one preferred embodiment of my invention certain changes in the construction and arrangement of parts might be made without seriously departing from the spirit and scope of my invention as expressed in the appended claims.

I claim:

1. A feed manger or the like comprising a bucket, the same having pivot studs on opposite sides thereof, supporting brackets therefor arranged to be disposed on opposite sides of said bucket and mounted on a wall, said brackets having recesses therein to receive said studs for pivotally supporting said bucket, and a part on at least one of said brackets movable from one position in which the studs may be entered in or removed from said recesses to a position in which the studs are held in place in said recesses.

2. A feed manger or the like comprising a bucket, the same having pivot studs on opposite sides thereof close to the front of the bucket, supporting brackets therefor arranged to be disposed on opposite sides of said bucket and mounted on a wall, said

brackets having open ended slots therein at their outer ends to receive said studs for pivotally supporting said bucket, the bucket when so supported resting at the rear thereof on the brackets, and a part pivotally mounted on each bracket adjacent the slot therein and arranged to be turned from a position projecting over and closing the ends of said slots to prevent removal of the bucket from the brackets but permitting pivotal movement of the bucket with respect thereto, to another position uncovering the ends of said slots to permit the withdrawal of the pivot studs and hence the removal of the bucket from the brackets.

3. A feed manger or the like comprising a bucket having pivot studs thereon at opposite sides thereof to afford tilting movement, and a frame for supporting said bucket comprising a pair of brackets for the opposite sides thereof, each of said brackets comprising a supporting wall piece arranged to be fixed in position, an arm reaching outwardly from the wall piece, the latter having a slot therein wherein the stud at one side of the bucket is arranged to be seated, and a second outreaching arm pivoted at its outer end to the other arm having a part which in one position of said arm permits the introduction or removal of the aforesaid stud through the open end of the slot and in another position of the arm confines the stud in said slot, the second arm being swingable with respect to the first arm from the one position to the other, and the second arm having means for detachably securing the same at its inner end to the wall piece in its latter position.

4. A feed manger or the like comprising a bucket having pivot studs thereon at opposite sides thereof to afford tilting movement, and a frame for supporting said bucket comprising a pair of brackets for the opposite sides thereof, each of said brackets comprising a pair of arms reaching outwardly from and arranged to be secured to a wall, one of said arms having a slot therein wherein the stud at one side of said bucket is arranged to be seated, the other arm being pivoted at its outer end to the first mentioned arm and having a part which in one position of said arms permits the introduction or removal of the aforesaid stud through the open end of the slot and in another position of the arms confines the stud in said slot, the one arm being swingable with respect to the other from the one position to the other, and the arms having means for fixing the inner ends thereof to the wall with the stud held in operative position.

5. A feed manger or the like comprising a bucket formed of sheet metal having the rim thereof defined by an outwardly directed flange, and a frame for reinforcing the rim of said bucket on all sides thereof, the same being formed of angle iron having the horizontal flange thereof inwardly directed and overlying the flanged rim of the bucket for the attachment of the same thereto, the vertical flange of said frame being downwardly directed and serving to enclose and conceal the raw edges of the outwardly directed flange where the same is attached to said frame as above described.

6. In a feed manger or the like, a bucket formed of sheet metal and having an angle iron frame reinforcing the rim thereof, the frame having its horizontal flange inwardly directed at least at the front and opposite sides of the bucket for attachment to the corresponding walls of the latter and having the vertical flange thereof downwardly directed and giving an apron effect, and means within said frame between said vertical flange and the side wall of the bucket at opposite sides of said bucket whereby the same may be pivotally attached to a pair of supporting brackets, the attachment being thereby enclosed by the downwardly directed vertical flange of the rim frame.

7. A feed manger or the like, comprising a bucket, the same being arranged to be pivotally supported at opposite sides thereof, and a pair of separate brackets, said brackets being both arranged to be mounted on a wall detached from the bucket but in properly laterally spaced relation to one another to accommodate the bucket therebetween, and each of said brackets comprising a plurality of parts arranged to be bolted together in final assembled position, the bucket having portions at opposite sides thereof arranged to detachably interfit with portions of the brackets for pivotal support of the bucket thereon, the said bucket portions in the bolting together of the parts of the brackets in final assembled position being arranged to be pivotally secured to the brackets.

8. A feed manger or the like, comprising a bucket having pivot studs thereon at opposite sides thereof, and means for supporting said bucket comprising a pair of brackets for the opposite sides thereof, one of said brackets comprising a pair of arms reaching outwardly from and arranged to be secured to a supporting wall, one of said arms having an open ended slot therein wherein the stud at one side of said bucket is arranged to be seated, the other arm being pivoted to the first arm by a bifurcated coupler portion arranged to reach across the open end of said slot to confine the stud therein, and means for securing the arms to the wall with the stud held in said slot.

