No. 698,050. Patented Apr. 22, 1902.

# S. T. PLAYFORD.

## SECTIONAL TANK.

(Application filed Jan. 3, 1902.)

(No Model.)

Fig. 1.

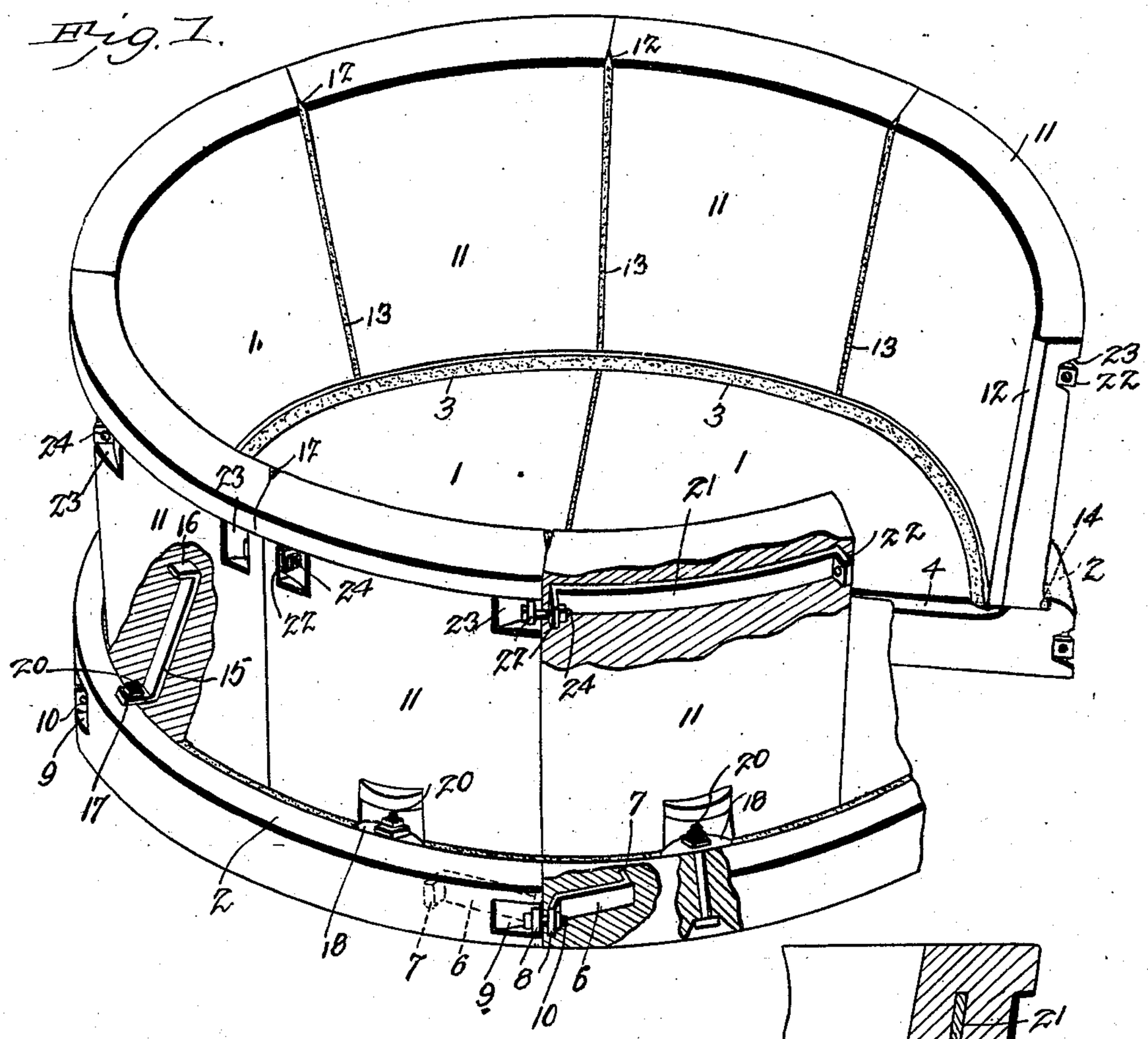



