No. 831,279

PATENTED SEPT. 18, 1906.

M. W. HAMILTON.

SILO DOOR.

APPLICATION FILED OCT. 18, 1905.

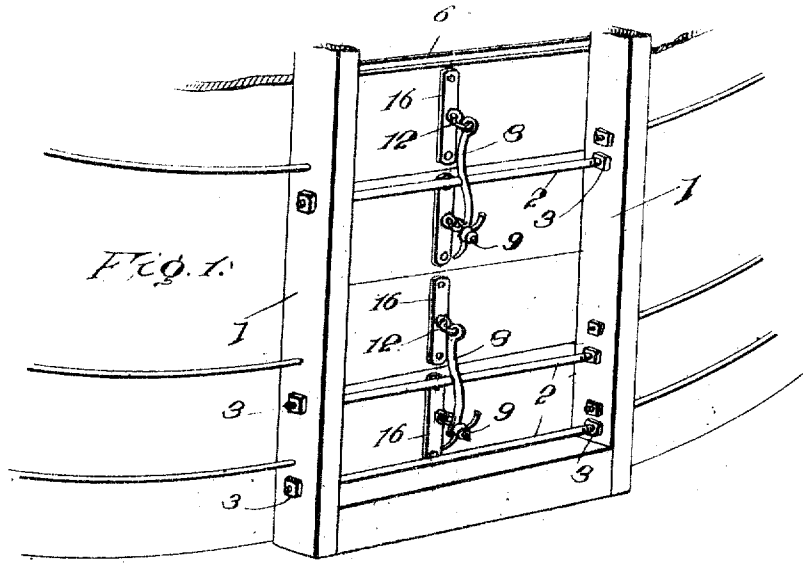


FIG. 1.

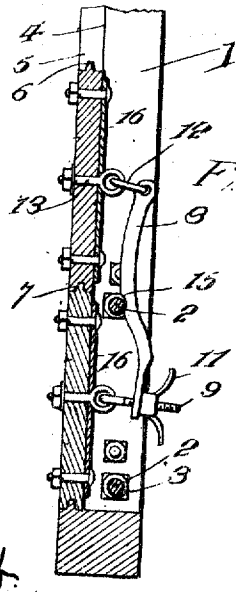


FIG. 2.

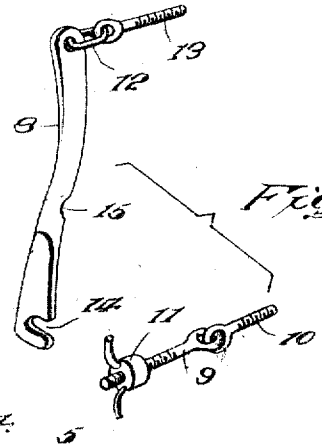


FIG. 3.

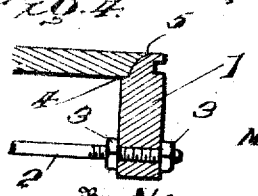


FIG. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

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SILO-DOOR.

No. 831,279. Specification of Letters Patent. Patented Sept. 18, 1906.

Application filed October 18, 1905. Serial No. 283,310.

To all whom it may concern:

Be it known that I, MILLARD W. HAMILTON, a citizen of the United States, residing at Snyder, in the county of Augusta and State of Virginia, have invented certain new and useful Improvements in Silo-Doors, of which the following is a specification.

This invention relates to closures for silos or ensilage-containers, the purpose being to provide a door in sections and fastenings for the latter of novel formation, whereby a tight joint is feasible between the sections themselves and between the latter and the jambs of the opening and said sections capable of being quickly and readily removed and easily placed in position.

A further purpose of the invention is to devise fastenings of peculiar form which when tightened draw adjacent door-sections together and tight against the jambs.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a silo-door embodying the invention. Fig. 2 is a vertical section thereof. Fig. 3 is a detail perspective view showing more clearly the fastening means. Fig. 4 is a transverse section of a jamb and adjacent parts.

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.

The invention is adapted for silos or ensilage-containers of any construction, and since it appertains only to the closure the latter is illustrated.

