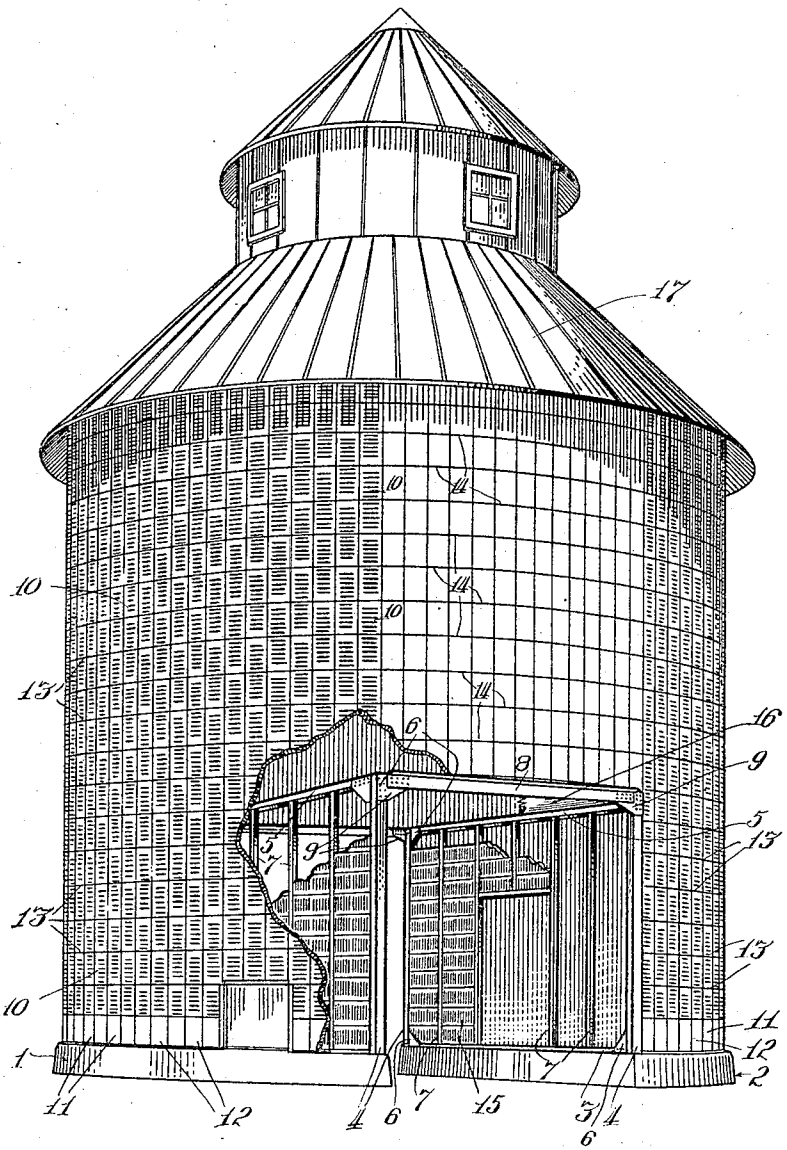
Nov. 20, 1923. 1,474,827

H. B. JONES

GRANARY

Filed July 22, 1922



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Patented Nov. 20, 1923. 1,474,827

UNITED STATES PATENT OFFICE.

HARRY BERNARD JONES, OF CHICAGO, ILLINOIS.

GRANARY.

Application filed July 22, 1922. Serial No. 576,706.

To all whom it may concern:

Be it known that I, HARRY BERNARD JONES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Granaries, of which the following is a specification.

My invention relates to granaries of a type for storing corn or other grain, and it has for its principal object the provision of a new and improved form and arrangement of parts by reason of which satisfactory ventilation is provided while at the same time the grain is protected against rats, rain or fire.

It is another object of my invention to so construct and re-enforce my improved granary that it shall be very strong to resist wind and that it shall not bulge or sag at any point under the stresses imposed by the weight of the grain.

