United States Patent [19]

Cox

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[54] **ENCLOSED HOUSING FOR GAS TANK STANDS**

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[52] **U.S. Cl.** **52/27;** 52/192; 52/DIG. 3; 220/18

[51] **Int. Cl.²** **E04F 19/04**

[58] **Field of Search** 52/27, 192, 194, 292, 246, 52/DIG. 3, 169, 40; 248/13; 220/18

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[57] **ABSTRACT**

A housing for a gas tank and its stand wherein sheet members are arranged on the stand which conforms to the outline of the tank by having rounded, horseshoe shaped ends. The sheet members extend from the ground to the tank and can be locked in position. The tank itself forms a ceiling for the housing, the ground being the floor, and the sheet members are the side walls.

10 Claims, 6 Drawing Figures

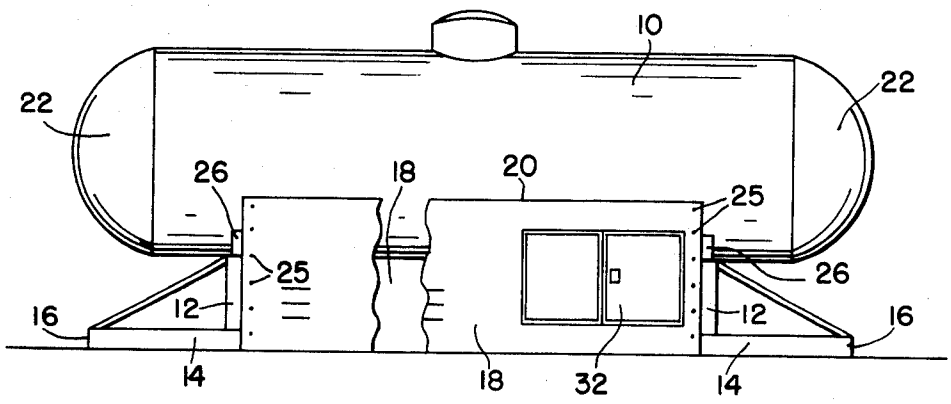


FIG. 1

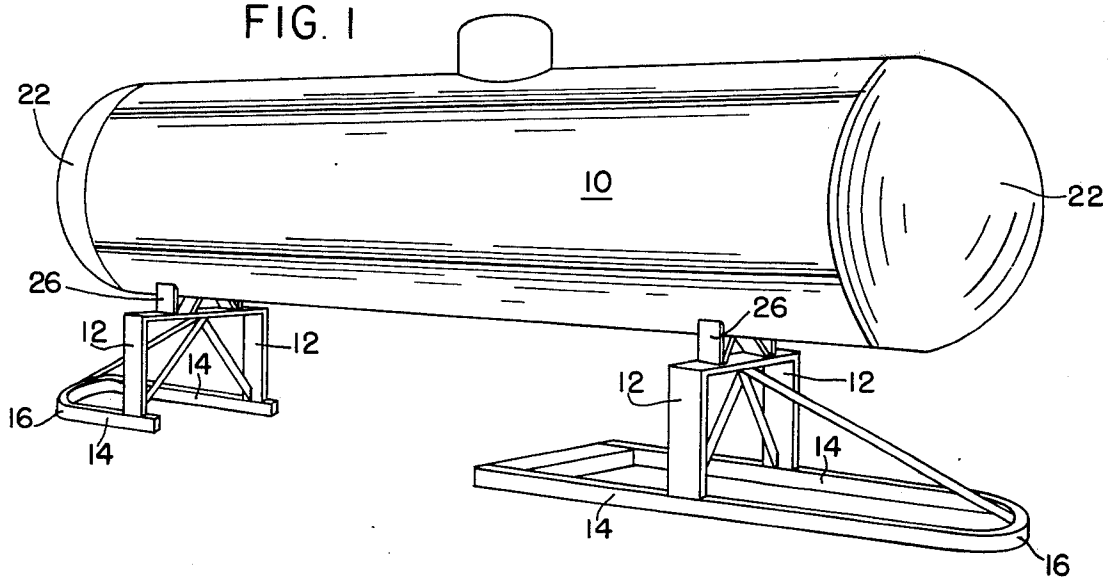


FIG. 2

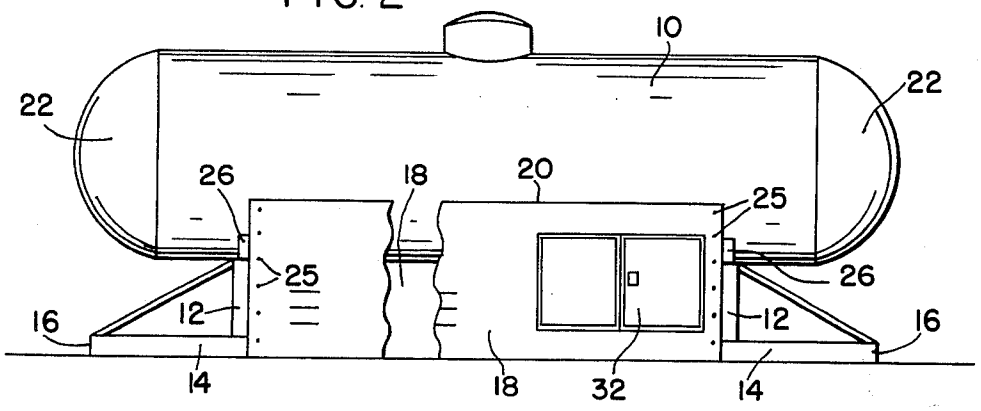
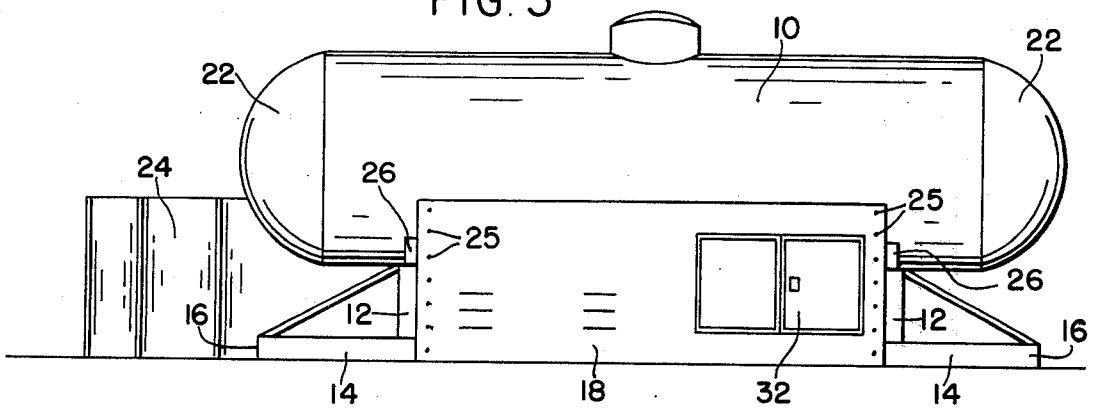


