No. 811,032. PATENTED JAN. 30, 1906.

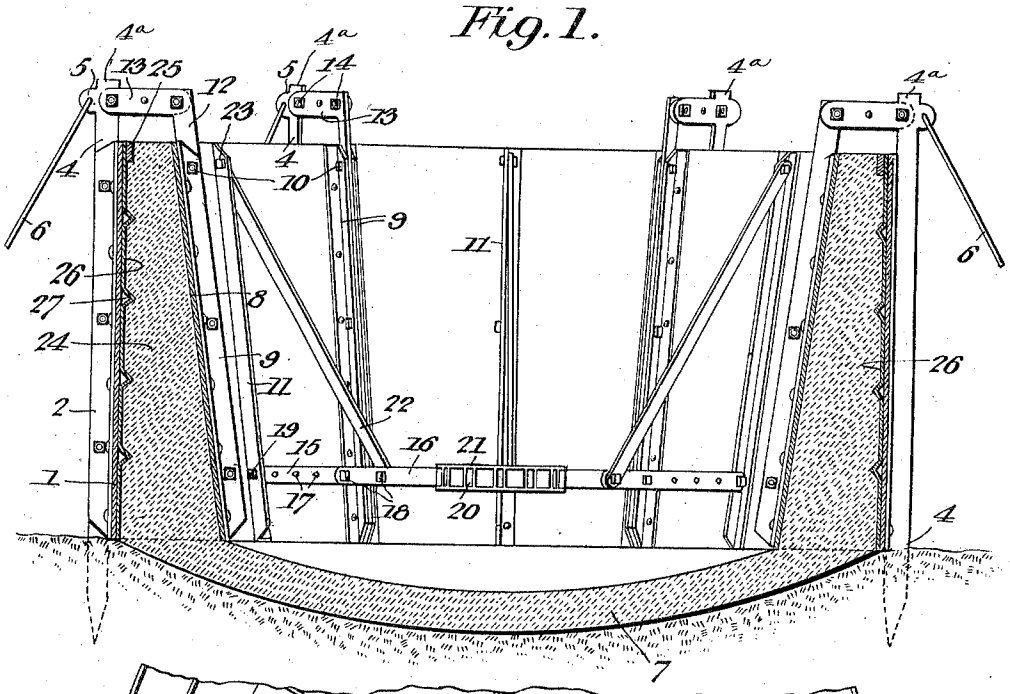
G. A. BYOR.

MOLD.

APPLICATION FILED MAY 11, 1905.

2 SHEETS—SHEET 1.

Fig. 1.



