May 22, 1928. 1,670,709

B. B. BLOOD

COLLAPSIBLE PAIL

Filed March 20, 1926

Fig. 1

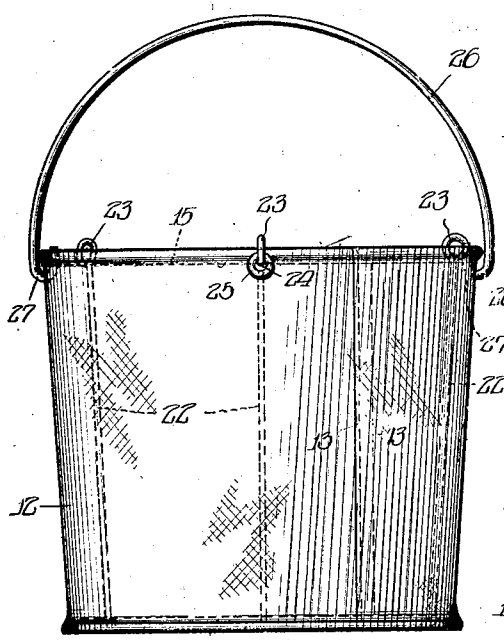


Fig. 2

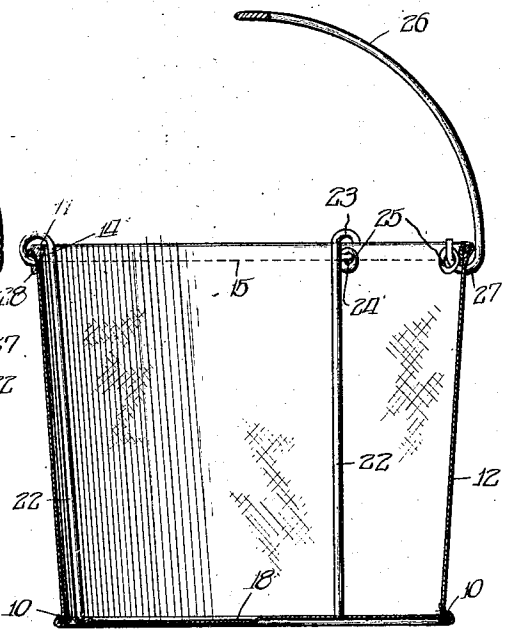


Fig. 3

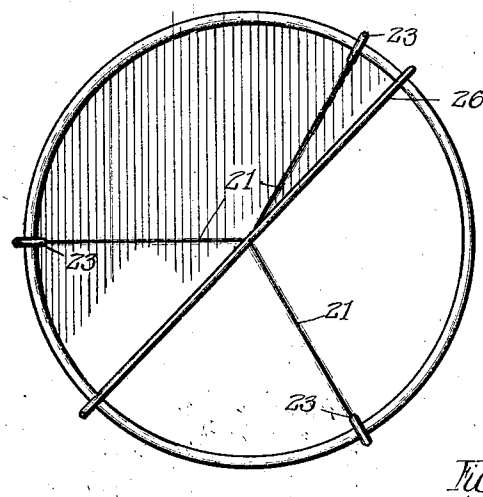


Fig. 4

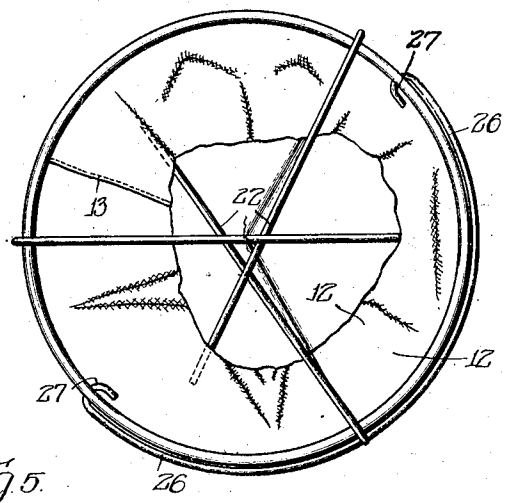
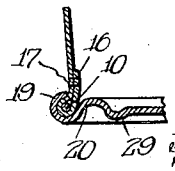


Fig. 5



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UNITED STATES PATENT OFFICE.

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COLLAPSIBLE PAIL.

Application filed March 20, 1926. Serial No. 96,154.

The present invention relates to collapsible pails.

More particularly the present invention relates to pails which may be collapsed into relatively small space when not in use and has for one of its objects the provision of a collapsible pail which is simple to operate and which when in normal operative position will form a relatively rigid water-tight structure.

A further object is to provide a collapsible pail made of simple parts, which pail is cheap to manufacture and which is well adapted to meet the conditions encountered in ordinary service.

A further object is to provide a collapsible pail which is light in weight and which provides a relatively large capacity.

Further objects will appear as the description proceeds.

Referring to the drawings—

Figure 1 is a view in side elevation of one embodiment of the present invention in its operative position;

Figure 2 is a sectional view of the structure shown in Figure 1;

Figure 3 is a top plan view of the structure shown in Figure 1;

Figure 4 is a top plan view of the improved pail when said pail is in collapsed position; and

Figure 5 is a view on an enlarged scale of a detail of construction.

The numerals 10 and 11 indicate, respectively, top and bottom rings which may be made of galvanized iron or other non-corrosive material having the requisite stiffness. Said rings 10 and 11 are disposed within folded over edge portions of the fabric material 12, which fabric material may be sewed along the seams 13—13 to form an endless band. The folded over upper edge portion of the fabric material 12 is indicated by the numeral 14 and is stitched along the seam 15. The lower folded over portion of the fabric material 12 is indicated by the numeral 16 and is stitched along the seam indicated by the numeral 17.

