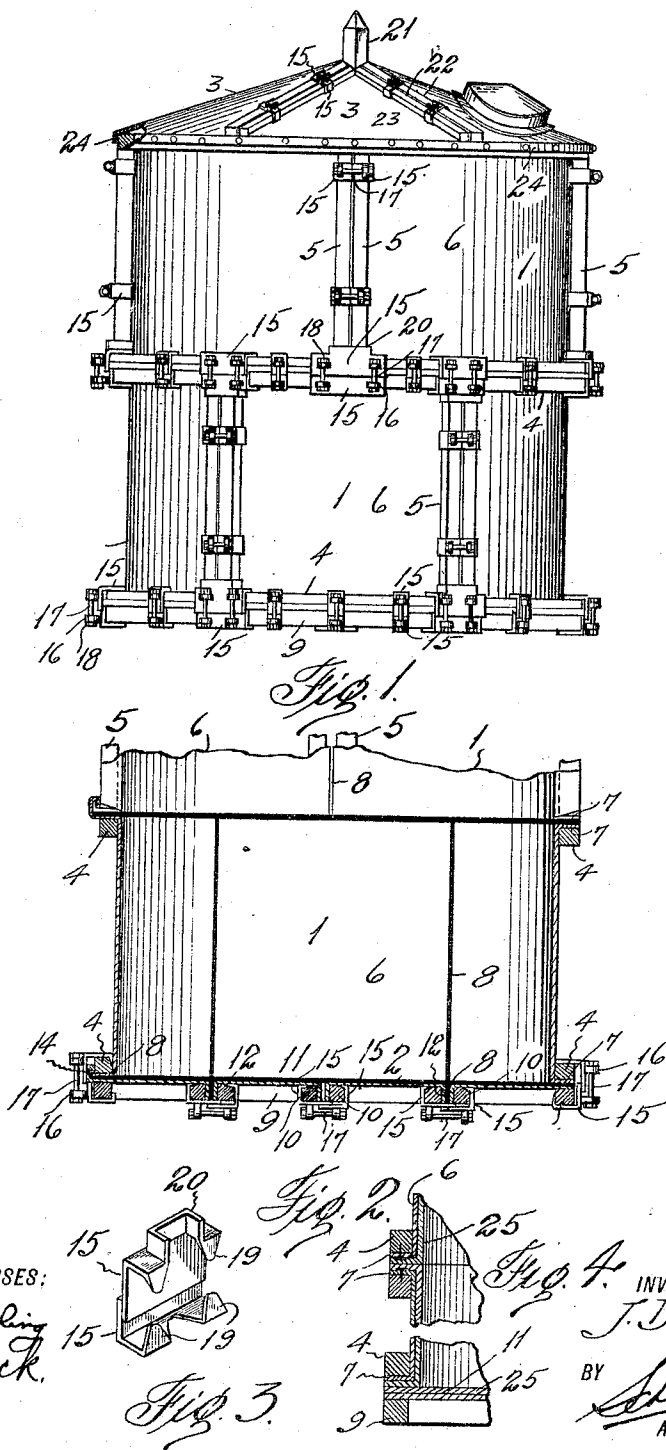


J. D. HARRY.
METAL STORAGE TANK.
APPLICATION FILED JUNE 23, 1910.

994,921.

Patented June 13, 1911.



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UNITED STATES PATENT OFFICE.

JEFFERSON D. HARRY, OF DALLAS, TEXAS.

METAL STORAGE-TANK.

994,921.

Specification of Letters Patent. Patented June 13, 1911.

Application filed June 23, 1910. Serial No. 568,432.

To all whom it may concern:

Be it known that I, JEFFERSON D. HARRY, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Metal Storage-Tanks, of which the following is a specification.

This invention has relation to metal storage tanks and particularly to knock-down tanks.

The object of the invention is to provide a tank formed in several sections or parts and arranged to be assembled in an expeditious and substantial manner.

Another feature is a particular form of clamp, whereby the parts are secured together and held in permanent relation.

Finally the object of the invention is to provide a tank of the character described that will be strong, durable, efficient, and light in weight, comparatively inexpensive to construct; and one in which the several parts will not be likely to get out of working order.

With the above and other objects in view, the invention has relation to certain novel features of construction and operation, an example of which is described in this specification and illustrated in the accompanying drawings, wherein:

Figure 1 is an elevation of the tank assembled, Fig. 2, is a partial vertical section, Fig. 3, is a detail of one of the clamps in perspective, and Fig. 4 is a detail in section of a modified form.

In the drawings, the numeral 1 designates one of the side sections of the tank, 2 the bottom sections, and 3, the top sections. The side sections 1, are each curved so that when a number are assembled in a course, a circular wall will be produced. Each section 1 has an exterior frame composed of segmental horizontal members 4 and upright or vertical members 5 connecting the ends of the members 4 and disposed therebetween. The members 4 and 5 are preferably formed of wood to make the section as light as possible, although other suitable material could be used if desired.