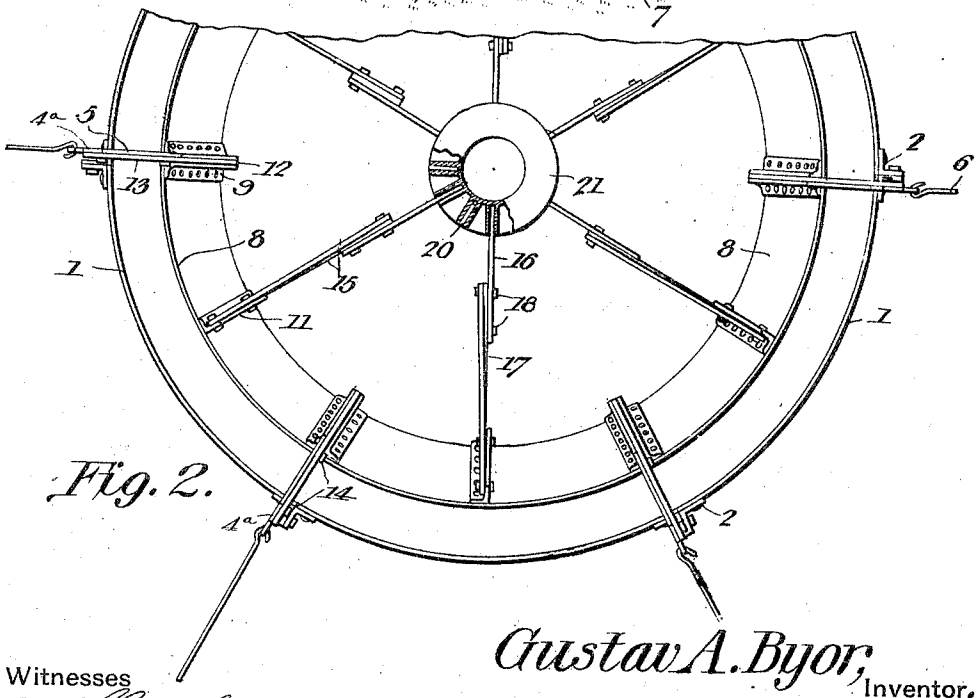


Fig. 2.

Witnesses

E. F. Stewart

H. C. Shepard.

Gustav A. Byor, Inventor.

by C. A. Snow & Co.

Attorneys

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2 SHEETS—SHEET 2.

Fig. 3.

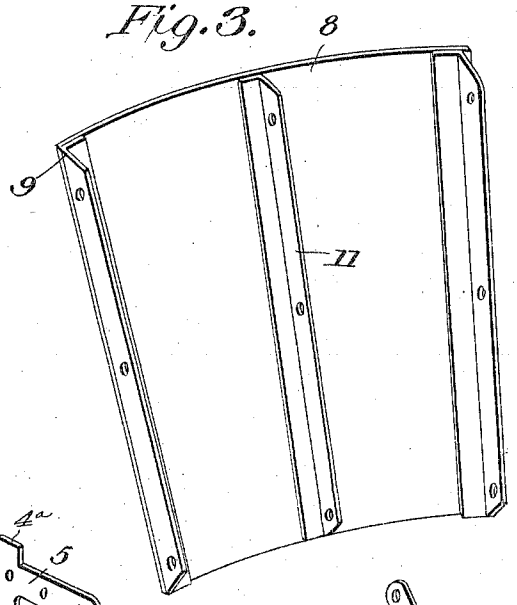
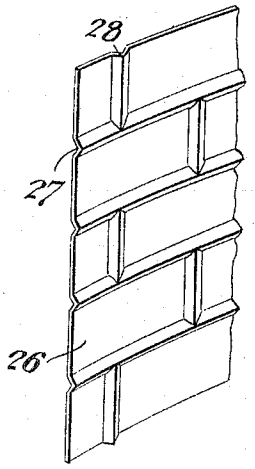


Fig. 6.



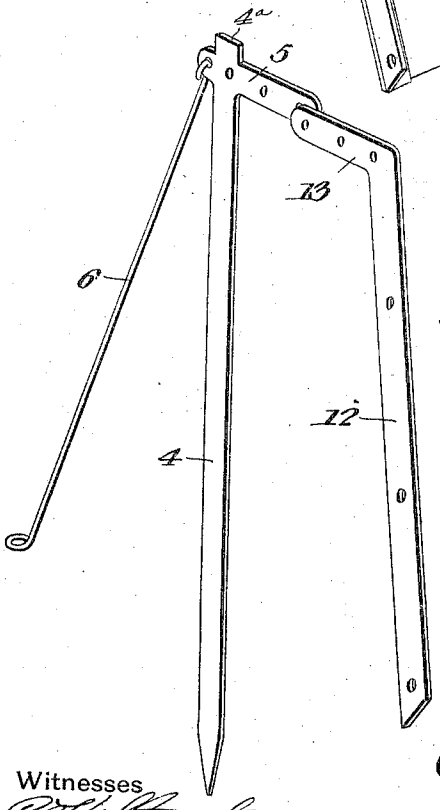
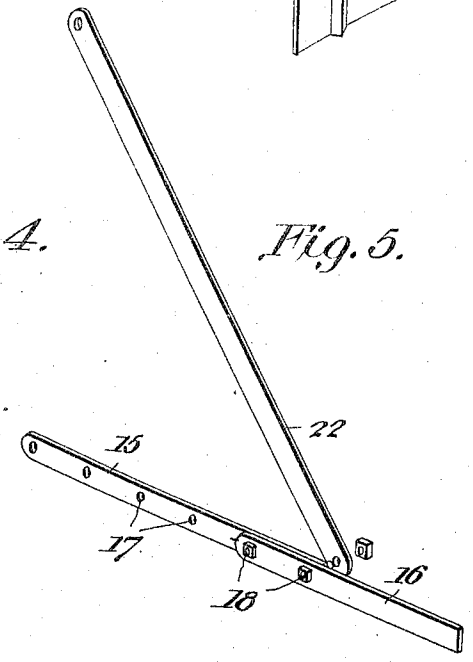


Fig. 4.

