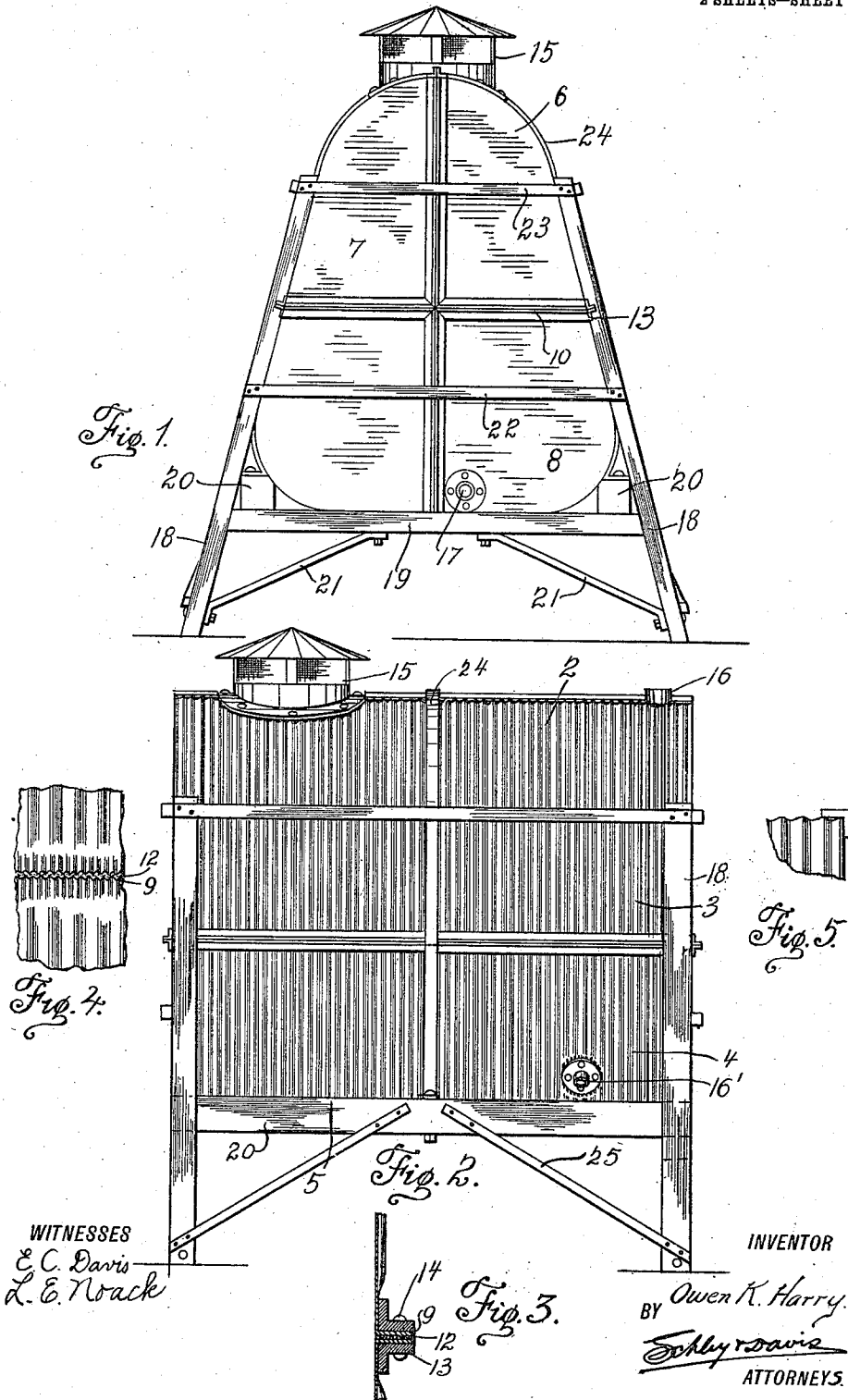


O. K. HARRY.
TANK AND SUPPORT.
APPLICATION FILED AUG. 7, 1909.

965,455.

