G. MOEKE.

SILO.

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946,389. Patented Jan. 11, 1910.

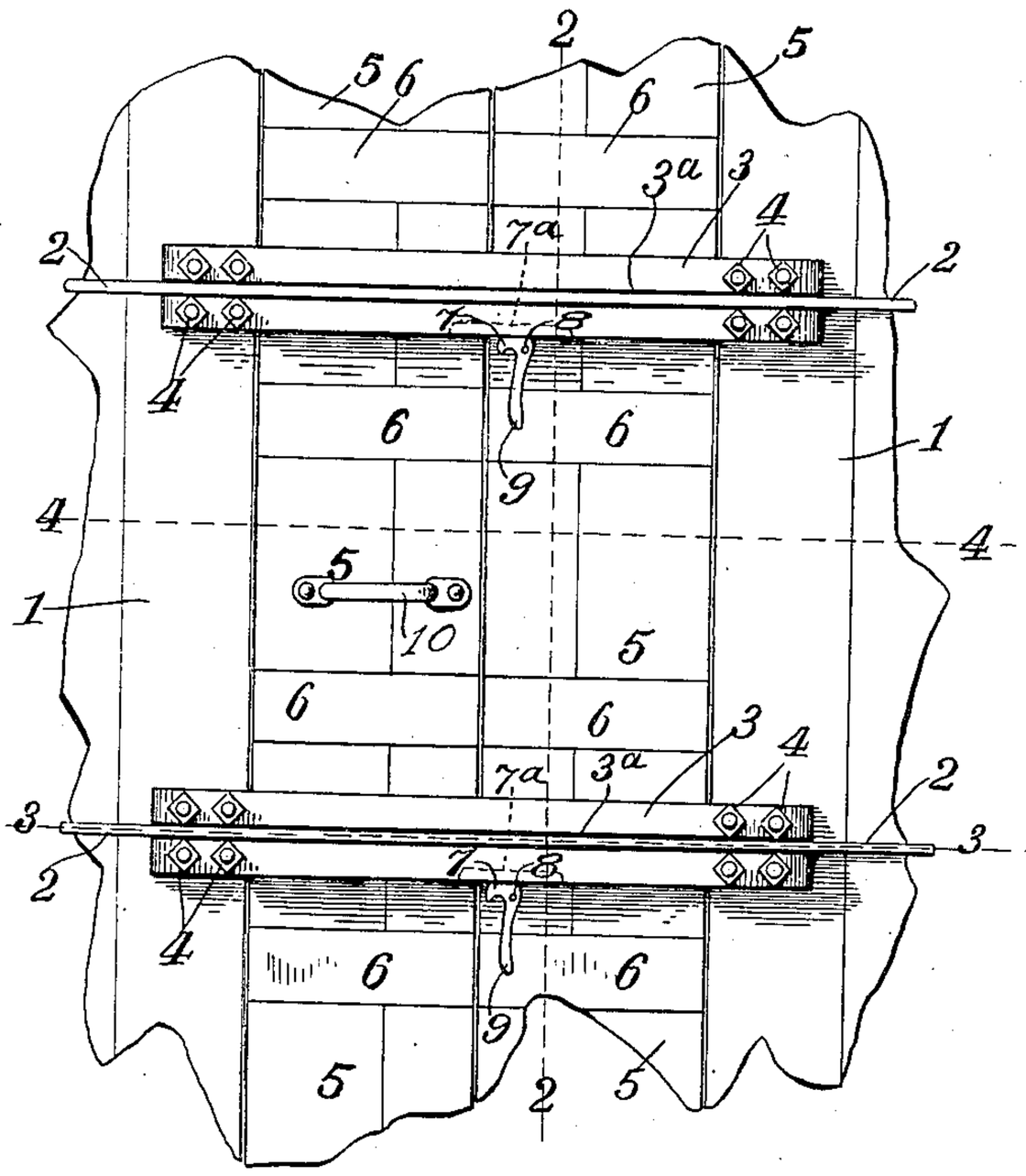

Fig. 1

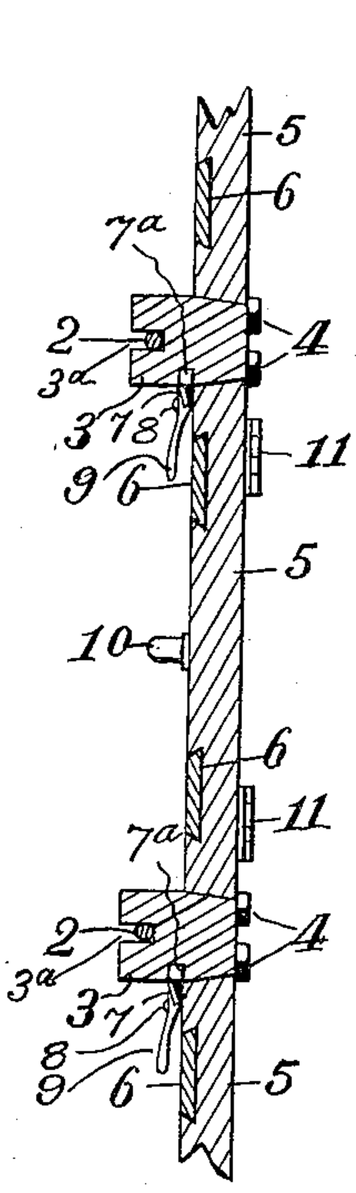

Fig. 2