Fig. 5.



Witnesses

E. F. Stewart

H. C. S. Shepard

Gustav A. Byor, inventor.

by C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

GUSTAV A. BYOR, OF EDGAR, NEBRASKA.

MOLD.

No. 811,032. Specification of Letters Patent. Patented Jan. 30, 1906.

Application filed May 11, 1905. Serial No. 259,948.

To all whom it may concern:

Be it known that I, GUSTAV A. BYOR, a citizen of the United States, residing at Edgar, in the county of Clay and State of Nebraska, have invented a new and useful Mold, of which the following is a specification.

This invention relates to molds, and is primarily designed to enable the convenient setting up of the mold upon the ground for the formation of a concrete or artificial-stone drinking-tank which is to remain in the position molded after the mold has been removed therefrom.

With this and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a vertical sectional view of a mold embodying the features of the present invention. Fig. 2 is a fragmentary top plan view thereof. Fig. 3 is a detail perspective view of one of the inner mold-sections. Fig. 4 is a detail perspective view of a pair of adjacent inner and outer posts. Fig. 5 is a detail perspective view of one of the internal braces. Fig. 6 is a fragmentary perspective view of a plate to be employed for giving an ornamental configuration to the exterior of the tank.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

Preparatory to setting up the present mold a shallow pit is dug in the ground, as indicated in Fig. 1 of the drawings, said pit preferably having a concave bottom. After this pit or concavity has been produced the outer member of the mold is set up. This outer member consists of a series of sheet-metal sections 1, having their ends abutted and flanged, preferably by means of external angle-bars 2 riveted thereto, the adjacent flanges or angle-bars of the abutted sections being detachably connected by means of bolts 3. At suitable intervals around the outer member of the mold posts 4 are driven into the ground in contact with the outer face of the outer mold member, the upper end of each post rising a suitable distance above the top of the mold and provided with a cross-bar 5, extending inwardly across the top edge of the mold. The post rises a short distance above the cross-bar 5 to form a head 4^a to receive the blows of a sledge or the like when driving the post into the ground, as otherwise the cross-bar 5 would become bent and the bolt-openings therein impaired. A brace rod 6 is connected to the upper end of the post and inclines downwardly and outwardly therefrom, with its lower end anchored to the ground in any suitable manner. By this means the outer member of the mold is effectually braced against outward strains occasioned by the pressure of the plastic material when filling the mold. After the outer member of the mold has thus been set up a suitable amount of plastic material is run into the pit so as to form a bottom 7 for the tank, the upper face of this bottom portion preferably being concaved, as shown in Fig. 1.

When the bottom of the tank has been finished and before it has become set, the inner wall or member of the mold is set up, this member consisting of an annular series of abutted sections 8, one of which has been shown in detail in Fig. 3 of the drawings. Each end of each of these sections is flanged, preferably by means of an angle-bar 9 riveted to the outer face of the section, the abutted flanges or angle-bars of adjacent sections being detachably connected by means of bolts 10. Intermediate of the ends of each section there is an upright angle-bar 11, which serves to stiffen the section and also for connection with brace members for centering the inner mold member within the outer mold member.

Between the abutted ends of each pair of adjacent inner mold-sections 5 there is an upstanding post 12, which is pierced by the bolts 10 and rises above the top edge of the mold, where it is provided with a transverse arm or extension 13, lapping the arm 5 and the adjacent outer post 4 and connected thereto by means of bolts or similar fastenings 14.

