May 20, 1930. W. H. MILLER 1,759,131

STOCK FEEDING TROUGH

Filed July 21, 1928

Fig. 1.

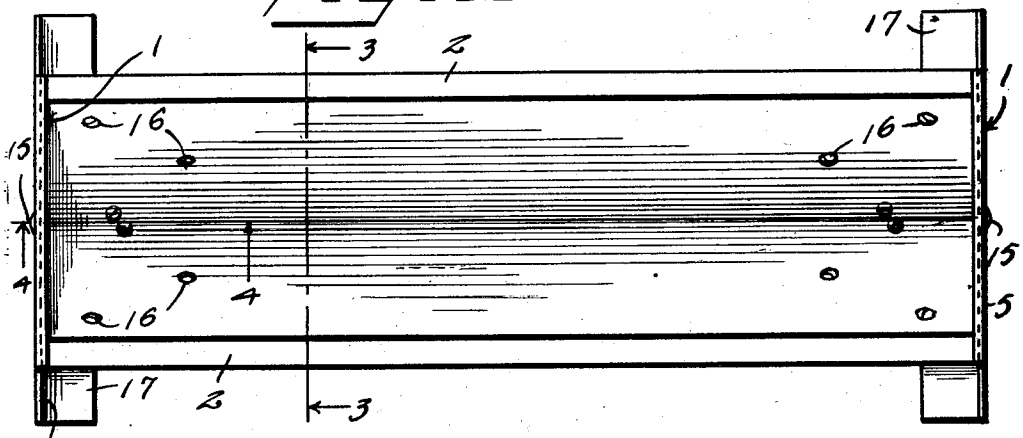


Fig. 2.

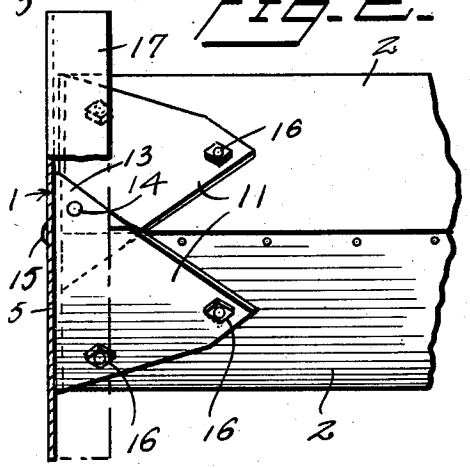


Fig. 3.

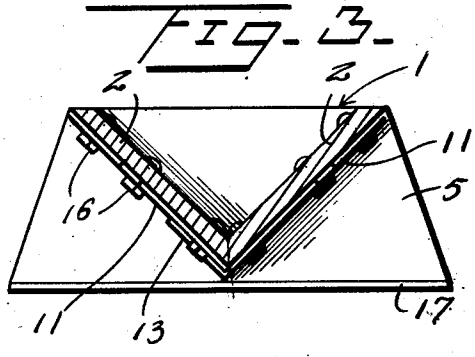
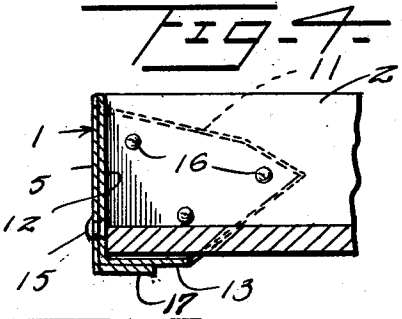


Fig. 4.



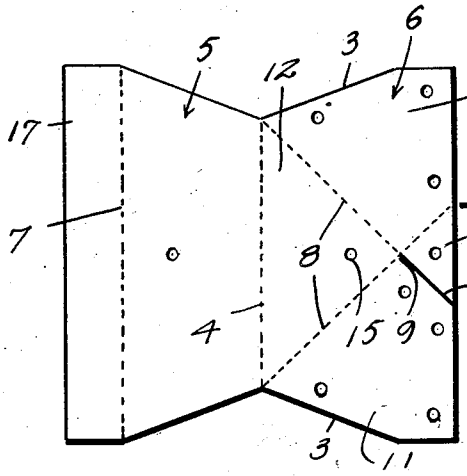


Fig. 5.

