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C. SPAETH

1,942,984

SHEET METAL CONTAINER

Filed Nov. 7, 1931

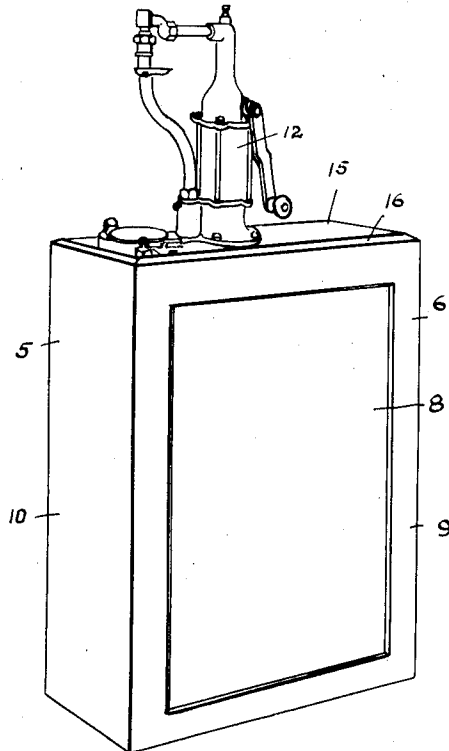
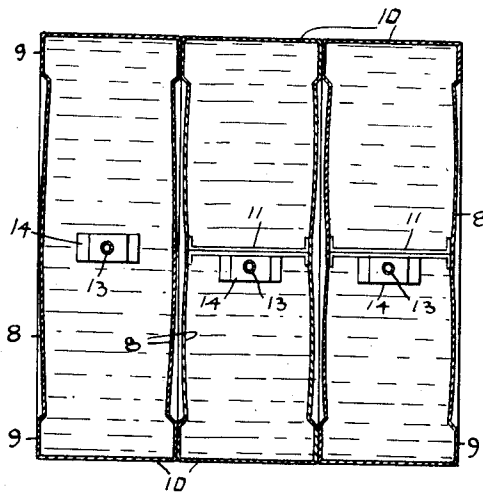
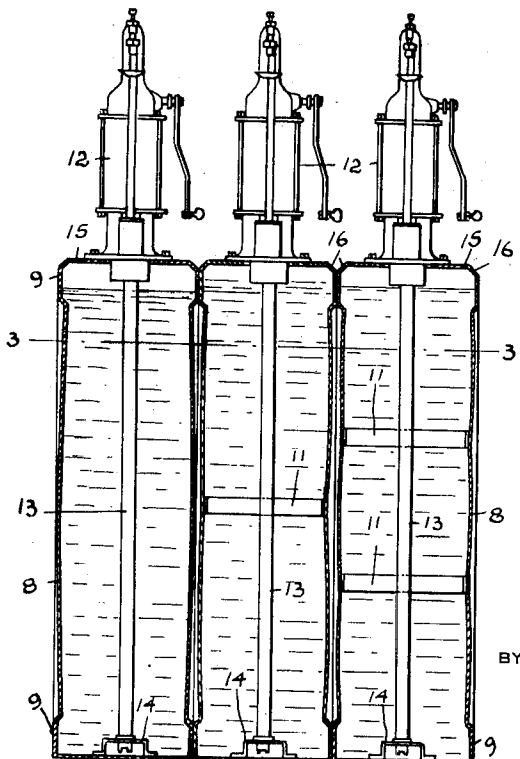


FIG. 1

FIG. 2

FIG. 3



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SHEET METAL CONTAINER

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1 Claim. (Cl. 220—72)

This invention relates to oil and grease tanks now commonly used by garages, and service stations for dispensing automobile lubricating oil and greases, etc., a battery of such tanks placed side by side being generally employed for holding the different oils and greases or different grades of these commodities.

