To all whom it may concern:

Be it known that I, GEORGE W. WOOLDRIDGE, a citizen of the United States, residing at Clarksville, in the county of Butler, State of Iowa, have invented a new and useful Self-Cleaning Manger; 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.

The present invention relates to certain new and useful improvements in mangers, and has for its object to provide a device of this character which embodies certain novel features of construction whereby it can be easily cleaned and maintained in a sanitary condition.

Further objects of the invention are to provide a manger which is comparatively simple and inexpensive in its construction, which can be readily constructed of sheet metal and made in different sizes to suit the requirements of different conditions, which has a tilting bottom mounted to be swung into an open position for the purpose of cleaning the manger, and which can be easily mounted in position within any barn.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a front elevation of a manger constructed in accordance with the invention. Fig. 2 is a transverse vertical sectional view through the same. Fig. 3 is a similar view showing a slight modification.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Specifically describing the present embodiment of the invention, the numerals 1 and 2 designate the front and back, respectively, of the manger box, said members being connected at the extremities thereof by the end plates 3, and the back 2 and end plates 3 being all of the same height, while the front plate 1 extends from the top of the ends 3 to a point midway of the length thereof. These members may be conveniently formed of sheet metal, and the lower edge of the front plate 1 is returned upwardly and then downwardly to provide a grooved socket 4 extending the full length thereof. The mouth of the socket is preferably slightly contracted at 4°, and then flared at 45°, and the walls of the socket are resilient. The manger bottom is in the form of a trough and includes the substantially semi-circular ends 5 which are connected at the curved ends thereof by the bottom plate 6, said trough shaped bottom being of exactly the proper size to close the bottom of the manger box when the bottom member is in a horizontal position. The semi-circular end plates 5 of the trough shaped bottom are provided at substantially the middle portions thereof with aligned trunnions 7 which provide a pivotal mounting for the bottom, enabling it to be swung about a longitudinal axis into either an open or a closed position. When the bottom member is in a horizontal position the manger box can be filled with fodder and used in the ordinary manner, and when it is desired to clean the manger, it is merely necessary to tilt the trough shaped bottom into a vertical or an inverted position. The parts may then be thoroughly cleaned without any difficulty, and it will be obvious that the manger can be easily kept in a perfectly sanitary condition.

The longitudinal edges of the trough shaped bottom are preferably returned and reinforced by wires, as indicated at 8, and the forward edge of the trough shaped bottom snaps into the groove or longitudinal socket 4 at the lower edge of the front side 1 when the trough is in a closed and horizontal position. The nose of a spring latch 9 at the rear edge of the trough shaped bottom then engages an opening 10 in the back 2 of the manger box to lock the trough in operative position. When it is desired to clean the trough, the latch 9 is released and the trough swung into a vertical or inverted position. When the trough is closed, the reinforced edge 8 at the front thereof snaps into the longitudinal socket 4 at the lower edge of the front side 1, thereby providing a rigidly reinforced lower edge for the front side which is not liable to be pressed inwardly or bent out of shape by stock.

A salt box 11 may be fitted upon one of the upper corners of the manger box, said...
salt box having a seed box 12 hinged to the rear edge thereof. The front and side of the salt box is shown as provided with downwardly extending flanges 11 which fit over and frictionally engage the front and end of the manger box. The seed box 12 may be swung forward over the salt box, or set at any desired inclination by means of a suitable prop 18.

The end plates 2 of the manger box are designed to be secured by bolts or other suitable fastening members to extensible standards 15 which are arranged between the floor and top of the barn. These standards 15 also support the ends of horizontal side boards 16 which are supported at their forward ends by the front standards 17. If desired, the end plates 3 of the manger box may also be secured to the side boards 16 by suitable fastening members such as the bolts 18. The manger box may thus be set at different elevations, exactly as may be required, and it can be mounted in position in the stall without difficulty.

A slight modification is shown by Fig. 3, in which the rear edge of the trough shaped bottom is provided with a depending lip 19 arranged to interlock with an upwardly projecting lip 20 on the manger box 2 when the bottom is in a closed position. This construction provides a tight joint between the rear edge of the bottom and the back of the box, and makes it impossible for the two members to be separated or pulled apart under any conditions.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. A manger including a rectangular box open at the top and bottom thereof and formed with opposed side walls and opposed end walls, the lower edge of one of the side walls being provided with a longitudinal socket extending the full length thereof, a trough shaped bottom pivotally mounted between the end walls of the box so as to tilt about a longitudinal axis, one of the edges of the bottom member being received within the before mentioned socket of the side member when the bottom member is in normal position, and the bottom member being adapted to be swung into a vertical or an inverted position when cleaning the manger, and latch means for locking the bottom member in normal position.

2. A manger including a rectangular box open at the top and bottom thereof and formed with opposed side walls and opposed end walls, the lower edge of one of the side walls being returned upwardly and downwardly to provide a downwardly opening spring socket extending the full length thereof, a trough shaped bottom member pivotally mounted between the opposed end walls so as to be tiltable about a longitudinal axis and susceptible of being swung into a vertical or inverted position when cleaning the manger, the longitudinal edges of the trough shaped bottom being reinforced, one of the reinforced longitudinal edges being engaged by the before mentioned spring socket at the lower edge of one of the sides when the bottom member is in closed position, and a latch member at the opposite edge of the trough shaped bottom member for locking the bottom member in a closed position.

3. A manger including a rectangular box open at the top and bottom thereof and formed with opposed side walls and opposed end walls, the lower edge of one of the side walls being returned upwardly and then downwardly to provide a spring socket extending the full length thereof, while the opposite side wall is provided with an upwardly extending lip, a trough shaped bottom member pivotally mounted between the opposed end walls so as to turn about a longitudinal axis and be susceptible of being swung into a vertical or inverted position when cleaning the manger, one of the longitudinal edges of the trough shaped bottom being received within the before mentioned spring socket at the lower edge of one of the side plates when the bottom is closed, and a depending lip at the opposite edge of the trough shaped bottom for engaging the lip at the opposite side of the manger box.

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

GEORGE W. WOOLDRIDGE.

Witnesses:

W. L. ARTHUR,
G. W. S. LEYEN.

Copies of this patent may be obtained for five cents each, by addressing the “Commissioner of Patents,
Washington, D. C.”