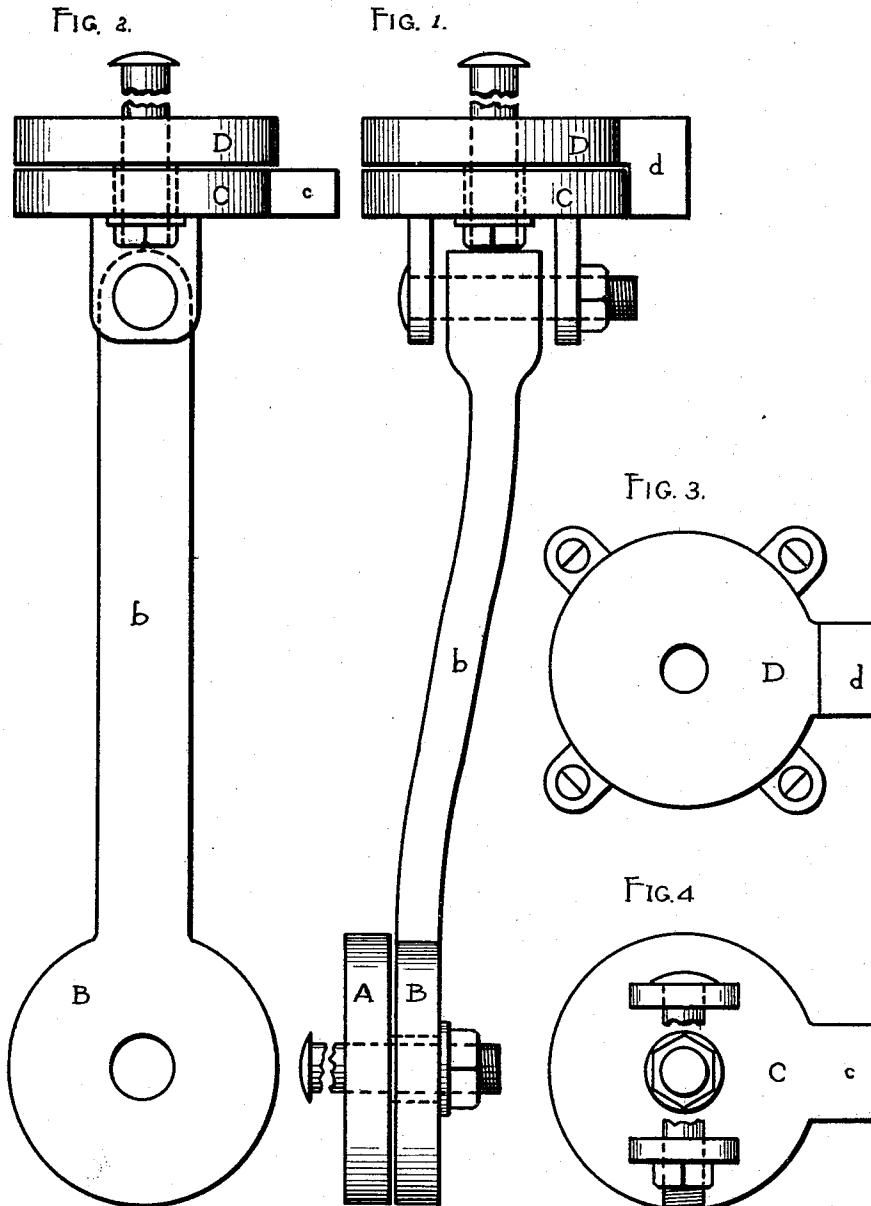


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APPLICATION FILED MAR. 10, 1915.

1,215,593.

Patented Feb. 13, 1917.
2 SHEETS—SHEET 1.



WITNESSES.

Sara Breunan
Kay Boyd

INVENTOR.

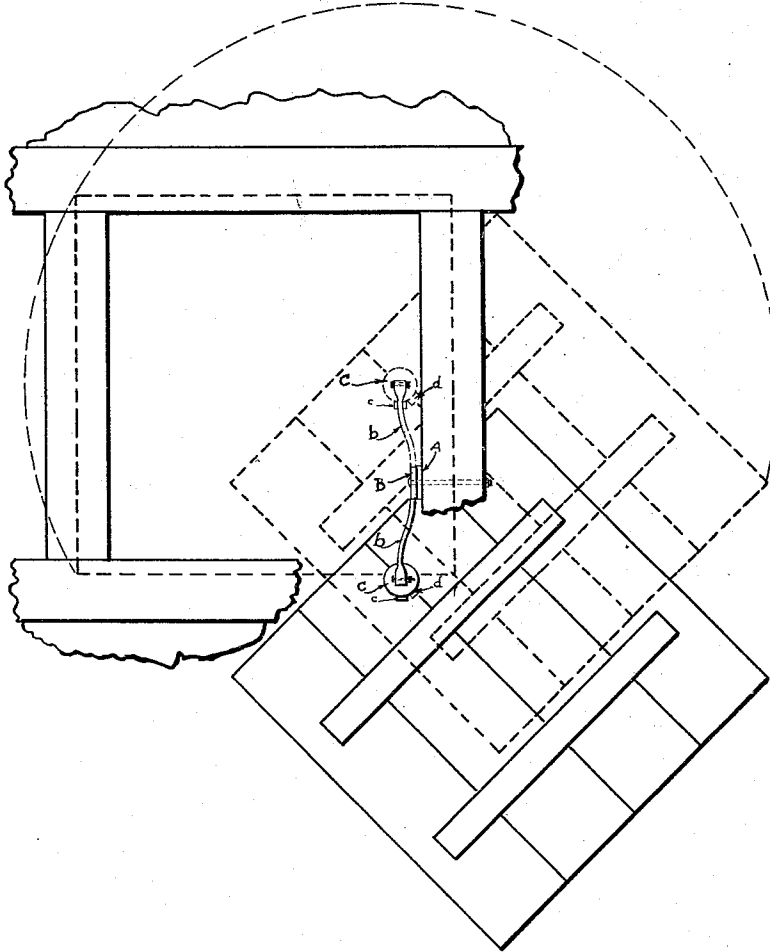
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FIG. 5.



