

G. H. HORN.
SILO.
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1,031,793.

Patented July 9, 1912.

Fig. 1.

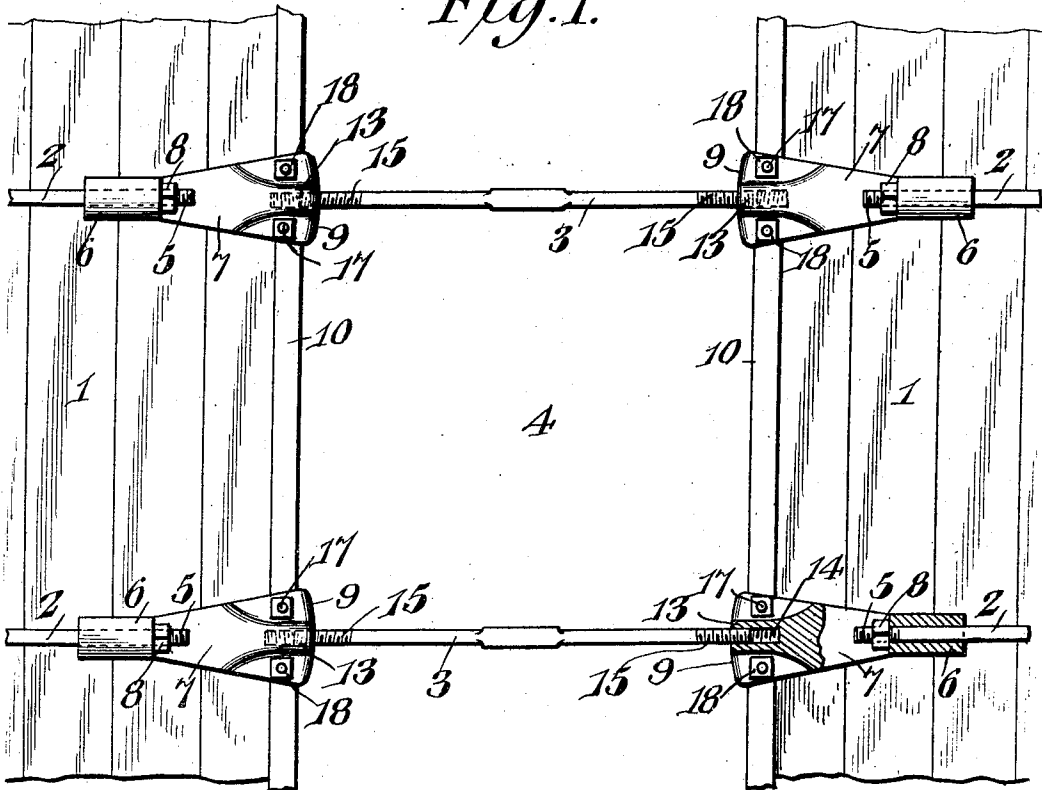
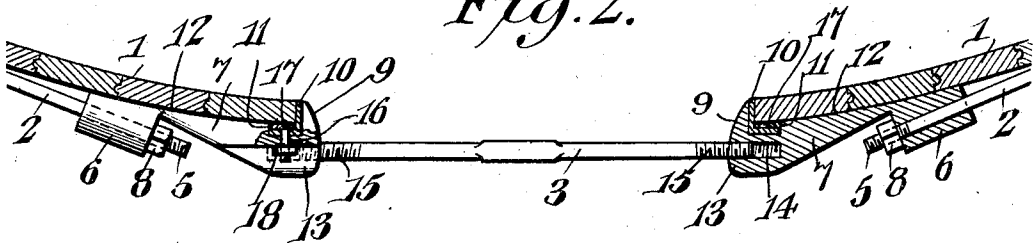


Fig. 2.



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SILLO.

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To all whom it may concern:

Be it known that I, GEORGE H. HORN, a citizen of the United States, residing at Vesper, in the county of Wood and State of Wisconsin, have invented a new and useful Silo, of which the following is a specification.

The invention relates to improvements in silos.

The object of the present invention is to improve the construction of silos, and to provide a simple, strong and efficient construction, adapted to dispense with the ordinary heavy door frames and the cross braces thereof, and capable of affording an adjustment at the opening and of rigidly maintaining the hoop receiving plates or members in engagement with the silo at opposite sides of the door-way.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims here-to appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is an elevation of a portion of a silo, constructed in accordance with this invention. Fig. 2 is a horizontal sectional view of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

