Sept. 7, 1937. E. E. HEWITT 2,092,392

MULTIPLE COMPARTMENT RESERVOIR

Filed Jan. 23, 1934

Fig. 1.

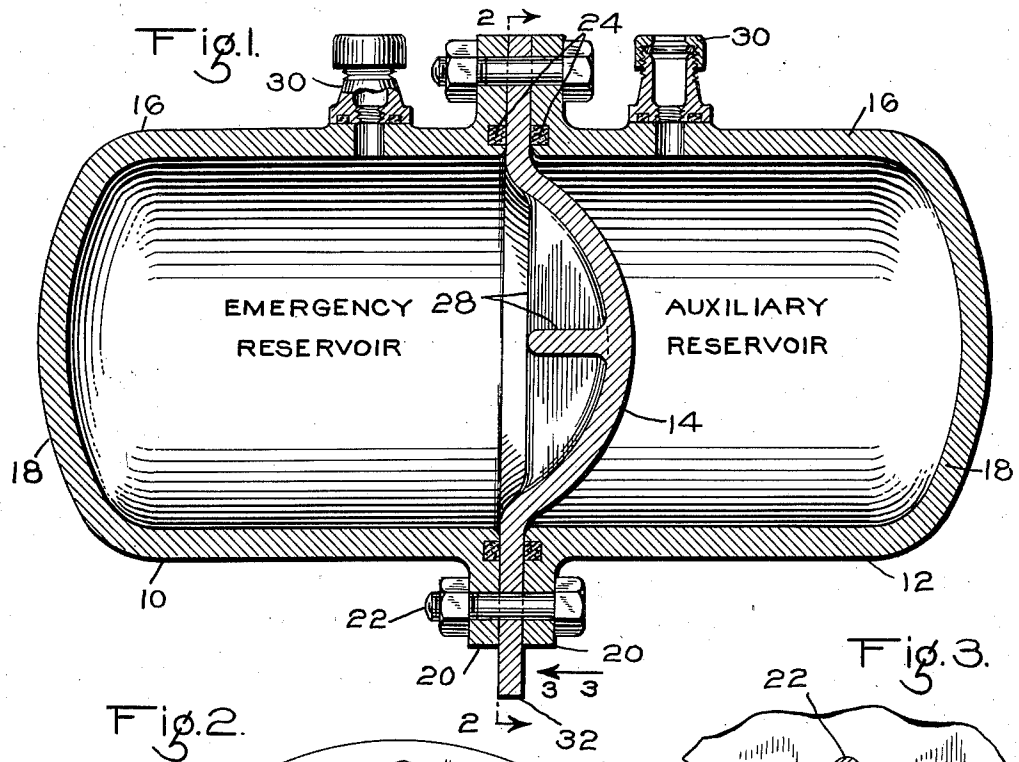


Fig. 2.

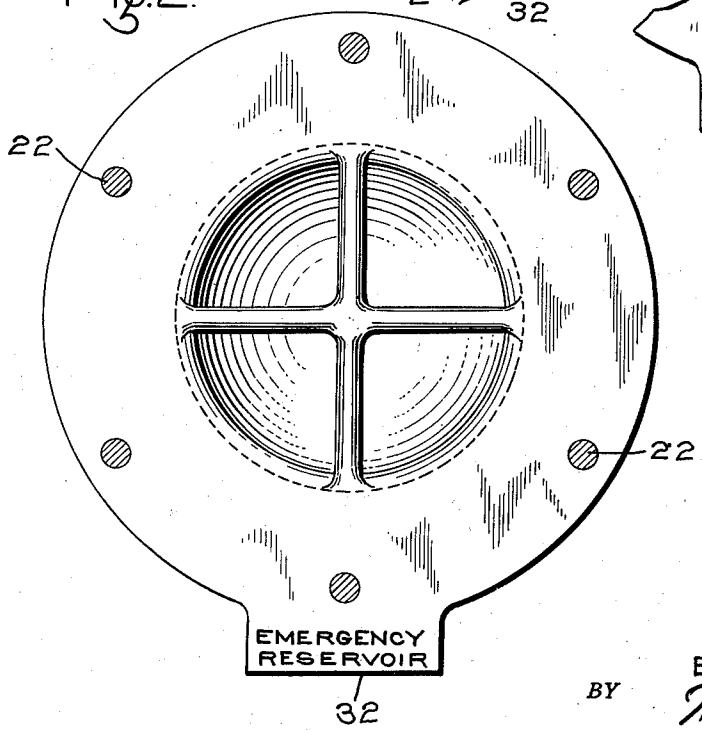
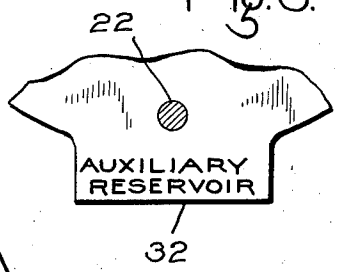


Fig. 3.



