(No Model.)

G. W. McKIM.

MEASURING VESSEL.

No. 514,377. Patented Feb. 6, 1894.

Fig. 1.

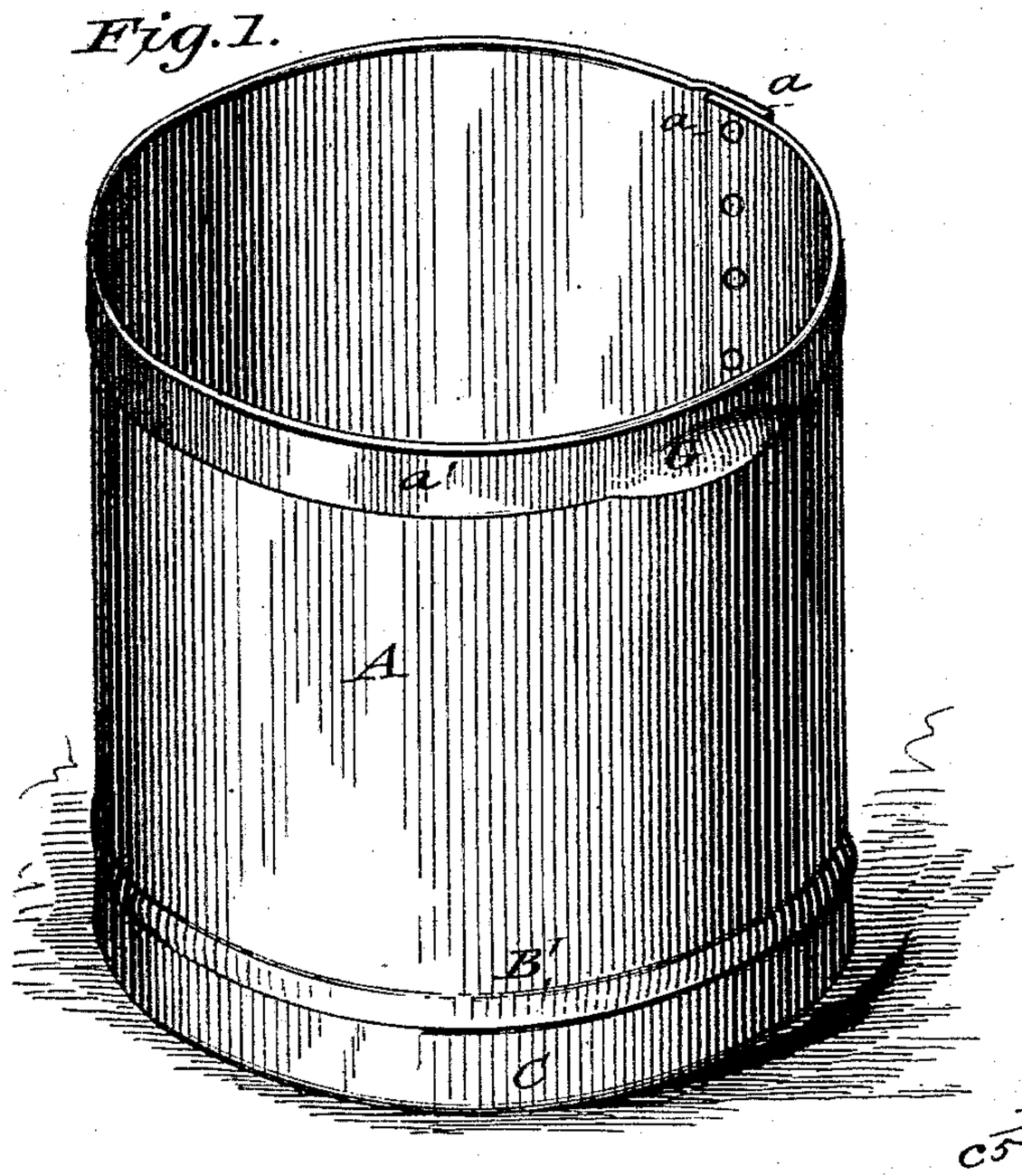


Fig. 3.