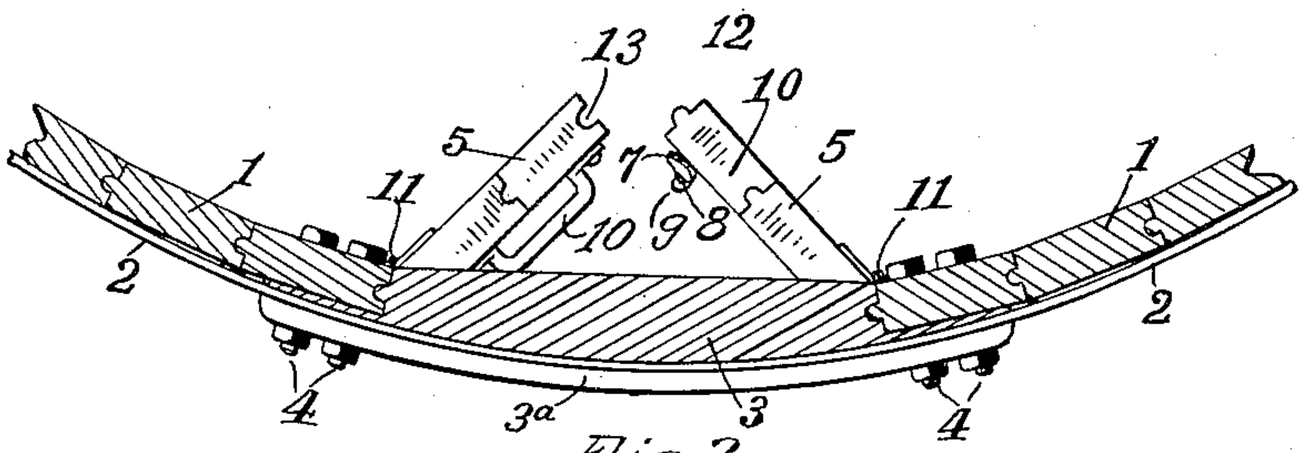

Fig. 3.

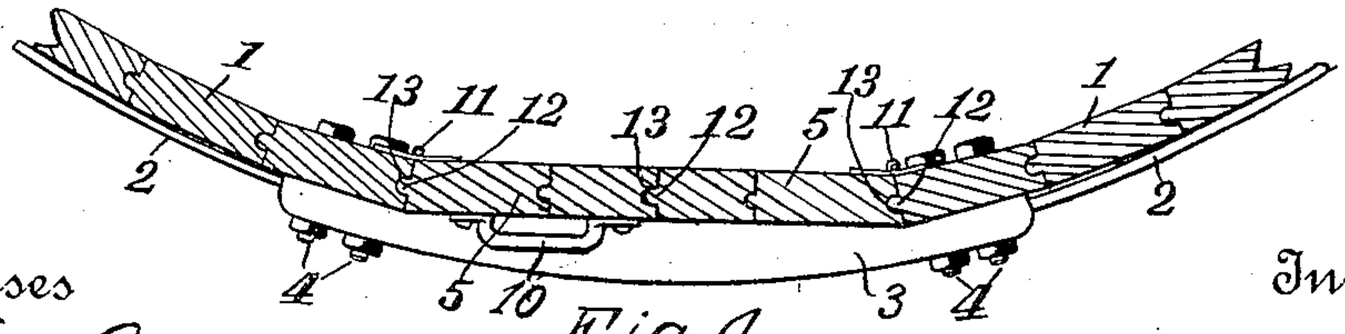

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

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SILO.