Fig. 3

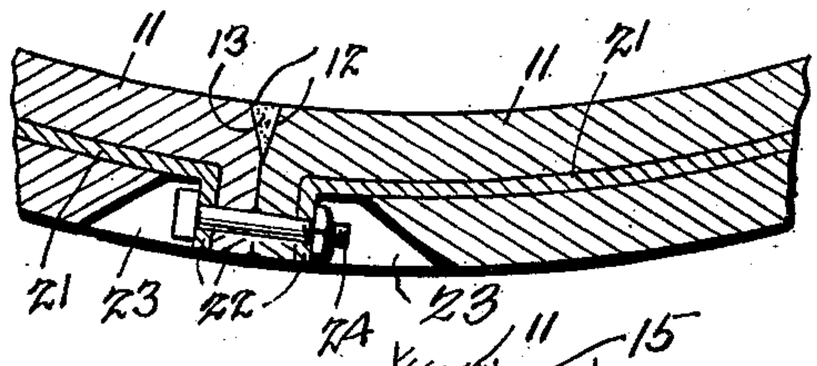



Fig. 4.

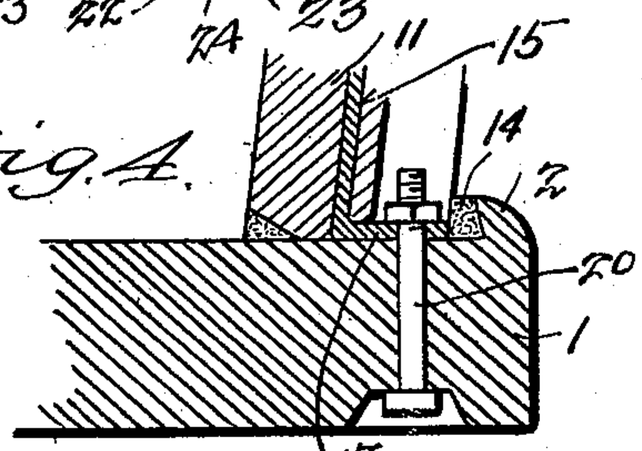
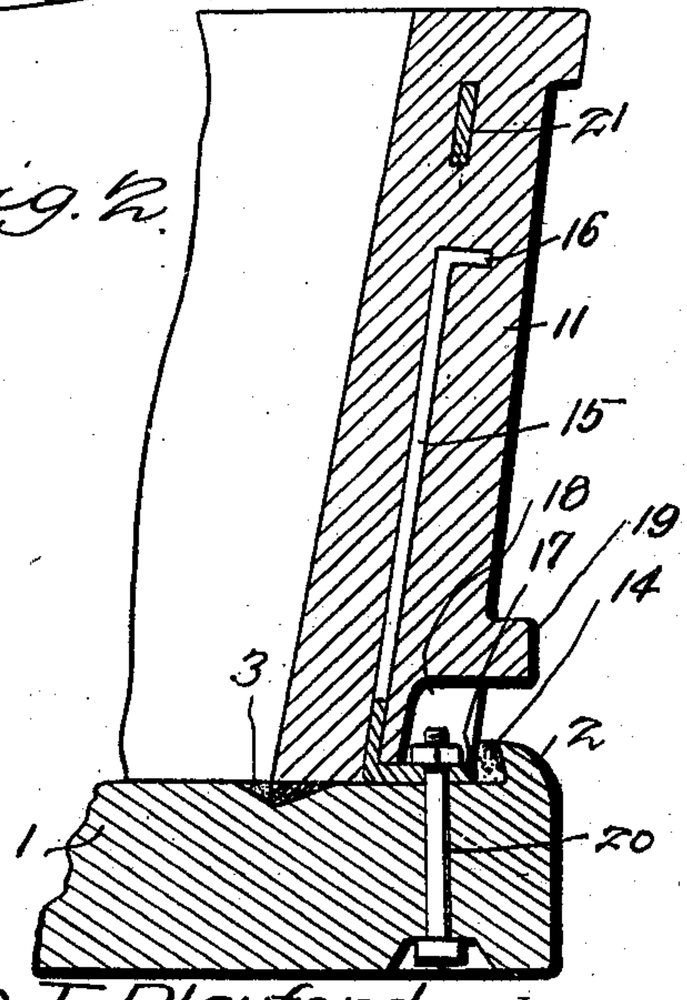



Fig. 2.




