May 4, 1937. H. C. BATES 2,078,995

FOLDING RECEPTACLE

Filed March 25, 1936

Fig. 1.

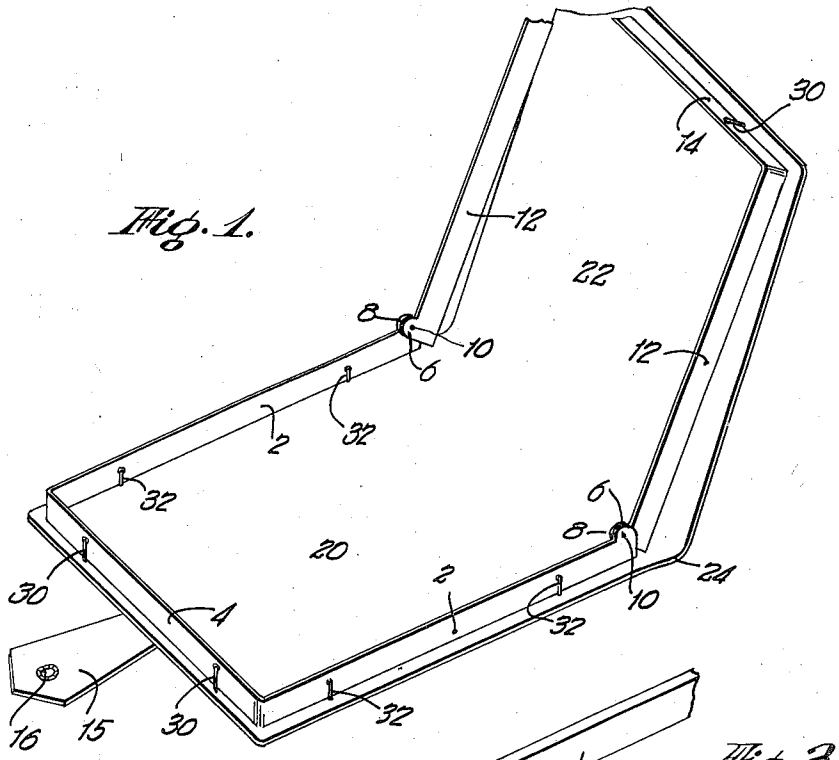


Fig. 3.

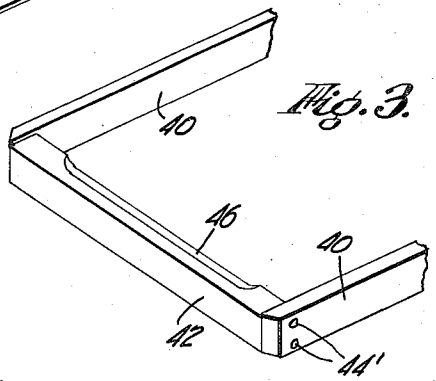


Fig. 2.

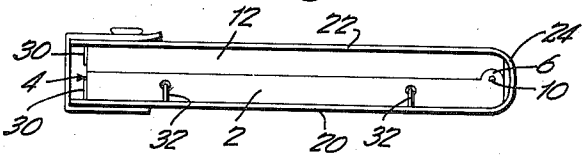
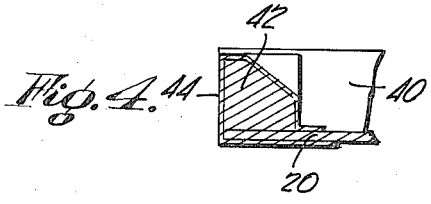


Fig. 4.



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FOLDING RECEPTACLE

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4 Claims. (Cl. 150—29)

This invention relates to improvements in folding receptacles and is directed more particularly to the provision of a novel folding receptacle which is both inexpensive to manufacture and neat and attractive in appearance.

It is one of the principal objects of the invention to provide a folding receptacle or container which is adapted for many and various uses and which includes a novel relatively rigid frame arranged to facilitate opening and closing of the receptacle.

It is another object of the invention to provide a folding receptacle which has a pair of relatively movable frame parts which are light in weight yet strong and capable of lending rigidity to the structure. The frame parts are adapted to permit facile opening and closing of the receptacle and one of them is arranged to be connected to the receptacle body substantially throughout its length while the other is connected at a certain point or points only.

