G. SMITH.

ROOF CONSTRUCTION.

APPLICATION FILED DEC. 8, 1914.

1,176,000.

Patented Mar. 21, 1916.

2 SHEETS—SHEET 1.

Fig. 1

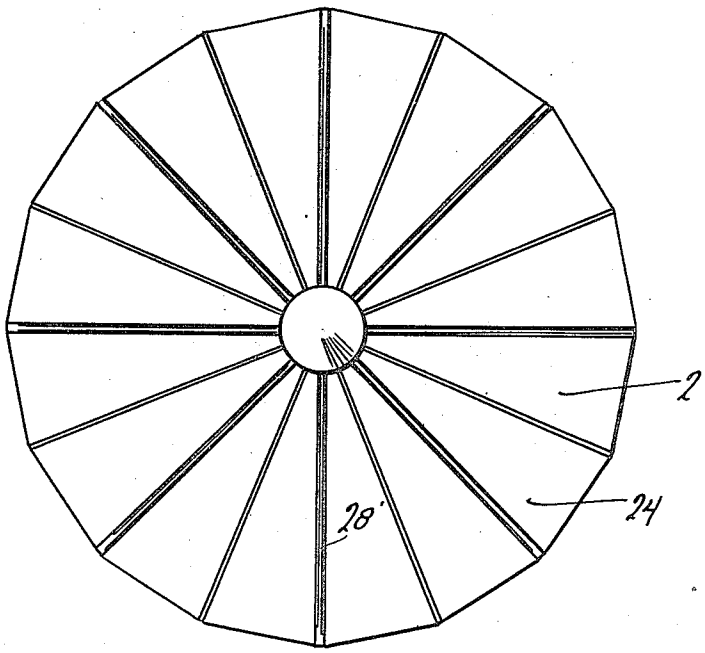
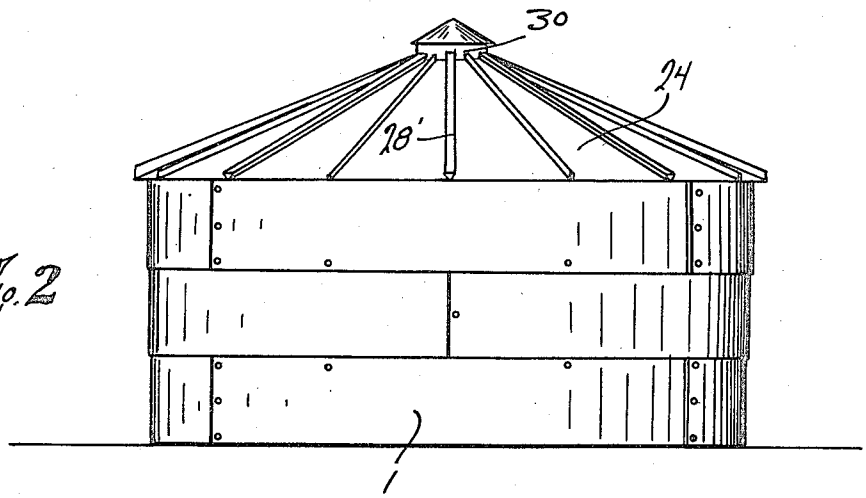


Fig. 2



Inventor

Greene Smith

Witnesses

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2 SHEETS—SHEET 2.

Fig. 5

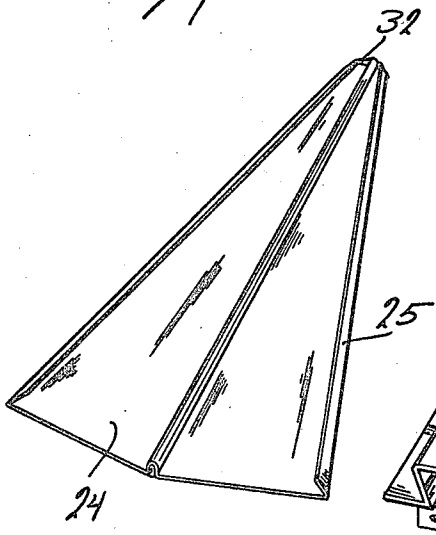


Fig. 6

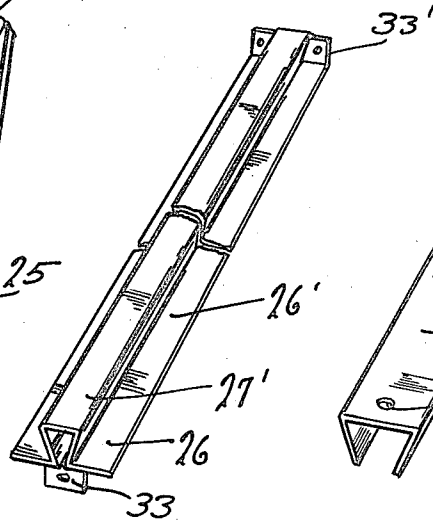
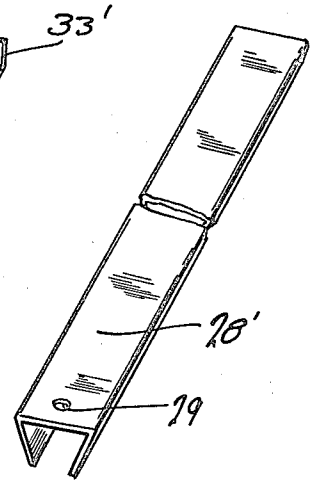


