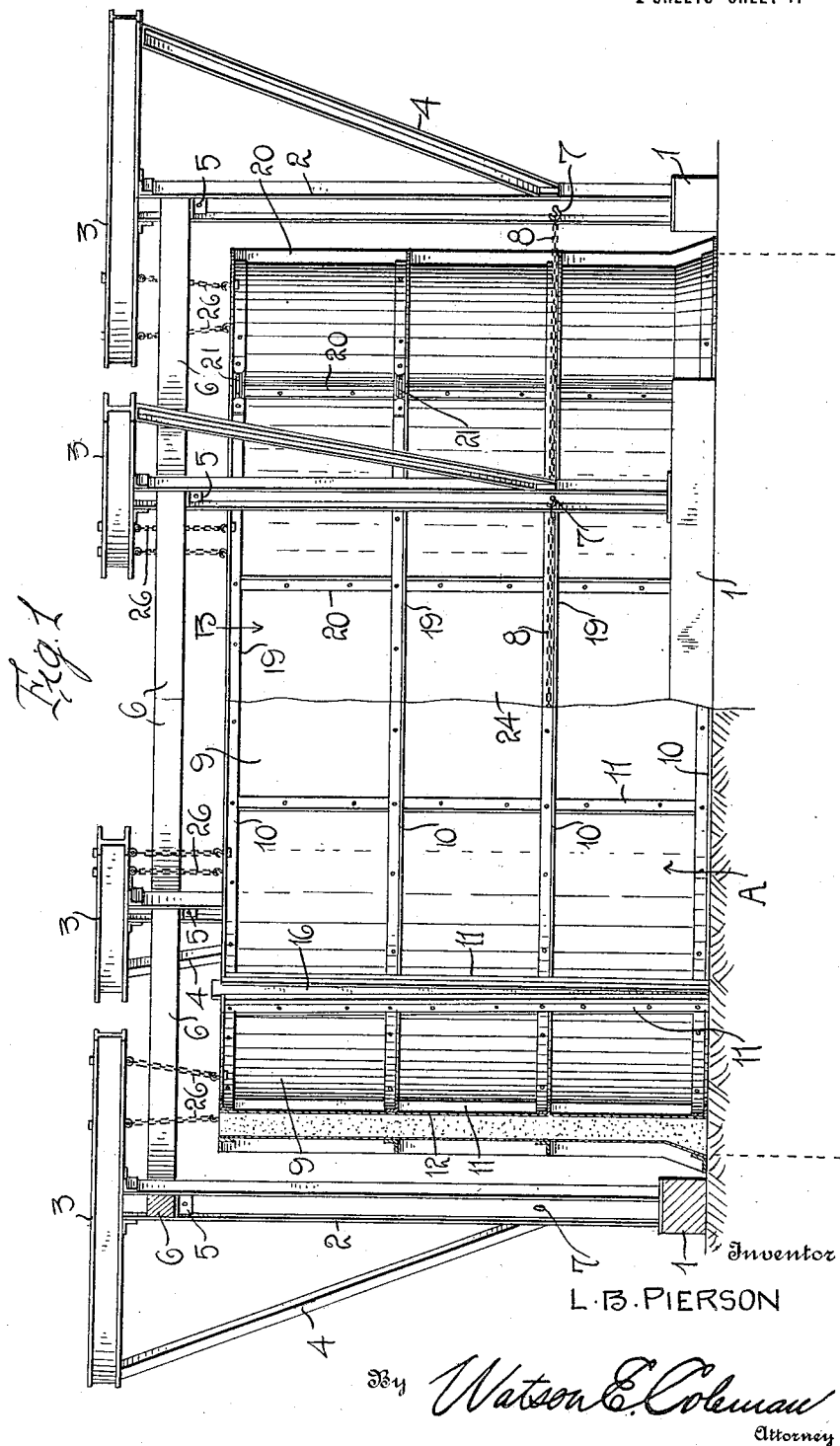


1,212,397.

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SILO CONSTRUCTION.
APPLICATION FILED MAY 1, 1916.

Patented Jan. 16, 1917.
2 SHEETS—SHEET 1.



