

April 3, 1928.

1,664,431

S. RINGER

METAL RECEPTACLE

Filed Feb. 1. 1926

2 Sheets-Sheet 1

Fig. 1.

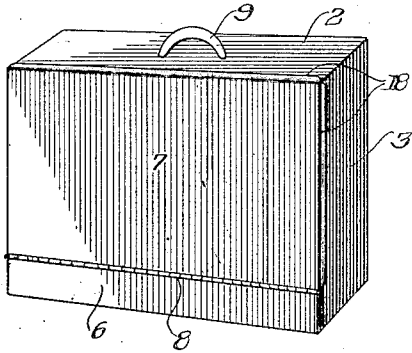


Fig. 2.

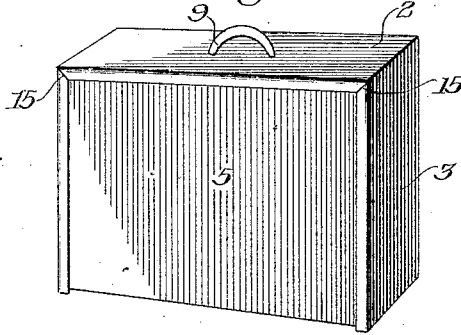


Fig. 3.

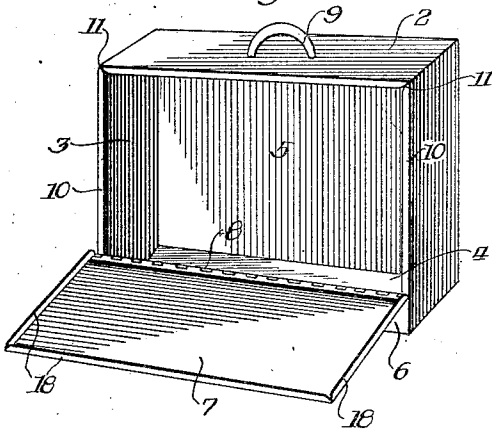


Fig. 4.

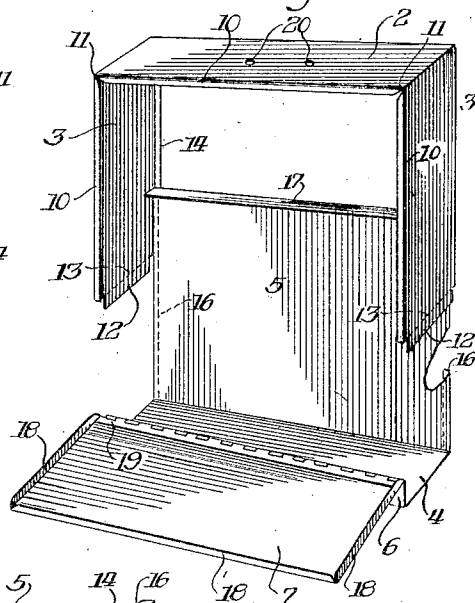


Fig. 5.

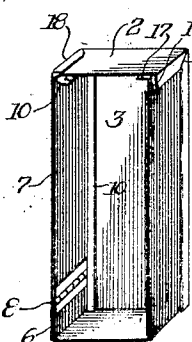
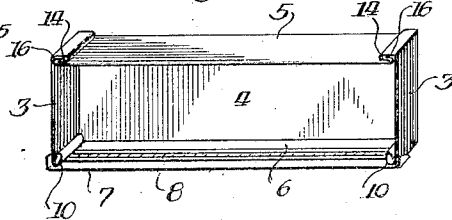


Fig. 6.



Witness:

Ed. C. Brown

By

Inventor:
Soren Ringer.
Gray Wilson Atty

April 3, 1928.

