

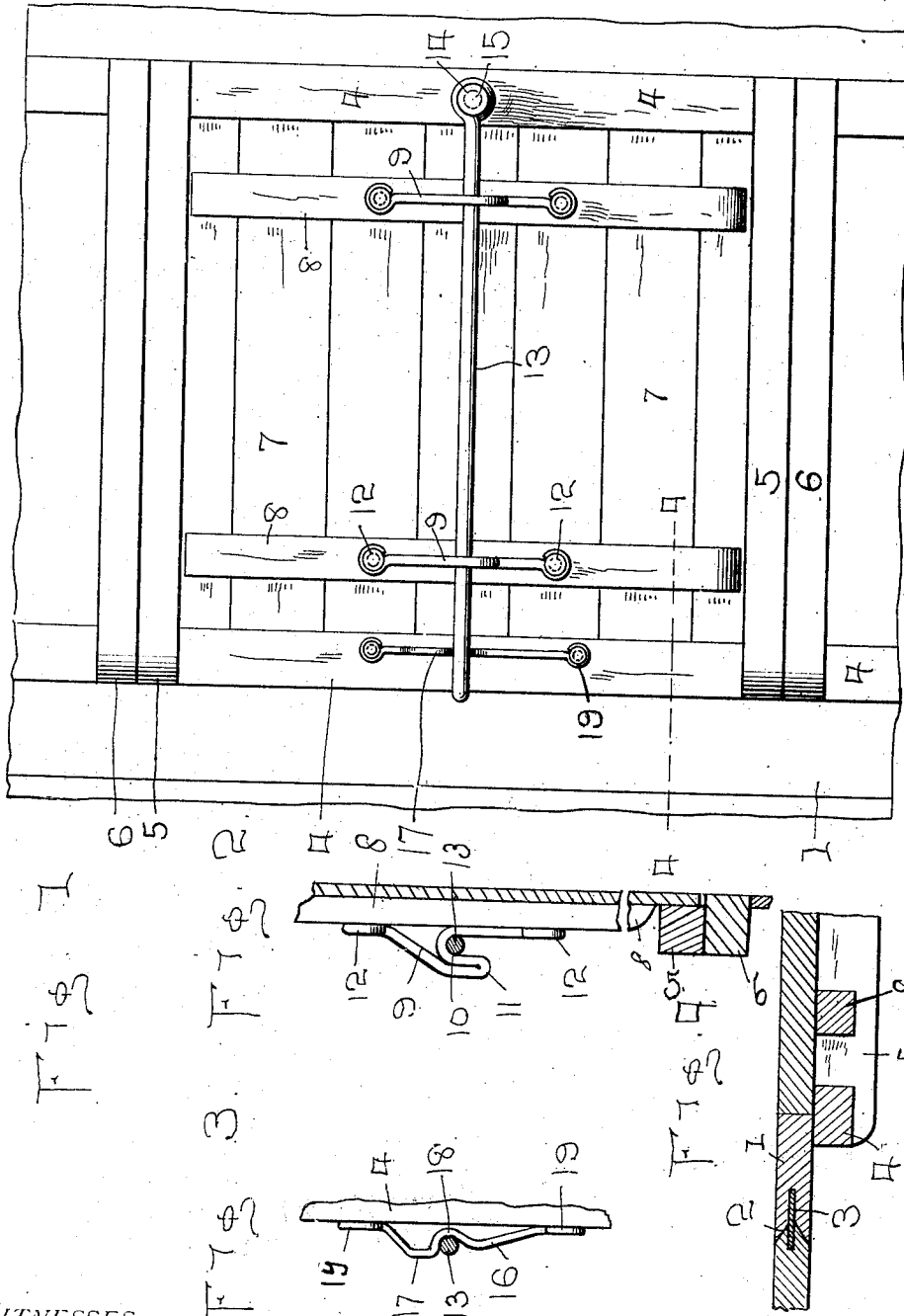
L. P. SWOVERLAND.

SILO.

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1,016,528.

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LEONARD P. SWOVERLAND, OF BOURBON, INDIANA.

SILO.

1,016,528.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEONARD P. SWOVERLAND, a citizen of the United States, residing at Bourbon, in the county of Marshall and State of Indiana, 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.