Still a further object of the invention is the provision of a receptacle which is novelly constructed so that it may be opened and set up in a display position. Thus the receptacle is particularly suitable for use by jewelry salesmen, for example, since it makes it possible for them to display their goods in the same container in which they are transported from place to place.

A still further object of the invention is the provision of a folding receptacle which is compact and when in closed position is devoid of openings through which dust or dirt might enter. Yet the receptacle may be easily opened to a position where its contents are readily visible.

Various and many other objects and advantages of the invention will become more apparent after a reading of the following description and reference will be had to the accompanying drawing, wherein:

Fig. 1 is a perspective view of the receptacle of the invention opened to display position;

Fig. 2 is a side elevational view of the receptacle shown in Fig. 1 in closed position;

Fig. 3 is a partial perspective view of a modified form of a frame part; and

Fig. 4 is an elevational sectional view on the line 4—4 of Fig. 3.

Referring now to the drawing more in detail the invention will be fully described.

According to this invention, the receptacle shown in the drawing includes a novel relatively rigid frame, formed of a pair of hinged frame parts, and a body member of some foldable material. The body is associated with the frame in such a way that the completed receptacle, while being essentially a folding receptacle, is at the same time relatively rigid and strong, and the body may be formed of various pliable materials, such as leather, cloth, paper or the like.

The frame broadly consists of a pair of substantially U-shaped members formed of sheet metal which are hinged together at the open ends of the U's. These frame parts are substantially alike in construction and are adapted to swing relative to one another between an extended or open position shown in Fig. 1 and a closed position as shown in Fig. 2.

One of the U-shaped members includes a pair of substantially parallel side arms 2 and an intermediate end portion 4 which extends at approximately right angles to the side arms 2 and between their outer ends. As stated, the frame members are connected to one another in hinged relation and this may be accomplished in various ways.

According to the preferred form of the invention, the rear ends of the side arms 2 are formed to have hinge portions 6 which project slightly above the planes of the upper marginal edges of the arms 2, as shown. In this way, a connecting pin 10 may extend therethrough, as will be described, in substantial alignment with the said upper marginal edges of the arms 2, for a purpose which will presently appear.

The other frame part has side arms 12, similar to arms 2, connected by an intermediate portion 14, which is like part 4. The rear ends of the arms 12 are formed to have hinge parts 8 which project slightly above the planes of their inner marginal edges in much the same manner as parts 6.

Thus, the frame parts may be hinged together by means of connecting pins 10 which extend through the parts 6 and 8 at each side of the frame. The inner marginal edges of the arms 2 and 12 are preferably substantially straight and are arranged to abut when the frames are closed, as in Fig. 2, and since the hinges are formed as above described, the pins 10 may extend therethrough in substantial alignment with the abutting marginal edges and thus not interfere with the abutment or provide openings or cracks through which dust or dirt might enter.

If desired, the U-shaped frame members may be fabricated. That is to say, the intermediate or end portions 4 and 14 may be formed of wood or some other material, which may be of considerable cross section, so as to be sturdy and strong, yet at the same time light in weight,

while the side arms 2 and 12 may be formed of various materials, such as metal or pyroxylin or some other material which is similarly light in weight. This will later be described more in detail.

The body member of foldable material will now be described and this consists of a pair of side wall portions 20 and 22 of substantially equal area joined at adjacent marginal edges to an intermediate or end wall portion 24 and are so arranged that the side walls may be substantially parallel as shown in Fig. 2. The body may be formed of a single piece of material or of a plurality of pieces, all as may be desired.

The side arms 2 and 12 of the frame members are preferably shorter than the length of the portions 20 and 22 while the end or intermediate portions 4 and 14 are preferably slightly shorter than the width of the portions 20 and 22. In this way, the U-shaped members may be associated with the receptacle body in such a way that the walls 20 and 22 project outwardly slightly beyond the marginal edges of the frame.