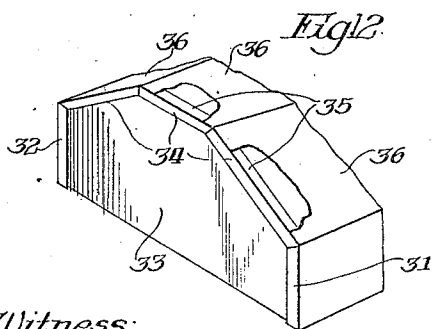
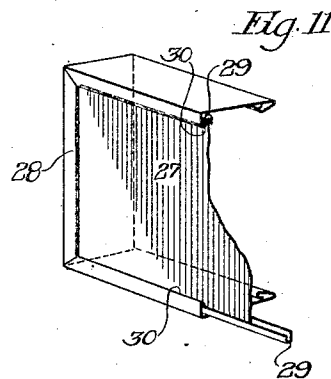
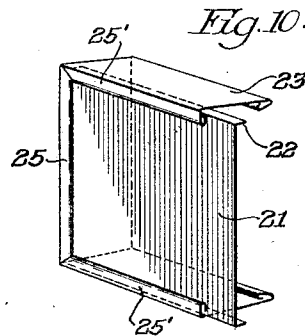
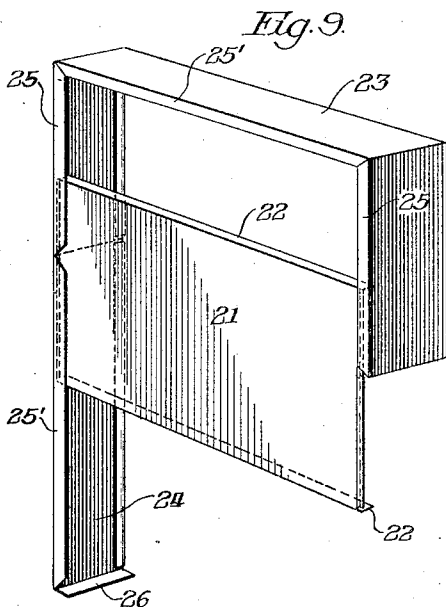
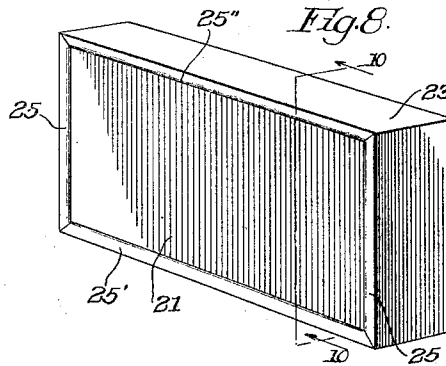
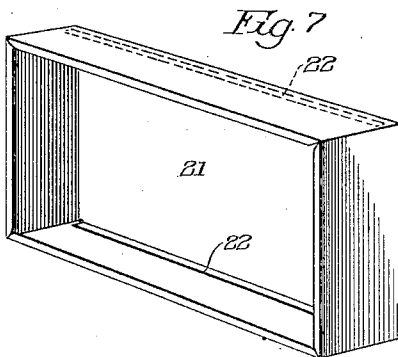
1,664,431

S. RINGER

METAL RECEPTACLE

Filed Feb. 1. 1926

2 Sheets-Sheet 2



Witness:

Ed. Adams

By

Inventor:
Soren Ringer.
Chas. J. Wilson Att'y.

UNITED STATES PATENT OFFICE.

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METAL RECEPTACLE.

Application filed February 1, 1926. Serial No. 85,117.

This invention pertains to sheet metal receptacles and more particularly to a sheet metal construction applicable in the manufacture of boxes, drawers, cabinets and containers etc., regardless of the shape or size of such articles and while herein illustrated and described as applied to a tool box or portable receptacle for tools and the like such as that described and claimed in my copending application Serial No. 82,451 filed January 20, 1926, and entitled Portable metal receptacle, the invention is of broader application and the pictured embodiments are purely illustrative.

Heretofore sheet metal receptacles such as those contemplated as within the scope of my invention have been constructed in various manners and with varying degrees of success, but many of them have been of unsubstantial or flimsy construction, ill adapted for permanent usage, particularly for portable usages, while those which were constructed in a manner which may be termed substantial have been found to involve too great an expense chiefly because of their complicated construction.