Witnesses
E. C. Stewart
J. W. Garner

Inventor
S. T. Playford,
by C. A. Snow & Co.
Attorneys

# UNITED STATES PATENT OFFICE.

STERLING T. PLAYFORD, OF CASSOPOLIS, MICHIGAN.

## SECTIONAL TANK.

SPECIFICATION forming part of Letters Patent No. 698,050, dated April 22, 1902.

Application filed January 3, 1902. Serial No. 88,334. (No model.)

*To all whom it may concern:*

Be it known that I, STERLING T. PLAYFORD, a citizen of the United States, residing at Cassopolis, in the county of Cass and State of Michigan, have invented a new and useful Sectional Tank, of which the following is a specification.

My invention is an improved sectional tank made of separable sections which are composed of grouting, artificial stone, or other suitable material; and my invention consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

One object of my invention is to provide improved means for securing the separable sections together.

A further object of my invention is to effect improvements in the construction of the separable sections and in the means for securing them together.

In the accompanying drawings, Figure 1 is a perspective view, partly in section, of a sectional tank embodying my improvements. Fig. 2 is a detail vertical sectional view of the same. Fig. 3 is a detail horizontal sectional view showing two of the separable wall-sections of the tank and the means for securing them together. Fig. 4 is a detail section illustrating a modification.

The separable sections of my improved tank may be made of grouting composed of hydraulic cement, such as Portland cement, and gravel or of any other suitable material which when set makes an artificial stone.

The bottom of the tank is composed of a suitable number of separable sections 1 of segmental shape, the sides of which radiate from a common center. The bottom sections 1 are formed on their upper sides at their perimeters with a flanged rim 2. The inner side of the said flanged rim is inclined inwardly, as shown in Fig. 2, and when the wall is placed on the bottom the said flanged rim is disposed without the base of the wall and at a slight distance therefrom, as shown, the diameter of the inner side of said flanged rim being greater than the exterior diameter of the base of the wall. On the upper side of the bottom of the tank, in the separable segmental sections thereof, is formed a channel 3, which is concentric with the rim or flange 2 and is at some distance within the same, and the sides of said channel 3 diverge upwardly, as shown. The angles formed by the upper sides of the bottom sections and the radial sides thereof are chamfered, as at 4, which chamfers extend diametrically across the bottom of the tank when the sections thereof are assembled, said chamfers terminating at their outer ends in the channels 3 of the said sections. It will be understood that the said chamfers 4 when the bottom sections are assembled form joints between them, the sides of which joints flare outwardly and upwardly.

Each of the bottom sections of the tank is provided near its radial sides and near its perimeter with metallic straps 6, which are angular in form longitudinally and provided at their ends with inwardly-extending projections 7 and outwardly-extending projections 8. The said straps 6 are embedded or molded in the bottom sections when the latter are molded and are entirely concealed, excepting the outer end projections 8 thereof, which are displayed in recesses 9, which are formed in the perimeters of the sections 1, as shown. When the sections of the tank-bottom are assembled, bolts 10 are employed, which engage openings in the projections 8 of straps 6, and thereby secure the said bottom sections together. The heads and taps of the bolts 10 are exposed in the recesses 9. Otherwise the connections between the bottom sections are entirely concealed. Since the straps 6 are embedded and molded in the bottom sections, it will be understood that the same are preserved from rusting. The recesses 9, in which the heads and taps of the bolts 10 are exposed, enable the bolts to be readily applied to or detached from the bottom sections. The upper widened joints between the separable sections, formed by the chamfers 4, are calked with oakum or other suitable material to prevent the said joints from leaking, and the oakum or other calking material may be covered with asphalt-paint or cement to retain it in place.