Preferably the side wall portions 20 and 22 are formed to be relatively rigid as compared with the end wall 24 and they are associated with the frame members in such a way that they lie snugly against the outer marginal edges of the side arms 2 and 12 when in closed position as shown in Fig. 2. Both of the portions 20 and 22 are preferably secured to the forward or intermediate end portions 4 and 14 of the frame members and this may be done in various ways, as by loop portions 30 which extend through the forward parts 4 and 14 and are attached in some manner to the forward end portions of the walls 20 and 22.

According to this invention, it is desirable that one of the walls, such as 20, be relatively immovable relative to the frame part with which it is associated, while the other wall, such as 22, be connected to its frame part by the above-mentioned loops 30 only.

That is to say, I secure the side arms 2 to the wall 20 in some suitable manner so that the wall 20 is at all times, whether the receptacle is open or closed, flush against the outer marginal edges of the arms 2. This may serve to prevent dirt or dust from getting into the receptacle, or prevent the contents from getting out of it, between the arms 2 and wall 20.

The manner in which this is accomplished may take various forms, such as spaced loop portions 32, substantially similar to loops 30, which extend through the side arms 2 and are attached to the wall 20. Or, if desired, the parts may be adhesively secured, for example.

According to the modified form of the invention shown in Figs. 3 and 4, the frame parts consist of side arms 40 connected at their forward ends by transverse end portions 42 and hinged together at their rear ends in some manner. Here the side arms are formed of pyroxylin, for example, and the parts 42 may be of wood.

The outer ends of the body member, that is, the outer ends of the side walls are formed to have flexible loop-like portions 44 which extend around and are secured to the intermediate portions 42 of the frames. It is desirable in this case as stated with reference to Figs. 1 and 2 that the inner marginal edges of the frame parts abut throughout when in folded relation and to this end the said forward end parts 42 of the frame members may be of slightly less width than the side arms 2 so that the foldable material which extends over the portions 42 will not project above the planes of the inner marginal edges of the frame members, more clearly shown in Fig. 4.

Thus the said marginal edges of the frame may be in abutment throughout, all of which tends to provide a neat and compact receptacle which is substantially closed all around and wherein there are no openings for dust and the like to enter.

The hinge parts of these frame members, as well as those of the frame members previously described, may be of various materials and, if desired, may be integral with or a part of the side arms. That is, they may be either molded, cemented, welded, or riveted to the side arms, as desired, and according to the particular materials used.

In the form shown in Figs. 3 and 4 the end portion 42 of the frames are preferably beveled or chamfered at their inner central parts, as indicated at 46. This tends to render the receptacle more neat and distinctive in appearance and facilitates the insertion or withdrawal of articles in the receptacle, as well as helps to insure the abutment of the frames at their forward ends when in closed relation.

As shown in Fig. 3, the side arms 40 may be connected to the transverse portions 42 by means of nails, tacks or the like 44 but it is desired to point out that the portions 40 and 42 of a U-shaped member may be connected to one another in various ways and may, if desired, be formed of a single piece of material.

In all events, preferably the frame and body members are so arranged that when the receptacle is opened to its maximum opened position, the frame members extend relative to one another at an angle which is greater than 90 degrees but less than 135 degrees, as shown in Fig. 1. In this way the articles in the container may be well displayed and as in the case of jewelry, medals, or manicure articles or the like the articles may be associated with the inner sides of the wall portions 20 and 22 so that a novel display container is provided.

According to the preferred form of the invention, there is also provided some means for holding the frame members in closed relation with the inner marginal edges of the side arms 2 and 12 and of the parts 4 and 14 in close abutment throughout, as stated above. To this end there may be provided a strap member 15 having one end secured to one of the wall portions, such as 20, or in some way associated with one of the frame members, and having its other end provided with means for releasably attaching to the other frame member or wall portion 22. In the form shown, the strap 15 has a button 16 on its free end adapted to releasably receive a projection provided on the other wall portion 22. However, various other means may be provided to hold the frame members in closed relation.

It will be noted that with the side arms 2 and part 4 secured to the wall 20 and with the wall 22 connected to its frame part only at the forward end thereof, when the receptacle is opened, the parts 2 and 4 and wall 20 are in abutment while the wall 22 moves away from its frame and extends at an angle thereto, as shown. The flexible hinge 24 of the receptacle body is, of course, arranged to extend around the rear ends of the side arms of the frames when in closed position, as shown in Fig. 2, and is disposed substantially as shown in Fig. 1, when the receptacle is open.

