J. H. WEST.

SILO.

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1,189,325.

Patented July 4, 1916.

Fig. 1.

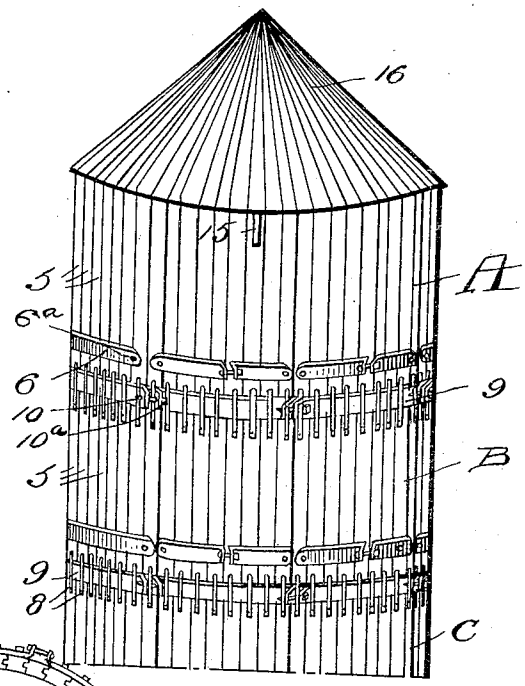
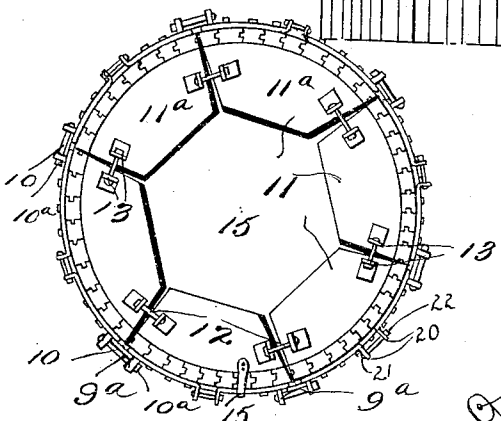


Fig. 2.



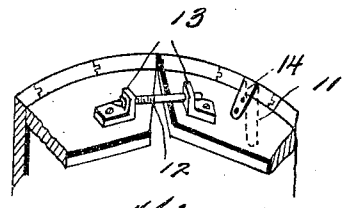


Fig. 3.

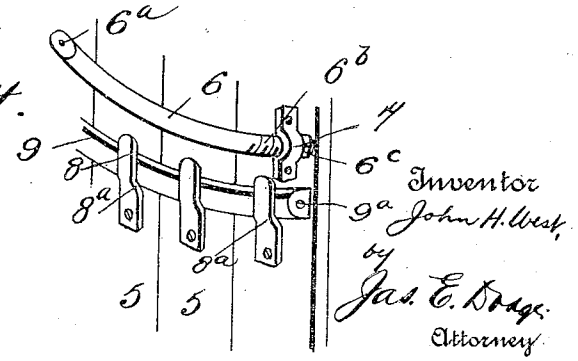


Fig. 4.

Witnesses
E. B. Semmes
E. L. Kneuss

Inventor
John H. West,
by
Jas. E. Dodge.
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. WEST, OF CARTHAGE, MISSOURI.

SILO.

1,189,325. Specification of Letters Patent. Patented July 4, 1916.

Application filed June 25, 1914, Serial No. 847,278. Renewed November 29, 1915. Serial No. 64,203.

To all whom it may concern:

Be it known that I, JOHN H. WEST, a citizen of the United States, and residing at Carthage, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Silos, of which the following is a specification.

This invention relates to improvements in silos, and its leading object is to provide a silo, formed of sections which are adapted to interlock with each other to form a tier of any suitable height, and each of which sections is made up of interlocked staves.

Another object of the invention is to provide simple and efficient means for locking the members of each section, to each other, and of locking the sections to each other.

Another object of the invention is to provide an improved stiffening member, for holding the stave sections in proper circular relation.