In the building of granaries heretofore, it has been customary to provide a driveway through the middle of the lower portion and such a construction is ordinarily desirable. In prior constructions, however, the provision of this central driveway has had the effect of weakening the structure very materially, and it is one of the specific objects of my invention to provide a structure comprising such a driveway so arranged as to be as strong and as well braced in every way as if the driveway were not provided.

It is another object of my invention to improve constructions of this type in sundry details hereinafter pointed out.

The preferred means by which I have accomplished my several objects are illustrated in the drawings and are hereinafter specifically described.

That which I believe to be new and desire to cover by Letters Patent is set forth in the claims.

The drawing is a perspective view of a structure embodying my improvements.

Referring to the drawing,—

1 and 2 indicate sector shaped foundations in oppositely disposed spaced relation. Secured to the foundations 1 and 2 there are channel irons 3 from the ends of each of which rise I-beams 4. The I-beams above each of the channel bars 3 are connected at their upper ends by means of a longitudinally extending I-beam 5, gusset plates 6 being provided at the corners for reenforcing the construction. Intermediate I-beams 7 are also provided between the channel bars 3 and the top I-beams 5. The vertically disposed I-beams 4 at each end of the frame-work are connected at their upper ends by angle bars 8 with gusset plates 9 provided for reenforcement. The arrangement is such that the parts above described constitute a very strong frame-work capable of withstanding very heavy stresses.

At each side of the fabricated steel frame-work, as above described, I have provided wall sections which are preferably substantially circular and concentric, being formed of slabs 10 each of which is of an oblong shape with square ends. Each of the slabs 10 is provided with ventilating ducts therethrough, such ducts being directed inwardly and upwardly from the outer face of the slab, the slabs being formed of concrete or other suitable material by molding or in any other well known manner. In the lower tier of slabs, I have provided a slightly modified form in which only the upper half of the slab is provided with the ventilating ducts, such slabs being indicated by the numeral 11. In alternating position with the slabs 11, I have provided half length slabs 12 which are not provided with the ventilating ducts.

By the use of the alternate full length and half length slabs for the lowest tier I provide for breaking joints. About the middle portions of the slabs of each tier, I have provided rods 13 which are adjustably connected at their ends with the I-beams 4 at the ends of the frame-work, being suitably tightened about the slabs so as to hold the slabs tightly in contact with each other.

The wall portions at opposite sides of the frame-work are extended upwardly to the top of the frame-work, and upon such lower wall sections and upon the frame-work I have provided a substantially circular wall-portion formed of the same type of slabs, parts of the circular wall section being upward continuations of the lower wall sections. About the slabs of each tier of the upper wall section I have provided tightening rods 14 which are adjustable in any suitable manner for binding the slabs securely in contact with each other.

Between the upwardly disposed I-beams of the framework I have inserted slabs 15 of any suitable type, preferably having ventilating ducts therethrough, serving to close the sides of the frame-work. A floor 16 of

any suitable type is provided serving to close the top of the frame-work.

If desired, the slabs forming the upper wall portion above the ends of the frame-work may be of a solid form without the ventilating ducts so as to provide for the storing of small grain. On the top of the upper wall section I have provided a roof structure 17 of any approved type.

By the use of my construction, I have provided a granary for storage of corn, being so arranged as to provide suitable ventilation for the corn while at the same time excluding rain and snow. Inasmuch as the construction is steel and concrete throughout it will be appreciated that the crib is as nearly fire proof as it can be made. The ventilating ducts through the slabs are of a size such as to prevent the entrance of rats, whereby a very considerable saving is effected as compared with the use of a crib formed of wood. By the use of the fabricated steel frame-work with the heavy rods extending about the slabs and connected at their ends to the ends of the frame-work, I have provided a structure comprising a central driveway in which the construction as a unit is as strong as it would be if the drive way were not provided. As will be readily understood, the bars 13 and 14 function like the hoops about the staves of a barrel serving to hold the structure very strongly together, this result being attained very effectively by the expedient of breaking joints between the adjacent slabs. By the expedient of breaking joints by the positioning of the slabs which are made with square ends rather than by notching the slabs I have effected a very great saving in the cost of production of the crib.