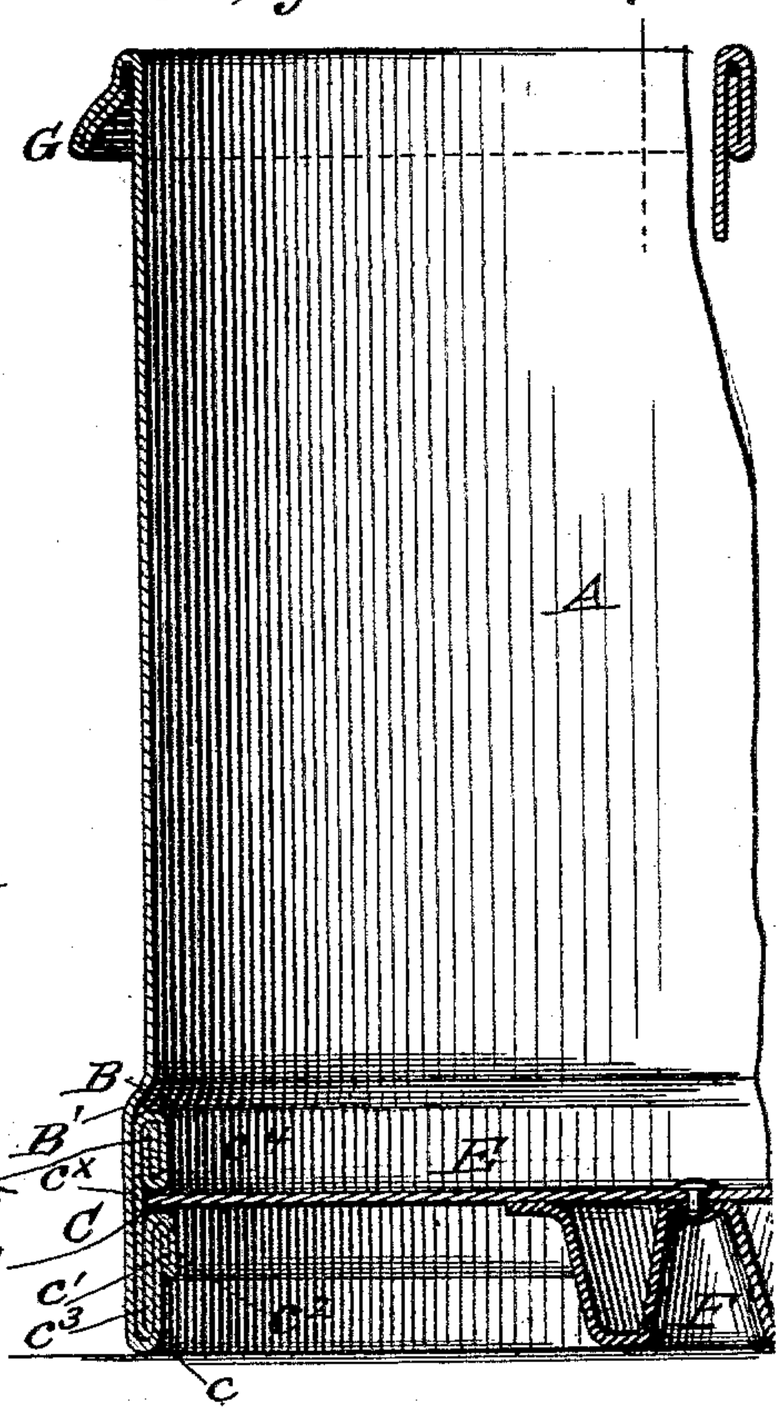


Fig. 2.