This invention relates to silos and more particularly to doors, door-frames and the adjacent portion of a silo.

An object of the invention is to construct a door and door-frame for a silo in such manner that the joints will be water and air tight.

Another object is to construct a door and door-frame for a silo in such manner that the door will be flush with the wall of the silo and will be securely held in position.

Another object is to provide novel means for holding the door or locking the same securely in position; and, a further object is to provide a silo door and door-frame to receive said door and novel means for locking the door in position within the frame, said locking means being of simple form and comprising a bar extending transversely across said door and held in such position by tension grippers at both sides of the door and upon the door-frame.

Other objects and advantages will be hereinafter set forth and pointed out in the specification and claim.

In the accompanying drawings which are made a part of this application, Figure 1 is a fragmentary view of a portion of a silo, showing my improved door, door-frame and door-lock. Fig. 2 is a detail view of one of the resilient lock bar grippers carried by the door. Fig. 3 is a similar view of the resilient gripper carried by the frame to receive the free end of the lock bar, and, Fig. 4 is a section on line 4—4 of Fig. 1, showing the water and air tight connection.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 represents the timbers or boards of the silo, which are preferably connected by having their opposite edges beveled and grooved in the form of a V, in cross section, as shown at 2, and secured by the metallic

splicing plate 3, as shown in Fig. 4. This constitutes air and water tight joints which are specially desirable adjacent the door openings of silos.

The door-frame is formed by means of the vertical strips 4 secured to the timbers 1, and cross pieces 5, said cross pieces forming the top and bottom of said frame, while the timbers 1 form the sides thereof. Secured to the strips 4 are the cross pieces 6, the greater portions of which rest upon the cross pieces 5 and a part of the depending portions of the cross pieces 6 project beyond the sides of the strips 5 to overlap the seams and also to form bearings for the top and bottom of the door to bear against when in position.

The door is constructed of interlocking boards 7 braced by the bracing strips 8 near opposite edges of the door, said bracing strips extending from the top to the bottom of the door. Upon the bracing strips 8 are secured the resilient locking bar gripping members 9, which are preferably formed by being bent upon themselves to present the bar receiving recess 10 and the overlapping finger portion 11 and the opposite circular ends 12, by means of which the gripping members are secured to the braces 8. The locking bar 13 has one end formed into a loop, as shown at 14, to receive the pivot pin 15 secured in one of the door-frame side members 4. The bar 13 is then forced into the recesses 10 of the resilient gripping members 9 and under the fingers 11 of said gripping bars. As the bar is swung in this position its free end engages against the inclined portion 16 of the resilient latch 17 carried upon the side bar 4 opposite the one to which the bar is pivoted, and after said end of the bar 13 slides over this inclined portion, it drops into the recess formed by the semicircular portion 18 of the gripping member 17, which is secured at its opposite ends 19 to the bar 4.

It will be understood that the free end of the rod 13 rests within the semicircular portion 18 of the member 17 only while the bar is gripped by the resilient gripping members 9, as previously described.

As will be understood the door opens inwardly and as the gripping members 9 are upon the outer face of the door 1, being forced into the recesses 10 and the curved portion 18 of the member 17, the door is

drawn outwardly against the members 4 and 6 and resiliently held tightly against these members to form water and air tight connections. The door may be opened by drawing the bar 13 out of the previously mentioned recesses and forcing the door inwardly.

It will be seen that by the members 9 being placed upon opposite sides of the door and the bar 13 extending transversely of said door, the latter is drawn tightly against the frame at both sides as well as the top and bottom. And as the gripping members are resilient, there is always a tendency to hold the door tightly closed.

From the foregoing it will be readily seen that I have provided a door, door-frame and adjacent portions of a silo of improved construction with positive air and water tight joints and connections.

What I claim is:

In a silo, a door carrying resilient gripping members, said door being flush with the wall of the silo, a locking bar carried by the door-frame of said silo, a resilient latch member carried by said door-frame opposite the point at which said bar is attached, said gripping members and said resilient latch member being adapted to receive said locking bar to hold the door in closed position, and means for securing said latch bar to said door-frame.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEONARD P. SWOVERLAND.

Witnesses:

L. M. LAUER,

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