In reference to the fabricated U-shaped members, it will be noted that the parts **42** are relatively more rigid than the side arms **40**. That is to say, where the transverse portions are formed of wood, for example, they are more rigid than the side parts, which, as stated, are formed of pyroxylin, which is relatively flexible. This tends to give to the receptacle the desired rigidity and strength at its forward end while at the same time the frames may be easily closed so as to abut substantially throughout their length.

While I have described the invention in great detail and with respect to a preferred form thereof, it is not desired to be limited thereto since many changes and modifications may be made therein without departing from the spirit and scope of the invention. What it is desired to claim and secure by Letters Patent of the United States is:

1. A folding receptacle of the class described comprising in combination, a substantially rectangular body having upper and lower wall members of substantially equal area joined at their rear marginal edges to an intermediate hinge portion, and a frame of relatively rigid material consisting of a pair of U-shaped members hinged together for swinging movements, each of said U-shaped members including a pair of substantially parallel side arms and a forward end portion extending transversely between the forward ends of said side arms, one of said wall members being secured to the forward end portion only of one of the U-shaped members and the other of said wall members being secured to both the forward end portion and the side arms of the other U-shaped member, said hinge portion of the body being flexible and freely movable relative to said frame.

2. A folding receptacle of the class described comprising in combination, a body including relatively stiff upper and lower wall members of substantially equal area hingedly connected at their rear marginal edges by a relatively flexible intermediate hinge portion, and a frame disposed between said wall members consisting of a pair of U-shaped members, each of said U-shaped members including a pair of spaced side arms connected together at their forward ends by a transverse end member and the rear ends of the side arms of one U-shaped member being hingedly connected to the rear ends of the side arms of the other U-shaped member whereby the U-shaped members may swing relative to one another, one of said wall members having its forward end portion and side portions secured to the transverse end member and side arms respectively of one of the U-shaped members so as to be substantially immovable relative thereto, and a connection between the forward end portion only of the other wall member and the transverse end member of the other U-shaped member whereby said other wall member is movable relative to said other U-shaped member.

3. A folding receptacle of the class described comprising in combination, a body including relatively stiff upper and lower wall members of substantially equal area hingedly connected at their rear marginal edges by a relatively flexible intermediate hinge portion, and a frame disposed between said wall members consisting of a pair of U-shaped members, each of said U-shaped members including a pair of relatively yieldable spaced side arms connected together at their forward ends by a relatively rigid transverse end member and the rear ends of the side arms of one U-shaped member being hingedly connected to the rear ends of the side arms of the other U-shaped member whereby the U-shaped members may swing relative to one another, one of said wall members having its forward end portion and side portions secured to the transverse end member and side arms respectively of one of the U-shaped members so as to be substantially immovable relative thereto, and a connection between the forward end portion only of the other wall member and the relatively rigid transverse end member of the other U-shaped member whereby said other wall member is movable relative to said other U-shaped member.

4. A folding receptacle of the class described comprising in combination, a pair of similar U-shaped frame members each having a transversely-extending front portion and a pair of side arms extending rearwardly therefrom, hinge connections at the rear ends of said side arms of the U-shaped members to facilitate swinging of the frames between a closed position wherein the side arms are in substantial alignment and abutting relation with one another and an open position wherein the side arms extend at an angle relative to one another, a relatively flat wall member disposed adjacent the outside of one of said frame members, connections securing the forward part and side parts of said wall member to the transversely-extending portion and side arms respectively of said frame member so as to render said wall member and one frame member relatively immovable, another relatively flat wall member disposed adjacent the outside of the other frame member, a connecter securing the forward part of said other wall member and the transversely-extending portion of the other frame member and constituting the sole connection therebetween to facilitate relative movement thereof, and a flexible hinge member connecting the rear marginal edges of said wall members and extending around the rear ends of the side arms, all adapted and arranged whereby when the said frames are swung from closed to open position the side arms assume a certain angular relation and the side wall members assume a different angular relation.

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