I have found, however, that by utilizing the construction hereinafter more fully set forth I can produce a receptacle or container which will involve little expense in manufacture, will be strong and durable for whatever use to which it may be subjected and which will enable the containers to be made rapidly on a production basis.

Accordingly one primary object is to construct a receptacle of the character set forth in such a manner that one or more of its sides or sections may be rigidly and securely connected or locked to two or more of its other sides or sections, and to provide a construction of such character as may be easily adapted to the construction of many different kinds and characters of receptacles.

Another object of perhaps equal importance is to provide a receptacle or container which will be comparatively light but strong and durable, one that may be easily transported and one that is at once simple, facile and economical to construct and one that may be utilized for a large variety of purposes.

Many other objects including the details of construction and arrangement, together with the broader aspects of the invention should become apparent from the descrip-

tion and claims and from the drawing in which:

Fig. 1 is a perspective view of the front of a receptacle built in accordance with the invention.

Fig. 2 is a perspective of the rear thereof.

Fig. 3 is a perspective view of the same with the cover or lid let down.

Fig. 4 shows the method by which the assembly of what I shall term the two halves of the receptacle is accomplished.

Fig. 5 is a vertical sectional view showing the construction and arrangement of the parts.

Fig. 6 is a horizontal sectional view showing the construction of the parts.

Figs. 7 and 8 are perspective views corresponding to the views of Figs. 1 and 2 but of a modified form of receptacle.

Fig. 9 is a perspective view of the receptacle shown in Figs. 7 and 8 showing the method of assembly of the parts.

Fig. 10 is a section showing in perspective the interior construction and taken on the line 10—10 of Fig. 8.

Fig. 11 is a view similar to that of Fig. 10 but of a still further modified construction and

Fig. 12 is a perspective view of a still further modified structure parts being broken away.

The receptacle or container illustrated in Figs. 1 to 6 inclusive is similar to that illustrated in connection with the aforementioned copending application and comprises generally a top 2, ends 3, a bottom 4, a back or side 5, a front strip 6 extending across the front of the receptacle and to which the cover or lid 7 is hinged at 8 (the cover or lid 7 and the strip 6 may be hereinafter referred to jointly or severally as a side) and a handle or the like 9 for convenient transportation of the receptacle if it be constructed for such purpose. The usual metal of which receptacles of the character herein described are constructed is sheet steel although it will be obvious that other metals of various specifications may be used.

In the construction of this receptacle illustrated in Figs. 1 to 6 inclusive, I prefer to utilize but three independent pieces of sheet metal. The two ends 3 and the top 4 are cut from a single sheet of metal, the front edges 10 are rolled and mitered, as at 11 in a manner more particularly described

in my prior Patent No. 1,582,541, issued April 27, 1926, at the points where it is desired the corners of the receptacle shall fall, and tongues 12 adapted to be bent along dotted lines 13 are provided on the bottom portions of the ends for a purpose to be hereinafter described.

V-shaped pieces are cut from the rear edges of the strip of material at points where the corners of the receptacle will be formed as is well known in the art and these back or rear edges are then rolled inwardly as shown at 14 in Figs. 4, 5 and 6 to form one portion of the usual lock seam. The portions forming the ends 3 of the container are then bent into position and this half of the receptacle is then ready for connection to the other half. It will be noted from Figs. 2 and 5 that where the rolled back edges of the ends and top meet when the strip is bent to the position illustrated in Fig. 4 they form miters 15.

The side 5, which has been illustrated as formed from the same sheet as the bottom and front strip 6 and integral therewith, is provided with tongue portions which are rolled outwardly toward one another on the outside face as illustrated at 16 in Figs. 4 and 6 to form halves of lock seams complementary to the halves 14 of the rear edges of the ends 3. The upper edge of the back is preferably flanged inwardly of the receptacle or in the opposite direction to the rolled edges 16 as shown at 17, the front strip 6 is provided with a hinge which is preferably spot-welded to it, the tongues 18 from the top and side edges of the cover or lid 7 are bent upwardly from the inside face thereof, and the hinge 19 is welded to the lower edge of the cover.

