

J. KRUZICK,
SILO MOLD.

APPLICATION FILED JAN. 25, 1915.

1,154,783.

Patented Sept. 28, 1915.

3 SHEETS—SHEET 1.

Fig. 1.

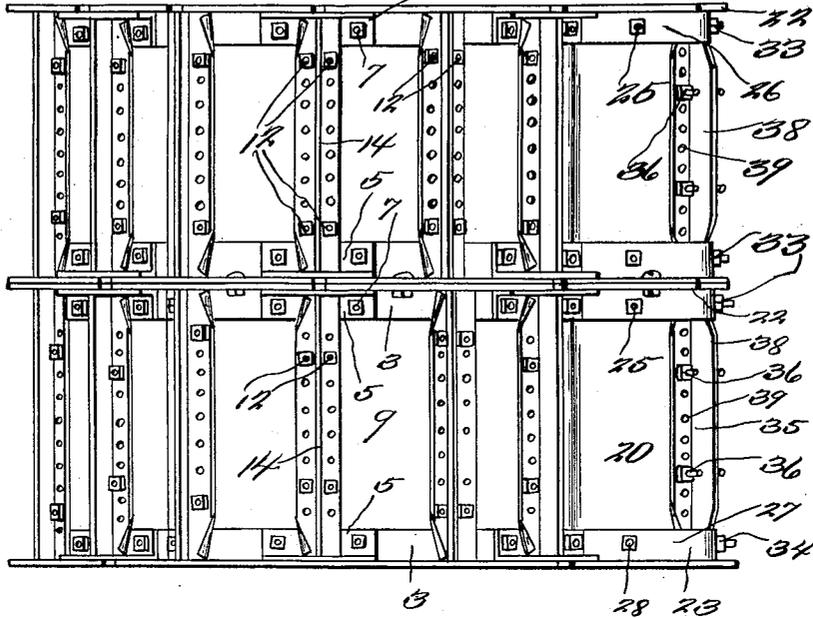
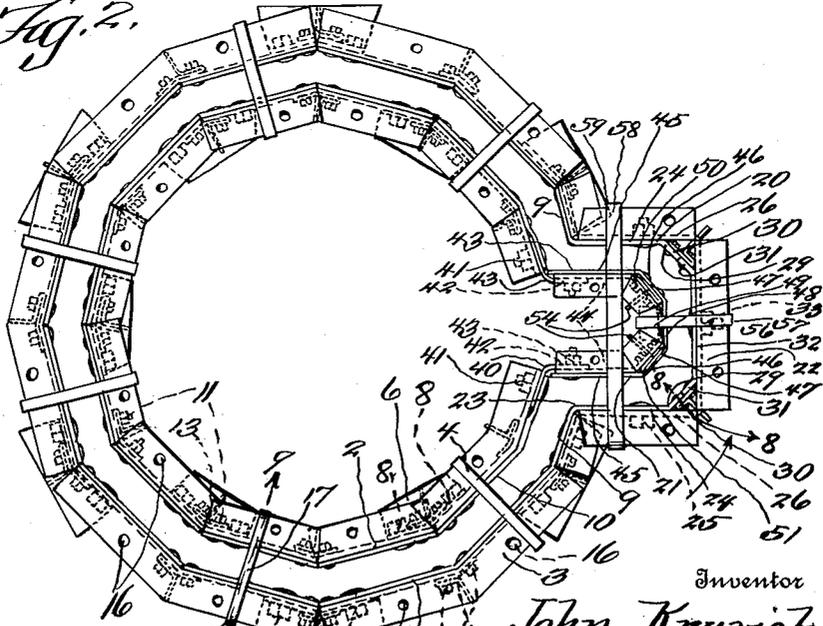


Fig. 2.