Patented July 26, 1910.

2 SHEETS—SHEET 1.

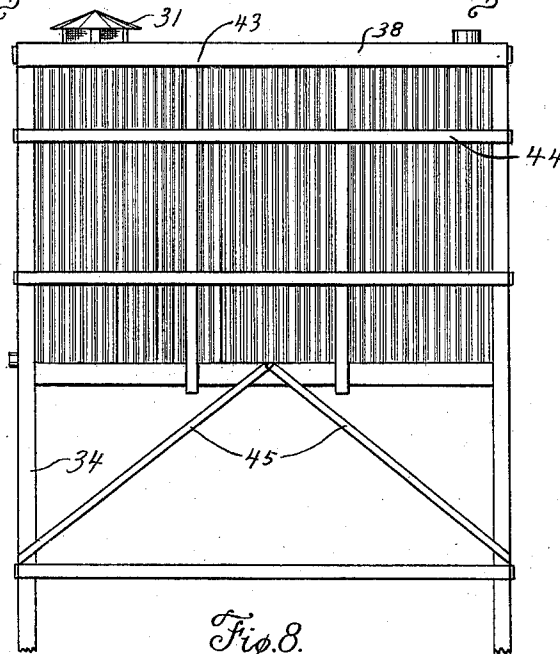
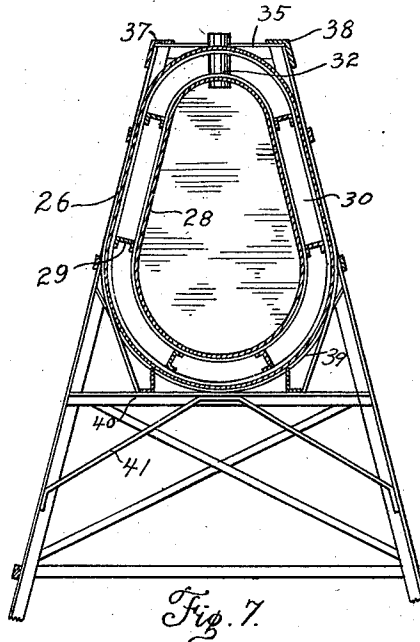
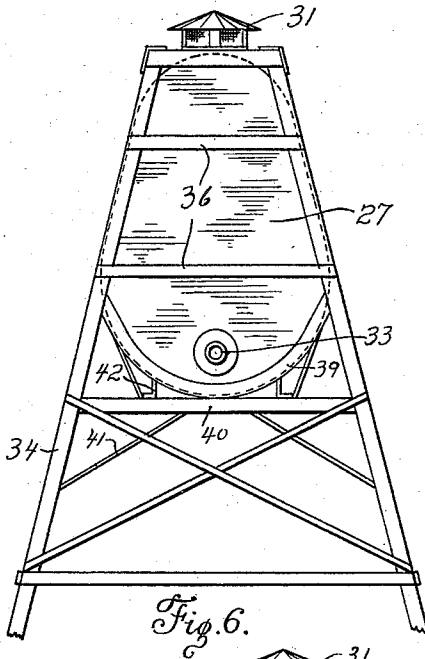


O. K. HARRY.
TANK AND SUPPORT.
APPLICATION FILED AUG. 7, 1909.

965,455.

Patented July 26, 1910.

2 SHEETS—SHEET 2.



WITNESSES
E. C. Davis
L. E. Noack

INVENTOR
Owen K. Harry.
BY *Edley Davis*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

OWEN K. HARRY, OF DALLAS, TEXAS.

TANK AND SUPPORT.

965,455.

Specification of Letters Patent.

Patented July 26, 1910.

Application filed August 7, 1909. Serial No. 511,767.

To all whom it may concern:

Be it known that I, OWEN K. HARRY, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented a new and useful Improvement in Tanks and Supports, of which the following is a specification.

My invention relates to new and useful improvements in tanks and supports therefor.

The object of the invention is to provide a tank and a support therefor whereby the tank is securely fastened and braced in the support or stand.