9. A feed manger or the like comprising a bucket, the same having pivot studs on opposite sides thereof, supporting brackets therefor arranged to be disposed on opposite sides of said bucket and mounted on a wall, said brackets having open ended slots therein to receive said studs for pivotally supporting

said bucket, the studs providing two points of support near the one edge of the bucket, and the bucket resting at its other edge on the brackets, and a part on at least one of said brackets movable from one position in which the studs may be entered in or removed from said slots to a position in which the studs are held in place in said slots.

10. A feed manger or the like comprising a bucket having pivot studs thereon at opposite sides thereof to afford tilting movement, and a pair of supports for said bucket at opposite sides thereof, each comprising a substantially horizontal arm reaching outwardly from and arranged to be secured to a suitable supporting part, the said bucket resting on said arm with its pivot stud at the outer end thereof, the said arm having a recess in the outer end to receive the stud, and a second arm for supporting the first arm reaching outwardly from the supporting part diagonally upwardly toward the outer end of said first arm to support the latter, said second arm serving to confine the stud in the recess.

11. A feed manger as set forth in claim 10 wherein the second arm has its outer end pivotally secured to the first arm adjacent the stud-receiving recess provided in the first arm, and has a part reaching from the pivot across the recess to confine the stud therein.

12. A feed manger as set forth in claim 10 wherein the second arm has its outer end pivotally secured to the first arm adjacent the stud-receiving recess provided in the first arm, and has a part reaching from the pivot across the recess to confine the stud therein, the feed manger including in each of the pair of bucket supports a wall piece to which the inner ends of the two arms are bolted, thus permitting detaching of the inner end of the second arm for pivotal movement of said second arm relative to the first arm for detaching the bucket, and also permitting detaching of the first arm whereby to permit fastening of the wall piece to the wall disconnected from the two arms.

13. A feed manger or the like comprising a bucket having pivot studs thereon at opposite sides thereof to afford tilting movement, and a pair of supporting brackets for the opposite sides of the bucket, each of said brackets being made in three pieces fastened together detachably to form a closed triangular support for the bucket, the pivot studs on the bucket being mounted on the brackets in such a manner that the brackets have to be opened to permit detaching the bucket therefrom.

14. In a feed manger or the like, the combination of a bucket having an inverted channel-shaped rim, pivot studs reaching crosswise of the channel at opposite sides of the bucket, and means for supporting said bucket comprising a pair of brackets at the opposite sides thereof, one of said brackets comprising a pair of arms reaching outwardly from and arranged to be secured to a supporting wall, one of said arms having an open ended slot therein for reception of the stud at that side of the bucket, the other arm being pivoted to the first arm by its outer end portion arranged to fit within the channel of the rim of the bucket with the free end thereof reaching across the open end of said slot alongside the first arm to confine the stud therein, and means for securing the arms to the wall with the stud held in said slot.

15. An open receptacle of sheet metal construction comprising a body formed of sheet metal having the rim thereof defined by an outwardly directed flange, and a frame for reenforcing the rim of said receptacle, the same being formed of angle iron and superimposed on the rim with the horizontal flange thereof inwardly directed and overlying the outwardly directed flange of the rim and attached thereto, the vertical flange of said frame being downwardly directed about the outside of the outwardly directed flange of the rim and serving to enclose and conceal the raw edges thereof.

16. A feed manger or the like comprising a bucket, the same having pivot studs on opposite sides thereof spaced rearwardly from the front of the bucket, supporting brackets therefor arranged to be disposed on opposite sides of said bucket and mounted on a wall, said brackets each comprising a substantially horizontal arm reaching outwardly from and arranged to be secured to the wall, and a second arm for supporting the first arm reaching outwardly from the wall diagonally upwardly toward the outer end of said first arm to support the latter, one of said arms having a recess in the outer end thereof to receive the pivot stud and the other arm being fastened at its outer end to said arm confining the stud in the recess, the said bucket utilizing its pivot studs as two points of support near the front edge of the bucket and the bucket resting at its rear edge on the horizontal arms of the brackets, said bucket being arranged to be swung forwardly relative to the brackets on the pivot studs and having portions on the front edge thereof arranged to come into engagement with the diagonal arms to limit the movement of the bucket.

In witness of the foregoing I affix my signature.

ROSWELL R. SHIRLEY.