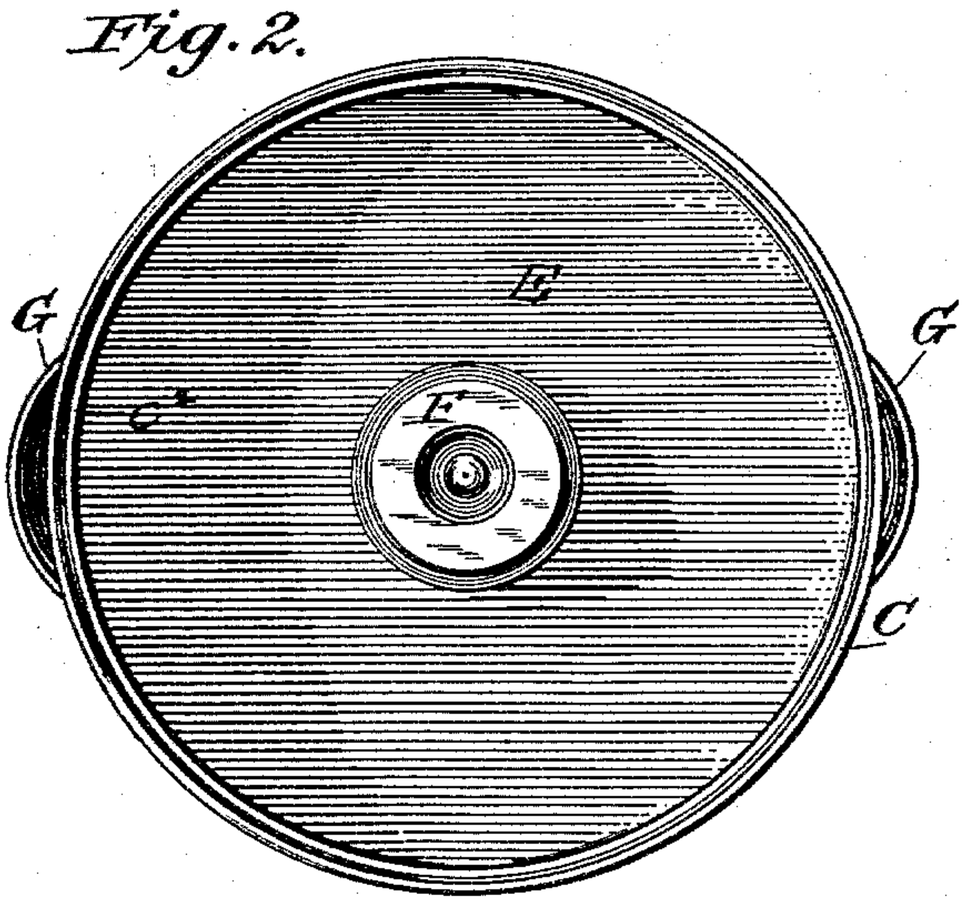
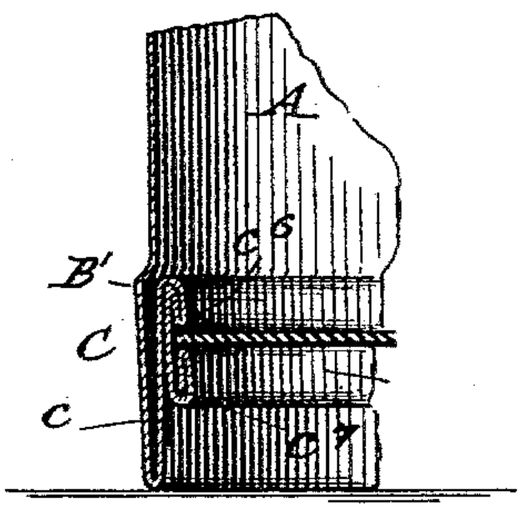


Fig. 4.



WITNESSES:

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MEASURING-VESSEL.

SPECIFICATION forming part of Letters Patent No. 514,377, dated February 6, 1894.

Application filed April 20, 1893. Serial No. 471,104. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. McKIM, a citizen of the United States, residing at Martin's Ferry, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Measuring-Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to measuring-vessels, and refers more particularly to that class of measuring-vessels formed of metal sides with wooden bottoms. In this class of measuring-vessels the bottoms soon become loosened and fall out, owing to the expansion of the metal and the contraction of the wood in hot weather. Furthermore, the bottoms also rot out and become useless before the metal sides begin to show signs of wear. To overcome these objections, and to provide a vessel in which the expansion or contraction will not affect the connection between the bottom and the sides, and to provide a simple, cheap and durable vessel in which both the sides and bottom are formed of metal, and which can be used both as a dry or liquid measure, is the object of my invention.

The invention consists in the peculiar and novel combination and arrangement of parts, all of which will hereinafter be described and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved measuring-vessel. Fig. 2 is an inverted plan view thereof. Fig. 3 is a vertical section of a portion thereof; and Fig. 4 is a view of a modification hereinafter referred to.

My improved vessel which in practice is generally constructed in half-bushel, peck, half-peck and quarter-peck sizes, comprises a circular body A formed of a single sheet of metal, the ends of which are lapped as at $a\,a$ and riveted; and the upper edge of such metal sheet is bent upon itself to form a strengthening or overlapping top edge a', as shown. Near its lower end the metal sheet is bent outward as at B, which forms an outer shoulder B′ from which point the side portion extends down to form the chine end C. The chine proper is formed by bending the lower end of the metal sheet back upon itself as at c, then down as at c', then upon itself again as at c^2, then down inside the fold c at c^3, then up beyond the bends c' c^2 as at $c^\times$, then down as at c^4, then up and lapped under the bend c^4 as at c^5.