It has been the practice to make such containers or tanks of relatively thin sheet metal, in the interest of economy and reduced weight, and as a result considerable trouble is experienced due to the tendency of the side walls of the tanks to bulge under the extremely heavy pressure, to which they are subjected in every day use. This bulging, which occurs centrally of the side walls, renders the tanks unsightly and furthermore interferes with their customary orderly even side by side placement or arrangement. In order to prevent this bulging of the side walls, cumbersome and expensive angle iron supporting frames have been employed inside the tanks but they are expensive and also are objectionable because of the relatively great amount of space which they occupy.

The general object of the present invention is to strengthen and re-enforce the side walls against bulging, by indenting or paneling and also where necessary by tying the two paneled walls together by means of a centrally disposed cross brace.

Figure 1 is a perspective view of the tank according to the invention.

Figure 2 is a vertical sectional view through a battery of tanks placed side by side in which one tank is shown without an internal brace and one each with one and two braces respectively.

Figure 3 is a section on line 3—3 of Figure 2.

In carrying out my invention, a tank 5 of rectangular shape is produced, which tank is of usual construction with the exception that the side walls 6 are indented thus producing panels 8 and surrounding border 9, both of rectangular shape. When a number of tanks are placed one beside the other, the border 9 of the panels 8 will be the only point of contact between adjacent tanks, because the panels stiffen the side walls and prevent bulging at the center, which bulging would create points of contact in the paneled area of adjacent tanks. Consequently, according to the present invention, batteries of tanks can be lined up evenly, thus reducing the space occupied by the tanks, and adding to the orderly appearance of the service station. As the rectangular tanks 5 are generally of much greater depth than

width, it follows that the front and rear or end walls 10 are subjected to less pressure than the side walls 6, and therefore, do not require strengthening or bracing. However, the side panels strengthen and stiffen the borders 9 which in turn impart considerable rigidity to the end walls. While it has been proven in practice that the paneled side walls 6 make it possible to eliminate the use of the bulky and expensive frame work heretofore employed, in some instances it is desirable to employ a simple single angle iron cross brace member 11, such as shown in the centermost tank, Figure 2. This brace is welded or otherwise suitably connected at its ends to the opposite side walls of the tank, at approximately the center thereof, the point where bulging is most likely to occur. Where two braces are employed they are preferably positioned one above the other below the mid section of the tank, as illustrated in the right hand tank 5, Figure 2.

A pump 12, of any well known and old construction mounted on the top of tank 5, communicates with the interior of the tank through a pipe 13, which is rigidly secured at its lower end to the bottom of the tank by means of a bracket 14.

The top wall 15 of the tank is also re-inforced or stiffened to withstand the heavy downward and tilting stresses incident to the every day use of pump 12. Thus, the top wall is raised relatively to the downwardly and outwardly bent edges 16 thereof.

The indentation of side walls 8 of tank 5 is dimensioned to avoid bulging of the walls of a filled unbraced tank beyond the plane of panels 9. This assures the proper alignment and orderly side by side placement or arrangement of the braced tanks previously referred to, in the event braces are dispensed with, or where braces are employed, and become accidentally loosened at their point of connection with one or both of the side walls.

The principal purpose of braces 11 is to stiffen the tank against excessive buckling, due either to the pressure of the liquid contents or the inaccuracy in forming the side walls of the tank into rectangular shape. It frequently happens that the sides of the tank are slightly out of parallel and consequently when the heads and bottoms are welded in place, the extra or superfluous metal must be crowded in one direction or another, thus causing buckling. Under such circumstances the use of braces 11 are employed to stiffen the side walls against this bulging action, which otherwise would be prevented by the action of panels 8.

What I claim, is:

A rectangular sheet metal container of greater depth than width, comprising side walls having a recessed panel extending substantially over the entire area of said walls, a cross-brace member welded at its opposite ends to opposite side walls of said container within the area of their panels

and a top wall having a raised panel extended substantially over the entire area of said top wall and encircled by narrow downwardly and outwardly inclined border planes merging into said side walls.

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