FIG. 3



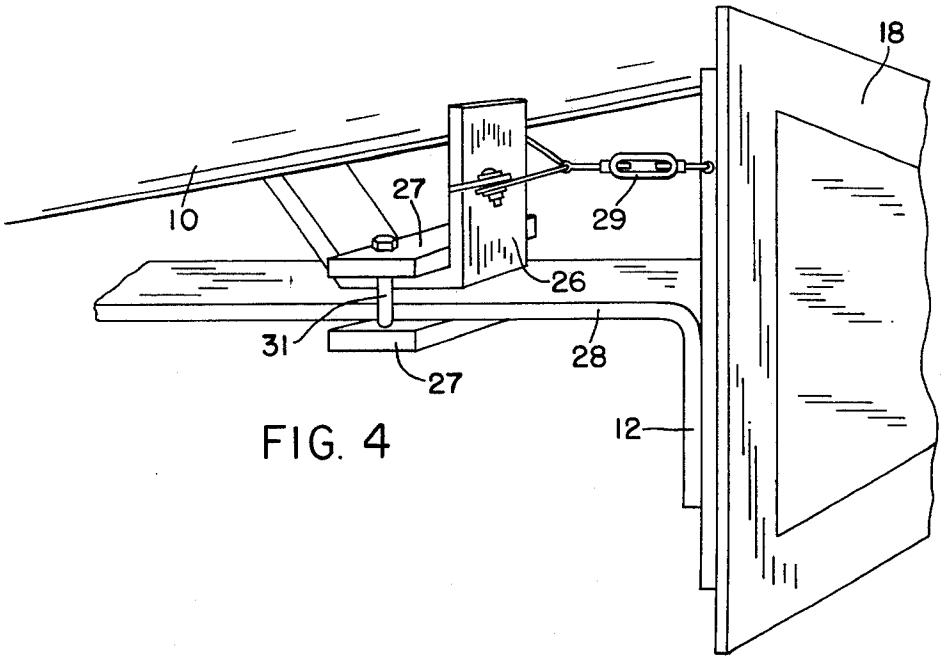


FIG. 4

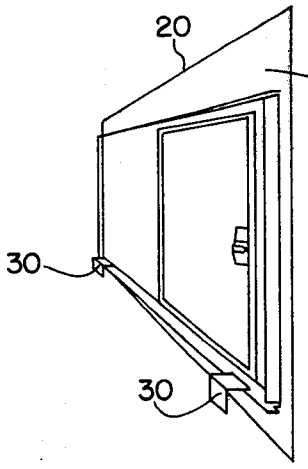
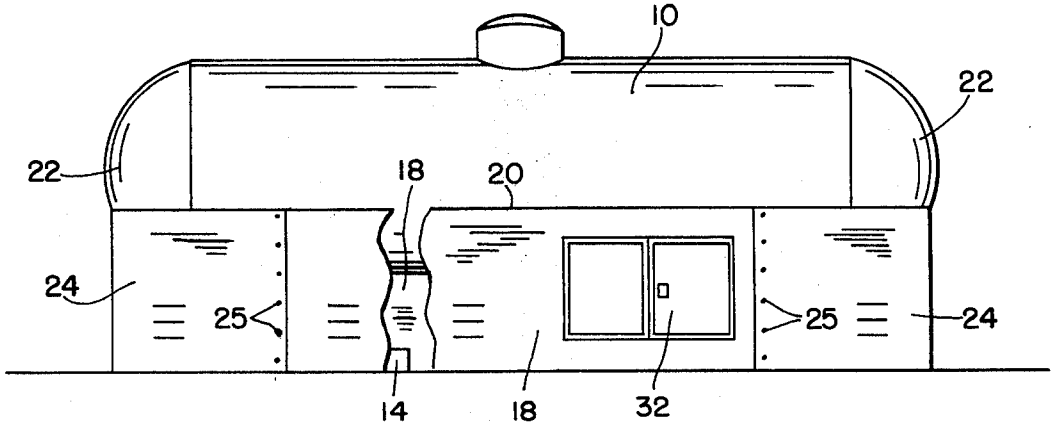


FIG. 5

FIG. 6



ENCLOSED HOUSING FOR GAS TANK STANDS

BACKGROUND OF THE INVENTION

Gas tanks are mounted on feet so as to be able to set the tanks on the ground, such tanks being generally cylindrical and having rounded ends. Large tanks particularly are provided with piping and valves, etc., when in position, and if no protection is provided these valves may be opened by unauthorized persons creating hazards, and other vandalism is apt to occur. Also these tanks merely set on the ground do not provide a very attractive background for the places in which they are installed.

In some states it is required by law that these tanks be protected as for instance by a fence, but in the present case it is the object of the invention to provide an attractive enclosure preventing vandalism and avoiding the use of fences.

The tanks under consideration and their supporting feet are almost never made precisely the same and they vary in size and dimension to an extent which renders it impossible to provide anchoring means for an enclosure to be later applied and therefore it is another object of the present invention to provide such an enclosure with very flexible anchoring means so that anyone who is not a mechanic can apply the enclosures with directions supplied, with the use of a wrench.

SUMMARY OF THE INVENTION

The gas stand itself comprises a pair of horseshoe shaped members the open ends of which face each other and in general the shapes of the horseshoe shaped members are a projection of the rounded ends of the gas tank and conform therewith in outline. In most cases these horseshoe shaped members will be spaced apart and a flat sheet of material is arranged at each side of the tank and are connected to the horseshoe shaped members at flat sides thereof being fastened to the supports by any means desired.

At the curved ends of the horseshoe shaped members, generally flexible sheet material is utilized to extend around in conformance with the horseshoe and also with the shape of the tank extending from a generally tangential position with respect to the tank itself to the ground and being fastened at the ends thereof after being bent around the arcuate ends of the horseshoe shaped members, to the already positioned flat sheet members by any means desired or convenient, thereby forming a completely enclosed housing below the gas tank, the gas tank itself comprising the ceiling of the housing and the ground comprising the floor, the horseshoe shaped members comprising means for securing the sheet-like members in position.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view illustrating a gas tank mounted on a stand;

FIG. 2 is a view in side elevation illustrating the side plates or sheet members in position;

FIG. 3 illustrates an end member being secured to one of the side members to be wrapped around the horseshoe shaped member and attached to the other side member;

FIG. 4 illustrates one manner of securing the side members;

FIG. 5 illustrates the clips for the side members; and

FIG. 6 is a view in elevation illustrating the completed construction.

