O. W. DAVIEE.

SILO.

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1,125,070.

Patented Jan. 19, 1915.

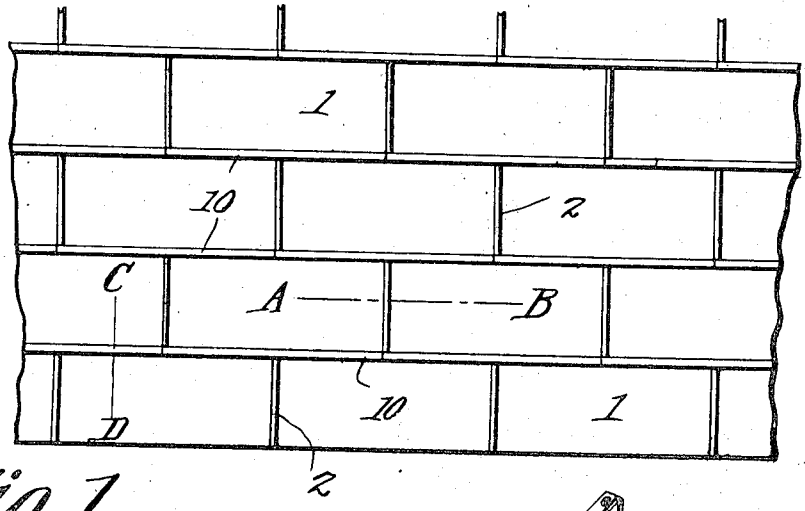


Fig. 1.



Fig. 2.

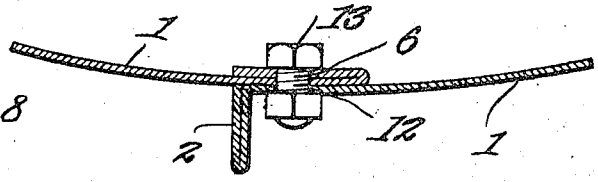


Fig. 3.

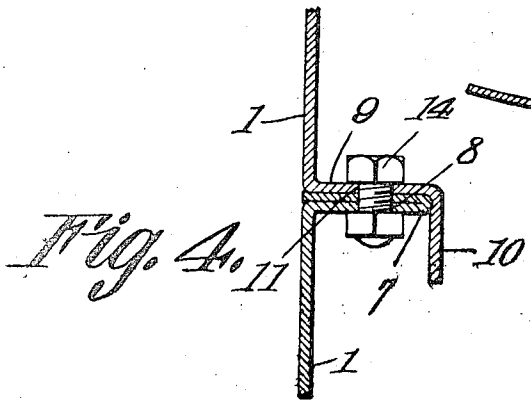


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

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SILO.

1,125,070. Specification of Letters Patent. Patented Jan. 19, 1915.

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To all whom it may concern:

Be it known that I, OLIN W. DAVIEE, a citizen of the United States, residing at Oklahoma city, in the county of Oklahoma and State of Oklahoma, have invented a new and useful Silo, of which the following is a specification.

This invention relates to silos and more particularly to a metal silo construction, one of the objects of the invention being to provide a plate of novel form adapted to be used in the erection of a silo wall, the plate being so shaped as to form a segment of the wall and to be reinforced throughout its length and width, the reinforcing portion constituting means for engaging the next adjoining plate whereby the said plates can be readily connected without danger of admitting moisture to the silo between the joints.

A further object is to provide a plate for use in the construction of metal silos and which dispenses with the use of separate reinforcing means such as has heretofore been necessary in the formation of all metal silos.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is an elevation of a portion of a silo made up of plates such as constitute the present invention. Fig. 2 is a perspective view of one of the plates. Fig. 3 is an enlarged section on line A—B Fig. 1. Fig. 4 is an enlarged section on line C—D Fig. 1.

Referring to the figures by characters of reference 1 designates a rectangular sheet metal plate curved from end to end so as to be concentric with the center of the silo under construction. One end of the plate is provided with an outstanding flange 2 extending radially from the plate. This outstanding flange is formed of two thicknesses produced by folding the flange upon itself as indicated particularly in Fig. 3. Thus it will be seen that the flange constitutes a reinforcing rib extending throughout the height of the plate, said rib being of double the thickness of the plate. The other end of the plate 1 is folded upon itself, as shown, to produce a reinforcing tongue 5 extending throughout the height of the plate, this tongue being provided with apertures 6 for the reception of rivets or other suitable fastening devices.

Extending outwardly from the upper edge of the plate 1 is a flange 7 which is folded, as shown particularly in Fig. 4 so as thus to provide an outstanding reinforcing rib extending from the tongue 5 to the flange 2. This reinforcing flange or rib 7 has apertures 8 for the reception of suitable fastening means.

Outstanding from the lower edge of plate 1 is a flange 9 from the outer edge of which depends an apron 10 extending throughout the length of the flange, the width of the flange 9 being substantially equal to the width of the flange 7. Apertures 11 are preferably provided within flange 9 for the reception of suitable fastening devices.

In erecting a silo made out of plates such as herein described, those plates forming the bottom course are placed end to end with the tongues 5 extending back of the flanges 2 of the next adjoining plates so that bolts or other fastening devices may be extended through the openings 6 and also through openings 12 formed in the plates 1 close to the flanges 2. One of these fastening bolts has been indicated at 13 in Fig. 3. After the first course of plates has been set up in this manner so as to form an unbroken ring, the plates forming the second course are erected thereon in staggered relation to the lower plates. These plates of the second course are arranged with their flanges 9 bearing downwardly on the flanges 7 so that the aprons 10 will hang downwardly below the flanges 7. Fastening bolts 14 or the like are extended through the registering openings 8 and 11 in the flanges, as shown in Fig. 4. After the plates of the second course are secured to the plates of the first course and to each other, the plates of the third course are erected. This operation is continued until the full height of the silo has been reached.

It will be found that by constructing a silo of plates such as herein described, the same is reinforced both vertically and an-

nularly by the outstanding ribs. Thus it becomes unnecessary to attach angle strips or other reinforcing devices to the plates or to connect the plates to an interior or exterior supporting frame. Consequently, a silo made up of plates such as herein described can be quickly erected without even requiring the use of skilled labor and, furthermore, the cost of construction is reduced to the minimum.

It will be apparent that by providing the lapped joints between the ends of the plates and by providing the depending aprons 10, there is no danger of any water seeping through the joints.

What is claimed is:—

As an article of manufacture, a wall unit consisting of a metal plate rectangular in outline and having an integral laterally extending flange along one end thereof, said flange being folded longitudinally to provide a double thickness, and an integral laterally extending flange along the top and bottom of the plate, said end flange extending up to and merging into the top and bottom flanges, said bottom flange having a downwardly extending apron disposed along vertical lines parallel with the face of the plate, and said upper flange being folded longitudinally to provide a double thickness throughout the length thereof, that end of the plate remote from the end flange being flat and provided with a reinforcing fold extending from the top to the bottom of the plate, there being apertures in said fold and corresponding apertures in the plate close to the end flange, and there being a series of apertures in the top and bottom flanges.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OLIN W. DAVIEE.

Witnesses:
H. H. BRAY,
L. M. HALBERT.