Witnesses
Philip Terrell
Francis F. Maxwell

Inventor
John Kruzick
By *D. Swift & Co.*
Attorneys

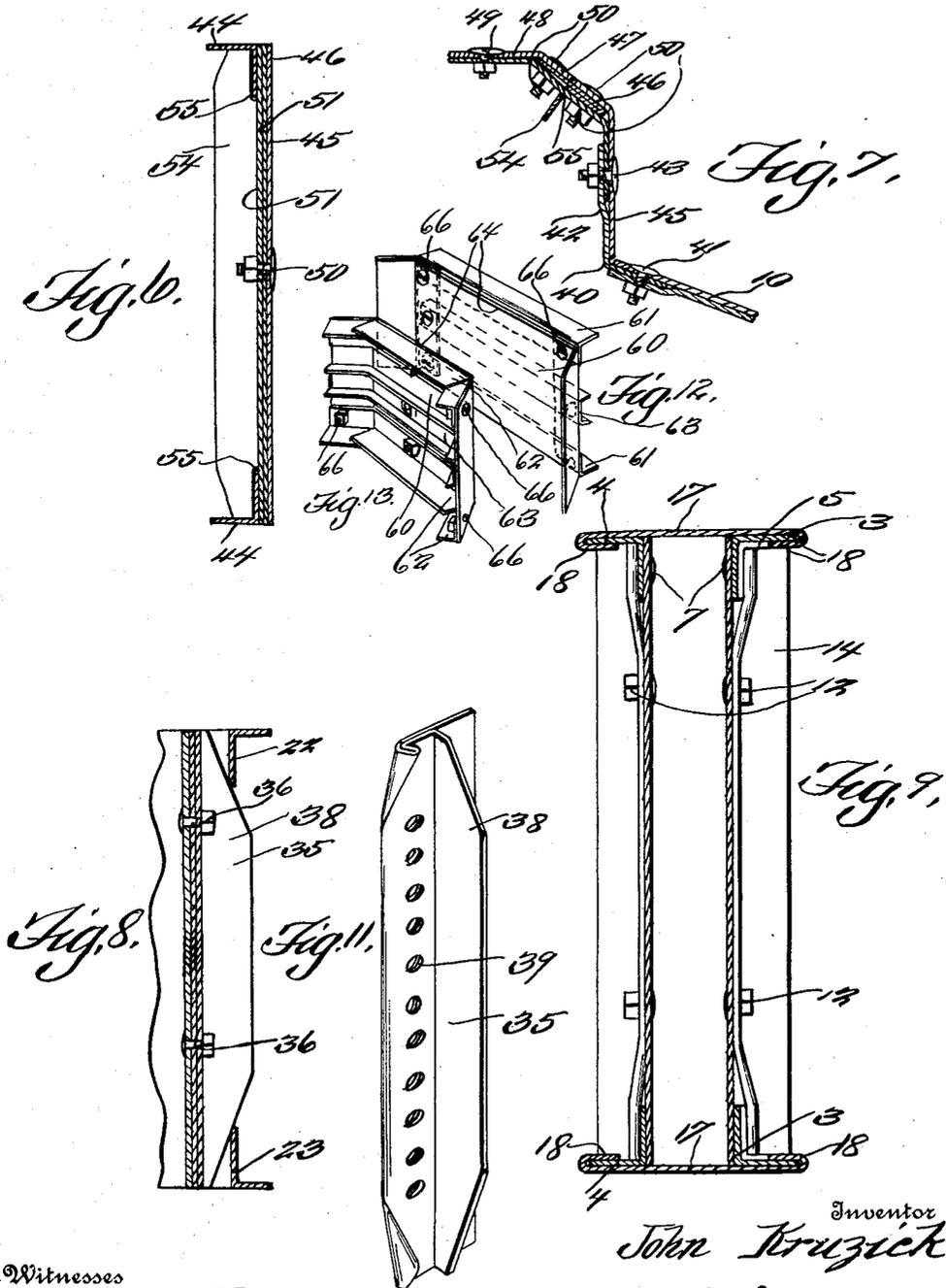
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3 SHEETS—SHEET 3.



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Philip Perrell.
Francis J. Perrell.

Inventor
John Kruzick

By *D. Swift & Co.,*
Attorneys

UNITED STATES PATENT OFFICE.

JOHN KRUZICK, OF WINAMAC, INDIANA.

SILO-MOLD.

1,154,783.