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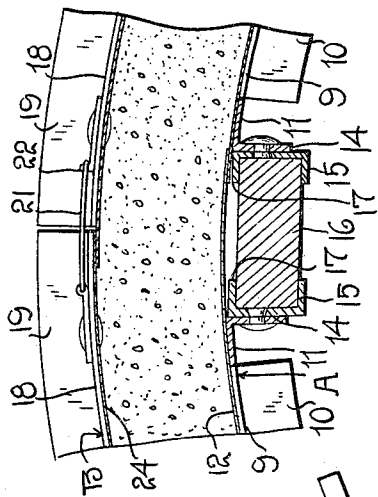
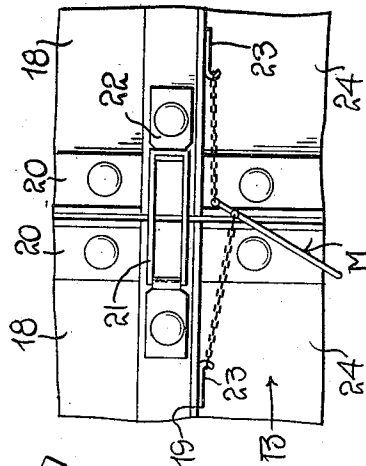
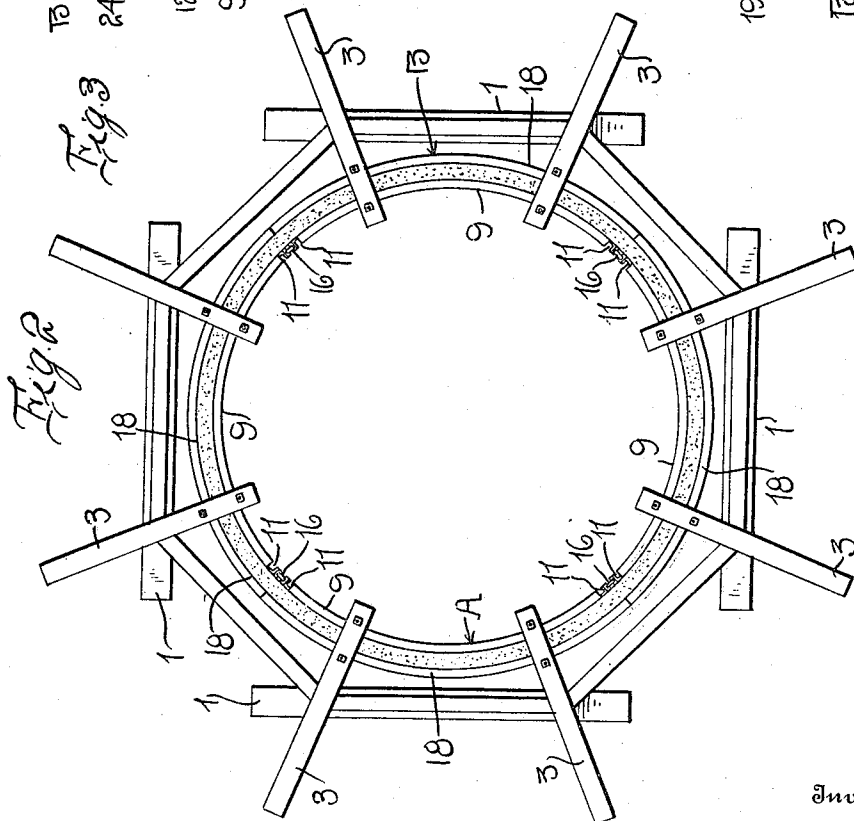


Fig. 4



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LUDVIG B. PIERSON, OF POTEET, TEXAS.

SILo CONSTRUCTION.

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Specification of Letters Patent.

Patented Jan. 16, 1917.

Application filed May 1, 1916. Serial No. 94,727.

To all whom it may concern:

Be it known that I, LUDVIG B. PIERSON, a citizen of the United States, residing at Poteet, in the county of Atascosa and State of Texas, have invented certain new and useful Improvements in Silo Construction, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to certain improvements in silo construction and it is an object of the invention to provide a novel and improved means whereby the vertical walls of the silo may be produced from plastic material and whereby said wall may be caused to extend within the ground so that a silo when completed is arranged substantially entirely below the ground level.

20 The invention also has for an object to provide a novel and improved mold comprising a plurality of sections together with means whereby said sections may be readily and effectively maintained in assembled relation.

25 A still further object of the invention is to provide novel and improved means whereby a mold for forming the vertical walls of a silo or the like may be conveniently supported in applied position and in such a manner as to permit the wall or walls formed therein to descend as the ground is excavated beneath said wall or walls.

30 The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved silo construction whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will hereinafter be definitely claimed.

45 In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

50 Figure 1 is a view partly in elevation and partly in section showing a mold constructed in accordance with an embodiment of my invention and at the initial operation in the production of a silo, the excavation being indicated by dotted lines; Fig. 2 is a view in top plan, on a reduced scale, of the mold construction as herein embodied; Fig. 3 is an enlarged fragmentary horizontal section

taken between the meeting ends of the sections of the mold members; and Fig. 4 is a fragmentary elevation illustrating the locking means coacting with the meeting ends of the sections of the outer mold member.

As disclosed in the accompanying drawings, 1 denotes elongated supporting members or beams adapted to be rested upon the ground level and provided with the up- standing posts 2 having their upper ex- tremities provided with the horizontal beams 3 extending radially of the axial center of the silo or the like to be formed and extend- ing beyond the opposite sides of the posts 2.