WITNESSES
Sara Breunan
Ray Boyd

INVENTOR
Carl Woss

UNITED STATES PATENT OFFICE.

CARL W. VOSS, OF MINNEAPOLIS, MINNESOTA.

SILO-DOOR HINGE.

1,215,593.

Specification of Letters Patent.

Patented Feb. 13, 1917.

Application filed March 10, 1915. Serial No. 13,352.

To all whom it may concern:

Be it known that I, CARL W. VOSS, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Silo-Door Hinge, of which the following is a specification.

My invention relates to improvement in a single silo door hinge which has three (3) joints, one a rotary joint to let the door turn up over the opening and over a 45 degree angle; one to carry the door to one of the upper corners of the opening, and one to let the door turn so inside of door is always turned to inside of silo; first, to provide a hinge so the door can be opened by removing enough ensilage to let the door pass the sill; second, to carry the door in an upright position when open; third, so the door can be turned down to one side of the opening so the operator can pass out and close the door from outside of silo.

I attain these objects by the mechanism illustrated in the accompanying drawing, in which:

Figure 1, is a side elevation of the entire hinge. Fig. 2, top view of hinge. Fig. 3, view of part that bolts to door. Fig. 4, view of part that connects the arm to part on door. Fig. 5, by turning sheet on its side and with the heading placed at the left and the signature at the right, is a vertical view of the hinge attached to silo door. The dotted lines show the door closed and the movement of door when opening and the full lines show the door when open.

Similar letters refer to parts throughout the several views.

The bearing A, arm b, bracket C, with bolt or slide rod and door plate D, constitute the entire hinge to hang a door, making a single door hinge.

"A" is a circular bearing plate and is connected to bearing "B" on arm "b", and "A" has a sleeve that passes through "B" so the bolt that connects them can be tightened with no friction to "B", and when "A" and "B" are so connected it will place the strain on the end of the bolt, the same bolt being used to attach "A" to the exterior of silo at the top end of opening (see Figs. 1 and 5.) making a substantial

joint for arm "b" to carry door to one side of opening on the inside of the silo.

The arm "b" is made on an irregular curve so "C" will pass under the door sill and "b" and "C" are connected by a bolt passing through the two lugs on "C" and end of "b". The end of "b" is not as large as the opening between the two lugs so the bolt can be used for a slide rod and making a joint to keep the inside of the door to the inside of the silo and with a slide rod to adjust the door when closing.

The bracket "C" has a circular bearing, and lug "c" attached on one side of it (see Fig. 4.) and is connected to one side of "D". The other side of "D" is attached to the door in the center at the top end (see Fig. 5.) and "D" has a lug "d" that passes over the circular part of "C" (see Fig. 2.) and has a sleeve that passes through "C" so the bolt that connects "C" "D" and the door can be tightened with no friction to "C" and when "C" and "D" are connected it will lessen the strain to the side of the bolt and place it on the end of the bolt making a vertical joint with stop lugs so the door can be turned up as shown by the dotted lines (see Fig. 5) and carried by the lugs when open as shown by full lines, (see Fig. 5.) The bolts that connect the hinge to the silo or door form no part of my invention.

I am aware that prior to my invention sleeves have been applied to other inventions. I therefore do not claim it so broadly; but

I claim:

In a hinge adapted to be used on a door the combination of a circular bearing plate with a sleeve attached secured to the exterior of the silo at the top of the opening, and an arm with a circular bearing attached pivotally connected to the plate, permitting the other end of the arm to swing the door from the center of the opening at the top end inwardly and around to side wall of the silo at the upper corner of the opening, when opening the door, and back to center of the opening when closing the door, and this end of the arm pivotally connected to the bracket C, with two lugs and slide rod, permitting the inside of the door to be kept to the inside of the silo when opening and closing the door, and

adjusting the door when closing, and the bearing side of bracket C, with lug *c*, attached to one edge pivotally connected to the door plate D with lug *d*, and sleeve
5 attached and the other side of door plate secured to the door in the center at top end, permitting the door to be turned up over the opening and carried in an upright posi-

tion by the lugs when open, and will turn down and hang squarely in front of the 10 opening when closing.

CARL W. VOSS.

Witnesses:

SARA BRENNAN,
RAY BOYD.

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