C. W. McCLURE.

SILO ROOF CONSTRUCTION.

APPLICATION FILED JUNE 24, 1911.

1,019,334.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 1.

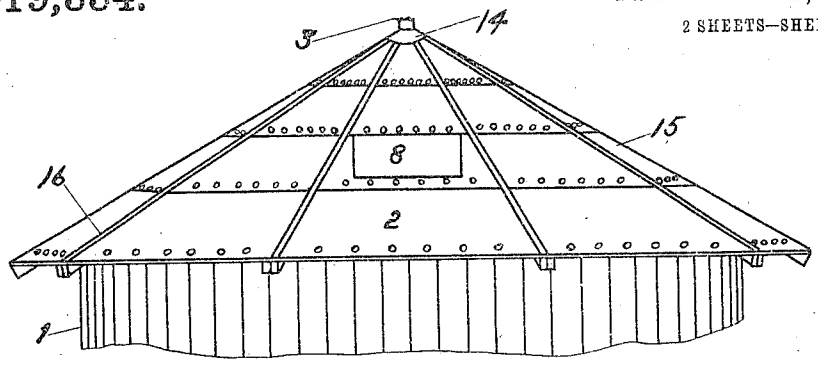

Fig. 1.

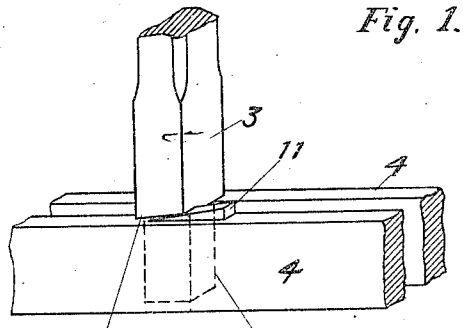

Fig. 7.

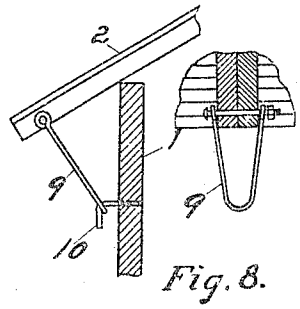

Fig. 8.

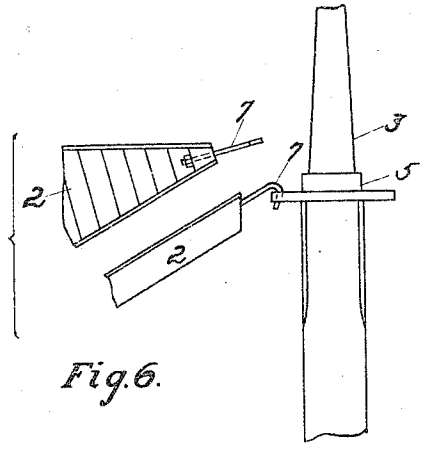

Fig. 6.

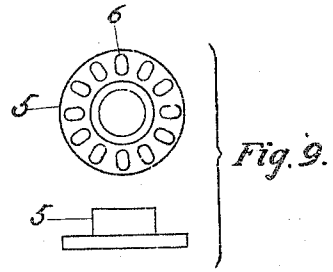

Fig. 9.

WITNESSES:

Jos Rawley.

Christine A. Braidel

INVENTOR

Charles W. McClure

BY

Geo. D. Willcox. ATTORNEY

C. W. McCLURE.

SILO ROOF CONSTRUCTION.

APPLICATION FILED JUNE 24, 1911.

1,019,334.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 2.

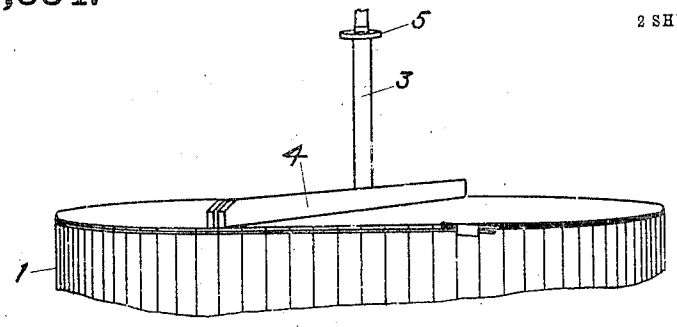

Fig. 2.

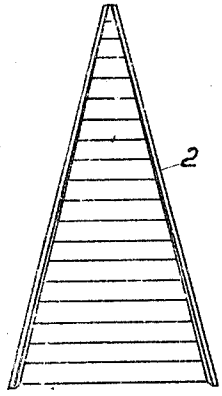

Fig. 5.

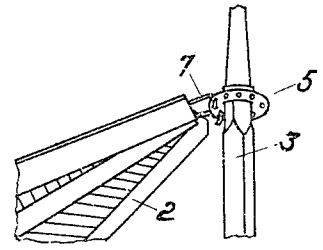

Fig. 4.

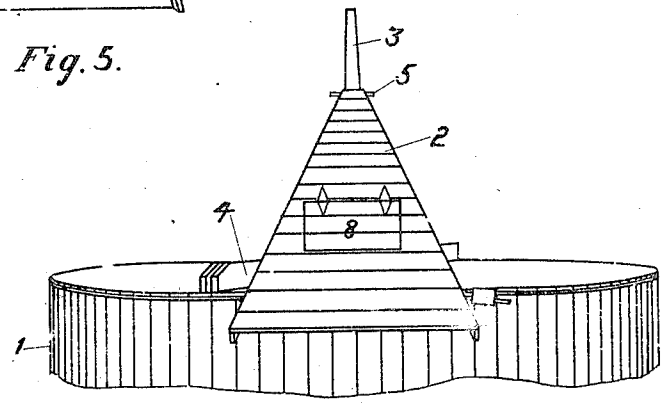

Fig. 3.