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To all whom it may concern:

Be it known that I, JOHN KRUZICK, a citizen of the United States, residing at Winamac, in the county of Pulaski and State of Indiana, have invented a new and useful Silo-Mold; 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 an improved mold or form for molding or constructing cement or concrete silos, or other plastic similar structures or cisterns.

As an object of the invention it is the aim to provide upper and lower segmental sheet metal angle iron joined or united in sequence, to form upper and lower substantially circular rings connected by vertically arranged plates, the adjacent edge portions of which are connected by strips T-shaped in cross section, thereby forming inner and outer walls, between which plastic material may be deposited to form a silo or other similar plastic structure.

Another object of the invention is the provision of a silo mold or form comprising inner and outer walls provided with offset sectional parts to form an offset hollow portion to the silo, the inner wall of the offset sectional part being substantially of a polygonal contour and having reinforcing strips T-shaped in cross section, the upper and lower end portions of said T-shaped strip being slitted or slotted to receive the upper and lower angular reinforcing strips.

Another feature of the invention is the provision of connecting straps for connecting the inner and outer walls of the mold, and after the concrete or other plastic material has become set, that is, of the first tier of the silo said connecting strips are removed, and additional inner and outer walls, to form the second tier of the silo are bolted as shown to the upper portions of the first inner and outer walls, and so on until the silo has been completed.

In practical fields the details of construction may necessitate alterations, falling within the scope of what is claimed.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings: Figure 1 is a view in side elevation of the first and second tiers of the inner and outer walls of the mold.

Fig. 2 is a plan view of Fig. 1, showing parts in section. Fig. 3 is an enlarged detail perspective view of a portion of the outer wall of the mold, showing a part of the offset portion and looking downwardly. Fig. 4 is an enlarged perspective view of the structure shown in Fig. 3 looking upwardly. Fig. 5 is a detail view of the inner wall of the offset part of the mold, showing the reinforcing strips T-shaped in cross section. Fig. 6 is a sectional view on line 6—6 of Fig. 5. Fig. 7 is a sectional view on line 7—7 of Fig. 5. Fig. 8 is a sectional view on line 8—8 of Fig. 2. Fig. 9 is a sectional view on line 9—9 of Fig. 2. Fig. 10 is a detail view of one of the strips 51. Fig. 11 is a detail view of one of the strips 35. Figs. 12 and 13 are detail views showing a modified form of extension walls.

Referring more especially to the drawing, 1 and 2 designate the outer and inner walls of the mold, and it may be well to state that the accompanying drawings are merely used for the purpose of illustration, and moreover, the shape or contour of the mold may be varied. In other words, the walls may be drawn exactly circular, instead of polygonal in outline. The inner and outer walls comprise upper and lower segmental strips 3 and 4, angular in cross section. These segmental sectional strips, angular in cross section are connected by shorter strips 5 and 6 angular in cross section, by means of bolts and nuts 7 and 8. The upper and lower segmental strips 3 of the outer wall are connected by the vertical wall plates 9, also bolted to the strips 3 by means of the bolts 7, and similar wall plates 10 are bolted by the bolts 8 to the upper and lower strips 4 of the inner wall. Connected by means of bolts 11 and 12 to the adjacent edge portions of the wall plates 9 and 10 of the inner and outer walls are connecting or uniting strips 13 and 14 T-shaped in cross section, thereby forming a rigid structure. These connecting or uniting strips are constructed of sheet metal bent upon themselves as shown in Fig. 10 to form the T-shaped contour in cross section, and it will be noted that the upper and lower ends of the connecting or uniting strips overlap the vertical parts or flanges of the strips 3 and 4, as shown in Fig. 9. It will be observed that the horizontal flanges of the strips 3 and 4 angular in cross section are provided with apertures or holes 16, to receive bolts, for bolting super-imposed in-

ner and outer walls upon the lower walls, in order to construct another tier to the silo. The horizontal flanges of the upper strips 3 and 4 of the inner and outer walls are connected by metallic straps 17 (Fig. 2) having bent over ends 18 to receive said horizontal flanges. However, before the inner and outer walls of the second tier of the silo are bolted upon the first inner and outer walls, the straps 17 are removed, but are not removed until the concrete, cement or other plastic material has become well set.