Another feature resides in the shape of the tank which is designed to overcome the disadvantage of the round tank which is now commonly in use.

A still further object is to provide a tank formed in sections and a water tight joint for the sections.

A final object of my invention is to provide a device of the character described which will be simple, strong, durable, efficient and comparatively, inexpensive to construct, and one in which the several parts will not be liable to get out of working order.

With above and other objects in view my invention has relation to certain novel features of construction and operation an example of which is described in the following specification and illustrated in the accompanying drawing, wherein: Figure 1 is an end elevation of the tank and stand, Fig. 2 is a side elevation of the same, Fig. 3 is a cross-section through one of the joints, Fig. 4 is a detail in elevation of one of the joints with the angles removed, Fig. 5 is a detail in plan of the tank showing a modified form of corner post, Fig. 6 is an end elevation of a modified form of tank and support, Fig. 7 is a transverse vertical section of the same, and Fig. 8 is a side elevation of the modified form.

In the drawings, the numeral 1 designates the tank which is preferably formed of sections of sheet metal, the ends being flat and the sides, top and bottom being corrugated, although I do not wish to limit myself to the use of corrugated metal. The tank exhibits in cross section a modified triangular shape, the top being curved and the lower longitudinal edges being rounded. The top member 2 is curved transversely and merged into flaring side portions 3. This member termi-

nates at the center of the tank where it is joined to the upwardly inclined side portions 4 of the bottom member 5, the intersections of the side portions 4 and the bottom proper being rounded as shown at 8 in Fig. 1. The ends 7 of both members are vertical.

The tank is divided at its horizontal and longitudinal centers, forming the upper member in two equal sections and the bottom member likewise. The sections are joined together by watertight joints which are formed by crimping the side, bottom and top edges of the sections and bending outwardly directed flanges 9 thereon as shown in Figs. 3 and 4. On the ends 7 similar flanges 10 are bent, but it is not necessary to crimp the flanges as the metal is not corrugated. Suitable packing material 12 is placed between the flanges at each joint, while angle or other irons 13 are set into the angles of the flanges and rest thereon. The sections are held together by bolts 14 passed through the angle irons, flanges and packing at each joint. A joint of this character will not only be secure but water and dust tight.

Preferably near one end of the tank a man hole having a ventilated cover 15 is provided, while an inlet 16 is positioned at the opposite end. At the bottom of the tank an outlet may be arranged at the side as shown at 16 in Fig. 2, or at the end as shown at 17 in Fig. 1, or at both places, if desired.

In comparing the form of tank herein set forth with a round or circular tank of the same capacity it is to be observed that the width across the end of this tank is considerably less than the diameter of the round tank, while the height will be a foot or more, less than that of the round tank. Where the tank is set against a building it will project less than the round tank and may be supported below the eaves of a low roof without projecting above the same and at the same time having its outlet at the proper height.

While this tank may be supported on a stationary and previously constructed platform or stand, I prefer to provide the tank with a stand or support so that it may be placed in position and connected without the expense or delay of first building the support. In carrying out the feature inclined corner posts 18 are provided at each

corner of the tank terminating just above the side sections 3 and extending some distance below the tank to form legs. At each end the posts are connected by cross bars 19 on which the tank rests, while in the angles formed by the posts and cross bars, the ends of side bars 20 are secured, these side bars supporting the tank longitudinally at the lower rounded edges. The stand is stiffened by braces 21 extending from the lower ends of the posts to the underside of the cross bars. At the upper ends of the corner posts additional braces are provided by bars 22 and 23. The tank is secured in the stand by a transverse central strap 24 passed over the tank and having its ends fastened to the side bars 20. Diagonal brace bars 25 are also secured at each side of the stand.

It is obvious that the tank and stand are securely tied together and braced to sustain a very heavy load, it being understood that when the tank is filled with water, the load carried by the stand will be several thousand pounds. The tank and stand being constructed and combined it is merely necessary to transport them to the place where it is desired to use the same, set the combined tank and stand in position and connect the pipes, a previously constructed support or platform being unnecessary and a more durable and longer lived support being provided. By forming the tank in sections it may be taken apart and more compactly and conveniently shipped, and also at a less freight cost than when the assembled tank is shipped. Further by this arrangement new sections may be readily supplied.