WITNESSES:

Jos. Rawley.

Christine A. Braidel.

INVENTOR

Charles W. McClure.

BY

Geo B. Willcox. ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES W. McCLURE, OF SAGINAW, MICHIGAN.

SILO-ROOF CONSTRUCTION.

1,019,334. Specification of Letters Patent. Patented Mar. 5, 1912.

Application filed June 24, 1911. Serial No. 635,207.

To all whom it may concern:

Be it known that I, CHARLES W. McCLURE, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Silo-Roof Constructions; 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 is a roof construction for silos and the objects of the improvement are to provide a roof for silos that is simple in construction, inexpensive, and the parts of which are so arranged that they can be conveniently packed for shipment and can be readily assembled on the silo with the minimum amount of labor.

The construction also comprises means whereby the roof is free from the wall of the silo to enable the silo hoops to be tightened without disturbing the roof and also to enable the silo walls to expand independently of the roof when the silo is filled, and for vertically adjusting the apex of the roof to make it tight.

The invention consists in certain novel constructions and combinations of parts and the equivalents thereof, whereby these objects are attained, as will be fully set forth in the specification and pointed out in the claims.

The device is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the roof assembled; Fig. 2 is a view of the girder and center pole in place; Fig. 3 is a similar view showing one section of the roof in place; Fig. 4 is a detail of the means by which the roof sections are connected to the center pole; Fig. 5 is a plan view of a roof section; Fig. 6 is a detail showing the manner of assembling the roof sections and the center pole; Fig. 7 is a detail of the connection between the center pole and the girders that support it; Fig. 8 is a detail partly in section, of the fastener by which the roof section is secured to the silo wall; and Fig. 9 is a detail of the post collar.

As is clearly shown in the drawings, 1 represents the upper part of a silo wall to which the roof is to be applied.

2 is a segment-shaped roof section, and 3 is the center post by which the apex of the assembled roof is supported.

4 is a two-piece girder spanning the top of the silo and carrying the post 3 at its middle.

A collar 5 of cast iron or other suitable material is fitted to the upper part of the post 3 and it is to this collar that the upper ends of the roof sections 2 are secured. The means by which the roof sections are secured to the collar is illustrated in Figs. 4, 6 and 9, where 6 represents a plurality of holes formed in the flange of the collar 5, and 7 is a hook bolt secured at one end to the upper extremity of the segmental roof section 2 and adapted to be hooked into one of the holes 6, as shown in Figs. 4 and 7.

Any desired number of sections may be employed but I prefer to provide twelve so that each section may be of a size suitable to be easily and conveniently handled.

In practice I prefer to provide one of the sections 2 with a trap door 8 through which to insert the deflector or blow pipe end of a silo filler.

To the lower or outer end of the side members of each pair of adjacent sections 2 is pivotally secured a loop 9 adapted to engage a screw hook 10 screwed into the silo wall. The hook 10 is first turned up, then the loop 9 is passed under it and the hook 10 is then turned down, as shown in Fig. 8.

In assembling the roof, each section is engaged with the collar, and when all the sections are in place, if the lower ends of the sections are too loose or too tight together, the center post 3 is raised or lowered accordingly. This vertical adjustment of the center post is accomplished by means of a wedge 11 inserted between the top of the girder 4 and the shoulder 12 of a tenon formed on the post 3, as indicated by dotted lines in Fig. 7, or by any other equivalent device capable of vertically adjusting the upper ends of the roof sections. The outer ends of the sections are then engaged with the silo wall by means of the loop 9 and hook 10.

Preferably the girder is made in two parts, the shank 13 of the post 3 being received between them. This arrangement stiffens the mounting of the post and tends to keep it central.

The apex of the roof is rendered water-

tight by means of the sheet metal cone-shaped hood 14 which fits around the center post 3 above the collar 5 and battens 16 and overlaps the upper ends of the assembled roof sections.

After the roof is assembled as above described, it may be covered with any suitable water-proof roofing 15 and the joints between the adjacent roof sections may be protected by radially extending battens 16.

By the means above described I have produced a silo roof that is simple in construction, easy to transport and assemble and capable of being put together without the aid of skilled labor.

Having described my invention, what I claim and desire to secure by Letters Patent, is:—

1. In combination with a silo wall, a roof comprising a transverse girder carried by said wall, an upright post carried by said girder, a plurality of segmental roof sections, means carried by said post for removably securing the upper ends of said roof sections, means for holding the lower ends of said sections to said silo wall, and means adapted to vertically adjust the upper ends of said sections and thereby fit said sections together.

2. In combination with a silo wall, a two-part transverse girder extending diametrically across said wall, a post received between the members of said girder, said post formed with a shoulder, lifting means between said shoulder and girder, a plurality of segmental roof sections, a collar on said post, means carried by the upper end of each section adapted to engage said collar, and fastening means for the lower ends of said sections.

3. In combination with the segmental roof of a silo, said roof comprising a plurality of segmental sections, of means carried by the silo and adapted to effect vertical adjustment of the upper ends of said sections whereby to fit said sections together.

4. In combination with a silo wall, a roof comprising a transverse girder carried by said wall, an upright post carried by said girder, a plurality of segmental roof sections, means carried by said post for removably securing the upper ends of said roof sections, means for loosely holding the lower ends of said sections to said silo wall, but adapted to permit independent inward and outward adjustment of said wall, and means adapted to vertically adjust the upper ends of said sections and thereby fit said sections together.

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

CHARLES W. McCLURE.

Witnesses:

CHRISTINE A. BRAIDEL,

GEO. W. SMITH.