Fig. 7



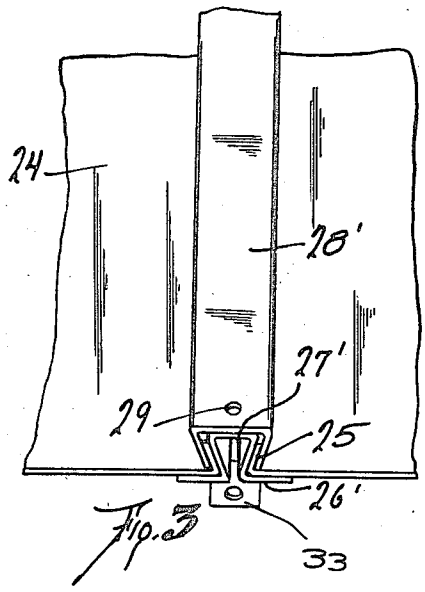


Fig. 3

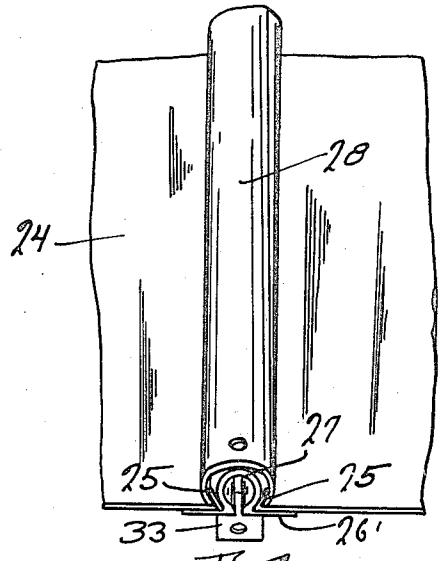


Fig. 4

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UNITED STATES PATENT OFFICE.

GREENE SMITH, OF SPOKANE, WASHINGTON.

ROOF CONSTRUCTION.

1,176,000. Specification of Letters Patent. Patented Mar. 21, 1916.

Application filed December 8, 1914. Serial No. 876,023.

To all whom it may concern:

Be it known that I, GREENE SMITH, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented new and useful Improvements in Roof Construction, of which the following is a specification.

My invention relates to a grain storage tank and roof therefor, and has as its principal object the provision of a roof structure of simple construction and one causing a minimum of trouble in erection.

A further object of my invention is to provide a roof structure which may be readily and cheaply manufactured.

A final object of my invention resides in the particular arrangement and combination of parts hereinafter described.

In the accompanying drawing: Figure 1 is a top plan view of a grain or the like bin provided with my improved roof. Fig. 2 is an elevational view of the bin and roof shown in Fig. 1. Fig. 3 is a detailed perspective view, partly in section, of a joint in an assembled roof made according to the preferred form of my invention. Fig. 4 is a view similar to Fig. 3 but of a modified form of my invention, which latter form is shown and described in my copending application numbered 762,975, for a grain storage tank, filed April 23, 1913. Fig. 5 is a perspective view of a segmental roofing section used in carrying out my invention. Fig. 6 is a detailed perspective view of one of the locking pieces used in making up the roof joints. Fig. 7 is a perspective view of the resilient sleeve used in making up the water-tight roof joint.

Referring more particularly to the drawing, 1 represents the sides of the bin which are shown in circular outline.

2 represents the roof structure as a whole. This structure is composed of a number of sectoral units 24 having upturned edges 25 lying at an acute angle to the top surface of the unit. In assembling the roof these units are placed together to form a conical shaped roof, the joints being formed by placing the hollow rib 27′ of the locking piece 26 so that the hollow rib projects up between the two adjoining roof sections 24 and the flanges of the lock piece 26′ abut against the under side of the unit pieces 24. It will be seen that the ribs 27′ lie between and contact with the faces of the two upturned edges 25 of adjacent unit members of the roof, the cross section of the ribs 27′ being somewhat like the letter V. I provide also a resilient holding split sleeve 28′ which has a cross section similar to that of the ribs 27′, but which is larger than said ribs. This resilient sleeve is then slipped over the upturned edges 25 holding them tightly together and against the ribs 27′. The sleeve 28′ is provided with a hole 29 to allow for the insertion of a suitable instrument for withdrawing the sleeve when desired. The sectoral units making up the roof are formed so as to leave a hole at the center for the reception of the ring 30 which forms an opening in the tank to permit both ventilation and inspection. The inward end 32 of the roof unit may be turned upward against the ring 30 so as to form a water shed. It will be seen, moreover, that the lower ends of the members 26 have rigid therewith lugs 33 by which the roof structure may be attached to the walls of the bin. The inner ends of the members 26 may also be formed as at 33′ to promote the connection of these members with the ring 30. In case this latter construction is adopted the rods 31 may not be necessary.

Referring more particularly to Fig. 4, it will be seen that this modification comprises members 27 and 28 having functions similar to members 27′ and 28′ previously mentioned, the principal difference being that in the form shown in Fig. 4, the parts have an oval cross section instead of a V-shaped cross section. It will be seen that Fig. 3 shows the preferred form since this form is entirely waterproof owing to the closer fitting of the parts. The remaining details of the forms shown in Figs. 3 and 4 are identical.

Having thus described my invention, what I claim is:—

In a circular roof of the character described, sectoral roof sections having upturned flanges inclined toward the body of said sections at an acute angle, a locking channel having a top flat web and side channel walls converging downwardly toward each other and shaped to abut in flat relation against the inside faces of the flanges of said sections, said side walls of said locking channel having laterally extending

flanges abutting against the bottom faces of said sections, and a resilient holding channel having a web abutting upon the web of said locking channel and provided with converging flanges abutting against the outside faces of the upturned flanges of said sections, substantially as described.

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

GREENE SMITH.

Witnesses:
HERBERT E. SMITH,
EDNA BROYLES.