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UNITED STATES PATENT OFFICE

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STOCK-FEEDING TROUGH

Application filed July 21, 1928. Serial No. 294,536.

This invention relates to the class of troughs and pertains particularly to an improved construction in animal feed troughs.

The primary object of the present invention is to provide an improved metallic end structure for feed troughs wherein the trough proper is designed to be constructed of wooden planks.

It is well-known that wood is best suited for the construction of stock feeding troughs as it withstands rougher treatment than troughs constructed of metal, particularly where the troughs are exposed during the winter season so that the contents thereof becomes frozen as the wood permits of the more ready removal of frozen ice and snow without danger of ruining the trough for further use. However, wooden end structures have been found unsatisfactory because of the fact that it is difficult to secure the sides of the trough thereto to prevent leakage of the contents therefrom. In view of this a very important object of the present invention is to provide a metal trough end of a type which can be readily stamped from sheet metal of suitable rigidity and folded or bent in such manner as to provide an end structure which will be strong and durable and which will properly support the ends of the trough boards to prevent leakage of liquids from the trough.

A further novel feature of the invention resides in the method of forming the trough end from a metal blank in such a way that a reinforcing of the parts, one by the other, results.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:—

Figure 1 is a top plan view of the trough embodying the present invention;

Figure 2 is a bottom plan view of one end of the trough, a portion thereof being broken away;

Figure 3 is a sectional view taken upon the line 3—3 of Figure 1;

Figure 4 is a sectional view taken upon the line 4—4 of Figure 1;

Figure 5 is a plan view of the metal blank from which the trough end structure is formed.

Referring more particularly to the drawing, the numeral 1 indicates the trough ends embodying the present invention, the boards or planks which form the body of the trough being indicated by the numeral 2.

In the formation of the trough end structure a blank of sheet metal is provided of generally rectangular configuration and two opposite edges thereof have formed therein the relatively shallow V-shaped cut-away portions 3 after which the blank is scored transversely as at 4 to form a central fold line, thus forming the blank into the two main portions 5 and 6.

A second fold line is formed across the blank on the portion 5 substantially parallel to the center line 4 and adjacent the outer edge of the portion, as indicated at 7.

The portion 6 is provided with a pair of oppositely directed fold lines 8 each of which extends from one end of the central fold line 4 toward the outer edge of the portion 6, these fold lines 8 crossing at a point adjacent the said outer edge as indicated at 9 and the blank is slit as at 10 along one of the fold lines 8 to the point 9 where the two lines cross. In setting up the trough end, the blank is folded along the line 4 bringing the portions 5 and 6 into side by side relation. The corners of the portions 6 are then bent outwardly along the fold lines 8 forming the wings 11 which are brought into position at right angles to and extending from the portion 5 leaving the central part of the portion 6 of substantially triangular configuration as indicated at 12. The triangular section formed between the outer edge of the portion 6 and the slit 10 and one of the fold lines

8 is then bent to form a tab 13 carried by one of the wings for overlapping engagement with the adjacent wing. This tab is then riveted to the adjacent wing as indicated at 14, thereby securing the two wings together in V-shaped formation for the reception of the ends of the trough boards 2.

Suitable fastening means is employed for maintaining the triangular section 12 of the portion 6 in position against the face of the portion 5, such as a rivet 15 or the like and suitable bolts or other securing elements 16 may be employed for fastening the trough boards 2 in their respective positions.

After the wings 6 have been bent to the positions described and secured by fastening the tab 13 of one of the wings to the face of the adjacent wing the portion 5 is then bent along the fold line 7 to bring the part of this portion lying outwardly of the line to right angular position with respect to the main body portion and beneath the trough, in the manner shown, to provide the base 17.