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To all whom it may concern:

Be it known that I, GEERT MOEKE, citizen of the United States of America, residing at Zeeland, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Silos; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in silos and more particularly to the construction of the doors and adjacent parts, and its object is to provide the same with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings in which:

Figure 1. is a front elevation of a portion of a silo embodying my invention; Fig. 2. a vertical section of the same on the line 2—2 of Fig. 1; Fig. 3. a horizontal section on the line 3—3 of Fig. 1; and, Fig. 4. the same on the line 4—4 of Fig. 1.

Like numbers refer to like parts in all of the figures.

1 represents a portion of the body of the silo, which is preferably composed of staves joined by tongue and groove at the edges and surrounded horizontally at intervals by hoops or bands 2 preferably of round steel rods provided with means for tightening the same (not shown). At any convenient part of the circumference, the staves forming the body of the structure are spaced apart a sufficient distance to form a door opening and this opening is spanned horizontally at regular intervals corresponding to the hoops by braces 3, each having an outer surface curvature concentric with the axis of the structure and of somewhat greater radius. In the outer side of each brace is a deep groove 3^a to receive the respective hoop or band 2. These braces also extend inward to the inner surface of the structure and each is preferably rectilinear on its inner side and beveled at the top and bottom to receive the upper and lower beveled edges of the doors 5, which extend therebetween when closed. This inward rearwardly projecting portion of the braces, shoulders against the edges of the adjacent staves and connects therewith by tongues and grooves, whereby it securely holds the edges of the staves in place and is in turn held thereby.

The doors 5 are preferably made in opposing pairs and are also formed of strips joined by tongue and groove, and each door is provided with battens 6 having dovetail edges and are inserted in dovetail grooves in the strips and extend transversely thereof. The outer edges of the doors are also joined to the adjacent edges of the staves by tongue and grooves 12 and 13 and are joined to each other in like manner. The tongue and groove being substantially semicircular in transverse section, the doors will swing freely, and are hung by hinges 11 to the adjacent staves, and secured in closed position by a fastening pivoted eccentrically to one of the doors as at 8, and having a cam-shaped portion 7 which enters a suitable recess 7^a in the under side of the brace 3, and is inclined to the surface of the door in such manner that when turned upon the pivot 8 by means of the lever 9, the door will be secured in place between the diverging upper and under surfaces of the edges of the braces 3 and the fastening means protected from the weather by the overhanging brace, and will not become clogged with snow or ice. The doors are also provided with handles 10, by which the same may be opened or closed, and which also serve as handholds for climbing the outside of the silo, using the outwardly projecting braces as supports for the foot when so doing.

What I claim is:

1. A silo comprising vertically disposed staves joined to each other by tongues and grooves and spaced apart to form a door opening, braces at intervals across said opening, said braces having outer curved surfaces, inner rectilinear surfaces, beveled upper and under surfaces, and grooves in their outer surfaces, bands surrounding the staves and inserted in said grooves, doors having beveled upper and lower ends engaging the beveled surfaces of the braces when closed, and also joined to the staves and to each other by tongues and grooves, hinges connecting the doors and staves, and a cam fastening on a door engaging a recess in a brace.

2. A silo comprising a body having a vertically extended door opening, brace bars extending across said openings at intervals, and each having a recess in its under side and projecting outward from the plane of

the doors, doors to close said openings, and a fastening pivoted to a door and having a cam member inclined to the surface of the door and adapted to move into and out of said recess, and a lever to operate said cam, whereby the brace overhangs and protects the fastening from the weather.

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

GEERT MOEKE.

Witnesses:
C. J. DEN HERDER,
ALBERT VAN LOO.