The two main parts of the receptacle are then ready for assembly. With the parts of the receptacle properly designed the rolled edges 16 are slid within the open ends of the rolled edges or half seams 14 until the flange 17 abuts the inner face of the top 2 as illustrated in Fig. 5. In this position the tongues 12 are bent inwardly beneath the bottom 4 and are spot-welded thereto, although it will be obvious that the tongues may be first bent inwardly and spot-welded to the bottom 4 so that they will be located on the inside of the bottom. The flange 17 is then spot-welded to the top 2 and in its position abuts against an inner portion of the rolled edge 14 of the top. A handle 9 as before mentioned may be attached to the container or receptacle through holes 19 drilled in the top as will be obvious. The resultant article, as shown in Figs. 1, 2 and 3, is of neat appearance, is strong and durable and withal has been simply constructed.

The receptacle illustrated in Figs. 7 to 10 inclusive is constructed in a manner similar to the receptacle which has just been de-

scribed and differs therefrom namely in that the side or back 21 is provided at both upper and lower edges with flanges 22 adapted to abut against and be welded to the interior faces of the top 23 and bottom 24. The front edges are rolled and mitered preferably in the same manner as that shown in my prior patent above mentioned, while the back edges 25 are adapted to be interlockingly engaged with the side edges of the back 21 in the same manner as the edges of the ends 3 are connected with the edges of the back 5 of the receptacle shown in Figs. 1 to 6 inclusive. The bottom 24 of the receptacle however, in this instance, is formed integral with one end and is provided with a tongue 26 adapted to be spot-welded to the interior face, or if desired, the exterior face of the opposite end after the side or back 21 has been slid into place. This construction is well illustrated in Figs. 9 and 10.

In Fig. 11 I have shown a modified construction in which the side or back 27 is connected to the ends, top and bottom (only one end showing) by lock seams. The lock seam indicated at 28 at one end and that at the other end which is not shown are identical in construction with the lock seams illustrated at 25 in Fig. 9 and at 14 and 16 in Fig. 6, while the two remaining edges of the side or back 27 are connected to the top and bottom by a slightly modified form of lock seam comprising a channel strip 29 adapted to be slid within the inwardly rolled edges 30 of the top and bottom and to receive the straight unrolled edges of the side or back 27. In this construction, therefore, the side or back 27 is secured by lock seams to the ends, top and bottom, although this construction does not provide the same rigidity provided by the constructions previously described.

Fig. 12 illustrates a construction which may be made in the manner similar to that illustrated in Figs. 1 to 6 inclusive in that the two seams 31 and 32 are lock seams with the side or end 33 and the seams 34 are "false" seams such as that illustrated at 14 at the top of Fig. 5 or at 25' in Fig. 9, while flanges 35 are formed on the side or end 33 for spot-welding to the interior faces of the top portions 36.

The words top, end, back, bottom, side and others of like character, wherever used in the description and claims, are not to be construed with such limitation that they may not be applied to constructions similar to mine, for I mean those words to be interchangeable. It will be obvious for instance, that what I have termed the top, might in fact be a bottom or an end or side and the relationship which I have described as existing between a side and the top or ends might in fact be a relationship between the bottom

or an end, and the ends or side. The parts of the receptacles illustrated have been described by such terms as have been considered adequate to permit a clear understanding of a few embodiments of the inventive concept and not because the invention is limited thereto.

From the foregoing it should be well appreciated that I have provided a unique but simple and effective construction adapted for a large variety of sheet metal manufactures and a construction possessing unusual advantages. I do not therefore desire to be limited to the particular embodiments chosen for illustrative purposes but only by the spirit of the invention and the scope of the appended claims.

I claim:

1. In a sheet metal receptacle, top and end sections integrally connected together and each having an inwardly rolled edge at one side of the receptacle, and a side section having two substantially opposed edges interlockingly connected with certain of said inwardly rolled edges and another edge abutting but not interlockingly engaging an interior portion of another rolled edge.