Each frame has a panel or inner covering 6 of sheet metal having its edge portions bent outward at 7 and secured in a suitable manner at the sides and top and bottom of the frame, the sheet metal also being suitably fastened to the inner side of the frame. These side sections are arranged in courses

and a tank so assembled that the sections of one course break-joint with those of the next adjacent courses.

The edge portions or outwardly directed flanges 7 of one section are opposed to the corresponding portions of the adjacent sections, and between the sections, a suitable packing 8 may be disposed both vertically and horizontally. When the sections are drawn together this packing will be compressed and the liability of the tank leaking reduced to a minimum. The bottom sections 2, also each have a frame, which however is composed of segmental members 9 connected by cross members 10 at their ends, but said cross members lying in the same plane as the members 9. The bottom sections are of course disposed horizontally and each has such a length as to produce a circular base when the said sections are all in place. Each bottom frame has a covering 11 of sheet metal having downwardly directed flanges 12 embracing the sides of the cross members 10. The sheet metal of the bottom is merely extended over the members 9 as shown at the right of Fig. 2. Wherever sections are brought together, the packing 8 is interposed. If a lock-joint is desired between the lowermost sections 1 and the bottom sections, the flanges 7 of the lower members 4 are extended outward and bent up as shown at the left of Fig. 2. The edge portions 14 of the bottom sheet metal coverings 11 are bent up and about the bent portions of the flanges and a folded seam produced. Such an arrangement will not only strongly connect the bottom and side sections, but provide a water-tight joint.

For holding the sections together, I provide a plurality of clamps. Each clamp comprises two members 15, each having an eye 16 and the adjacent edges of the members overlapping, whereby a bolt 17 passed through the eyes and held by a nut 18 may be adjusted to draw the members of a clamp together or permit them to be moved apart. The clamps are made in single and double styles, each member being right angular in cross section and having inwardly directed tapered tongues 19, the tongues of one member being opposed to and directed toward the tongues of the other member. Substantially the only difference between the styles of members are that the double style has two bolts and a collar 20, and is larger than the single style which has only one bolt and no

collar. These clamps are disposed as is best shown in Figs. 1 and 2, the opposite members either engaging the adjacent members 5 or the adjacent members 4 of the side sections 2 and the segmental members 9 of the bottom sections. When the members are placed in position, the tongues being tapered may be readily inserted between the wood frame members and the sheet metal covering, thus holding each individual member 15 in position on its respective part which it embraces. The double clamp members are used at the intersection of two members 5 and two members 4 or at the intersection of two members 5 and the bottom members 4 and 9. In the double clamps one of the members 15 as shown in Fig. 3 has an angular collar 20 which embraces the members 5 and ties them together.

The sections 3 at the top of the tank radiate from a center stud 21 and each section has radial members 22 along its edges, extending from the stud. Each section is formed of sheet metal 23 secured to the radial members and turned down at its outer edge to form a segmental flange 24 fitting over and fastened to the upper segmental members 4 of the side sections. The radial members 22 are clamped together like the members of the other sections.

It is obvious that this tank may be transported in knock-down form and quickly assembled after reaching its destination. By forming the members 4, 5, 9, 10 and 22 of wood, a lighter and cheaper tank may be constructed and at the same time the members will permit the sheet metal to be nailed thereon, which is much cheaper than where angle iron is used.

In Fig. 4 I have shown a modified form of tank. This tank is designed for storing crude oil and material which would corrode or injure the sheet metal coverings. The general construction of the tank is the same, the main difference being in a lining 25 of

soft metal, as lead which is applied to the inner surface of the sheet metal and the flanged portions of the same.

What I claim is:

1. A knock-down tank comprising a bottom, a top, a sectional cylindrical body, the sections forming the body each comprising a wooden frame having vertical and horizontal members, and a sheet metal covering having its edge portions bent about the frame, and two part clamps embracing the adjacent members of adjoining sections, the clamps spanning the members transversely.

2. A knock-down tank comprising a bottom, a top, a sectional cylindrical body, the sections forming the body each comprising a wooden frame having vertical and horizontal members, and a sheet metal covering having its edge portions bent about the frame, two part clamps embracing the adjacent members of adjoining sections, the clamps spanning the members transversely, and a packing interposed between the sections.

3. A knock-down tank comprising a bottom formed of sections each having a frame covered with sheet metal bent thereabout, a sectional cylindrical body, the sections of the body each comprising a frame covered with sheet metal bent thereabout, a top formed of sections each comprising sheet metal secured to the side sections and having radial members, and two part metal clamps embracing and extending transversely of the members of adjoining frames also connecting and extending transversely of the lowermost side sections and the bottom sections.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JEFFERSON D. HARRY.

Witnesses:

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Z. M. DUCKWORTH.