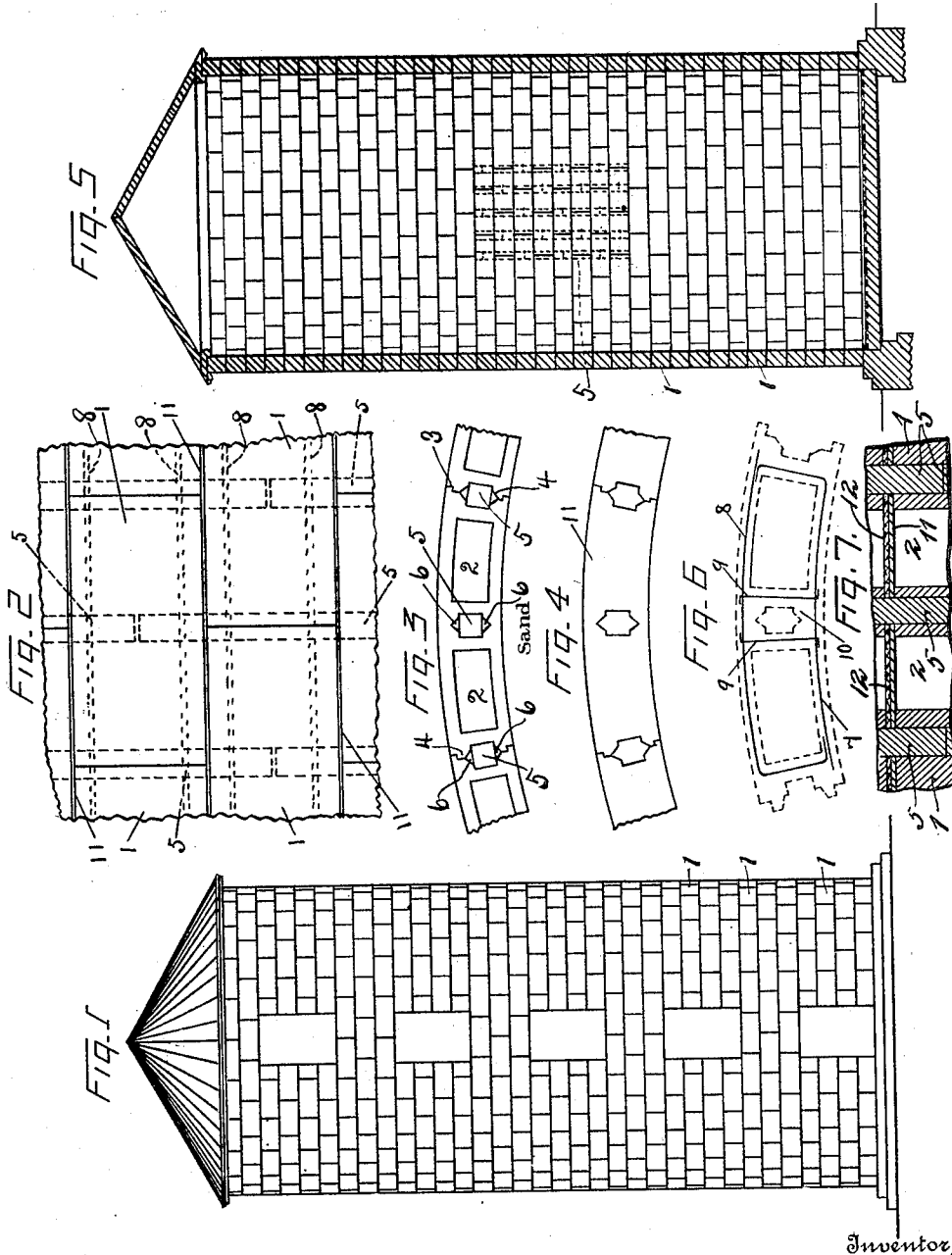


E. M. SELLORS.
SILO.
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1,106,897.

Patented Aug. 11, 1914.



Inventor,

Edward M. Sellors,

Witnesses

J. M. Stitt.
L. J. Knight

By

A. L. Jackson,

Attorney

UNITED STATES PATENT OFFICE.

EDWARD M. SELLORS, OF FORT WORTH, TEXAS, ASSIGNOR OF ONE-HALF TO A.
McKENNA, OF FORT WORTH, TEXAS.

SILO.

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To all whom it may concern:

Be it known that I, EDWARD M. SELLORS, a citizen of the United States, residing at Fort Worth, in the county of Tarrant, and State of Texas, have invented certain new and useful Improvements in Silos, of which the following is a specification.

My invention relates to silos, and particularly to silos constructed of hollow tiles, and the object is to construct silos of hollow tile and to bind them rigidly together by bars of wood embedded in the tiles. The object of using hollow tiles is to provide dead-air spaces within the tile, for the purpose of preventing the rapid passing of heat or cold through the tile.