In the accompanying drawings the numeral 1 designates the jambs located at the sides of the opening through which access is had to the silo, said jambs being braced by stays 2, preferably regularly spaced and constituting rungs as well as ties. The end portions of the stays 2 are threaded and passed through openings in the jambs 1 and receive pairs of nuts 3, so as to brace the jambs in each direction. The stays 2 preferably consist of rods of any diameter and according to the strain to be resisted. The inner corners of the jambs bordering upon the opening to the silo are rabbeted and form shoulders 4 and are splayed, as indicated at 5, the splay being on a curved line. By having the splay curved it is better adapted to conform to the corresponding abutting edge of the door, so as to allow for contraction and expansion according as the jambs are damp or dry.

The door is formed of sections which are placed in position as the silo is filled and removed as the ensilage is removed. The ends of the sections are curved to conform to the curved splay 5 of the jambs 1 and are adapted to fit against the shoulders 4 when drawn outward by the fastening means. The meeting edges of the sections have matching joints, the one being provided with a tongue 6 and the other having a corresponding groove 7 for reception of the tongue. The sections when placed in position are secured by suitable fastenings which coöperate with the stays or tie-rods 2.

A set of fastenings is provided for each two sections of the door, and each set comprises a bar 8 and bolt 9, each being linked or otherwise loosely connected to its respective section. The bolt 9 is provided at its inner end with an eye, through which passes an eye-bolt 10 or like fastening by means of which the bolt 9 is attached to its section. A winged nut 11 is mounted upon the bolt 9 and serves in conjunction with the bar 8 to draw the sections close together and tight against the jambs 1. The bar 8 is connected by link 12 to an eyebolt or like fastening 13, by means of which said bar is attached to its section. The outer end of the bar 8 is provided with a notch 14 to receive bolt 9 and against which the nut 11 bears to tighten the sections and secure them in place. The bar 8 obtains a purchase upon a stay or tie rod 2 and is preferably provided with a seat 15 to fix the position of said bar, whereby when the same is subjected to tension coöperating adjacent door-sections are drawn together and at the same time pressed against the jambs of the opening. It will thus be understood that the securing means serve both to hold the door-sections in position and to draw them together to obtain a tight joint between their meeting edges. To strengthen the door-sections, plates 16 are fitted there-

to and secured by bolts or other substantial fastening means. These plates 16 likewise serve to strengthen the points of attachment of the fastening elements to the door-sections.

From the foregoing it will be understood that the invention provides a door or closure for silos or like ensilage-containers which will at all times admit of a close joint being secured and maintained and which is essential to the preservation of the ensilage, while at the same time admitting of the sections of the door being easily and conveniently placed in position as the silo is filled and removed as the ensilage is withdrawn to be fed to the stock or for other purposes.

Having thus described the invention, what is claimed as new is—

1. In a closure for silos and the like, the combination of door-sections, and a set of fastenings for adjacent sections, one element of the fastening means consisting of a bar having a notch at its outer end and the other element consisting of a bolt provided with a nut.

2. In a closure for silos and the like, the combination of adjacent door-sections, a bar loosely connected at one end to one of said sections and having a notch at its free end, a bolt loosely connected to the other section, and a nut fitted upon said bolt.

3. In a silo or the like, the combination of jambs, stays connecting said jambs, a sectional door, a bar loosely connected at one end to a door section and adapted to engage over one of said stays, and means for connecting the opposite end of said bar to an adjacent door-section.

4. In a closure for silos and the like, the combination of jambs, stays connecting said jambs, a sectional door for closing the opening, a bar loosely connected at one end to a door-section and adapted to engage over one of said stays and having a seat to receive said stay, and means for connecting the opposite end of said bar to the adjacent door-section, the parts being arranged to admit of the sections being drawn close together and at the same time tight against the jambs.

5. In a closure for silos and the like, the combination of jambs rabbeted upon their inner corners and splayed upon curved lines, stays connecting said jambs, a sectional door having matched joints between the sections and the ends of said sections curved to fit the curved splay of the jambs, a bar loosely connected to one of the sections and adapted to engage over a stay provided with a seat to receive the stay, and a bolt loosely connected to the adjacent door and section and provided with a nut, the parts being arranged to operate substantially in the manner set forth.

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

MILLARD W. HAMILTON. [L. S.]

Witnesses:
V. B. HILLYARD,
J. D. YOAKLEY.