

N. JOHNSON.

SILLO.

APPLICATION FILED JUNE 18, 1910.

979,767.

Patented Dec. 27, 1910.

Fig. 1.

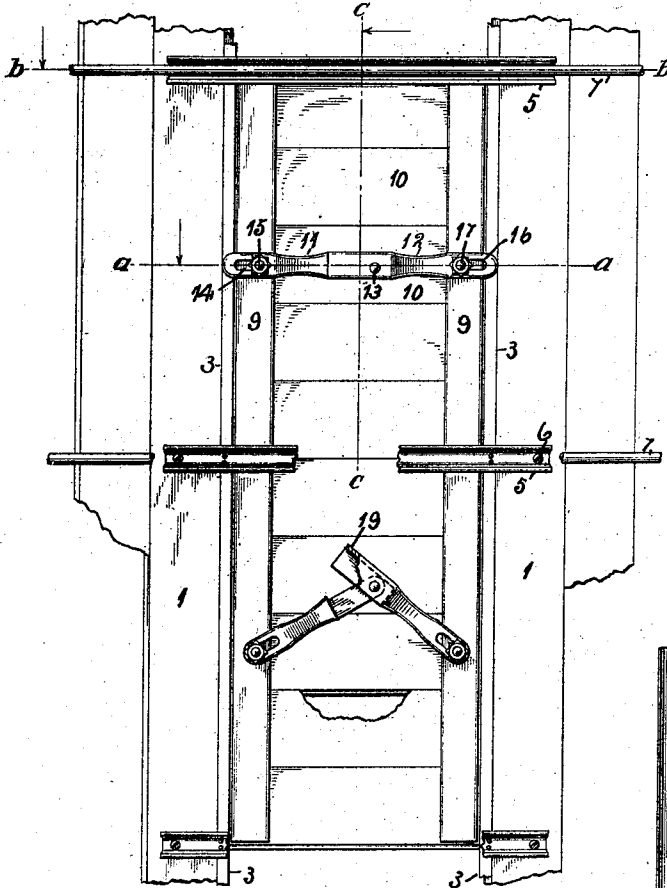


Fig. 2.

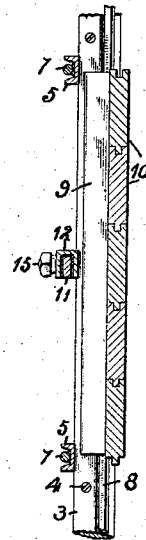


Fig. 5.

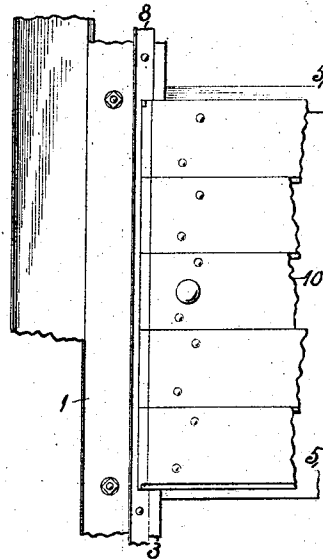


Fig. 3.

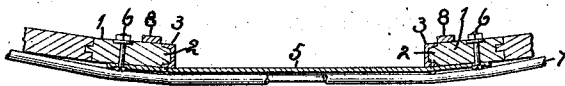
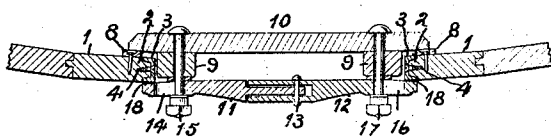


Fig. 4.



Witnesses:

W. L. Dow.
B. B. Coy

Inventor:

Nels Johnson
By A. D. Behel

Att'y.

UNITED STATES PATENT OFFICE.

NELS JOHNSON, OF BATAVIA, ILLINOIS, ASSIGNOR TO CHALLENGE COMPANY, OF BATAVIA, ILLINOIS, A CORPORATION OF ILLINOIS.

SILLO.

979,767.

Specification of Letters Patent.

Patented Dec. 27, 1910.

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To all whom it may concern:

Be it known that I, NELS JOHNSON, a citizen of the United States, residing at Batavia, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Silos, of which the following is a specification.

The object of this invention is to construct a closure for silos, in which the locking device is in the form of toggle levers having their free ends beveled on the inside to form cam surfaces.

The further object of this invention is to protect the edges of the door opening with channel iron bars, which prevent the lateral warping of the staves next the opening.

In the accompanying drawings, Figure 1 is an outer face representation of the opening of a silo in connection with which my improvements are shown. Fig. 2 is a section on dotted line *c c* Fig. 1. Fig. 3 is a section on dotted line *b b* Fig. 1. Fig. 4 is a section on dotted line *a a* Fig. 1. Fig. 5 is a fragmental inner face representation.

In the drawings I have shown only enough of a silo to a complete understanding of the location and arrangement of my improvements in connection therewith. The opening of the silo is formed by the edge strips 1 having their facing edges formed with tongues 2. Channel iron bars 3 receive the tongues 2 and are held in position by the screws 4. Channel bars 5 extend across the door opening and are riveted to the channel bars 3. These channel bars 5 are also connected to the edge strips 1 by the bolts 6. The rods 7 which encircle the staves of the silo are located in the channel bars 5 which assist in holding the rods elevated. To the inner face of the edge strips 1, and adjacent to the edges of the channel bars 3 is secured a rubber strip 8.

The door to the silo as a whole, is composed of sections, a section located between two of the channel bars 5, each door section comprises the vertical bars 9 connecting

the cross-bars 10. To one of the vertical bars 9 is connected one bar 11 of a toggle lever, and to the other bar 9 is connected the other bar 12 of the toggle lever. These two bars 11 and 12 are pivotally connected by the rivet 13. The bar 11 has a slot 14 through which a bolt 15 passes. The bar 12 has a slot 16 through which a bolt 17 passes. The free ends of both of these bars are formed with a beveled face 18. The bar 12 has a closed upper edge 19 which rests in engagement with the upper face of the bar 11 near the pivotal rivet 13, thereby forming a lock between the two bars when they are in a horizontal position.

When the bars 11 and 12 are in their locked position the beveled faces 18 of the bars will engage the edges of the channel bars 3 thereby drawing the door sections against the rubber strips 8 and forming an air tight joint. These bars in their locked positions will form steps in order that the attendant may reach any portion of the silo.

I claim as my invention.

1. A silo having a door opening, door sections for closing the opening, two levers pivotally connected and each pivotally connected to a door section and adapted to contact with the edges of the door opening.

2. A silo having a door opening, door sections for closing the opening, a toggle supported by each door section, the outer end of each of the links of the toggle being formed with a slot through which a bolt passes, and one of the links formed with a stop for engagement with the other link thereby forming a lock between the links.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

NELS JOHNSON.

Witnesses:

R. E. McDANIELS,
CHAS. ELNOHR.