Figs. 5, 6, 7, and 8 show another or modified form of my tank in which the tank is supported in a tower that is securely fastened to the tank. This tank is very suitable for independent water works systems in the rural district and for the use of an individual party as often times it is necessary to elevate a tank in order to get the desired pressure or to meet with certain other conditions. At this time the construction of a tower as it is carried out to day is no small item and the initial cost is large and the repair bill is just as large in proportion. I have provided a tower which will be made rigid with the tank so that the tank will not be liable to damage by storm, while at the same time I have done away with the usual flooring which so often rots away and has to be replaced.

The tank 26 as shown in cross section is elliptical in shape and is preferably made of corrugated sheet metal with the exception of the end walls 27 which is made of sheet metal. Within the walls of the tank 26 an inner shell 28 is supported on brackets 29 in such a manner as to leave an air space

30 all around the outside of the inner shell. This space may be filled with a desirable packing or it may be left as a dead air space. At the top near the one end of the tank 26 a man hole 31 is arranged to communicate with the inner shell while at the other end an inlet pipe 32 is extended through the tank 26 into the shell 28. An outlet pipe 33 enters the tank 26 near its bottom and also has connection with the shell 28.

The tower consists of a plurality of inclined posts 34 which extend above the top of the tank. These posts are bound together by cross beams 35 above the tank and by cross bars 36 at points intermediate their ends. The cross beams 35 support two beams 37 and 38 which extend over the tank. An angle iron 39 is bent to conform with the rounded bottom of the tank and connects two of the upright posts at either end of the same; the flange of this angle iron being placed to prevent the tank from being moved by any force which might strike the end of the tank. This angle bar is reinforced at its center by a cross beam 40 which extends between the uprights 34 which is in turn reinforced by brace rods 41. Beams 42 carried on the cross beams 40 support the tank at a point, intermediate its end and are reinforced by straps 43 which extend down from the beams 37 and 38. Bars 44 may be secured to the uprights to prevent the same from spreading and to relieve the strain on the beams 37 and 38. Diagonal bars 45 are also secured to the uprights 34.

Although I have shown my tower built of angle iron I do not wish to be limited to this construction under some conditions wood and other materials may prove more satisfactory.

What I claim is:

1. The combination in a tank and stand, of a tank body having inclined flat sides, vertical ends joined to the sides at an angle, a rounded top joined to the sides and ends, the top being of semi-cylindrical form, a bottom having a rounded portion at each side joined to the inclined sides, the vertical ends extending from the bottom to the top, an inclined post at each corner of the tank body, cross bars supported from the corner posts side bars supported on the cross bars and engaging with the rounded portions of the bottom of the body, and means embracing the sides and top of the tank body and secured to the side bars for fastening the tank body in the stand.

2. A metallic cistern tank having vertical flat ends, a flat bottom, a transversely rounded top, and sides inclined inward from the bottom to the top, the tank having continuous corrugations extending completely therearound transversely with relation to its

longitudinal axis, the vertical flat ends extending at substantially right angles to the sides, bottom and top of the tank.

3. In a metal cistern tank, sections having
5 sides provided with vertical corrugations, an outwardly directed horizontal flange on each section provided with crimps considerably smaller than the corrugations, the flanges being disposed in adjacent relation, a packing arranged between the flanges, and means for fastening the bars and flanges
10 together to form a joint.

4. In a metallic cistern tank, sections having sides provided with vertical corrugations, an outwardly directed horizontal

flange on each section provided with crimps 15 considerably smaller than the corrugations, the flanges being disposed in adjacent relation, a packing arranged between the flanges, metal bars disposed on the flanges, and means for fastening the bars and flanges 20 together to form a joint.

In testimony whereof I have signed my name in the presence of two witnesses.

OWEN K. HARRY.

Witnesses:

J. D. DAY,

JACK A. SCHLEY.