Other objects and advantages will be fully explained in the following description, and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Figure 1 is a side elevation of a silo constructed in accordance with my invention. Fig. 2 is a broken view, illustrating the manner of binding the tiers in position. Fig. 3 is a plan view of one tile and broken views of others, illustrating the manner of forming the joint between two tiers. Fig. 4 illustrates a mat or sealing to be placed between each tier of tiles. Fig. 5 is a vertical section of the silo, illustrating the manner of binding the tiers together. Fig. 6 is a plan view, illustrating the manner of reinforcing each tier with wires or rods. Fig. 7 is a broken sectional view, illustrating the manner of sealing between tiers of blocks.

Similar characters of reference are used to indicate the same parts throughout the several views.

The improved silo is constructed in the form of the ordinary type of silos, preferably circular wall. The wall of the silo is constructed of blocks 1. Each block has two openings 2 therein, extending from top to bottom. The vertical meeting faces of two tiers are formed by a dove-tailed joint 3; that is, the face of one tier has a groove therein and the face of the other tier has a rib 4 which fits into the groove of the adjoining tier. A second groove is formed within the rib 4 and in the groove of the adjoining tier, and a wooden block 5 is inserted

in the groove formed between the two meeting faces. The groove formed between the two meeting faces is irregular in shape and has angular extensions on each side of the wooden block 5 for receiving sand 6 to form a seal about the wooden block 5. The joints or meeting faces of the tiles 1 are broken as illustrated in Fig. 2, the vertical joints or meeting faces of the tiles in one tier being at the middle points of the tiers of tiles above and below. Each tile has a third opening running vertically therethrough, which is similar to the opening formed by the vertical groove between the meeting faces of two tiles, and this third opening is in the center of the tile between the two openings 2. The object of a third vertical opening through the tile is to receive the locking bar 5. The arrangement of the wooden bars 5 is as follows: A bar 5 terminates in the center of a tile and extends out of the tile through the groove between the meeting faces of two tiles in the next tier and on into the center of the next tile in a third tier. Each wooden bar thus terminates in the center of a tile. Thus the two ends of the wooden bar terminate in the centers of two tiles with a tier of tiles between the tile in which each end of the wooden bar terminates. See Figs. 2 and 5. When the wooden bar is put in place, sand 6 is poured in to angular grooves on each side of the wooden bar 5, to form a seal. The vertical meeting faces of two tiles are secured together by the dove-tailed joint 3 and the wooden block 5 and the sand filling 6. The tiles are manufactured from materials in the following proportions: One part cement, one part sand and two parts gravel, with the necessary water. The tiles are reinforced with rods or wires 7 and 8, such as are shown in Fig. 6, each bar 7 being L-shaped and each bar 8 being L-shaped, and so placed in the tile as to form a quadrangular figure. In addition to the rods 7 and 8, cross-rods 9 are placed across the part 10 of the tile. A set of these reinforcing rods is embedded near the lower end of the tile and a similar set of reinforcing rods is embedded in the tile near the upper end. See Fig. 2 for the location of the two sets of reinforcing rods. A sealing mat 11, such as is illustrated in Fig. 4, is placed between each tier of tiles to form a perfect joint. The mat 11 has openings similar to the openings in the

tiles for the wooden bars and sand. Otherwise the mats are unperforated and made of flexible material and intercept the dead air spaces of the blocks. In order to make a
5 more perfect seal, liquid cement 12 is poured into the dead air spaces 2 until all inequalities are filled and a perfect seal is formed between the blocks 1. The blocks or bars
5 aid in forming a seal and they also serve
10 to maintain the seal because they prevent any lateral or other movement of the blocks on each other, holding the wall rigid.

What I claim, is,—

1. A silo constructed of concrete blocks
15 laid end to end in tiers and having the meeting ends of the blocks connected by dove-tailed joints, each block having a vertical groove in each end for receiving sealing devices and having a vertical opening through
20 the center thereof for sealing devices and having relatively large vertical openings therethrough for dead air spaces, each tier of blocks breaking joints with the adjacent tiers of blocks, wooden bars and sand run-
25 ning through the openings between the meeting faces of the blocks and terminating in the central openings of the adjacent tiers

of blocks, and a flexible mat between the horizontal faces of each two adjoining tiers.

2. Building blocks for silo walls laid end
30 to end and in tiers, the blocks of one tier breaking the joints between the blocks of adjacent tiers, each block having a vertical central opening therethrough and each block
35 having a vertical groove in each end thereof whereby a vertical opening is formed between each two blocks, a wooden bar running through the opening between each two
meeting ends and approximately half
40 through the blocks of the adjacent tiers, sand in the openings about the wooden bars, a flexible mat between the horizontal faces
of the tiers, each block having dead air
spaces vertically therethrough, and a cement
45 sealing poured into said dead air spaces on said mat to cooperate with said mat to form
a seal between the tiers.

In testimony whereof, I set my hand in the presence of two witnesses, this 19th day of August, 1913.

EDWARD M. SELLORS.

Witnesses:

A. L. JACKSON,
J. W. STITT.

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