2. In a receptacle, a strip of sheet metal formed to provide at least three walls of the receptacle, each wall having an edge lying in substantially the same plane as the plane in which the corresponding edges of the other walls lie and each of said edges being flanged inwardly and turned upon itself to provide a seam and so that corresponding points of all such seams will be in substantially the same plane, and a sheet of metal having certain substantially opposed edges interlockingly connected to certain of said seams and flanged at portions of certain other of its edges, the flanges of said sheet being adapted to abut against the corresponding interior faces of the walls to which they lie adjacent.

3. In a sheet metal receptacle, top and substantially parallel end sections integrally connected together and each having an inwardly rolled edge at one side of the receptacle, and a side section having substantially parallel, outwardly rolled edges for interlocking engagement with said end sections and having an inwardly flanged edge between said outwardly rolled edges for abutting engagement with the interior face of a top section.

4. In a sheet metal receptacle, a top and substantially parallel end sections integrally connected together and each having an inwardly rolled edge at one side of the receptacle, and a side section having substantially parallel, outwardly rolled edges for interlocking engagement with said end section and having an inwardly flanged edge between said outwardly rolled edges for abutting engagement with the interior face of a top section, said side section abutting,

at a marginal portion of its outer face, against a portion of the inner face of an in-turned edge of a top section.

5. In a sheet metal receptacle, top and substantially parallel end sections integrally connected together and each having an inwardly rolled edge at one side of the receptacle, and a side section having substantially parallel, outwardly rolled edges for interlocking engagement with said end sections and having an inwardly flanged edge between said outwardly rolled edges for abutting engagement with the interior face of a top section, said inwardly flanged edge of the side section being welded to said interior face of the top section.

6. A receptacle comprising, a plurality of sections providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and each end section having a tongue at a lower edge thereof, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections, and a bottom section connected to said side section, said tongues being bent inwardly into a position for engagement with the bottom section.

7. A receptacle comprising, a plurality of sections integrally connected and providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and a tongue on the lower edge of each end section, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections, and a bottom section integral with said side section and secured in position by said tongues.

8. A receptacle comprising, a plurality of sections integrally connected and providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and a tongue on the lower edge of each end section, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections, and a bottom section integral with said side section and secured in position by said tongues said tongues being bent over into engagement with and welded to said bottom section.

9. A receptacle comprising, a plurality of sections providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and each end section having a tongue at a lower edge thereof, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections and having marginal portions of its outer face abutting against the inner face of an in-turned edge of a top section, and a bottom section connected to said side section, said tongues being bent inwardly

into a position for securing engagement with the bottom section.

10. A receptacle comprising, a plurality of sections providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and each end section having a tongue at a lower edge thereof, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections and provided with an inwardly flanged edge between said outwardly rolled edges for abutting engagement with the interior face of a top section, and a bottom section connected to said side section, said tongues being bent inwardly into a position for securing engagement with the bottom section.

11. A receptacle comprising, a plurality of sections integrally connected and providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and a tongue on the lower edge of each end section, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections and abutting, at marginal portions at its outer face against the inner face of an in-turned edge of a top section, and a bottom section integral with said side sections and secured in position by said tongues.

12. A receptacle comprising, a plurality of sections integrally connected and providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and a tongue on the lower edge of each end section, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections and pro-

vided with an inwardly flanged edge between said outwardly rolled edges for abutting engagement with the interior face of a top section, and a bottom section integral with said side sections and secured in position by said tongues.

13. A receptacle comprising, a plurality of sections providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and each end section having a tongue at a lower edge thereof, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections, and a bottom section connected to said side section, said tongues being bent inwardly into a position for engagement with the bottom section, said bottom section having a forward edge struck up and a cover hinged to said struck-up portion of the bottom.

14. A receptacle comprising, a plurality of sections integrally connected and providing a top and ends, each section having an inwardly rolled edge at one side of the receptacle and a tongue on the lower edge of each end section, a side section provided with outwardly rolled edges for interlocking engagement with the inwardly rolled edges of certain of the first said sections and provided with an inwardly flanged edge between said outwardly rolled edges for abutting engagement with the interior face of a top section, and a bottom section integral with said side sections and secured in position by said tongues, said tongues being welded to said bottom section.

In witness of the foregoing I affix my signature.

SOREN RINGER.