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MULTIPLE COMPARTMENT RESERVOIR

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2 Claims. (Cl. 220—22)

This invention relates to fluid pressure reservoirs for fluid pressure brake apparatus, and more particularly to reservoirs having multiple compartments.

It is a principal object of my invention to provide an easily manufactured, pressure-tight reservoir in which the volumes of the compartments within the reservoir may be conveniently changed or interchanged at any time by reversing the position of a reversible wall or partition.

Another object of my invention is to provide a simple method of manufacturing multiple compartment reservoirs in which fluids under pressure are to be stored.

Other objects and advantages will be apparent from the following description of one embodiment of my invention, which is illustrated in the attached drawing, in which,

Fig. 1 is a vertical section of a reservoir made according to my invention.

Fig. 2 is a view along the line 2—2 of Fig. 1.

Fig. 3 is a view along the arrow 3—3 of Fig. 1.

Referring to the drawing, the embodiment shown comprises end sections 10 and 12 and an intermediate wall section 14.

Each end section 10 and 12 comprises a side wall portion 16, which may be of circular, oval or of other cross-sectional configuration, and which merges at one end into a rounded or concave end wall portion 18 and at the other end into a peripheral flange 20.

The flanges 20 of each end section are adapted to be complementary so that the end sections may be secured together thereby, as by bolts 22, with the intermediate wall section 14 held therebetween. Gaskets 24 are provided to insure a pressure tight joint.

The intermediate wall section 14 has its center portion 26 of curved cross-section so as to form a bowl-like projection axially of the reservoir formed by joining the end sections thereto. Ribs 28 are provided integral with the curved or center portion 26 to increase the mechanical strength of the member.

With the intermediate section 14 secured to and between the end sections 10 and 12, a reservoir having two separate and pressure-tight compartments is formed. Fittings 30 are provided for connecting pipe to the two compartments.

Now a feature of my invention is that the end sections 10 and 12 may be duplicate parts, so that the intermediate section 14 not only serves to form two separate compartments, but the curved portion 26 may be shaped to provide one compartment with a definitely greater volume than the other.

If such a two-compartment reservoir is provided for use in connection with fluid pressure brake equipment for railway vehicles, one compartment may be used as an "emergency reservoir", and the other compartment as an "auxiliary reservoir", as indicated in the drawing.

In order that it will be apparent from the outside of the reservoir which compartment is the larger, or which is the smaller, I have provided a lug 32 integral with the intermediate section 14 and projecting beyond the meeting surfaces of the flanges 20. This lug may have inscribed on either side thereof the capacity of the compartment adjacent thereof, or the intended use of the compartment, as is indicated in Figs. 2 and 3.

If at any time it is desired to interchange the positions of the two compartments, the position of the intermediate wall section 14 may be reversed, so that the left hand compartment then becomes the smaller. Since in reversing the intermediate wall section 14 the lug 32 is also reversed, the inscription thereon will always indicate the true volumes of the compartments.

While the curved portion 26 of the intermediate sections may be of other configuration, I prefer to employ a curved section because of the increased strength offered to fluid pressures. This section, as well as the two end sections, may be constructed of pressed steel or fabricated steel, but I prefer a cast metal construction because of the ease and low cost of manufacture.

It is to be understood that the two end sections 10 and 12 may be other than duplicate parts, in order to obtain a desired difference in volume between the two compartments, but in such a case the volumes provided by the two compartments will be different when the intermediate section 14 is reversed.

While I have shown an embodiment of my invention in a two-compartment reservoir, it will be apparent that the invention may be embodied in a reservoir having a larger number of compartments, and I do not therefore desire to be limited otherwise than by the spirit and scope of the appended claims.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A multiple compartment reservoir comprising a pair of compartment defining sections, each of said sections having an open end and an outwardly extending flange circumscribing said end, the flange of one section being complementary to the flange of the other section, a dome-like

wall member adapted to be secured between said flanges to form two pressure tight volumes of different capacity, said dome-like wall member being reversible between said flanges to interchange the positions of said volumes, and a lug projecting from said wall member exteriorly of said volumes for indicating the volumes thus formed for either position of said wall member.

2. A multiple compartment reservoir comprising, a pair of compartment-defining sections, each of said sections having an open end and an outwardly extending flange circumscribing said end, the flange of one section being complementary to the flange of the other section, a gasket carried by each of said flanges, a wall member having an off-set portion and an annular flange surrounding said off-set portion, said annular flange and the flanges of said compartment-defining sections having matched apertures through which securing bolts are adapted to be passed to secure said sections and wall member together to define two unequal volumes, said wall member being reversible between said flanges to interchange the positions of said volumes, and a lug projecting from said wall member exteriorly of said volumes for indicating the volumes for either position of said wall member.

ELLIS E. HEWITT.