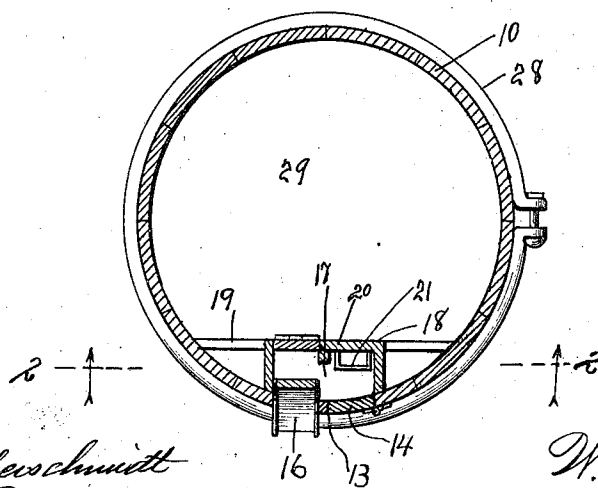


APPLICATION FILED FEB. 1, 1912.

Patented Jan. 21, 1913.



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UNITED STATES PATENT OFFICE.

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SILLO.

1,050,953.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed February 1, 1912. Serial No. 674,653.

To all whom it may concern:

Be it known that I, WILLIAM F. KINT, a citizen of the United States, and residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Silos, of which the following is a specification.

This invention relates to improvements in silos and more especially to an improved means for advantageously removing the contents therefrom.

A primary object of the invention is the provision of an inclosure within the dimensions of the usual construction of silo inclosures.

A further object of the invention is to provide a main or exterior silo casing adapted to be completely closed but having an entrance door and exit chute for accommodation of a scaling means and a plurality of exit doors for the main inclosure located at different heights.

In the usual construction of silos, a continuous row of doors or openings extending from the top to the bottom thereof is provided and this construction necessarily weakens the staves of the casing at this point and another object of this invention is to obviate the said disadvantage as well as fully protect the doors and ladders which are provided.

A still further object is to provide a scaling member and exit means entirely protected from the weather and having its individual roof together with one main chute exit and door entrance.

With these general objects in view and others that will appear as the nature of the invention is better understood, the same consists in the novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings forming a part of this application and in which like numerals of reference designate corresponding parts throughout the several views: Figure 1 is a central vertical sectional view of a silo provided with the present improvement. Fig. 2 is a side elevation thereof partially broken away taken upon the line 2—2 of Fig. 3, and, Fig. 3 is a transverse horizontal sectional view taken upon line 3—3 of Fig. 1.

Referring more in detail to the drawings, the cylindrical casing 10 of usual construction

is provided with the conical roof 11, the latter being provided at one side thereof adjacent the eaves with a rectangular opening 12 for a purpose hereinafter described. The main silo casing near the bottom thereof and in vertical alinement with said opening 12 of the roof is provided with a door opening 13 having the closure door 14 while positioned at one side is the silo exit opening 15 having a hinged member 16 forming a combination chute and door as clearly shown in Fig. 1 of the drawings.

Within the casing 10 is provided an auxiliary inclosure 17 formed by the provision of a trough-like structure 18 vertically arranged and preferably retained at its bottom by the chordal brace 19 while the top thereof fits the roof opening 12. The inner wall 20 of the inclosure 17 is substantially divided vertically into two parts, one portion accommodating the scaling ladder 21 while the other has a plurality of openings 22 therethrough, each provided with a closure door 23. The removal of ensilage from the silo being accomplished by depositing the same through the openings 20, side guards 24 adjacent each of said openings are provided which direct the deposit of the ensilage upon the chute door 16 heretofore described. The member 18 is provided at the top thereof with a separate gable roof 25 while a light opening or window 26 accommodates the auxiliary inclosure admitting both light and air thereto.

The chute member 16 hinged as at 27 to the silo casing 10 is normally retained in its open position as a chute by a contact of the top thereof with the inner wall 20 of the auxiliary inclosure while in its closed position, the same acts as a door for closing the exit opening 15 of the casing.

The silo casing 10 is provided with clamping hoops 28 of usual form and which constitute no part of the present invention, the casing being preferably mounted upon a suitable base as 29.

It will be noted that if desired, the member 18 may be in the form of an attachment to a silo and built therein or incorporated in its structure after the completion of the usual form of circular silo.

While the forms of the invention herein shown and described are what are believed to be preferable embodiments thereof, it is nevertheless to be understood, that the same

may be changed as to size, proportion and minor details without departing from the spirit and scope of the invention as set forth in the appended claims.

5 Having thus fully described the invention and in what manner the same is designed for use, what I claim as new and desire to secure by Letters Patent of the United States is:—

10 1. The combination with a silo having an opening through the roof thereof, of a trough-shaped member vertically positioned within said silo and projecting through said opening and having a window opening adjacent the top thereof above the roof and a
15 brace interiorly positioned transversely of said silo at the bottom thereof, said trough member seated upon and behind said brace, the sides of said roof opening and the brace

adapted for removably positioning said 20 trough-shaped member.

2. In combination with a silo having a removable chute member with openings therein, an inwardly swinging door hinged 25 at its bottom to said member adjacent said opening, the side of said silo having an opening therein, a door hinged inwardly to said side at the bottom of said last-named opening and adapted when opened to contact the chute member adjacent the bottom 30 of the opening in the latter and to lie obliquely across said member.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM F. KINT.

Witnesses:

M. E. McLEAN,
JAMES H. TYRRELL.

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