The wall of the tank may be circular, octagonal, or of other suitable form, and the same is composed of a plurality of separable segmental sections 11. The joints between the same are beveled outwardly on the inner sides of the wall-sections to form widened channels 12 at

the inner sides of the joints between the wall-sections, and when the latter are assembled the said channels 12 are calked with oakum or other suitable material, as at 13, and the said calking may be covered with asphalt-paint or cement, as in the case of the joints between the bottom sections. The wall-sections are seated on the bottom sections within the flanged rim 2 of the latter, and the space between the wall-sections and said flanged rim is filled with cement, as at 14, thereby securing the base of the wall against lateral or radial expansion. In each of the wall-sections, preferably near the center thereof, is placed a metallic strap 15, of angular form longitudinally, here shown as having its upper and lower ends outturned, as at 16 17. The lower outturned ends 17 of the said straps 15 are flush with the lower sides or bases of the wall-sections. The said straps 15 are embedded in the wall-sections and molded therein, and hence are entirely concealed and prevented from rusting. The said wall-sections are formed with recesses 18 in their outer sides at their bases, which recesses disclose the upper sides and outer ends of the projecting lower portions 17 of the straps 15. At the upper sides of the said recesses the said wall-sections are formed with projections 19, which overhang said recesses, as shown in Fig. 2. The wall-sections are secured on the bottom sections by bolts 20, which pass upwardly through the latter and engage the lower projecting portions 17 of the straps 15. The recesses 18 expose the taps and the upper ends of the bolts 20 and enable them to be applied, adjusted, and removed. The inner sides of the bases of the wall-sections overhang the channels 3 in the upper sides of the bottom sections and partly cover the same, and the said channels, which are at the joints between the wall-sections and the bottom sections, are calked with oakum or other suitable material, and the same may be covered with asphalt-paint, cement, or other suitable material. Each of the segmental wall-sections is provided with a metallic strap 21, which is embedded or molded therein and is provided with outturned ends 22, which are exposed by recesses 23, that are formed in the said wall-sections. The said straps 21 are disposed near the upper sides of the wall-sections and form a sectional hoop, and the said straps are connected together at the joints between the wall-sections by bolts 24, the heads and taps of which are exposed by the recesses 23, thereby enabling the said bolts to be applied, adjusted, and removed. The wall-sections are inclined outwardly at their upper sides, and thereby the inner side of the wall flares outwardly upwardly, thus lessening the danger of the bursting of the tank by the freezing and thawing of the water therein. It will be understood that the bottom of the tank must be supported at the center and at the joint between the sections thereof, and in practice the tank will preferably be supported on pillows of brick or masonry embedded in the earth below the frost-line.

The calking in the joints between the sections of my tank being elastic compensates for the contraction and expansion of the embedded metallic straps which are employed in connecting the sections together and reduces the liability to leakage. Should a leak develop in one of the joints, it may readily be recalked.

The sections of my tank may be readily separated when it is desired to disassemble the tank and set it up in another place.

The flanged rim 2 on the bottom of the tank obviates the use of a hoop or other means for securing the wall-sections together at their lower sides.

In Fig. 4 of the drawings I show a modification in which I omit the channel 3 and in lieu thereof bevel the lower side of the wall, as at $3^a$, to thus form an open joint between the base of the wall and the bottom, which joint is calked.

Having thus described my invention, I claim—

1. A tank having a plurality of separable sections, metallic connecting elements embedded in said sections, the latter having recesses exposing the ends of said metallic connecting elements and projections over said recesses, and bolts engaging the exposed ends of the metallic connecting elements and securing the said sections together, substantially as described.

2. In a tank, a bottom formed of separable segmental sections having an upstanding flange, a wall composed of separable sections, the bases of which are seated on the bottom, within the flange thereon, straps secured to the upper portions of said side sections and having their respective ends bolted together, and straps secured to said side sections and having their lower ends outturned, bearing on and bolted to the bottom, substantially as described.

3. A tank having a plurality of sections, straps embedded in them, and bolts connecting said straps together at the joints between the sections, whereby the latter are separable, substantially as described.

4. A tank having a plurality of segmental separable wall-sections, a hoop comprising a plurality of sections, each embedded in the material of one of the wall-sections, and bolts connecting the ends of the hoop-sections together at the joints between the wall-sections, substantially as described.

5. A tank having separable wall-sections, and sectional hoop-straps embedded and covered therein, said hoop-straps having their ends outturned and adapted to be engaged by means for clamping the wall-sections together, substantially as described.

6. In a tank, the combination of separable sections formed of initially plastic material,

metallic connecting elements molded and embedded in said sections, the latter having recesses exposing the ends of said metallic connecting elements, and bolts engaging the exposed ends of said metallic connecting elements and securing the said sections together, substantially as described.

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

STERLING T. PLAYFORD.

Witnesses:

CHRISTOPHER C. ALLISON,

WM. REYNOLDS.