From the foregoing description, it will be readily seen that the trough end structure herein described may be formed of relatively light sheet metal and still be strong and durable after being set up by reason of the fact that the particular method employed for folding the blank causes one element or part to brace and reinforce the other, as for example, a double thick wall is formed where the triangular section 12 bears against the portion 5 and one of the wings assists in supporting and maintaining the other wing in position by the integral tab 13 which it carries.

Having thus described my invention what I claim is:—

1. A stock feed trough comprising an elongated substantially V-shaped body section, an end support for each end of the body section comprising an upright plate arranged transversely of the trough end, a pair of supporting wings suspended from the top edge of and formed integral with the plate and projecting from the inner face thereof each positioning upon the under face of one side of the trough body, and a reinforcing tab carried by one of said wings extending beneath the trough and secured to and aganist the under face of the adjacent wing.

2. A stock feed trough comprising an elongated body section, and an end structure for each end of the body section comprising an upright plate extending transversely of the adjacent body section and, supporting wings forming a continuation of an edge of and carried by the plate and projecting from the inner face thereof for engaging an adjacent under face of the body section for the support of the same, and a supporting foot comprising an inwardly extending integral flange formed along the lower edge of said plate.

3. A stock feed trough comprising an elongated substantially V-shaped body section, an end support for each end of the body section comprising an upright plate arranged transversely of the trough end, a pair of supporting wings formed integral with the plate and projecting from the inner face thereof along the under face of one side of the trough body, a reinforcing tab carried by one of said wings extending beneath the trough and secured against the under face of the adjacent wing, and a supporting foot comprising an inwardly extending integral flange formed along the lower edge of said plate.

4. A metal trough end, comprising a sheet metal body of substantially rectangular form bent transversely medially to form two portions, one thereof having the central part lying against one face of the other portion and having a substantial portion of each corner bent to form a trough supporting wing projecting from the said central portion and forming substantially a right angle therewith.

5. A metal trough end, comprising a sheet metal body of substantially rectangular form bent transversely medially to form two portions, one thereof having the central part lying against one face of the other portion and having a substantial portion of each corner bent to form a trough supporting wing projecting from the said central portion and forming substantially a right angle therewith, said wings forming a substantial V-shaped trough end receiving structure, and a reinforcing tab formed integral with one of said wings and bent to overlie a face of the adjacent wing and secured thereto.

6. A metal trough end, comprising a sheet metal body of substantially rectangular form bent transversely medially to form two portions, one thereof having the central part lying against one face of the other portion and having a substantial portion of each corner bent to form a trough supporting wing projecting from the said central portion and forming substantially a right angle therewith, said wings forming a substantial V-shaped trough end receiving structure, and a reinforcing tab formed integral with the lower edge of one of said wings and bent to overlie one face of the adjacent wing to be secured thereto.

7. A metal trough end, comprising a sheet metal body of substantially rectangular form bent transversely medially to form two portions, one thereof having the central part lying against one face of the other portion and having a substantial portion of each corner bent to form a trough supporting wing projecting from the said central portion and forming substantially a right angle therewith, and a supporting base comprising an integral inwardly extending flange formed

along the lower edge of the other of said portions.

8. A metal trough end, comprising a sheet metal body of substantially rectangular form bent transversely medially to form two portions, one thereof having the central part lying against one face of the other portion and having a substantial portion of each corner bent to form a trough supporting wing projecting from the said central portion and forming substantially a right angle therewith, said wings forming a substantially V-shaped trough end receiving structure and a reinforcing tab formed integral with one of said wings and bent to overlie a face of the adjacent wing and secured thereto, and a supporting base comprising an integral inwardly extending flange formed along the lower edge of the other of said portions.

In testimony whereof I hereunto affix my signature.

WILLIAM H. MILLER.