With the above and other objects in view, the invention comprises certain new and useful constructions, combinations and arrangements of parts, clearly described in the following specification and clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the improved silo; Fig. 2 is a top plan view thereof, with the top removed; Fig. 3 is a detail sectional view, on an enlarged scale, showing the arrangement of the staves of one of the sections, and the means for tying the staves together; and Fig. 4 is a detail perspective view showing the connection between the stave brackets and the securing band.

Referring to the accompanying drawings illustrating the practical embodiment of the invention, A, B and C designate three sections of my improved silo, which are shown arranged in superimposed relation. It is understood that we may have one section reaching from the bottom to the top of the silo, and be made up of a certain number of staves, say eight, or ten, or a dozen.

Each unit of the improved silo consists of a number of staves 5, which are formed with longitudinal tongues and grooves, arranged to interlock the sections to each other. The units are preferably formed of equal height and are adapted to seat on one another. Each unit consists of a plurality of sections, constituted by a number of the staves, and the staves of each section of each unit are united to each other by means of a tying band or member 6, one end of which is secured at 6^a. In the form of tying members shown in Figs. 1 and 2 there are two bands to each section and the adjacent or inner ends 20 of this pair are united by an adjustable bolt 21 with nut 22. By tightening up on the nut 22 the two outer boards of each section are drawn together, thus bringing all the boards in the sections tightly together. This takes up the slack after the boards have stood out in the weather for a season or so. In the form shown in Fig. 4 a single band 6 is used secured at one side of the section at 6^a and having its other end extending through the holding eye 7. In this case a nut 6^c would be arranged on the threaded end of the band 6 and hold the staves of the section snugly together.

On the upper ends of the staves of each unit a plurality of brackets 8 are fixed, the lower ends of the brackets being supported against the staves by rivets or like means, and the upper ends of the brackets being offset to form seats 8^a. A band section 9 is adapted to seat on the brackets 8, and the ends of the band section 9 are formed with terminal ears 9^a. Each section of each unit carries a band section 9, and the confronting terminal ears of the band sections are clamped together by means of bolts 10 and nuts 10^a. When the band sections 9 are united, the unit will be properly assembled.

Within the upper end of the upper unit of the silo, a stiffening member 11, consisting of a plurality of sections 11^a, is placed. The sections 11^a are in the shape of sectors, and are locked to each other by means of clamping bolts 12, which extend through the upstanding ears 13 carried by the sections 11^a. When assembled together the sections 11^a form a circular ring. Each section 11^a is provided with an arm 14, which is adapted to overhang the silo unit and support the stiffening member within the unit. The stiffening member provides a central air space 15, and a suitable top 16 is disposed on the top of the silo to protect said central air space. When the sections of the silo unit are clamped together they will bind the sections of the stiffening member and thus lock the structure. End tongue and groove connections may be provided between the meeting ends of the silo unit, so that the units will be locked horizontally as well as vertically.

It is obvious that those skilled in this art may vary the details of construction and combinations of parts without departing from the spirit of my invention.

Having described my invention, I claim:—

1. A silo consisting of a plurality of units, one of the units being provided with brackets extending endwise thereof and the adjacent unit being provided with a band uniting the members of the unit and adapted to interlock with the brackets.

2. A silo consisting of a plurality of units interlocked in vertical formation, each unit consisting of a plurality of stave sections interlocked to each other, means for tying the staves of each section to each other, supports on the ends of each unit and bands clamping the sections of the silo to each other and adapted to interlock with the supports.

3. A silo consisting of a plurality of units, each unit comprising longitudinal tongue and grooved members interlocking with each other, supports on the end of said unit, and a clamping band carried by the adjacent unit and interlocking with the supports.

4. A silo consisting of a plurality of units, means for interlocking the units to each other, a stiffening member consisting of a plurality of sections forming a ring disposed within the upper unit, means for clamping the sections of the stiffening member to each other, and arms carried by said member adapted to seat on the upper unit.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

JOHN H. WEST.

Witnesses:
WARNIE BLACK,
LAURA HOBBS.

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