PREFERRED EMBODIMENT OF THE INVENTION

As shown in FIG. 1 the gas tank of conventional construction **10** is mounted on upright stands or standards **12, 12** in turn secured with respect to the straight sides **14, 14** of horizontal horseshoe shaped members having arced ends **16.** In general these horseshoe shaped members are a projection of the shape of the ends of the tank **10** so that they outline the same in conformance therewith but slightly reduced, and they are usually spaced apart as shown in FIG. **1.**

As shown in FIG. **2** a sheet of suitable material **18** is attached to the stands and to the straight members **14, 14** of the horseshoe shaped members forming flat side walls, there being of course one such sheet **18** at each side of the stand. The upper edge at **20** of sheet **18** is substantially tangential with respect to the side of the tank **10** which of course is generally cylindrical except for the bulging ends which are indicated at **22.** These ends are substantially hemispherical.

The distance between the straight legs **14** of the U-shaped members may be the same as the diameter of the tank **10** but also they may be slightly closer together, so that the sheets **18** do not extend upwards to the diameter of the tank **10** but impinge upon the same at a point below the widest point of the tank as shown in FIGS. **2** and **5.**

As shown in FIG. **3,** a flexible sheet member **24** is attached at one end to one of the side members **18** as by interengaging means such as snaps, bolts, or the like **25, 25** and is then bent around in conformance with the arc-shaped portion **16** of the horseshoe shaped members being of a size to then be connected by the fasteners **25, 25** to sheet members **18** at both sides of the tank.

The means by which the sheets are connected with respect to the tank and its stand is an important part of the present invention since the attachment has to be made very simply as in most cases it will be applied by persons of little mechanical ability and without special tools.

The members **26** in FIGS. **1** and **4** are parts of the welded-on feet of which there are two. Since the tanks vary slightly in size and dimension, and also these feet likewise vary, it is impossible merely to provide bolt holes for instance and then secure uprights **12** thereto by a bolt. The uprights **12** in the present case each includes a horizontal cross member **28** connecting the uprights from side to side, and each cross member **28** is then securely fastened with respect to its foot **26** as by means of a pair of parallel plates **27, 27** connected by bolts **31** only one of which is shown, see FIG. **4.** This is done for the reason that if pre-drilled bolt holes were provided in member **28** and in the foot **26** the chances would be very much against their coinciding because of the variations in manufacture above described.

A flexible member can be provided to be taken up by the turnbuckle **29** attached to sheet **18** and to the member **26** and this is used to tighten the connection by means which is wholly within the finished enclosure and thus protected.

Clips **30** on the insides of the sheets, see FIG. **5,** are used to hook over the straight portions **14, 14** of the U-shaped members so that the side members **18** are very solidly locked in position and cannot be removed from the outside of the housing. At the same time the

rounded sheet portion **24** may be permanently connected to the ends of the sheet members **18** so that the entire housing under the tank is completely invulnerable or at least it is very difficult to get into. Locked doors may be utilized as for instance at **32** for side panel members **18** providing authorized access to the compartment.

I claim:

1. In combination with a gas tank and a stand therefor supporting the tank off the ground, a multi-part sheet member housing, means connecting the housing to the stand, and being held upright thereby, said housing engaging the sides and ends of the tank and completely enclosing the space between the ground and the tank, the tank forming a ceiling for the housing.

2. The combination of claim **1** wherein the tank has convex ends and the separate pieces forming the housing comprise a flat sheet at each side of the tank connected to the stand, and a curved sheet at each end thereof in conformance with the ends of the tank.

3. The combination of claim **2** including means fastening the adjacent ends of the sheets.

4. The combination of claim **3** wherein the stand conforms in general to the outline of the tank.

5. The combination of claim **4** wherein the stand is smaller than the outline of the tank and the sheets contact the tank below the horizontal diameter thereof.

6. The combination of claim **2** wherein the stand includes curved horizontal members at each end of the tank, and straight members thereon.

7. The combination of claim **6** wherein the stand members are horseshoe shaped with open ends facing each other.

8. The combination of claim **7** wherein the horseshoe shaped members are spaced.

9. The combination of claim **1** wherein the tank is generally cylindrical with rounded ends and the stand includes two generally horseshoe shaped horizontal members that correspond substantially to the outline of the tank.

10. The combination of claim **9** wherein the sheet parts include two curved parts secured about the curved portions of the horseshoe shaped members and flat parts secured to the horseshoe shaped members at the leg portions thereof.

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