While I prefer to employ the construction as shown in the drawing and as above described, it will be understood that I do not wish to be restricted to the precise details of construction illustrated except as the same is specifically claimed, since it is evident that many changes can be made in the structure without departing from the spirit of the invention.

I claim:

1. In combination, a fabricated steel framework, substantially circular wall portions formed of slabs at opposite sides of the framework, and rods extending about said wall portions at each side and tightened between the ends of the framework for holding the slabs in tightened contact.

2. In combination, two foundations in spaced relation for providing a drive-way between them, vertically disposed steel beams secured at their lower ends to said foundations at opposite sides of the drive-way at each end thereof, steel beams connecting the upper ends of the vertically disposed beams at each end of the drive-way, substantially circular wall portions formed of slabs and contacting at their ends with the vertically disposed steel beams, and rods extending about said wall portions and secured to said vertically disposed steel beams for holding the slabs in tightened condition.

3. In combination, a granary formed of two sections in spaced relation on opposite sides of a frame work for providing a drive-way between the sections, said frame work comprising vertically disposed steel beams at opposite sides of the drive-way at each end thereof, said beams being held at their lower ends against spreading with respect to each other, and comprising also steel beams extending across the drive-way and connecting the upper ends of the vertically disposed beams at each end of the drive way, said sections comprising substantially circular wall portions formed of slabs and contacting at their ends with the vertically disposed steel beams, and rods extending about said wall portions and secured to said vertically disposed steel beams for holding the slabs in tightened condition.

4. In combination, a fabricated steel framework, substantially circular wall portions formed of slabs at opposite sides of the frame-work and extending to the top of the frame-work, an annular wall portion formed of slabs above said lower wall portions and said frame-work, rods extending about said wall portions at each side of the frame-work and tightened between the ends of the frame-work for holding the lower tiers of slabs in tightened contact, and other rods tightened about the annular upper wall portion for holding the slabs of the upper tiers in tightened contact.

5. In combination, a fabricated steel frame-work, substantially circular and concentric wall portions formed of slabs at opposite sides of the frame-work and extending to the top of the frame-work, a substantially circular wall portion formed of slabs above said lower wall portions and said frame-work, the slabs of the upper tiers of the side wall portions having broken joints with the slabs of the lower tier of the circular upper wall portion, rods extending about said wall portions at each side of the frame-work and tightened between the ends of the frame-work for holding the lower tiers of slabs in tightened contact, and other rods tightened about the circular upper wall portion for holding the slabs of the upper tiers in tightened contact.

6. In combination, a fabricated steel frame-work, slabs closing the sides of the framework, a floor closing the top of the frame-work, curved wall portions formed of slabs at opposite sides of the frame-work and extending to the top thereof, an annular top wall portion above said side wall por-

tions and said frame-work and formed of slabs, rods extending about said lower wall portions at each side of the frame-work and tightened between the ends of the frame-work for holding the lower tiers of slabs in tightened contact, and other rods tightened about the upper wall portion for holding the slabs thereof in tightened condition.

7. In combination, two sector shaped foundations in oppositely disposed spaced relation, a fabricated steel frame-work anchored to said foundations and extending therebetween, wall portions formed of slabs at opposite sides of the frame-work and extending to the top thereof, an annular top wall portion above said side wall portions and said framework, and also formed of slabs, rods extending about said lower wall portions at each side of the frame-work, and tightened between the ends of the frame-work for holding the lower tiers of slabs in tightened contact, and other rods tightened about the upper wall portion for holding the slabs thereof in tightened contact.

8. A granary formed of two sections in spaced relation, two sector shaped foundations in oppositely disposed spaced relation supporting the outer walls of said two sections, channel iron beams secured along the inner edge portions of said foundations, upright beams secured to the ends of said channel iron beams and rising therefrom, horizontal I-beams secured to the upright beams above said channel iron beams, a plurality of other I-beams in vertical position between the downwardly directed flanges of the horizontal I-beams and the upwardly directed flanges of the channel iron beams, and slabs held in position between the flanges of the vertical I-beams forming the inner walls of the said two sections.

HARRY BERNARD JONES.