In the accompanying drawing in which is illustrated the preferred form of the invention, the vertical staves 1 of the body of the silo are bound together by a plurality of hoops comprising relatively long curved rods or sections 2 and straight relatively short rods or sections 3, extending across the door-way 4 and located beyond the plane of the outer faces of the adjacent staves, so as to be spaced a sufficient distance from the door (not shown) to enable them to be utilized as a ladder. The relatively long curved rods or sections 2 are provided with threaded terminals 5, extending through integral sleeves 6 of metallic hoop-receiving plates or members 7 and receiving nuts 8, which fit against the inner ends of the sleeves 6 of the plates or members 7. The plates or

members 7, which are fitted against the outer faces of the staves 1, are arranged horizontally and extend rearwardly from the door-way 4, being preferably of a length to overlap or extend across a plurality of staves 1. The sleeves 6, which are arranged longitudinally of the plates or members, are located at the inner or rear ends of the same, and the said plates or members taper toward the sleeves, and the inner ends of the latter form shoulders against which the nuts 8 abut.

The plates or members taper in width and in thickness, and they are provided at their front enlarged ends with inwardly projecting flanges or lugs 9, forming bills of hook-shaped portions of the plates or members 7. The hook-shaped portions of the plates or members engage the silo at the jamb or side edges of the door-way, and the inwardly projecting lugs or bills are preferably of a length to extend to the plane of the inner faces of the staves, and angle bars 10 are preferably fitted against the staves at the door-way.

The angle bars, which are constructed of suitable metal, consist of two sides or wings, one being arranged at the edge or jamb of the door-way and the other being located at the outer face of the end stave. The plates or members are provided adjacent to their bills with recesses 11, receiving the outer portions of the angle plates, as clearly illustrated in Fig. 2 of the drawing, and permitting the inner faces 12 of the plates or members 7 to fit against the outer faces of the staves. The inner faces 12 beyond the recesses 11 have a slight curvature to conform to the configuration of the staves.

The plates or members 7 are provided at their inner portions with central longitudinal enlargements 13, having sockets 14 extending inwardly from the front ends of the plates or members and provided with right and left hand threads to receive right and left hand threaded ends 15 of the short straight rods or hoop sections 3. The rod 3, which is preferably provided with a central polygonal portion to enable it to be readily rotated, has its threaded ends engaging the right and left hand threaded sockets, and it forms a rigid connection between the plates or members and is adapted to maintain the same rigidly in position at the side or jamb of the door-way, and as

the plates or members are secured to the angle bars, as hereinafter described, the straight rods or sections 3 are adapted to adjust the opening of the silo. The plates or members are provided above and below the longitudinal enlargements 13 with perforations 16 for the reception of bolts 17, which also pierce the outer sides or wings of the angle bars. The heads of the bolts are preferably arranged at the inner faces of the outer sides or wings of the angle bars, and the nuts 18, which bear against the outer faces of the plates or members, are located in upper and lower exterior recesses formed by the central longitudinal enlargements 13. The angle iron bars, which connect the plates or members 7, are held at the sides of the door-way by the hoops, and the adjustment of the angle bars through the short straight rods or sections is for the purpose of adjusting the door-way 4 to allow for any swelling of the doors. This adjustment will enable the doors (not shown) to fit properly when placed in position.

What is claimed is:—

1. In a silo, the combination with a body portion having a door-way, of metallic plates or members fitted against the outer face of the body portion at opposite sides of the door-way and provided with hook-shaped portions engaging the silo at the side edges or jamb of the door-way, said plates being provided at their rear ends with integral longitudinal sleeves and having at their front ends right and left hand threaded sockets, and hoops composed of curved rods or sections having threaded terminals extending through the sleeves of the plates or members and provided with nuts for engaging the inner ends of the said sleeves, and short straight rods or sections extending across the door-way and having right and left hand threaded terminals fitted in the

said sockets and engaging the threads thereof, the curved rods or sections and the straight rods or sections being arranged in substantial alinement and connected with the opposite terminals of the plates or members.

2. In a silo, the combination with a body portion having a door-way, of angle bars fitted against the body portion at the side edges of the door-way, metallic plates or members fitted against the outer faces of the body portion of the silo at opposite sides of the door-way and provided with front hook-shaped portions having recesses at their inner faces to receive the angle bars and provided with inwardly projecting lugs or bills, which fit against the angle bars at the side edges or jamb of the door-way, said plates or members being provided at their rear ends with longitudinal sleeves and having longitudinal enlargements at their front ends provided with right and left hand threaded sockets, bolts piercing the angle bars and the plates or members and located above and below the longitudinal enlargements, and hoops composed of curved rods having terminal portions extending through and secured in the said sleeves, and short straight rods or sections having right and left hand threaded terminals engaging the right and left hand threaded sockets of the plates or members, the curved rods or sections and the straight rods or sections being arranged in substantial alinement and connected with the opposite terminals of the plates or members.

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

GEORGE HERMAN HORN.

Witnesses:

HARRY BOHMSACH,
NFLDA HORN.