The walls 1 and 2 are provided with offset extension walls 20 and 21 of the shape or contour as shown Figs 2, 3, 4, 5 and 7. The extension wall 20 comprises upper and lower reinforcing strips 22 and 23, which are angular in plan view, and angular in cross section. As will be observed one of the plates 9 on each side of the extension wall 20 is bent as shown at 23 forming a part 24 (Fig. 2) which is bolted at 25 to the downwardly extending flange 26 of the upper strip 22 and to the flange 27 of the lower strip 23, as shown at 28, (Fig. 1). The part 24 is bent at 29 forming a short flange 30 (Fig. 1). The flanges 30 abut against the flanges 31 of the plate 32, which is bolted at 33 to the downwardly extending flange of the strip 22 as shown at 33, and to the upwardly extending flange 27 of the lower strip 23, as shown at 34 (Figs. 1, 2, 3, 4 and 5). Where the flanges 30 and 31 abut, they are connected by the vertical reinforcing strip 35 T-shaped in cross section which are bolted at 36 to said flanges 30 and 31 (Figs. 2 and 3). The strips 35 are formed with sheet metal, and are bent upon themselves to form the T-shaped contour, and the upper and lower ends of the flanges 38 of said strips 35 are beveled off, as shown to fit the corners of the upper and lower strips 22 and 23, as shown clearly in Figs. 1 and 8, thereby reinforcing the structure. The bolts 36 may be inserted through any of the apertures 39. Where the inner wall 2 merges or blends into the extension wall 21 angular plates 40 are provided, which are bolted at 41 (Fig. 2) to the angular strips 4 above and below, and the arms 42 of the plates 40 are bolted at 43 to the strips 44 (Figs. 2 and 5), angular in cross section. Plates 45 are connected also at 43 to the upper and lower strips 44, and are provided with angular extending flanges 46 abutting the flanges 47 of the plate 48, which in turn is bolted at 49 to the upper and lower angular strip 44 (Figs. 2 and 5).

Each of the strips 44 is constructed in one piece, and in order that the same may be bent to the shape shown, particularly in Fig. 2, the horizontal flange of each of the strips 44 is severed as shown, so that parts of the

horizontal flange may overlap, as illustrated. Bolted at 50 to the inner surfaces of the flanges 46 and 47 are reinforcing strips 51 T-shaped in cross section (Figs. 2 and 5), and similar in construction to the strips 35, and the T portions of the strips 51 are interposed between the flanges 46 and 47 and the vertical flanges of the strips 44, and in order to permit of this construction the flanges 54 of the T-shaped strips 51 are slotted or slitted, as shown at 55 (Figs. 2 and 5) to receive the vertical flanges of the strips 44, thereby rigidly reinforcing the extension offset wall 21. Connecting the horizontal flanges of the upper strips 22 and 44 are metallic straps 56 having hooked ends 57, so as to hold the offset extension walls rigid with relation to each other. Connecting the opposite flanges of upper strips 22 is a metallic strap 58 having hooked ends 59, thereby holding the opposite side walls of the offset extension wall 20 in their proper position. The offset extension walls 20 and 21 may also be constructed by the modified form of plates shown in Figs. 12 and 13, which plates 60 are constructed of the angular strips 61, 62 and the trough-shaped strips 63 and the plates 64, bolted together in the manner shown, as at 66.

As before stated, the various sectional parts of the mold may be made in other shapes, either as shown, or circular or otherwise.

The invention having been set forth, what is claimed as new and useful is:—

A silo mold comprising inner and outer concentric walls, said walls having correspondingly constructed offset extension walls conforming in contour to each other, designed to mold a hollow offset extension wall to the silo, each of the offset extension walls consisting of upper and lower strips angular in cross section, plates connecting the upper and lower strips, reinforcing strips T-shaped in cross section connecting the adjacent edge portions of said plate and having their upper and lower ends disposed between the strip and said plates, and a connecting strap between the upper strips of the offset extension walls, the T-shaped strips of one of the extension walls having their upper and lower ends slotted to receive the vertical flanges of the angular upper and lower strips.

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

JOHN KRUZICK.

Witnesses:

LOUIS A. REIDELBACH,
EUGENE T. PRINCE.