It will be noticed by reference to Fig. 2 that the inner bend or chine portion seats under the shoulder B′, and the bent portions c^2 c^3 and c^4 c^5 are turned down in the same plane, but are spaced apart to form the groove D in which the bottom plate E is fitted, as shown. It will be thus seen that the chine proper is formed of a yielding section, *i. e.* an annular spring-like ring which will always adjust itself either inward or outward as the metal expands or contracts, and thereby keeping the groove and peripheral edge of the bottom in a tight contact under all circumstances. Furthermore, by making the bends which form the said groove, in the manner shown, shoulders are provided both above and below the bottom plate E, forming thereby a most positive bearing and lock for such bottom plate.

While I prefer to form the chine of a spring-like section formed of the several folds arranged as shown in Fig. 2, as such arrangement provides for a more perfect and positive bottom support and lock, yet it is manifest that the folds may be varied, as for instance as shown in Fig. 4. In this case the bend c extends up to the shoulder B′, and the shoulders c^2 c^3, c^4 c^5 are bent by turning the upper end of the bent portions c in the manner indicated at c^6 c^7, it being obvious that the chine may be formed of such manner of folds as may be required, the shoulder B′ being bent outward, in all cases a distance sufficient to accommodate the desired number of folds under it.

F indicates a button or center bearing on the bottom plate, and is intended to support the bottom in half-bushel sizes, so that lighter iron may be used for the bottom. In the smaller sizes this bearing piece may, however, be omitted.

G, G, indicate handle portions or lugs, formed integral with the body A, near its upper edge, they in the practical construction being formed by bending the overlapping top

edge a' outward at diametrically opposite points, as at $a^{\times}$, $a^{\times}$. This is usually done, after the ends of the body have been riveted together, by inserting such end in a suitable socket or die, and driving swages under the edge a' at the points $a^{\times}$.

By thus forming the handles, it will be manifest that the cost of manufacture is much reduced and the necessity of attaching the handle portions by rivets or otherwise is entirely avoided.

From the foregoing description taken in connection with the drawings the advantages of my improvement will readily appear. By forming the body of a single piece, with a yielding chine portion at one end, a reinforcing band at the top, having outwardly bent sections to form handles, the cost will be reduced to the minimum, while the vessel will possess the strength and rigidity desired.

The bottom cannot possibly become loose, and owing to its peculiar joint with the sides, the vessel can be made a fluid tight one by dipping the same in a galvanizing bath.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A metallic measure having a yielding chine portion provided with an annular groove, and a bottom piece fitted in such groove, substantially as shown and described.

2. A metallic measuring-vessel formed with a yielding chine portion, having bent portions, forming annular shoulders, and a bottom plate fitted between such shoulders, substantially as and for the purposes described.

3. A metallic measuring-vessel consisting of a sheet metal plate bent to form the sides, and having an outwardly pressed annular shoulder at its lower end, and such lower end bent inward upon itself to form a yielding chine portion, said chine portion having an annular groove, and a bottom plate fitted in such groove, substantially as described.

4. A metallic measuring-vessel formed of a single metal sheet having its ends lapped and riveted, and the lower edge bent inward upon itself and then bent to form double annular shoulder portions, and a metal bottom plate fitted between such shoulders, as and for the purpose described.

5. In a metallic measuring-vessel, in combination, a metal body, having an outwardly bent shoulder near its lower end, extended entirely around the said body, said lower end bent inward to fit under the said shoulder and adapted to form a yielding chine portion, the free end of such chine portion having double lapped portions on its inner face, forming shoulders, and a metal bottom plate fitted in such shoulders, all substantially as shown and for the purpose described.

6. In a metallic measuring-vessel, the combination of the metal body A, having an annular shoulder B, a chine portion C bent inward at the bottom, said portion bent to form loop portions c^2 c^3 and c^4 c^5, in combination with the bottom plate fitted between such loop portions, said loop portions and the chine portion adapted to fit under the shoulder D, when pressed outward, all substantially as and for the purpose described.

7. A metallic measuring vessel, comprising a body formed of a single sheet, having its ends lapped and riveted, its lower edge folded inward, to form a chine portion, and its upper edge bent outward to form an overlapping edge, said edge having outwardly bent portions to form handles, and a bottom plate, connected with the yielding chine portion, all substantially as shown and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. McKIM.

Witnesses:

GEORGE COOKE,

GEO. DUNCAN.