Adjacent the lower end of each stiffening-bar 11 there is connected a substantially horizontal brace-bar made up of overlapped adjustably-connected sections 15 and 16, the

member 15 being provided with a series of perforations 17 and the member 16 having a pair of perforations for registration with the successive perforations of the member 15, there being bolts 18 designed to be passed through registered perforations, so as to adjustably connect the brace members. The outer end of the brace member 15 is connected to the lower end of the adjacent angle-bar 11 by means of a bolt 19, and the outer end of the brace member 16 is fitted into one of a series of radial seats or sockets 20, carried by a centering member 21, as best shown in Fig. 2 of the drawings. To prevent sagging of the centering device 21, inclined braces 22 have their upper ends connected, by means of bolts 23, to the upper ends of the respective angle-bars 11, with their lower ends connected to one of the fastenings 18 of the adjacent horizontal braces.

When the inner and outer mold members have thus been set up, with the inner member centered and secured within the outer member, the plastic material is run into the mold through the annular open space between the top edges of the mold members, thereby to form the annular side 24 of the tank. When the sides of the tank have become set, the several sections of the mold members are disconnected and removed, thereby leaving the tank standing upon the ground in readiness for use.

It is proposed to embed a metallic ring or band 25 in the upper outer edge of the tank, as best shown in Fig. 1 of the drawings, to protect the upper edge of the tank against damage by draft-poles, chains, and the like when stock are drinking out of the tank.

If it is desired to give an ornamental configuration to the exterior of the tank, a series of forming-plates may be fitted against the inner face of the outer mold member, a portion of one of such forming-plates being shown at 26 in Figs. 6 and 1, said plates being provided with longitudinal and transverse ribs 27 and 28, arranged to form corresponding grooves or channels in the outer face of the tank in imitation of brick or masonry, as may be desired.

From the foregoing description it will be understood that the device of the present invention includes comparatively few parts, which may be conveniently assembled and set up out of doors, so as to leave the molded tank standing in the place desired for use. After the cast has been completed the sections of the mold may be conveniently removed and reëmployed to produce another tank. It is proposed to have all of the parts of the device formed of metal, so as to be durable and to withstand the effects of climatic changes.

While the present embodiment of the invention discloses a circular tank, it is of course obvious that other shapes of molds may be produced. Moreover, by adding sections the size of the mold may be increased, and the size may of course be decreased by removing one or more sections. It will now be understood that the radial brace members are adjustable endwise, so as to lengthen and shorten the same in accordance with the size of the cast to be produced.

It will here be explained that the cement for the sides of the tank should be run into the mold before the bottom has become set in order that there may be an intermingling of the cement of the bottom and sides of the tank to produce an integral structure and to obviate a weak joint between the bottom and the sides of the tank.

Having fully described the invention, what is claimed is—

1. In a mold of the character described, the combination of inner and outer concentric mold members, posts engaging the members and rising above the tops thereof with their upper ends provided with lapped arms, and fastenings connecting the arms.

2. In a mold of the character described, the combination of inner and outer concentric mold members, the inner member being made up of sections, a centering device within the inner mold member above the bottom thereof, substantially radial braces extending between the centering device and the respective inner mold-sections, and hangers inclined downwardly and inwardly from the inner mold member to the braces and supporting the centering device.

3. In a mold of the character described, the combination of inner and outer concentric mold members, the inner mold member being formed of sections having terminal upright flanges with the flanges of each section connected to the flanges of the adjacent sections, posts secured between each pair of flanges and rising above the top of the mold, and connections between the posts and the outer mold member.

4. In a mold of the character described, the combination of inner and outer concentric mold members, each mold member being made up of flanged sections having the flanges of each section connected to the flanges of the adjacent sections, posts driven into the ground in engagement with the outer face of the outer mold member with their upper ends rising above the top of the mold and provided with arms extending inwardly across the mold members, inner posts secured between the connected flanges of the inner mold member and rising above the top of the mold, each inner post having an arm lapping the arm of the adjacent outer post and secured thereto, a centering device lo-

cated within the inner mold member and provided with a series of radial seats, radial braces extending inwardly from the inner mold-sections and engaging the respective seats of the centering device, and inclined braces extending downwardly from the inner mold member and connected to the first-mentioned braces.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GUSTAV A. BYOR.

Witnesses:
J. C. GARDNER,
L. F. STODDARD.