The numeral 18 indicates a relatively stiff bottom plate which may be made of galvanized iron or other non-corrosive material. Said bottom plate 18 is of a circular outline to coincide with the ring 10 and has a crimped over edge portion 19 which cooperates with the upwardly swaged annular portion 20 of said bottom plate 18 to form a tight crimp around the folded over edge portion 16 of the fabric member 12, which folded over portion 16 is maintained against collapsing by the ring 10.

The bottom plate 18 is swaged to form a plurality of radial grooves 21—21 which extend substantially to the swaged up annular portion 20 of the bottom plate 18.

The top ring 11 is adapted to be held in spaced relationship with the bottom plate 18 by means of a plurality of braces 22—22 corresponding in number to the radial grooves 21—21. Said braces 22—22 preferably take the form of stiff wires and are provided with loops 23—23 at their upper extremities, which loops enclose the top ring 11. In order to permit the insertion of said loops 23—23 around the top ring 11, the fabric member 12 is perforated as indicated by the numerals 24—24, the boundaries of said perforations being defined by eyelets 25—25.

A bail 26 is provided having looped over end portions 27—27, which looped over end portions are adapted to support the upper ring 11. The fabric member 12 is suitably apertured for the reception of the looped end portion 27—27, the boundaries of said apertures being defined by eyelets.

Under normal service conditions, the top ring 11 will be held in spaced relationship with the bottom plate 18 by means of the braces 22—22. The length of said braces will be so chosen that the fabric member 12 will be held taut when said braces 22—22 are disposed in substantially vertical position, at which times the bottoms of said braces 22—22 should be relatively close to the swaged up portion 20 of the bottom plate 18. In order to form a pocket for each of said braces 22—22, the bottom plate 18 may be provided with a depression 29 at the outer extremity of each of the grooves 21—21, whereby the resiliency of the fabric member 12 will hold the braces 22—22 in bracing position.

Under service conditions, the pail should hold water or the like for a practical length of time. For this purpose the fabric member 12 should, of course, be chosen of sufficiently dense material. Moreover, the seams 13—13 should be relatively tight. By reason of the crimping of the portions

19 and 20 of the bottom plate 18 around the lower ring 10 and the fabric covering said lower ring, seepage of water from the pail at the lower extremity thereof is effectually prevented.

When it is intended to move the parts to collapsed position, the braces 22—22 may be moved out of the depressions 29—29 toward the vertical center line of the pail. Under these conditions the upper ring 11 will, of course, fall toward the bottom plate 18 and the fabric member 12 will fall into folds. The lower extremities of the braces 22—22 will lie between the bottom plate 18 and the folds of the fabric member 12, whereby the free extremities of said braces will be covered and there will be no protruding parts. The shape of the bail 26 will preferably be substantially semi-circular, whereby the said bail, when allowed to drop, will move into close proximity with the rings 11 and 10.

Inasmuch as the braces 22—22 are straight rods, they are adapted to be disposed in position to exert the most efficient bracing effect. Being disposed in radial planes of the pail, they naturally tend to follow the radial grooves 21—21 when the pail is being collapsed or being changed from collapsed condition to operative condition. Inasmuch as the braces 22—22 are within the fabric member 12, said fabric member holds said braces in position against the bottom plate 18 when the pail is in collapsed condition.

Though a preferred embodiment of the present invention has been described in detail, many modifications will occur to those skilled in the art. It is intended to cover all such modifications that fall within the scope of the appended claims.

What is claimed is—

1. A collapsible pail comprising a top ring, a bottom ring, a foldable fabric member joined to form an endless band, the extremities of said band being folded around the said rings, a bottom plate secured to said lower ring, and a plurality of brace members having supporting relationship with said upper ring and adapted to hold said upper ring in spaced relationship with said bottom plate, said bottom plate being provided with depressions for receiving and holding the lower extremities of said brace members, each of said brace members comprising a rod having an end portion looped about one of said rings and having its other end portion adapted to be positioned adjacent to the other of said rings, each of said rods when in bracing position lying in an axial plane of said pail and being disposed inwardly of said fabric member, whereby when said pail is collapsed, said fabric member will hold the free extremities of said brace members against said bottom plate.

2. A collapsible pail comprising a top ring, a bottom ring, a foldable fabric member joined to form an endless band, the extremities of said band being folded around the said rings, a bottom plate secured to said lower ring, and a plurality of brace members having supporting relationship with said upper ring and adapted to hold said upper ring in spaced relationship with said bottom plate, said bottom plate being provided with depressions for receiving and holding the lower extremities of said brace members, said bottom plate being provided with guiding grooves for guiding the lower extremities of said brace members into said depressions, each of said brace members comprising a rod having an end portion looped about one of said rings and having its other end portion adapted to be positioned adjacent to the other of said rings, each of said rods when in bracing position lying in an axial plane of said pail and being disposed inwardly of said fabric member, whereby when said pail is collapsed, said fabric member will hold the free extremities of said brace members against said bottom plate.

3. A collapsible pail comprising a top ring, a bottom plate, a foldable fabric member joined to form an endless band, the extremities of said band being secured to said top ring and to the periphery of said bottom plate, said bottom plate being provided with a plurality of radial grooves, each of said grooves terminating near the periphery of said bottom plate in a depression of greater depth than said grooves, and a plurality of brace members equal in number to said grooves, each of said brace members having an elongated portion adapted to lie in proximity to said fabric member when said pail is in operative position, the free extremities of said brace members being adapted to be seated within said depressions.

Signed at Chicago, Illinois, this 13th day of March, 1926.

BURR B. BLOOD.