70 The outer ends of the beams 3 and the lower end portions of the posts 2 have inter- posed therebetween the brace beams 4 and the substantially opposed faces of the posts 2 are provided with the plates 5 or the like to afford means whereby the interposed brace bars 6 may be applied. The lower end por- tions of the posts 2 are provided with the hook member 7 to afford an anchoring means for the chains 8 in order to further strengthen the structure and to assure the maintenance of the posts 2 in their prede- termined spaced relation.

85 The disclosure in the accompanying draw- ings embodies a silo circular in cross-section and the mold proper comprises two coacting members A and B of predetermined dimensions and having their opposed faces in predetermined spaced relation, it being un- derstood that concrete or other plastic ma- terial is deposited between the members in order to form the vertical wall of the silo.

90 The members A and B rest upon the ground line and as the plastic material de- posited therebetween sets, the ground be- neath the mold is excavated, and as the earth is removed from directly beneath the mold- ed wall, said wall will drop within the ex- cavation. It will be understood that as soon as a molded wall has substantially entirely passed from between the members A and B, a second pouring of plastic material will be made and as soon as the second pouring has set, the excavating will be continued and this method will be repeated until a vertical wall has been extended a predeter- mined distance within the earth.

100 In practice I find it of advantage to have the vertical wall of the completed silo ex- tend above the ground line a height substan- tially equal to the height of the mold mem- 110

bers A and B. In order to complete the silo, it will be perceived that the bottom portion of the excavation within the vertical wall will be covered with concrete or other plastic material and that a suitable top will be applied. This, however, forms no essential feature of my invention. It will also be understood that reinforcing fabric or members may be embedded within the concrete or plastic material to strengthen the wall or walls of the silo or the like.

Each of the members A and B is divided vertically into a plurality of sections and the sections 9 of the inner member A comprise the horizontal members 10 and the vertical members 11 having secured to the inner faces thereof the metallic plate or sheet 12. The end vertical members 11 of the sections 9 are arranged in downwardly converging relation and are provided with the outstanding longitudinal flanges 14 provided with the outwardly disposed flanges 15 to afford means for receiving the wedge member 16, whereby it will be perceived that the sections 9 are effectively held in assembled relation, it being further observed that the inner longitudinal margins of the members 11 are also provided with the outwardly directed flanges 17. By this construction the members 11 are substantially U-shape in cross section. It is also to be observed that the sheets or plates 12 are so related that when adjacent sections 9 are in assembled relation, the adjacent end portions of the sheets or plates 12 are in overlapping relation.

The sections 18 of the outer mold member B also comprise horizontal members 19 and the vertical members 20, and the opposed extremities of the horizontal members 19 are provided with coacting locking means herein disclosed as a loop member 21 pivotally engaged with the horizontal member 19 of one of the sections and coacting with the catch member 22 carried by the adjacent horizontal member 19. The adjacent end portions of the horizontal members 19 are provided at points inwardly of the locking means with the hook members 23 with which a tightening mechanism M is adapted to coact in order to assure the proper assembly of the sections of the outer member B. A detail description of the tightening member M is thought to be unnecessary as I do not wish to be understood as limiting myself to any particular type.

The inner faces of the members 19 and 20 of the sections 18 have also secured thereto metallic sheets or plates 24, and it is to be noted that the adjacent ends of said plates

or sheets 24 are also overlapped when the sections 18 are assembled.

Secured to and depending from the inner portions of the horizontal beams 3 are the flexible members 26 herein disclosed as chains which are adapted to be engaged with the hooks 26 carried by the upper horizontal members of the mold members A and B, whereby it will be perceived that the mold is prevented from descending within the excavation during the building operation of the silo or the like.

From the foregoing description, it is thought to be obvious that a silo construction embodying my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason of the convenience and facility with which it may be assembled, and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

1. A mold for forming a vertical wall comprising two coacting mold members arranged in predetermined spaced relation, each of said mold members comprising a plurality of sections, the adjacent vertical margins of the sections being provided with vertical members substantially U-shape in cross section and arranged in downwardly converging planes, and a wedge member insertible between said U-shape members for holding adjacent sections in assembled relation.

2. A mold for forming a vertical wall comprising two coacting mold members arranged in predetermined spaced relation, each of said mold members comprising a plurality of sections, the vertical margins of the sections overlapping when in assembled relation, the adjacent vertical margins of the sections being provided with vertical members substantially U-shape in cross section and arranged in downwardly converging planes, and a wedge member insertible between said U-shape members for holding adjacent sections in assembled relation.

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

LUDVIG B. PIERSON.

Witnesses:

L. J. GITTINGER,
WM. H. RUSSELL.