June 30, 1936. M. L. RATHBUN 2,046,133

CLOSED RECEPTACLE OR CASE

Filed July 2, 1935 2 Sheets-Sheet 1

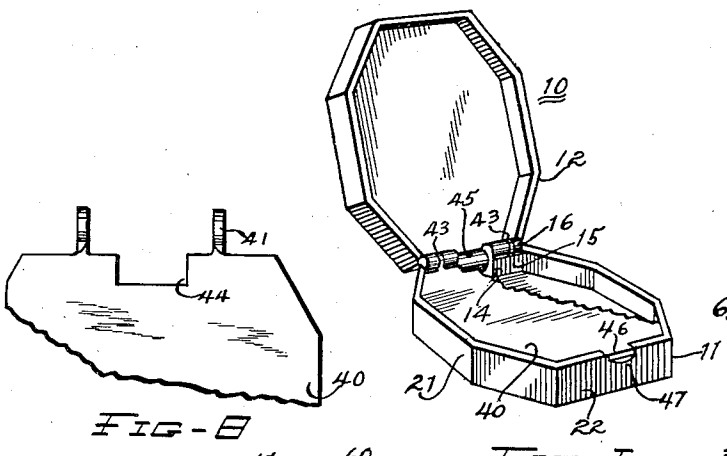


FIG-8 FIG-I

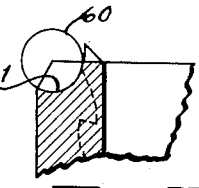


FIG-10

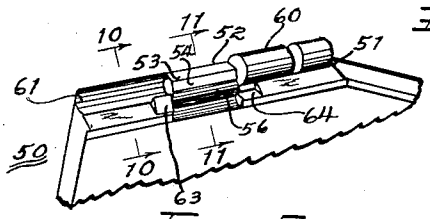


FIG-9

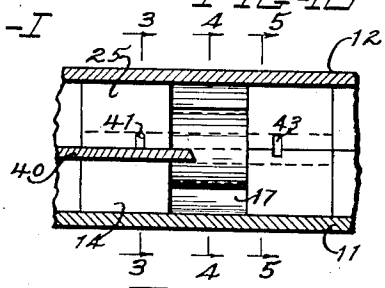


FIG-2

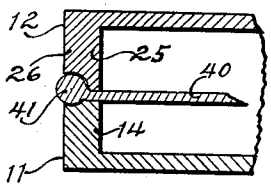


FIG-3

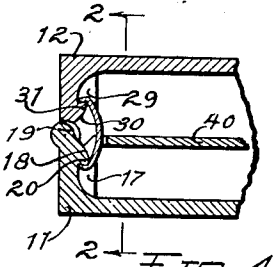


FIG-4

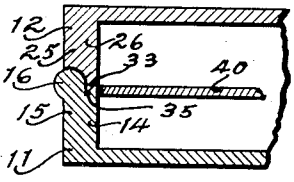


FIG-5

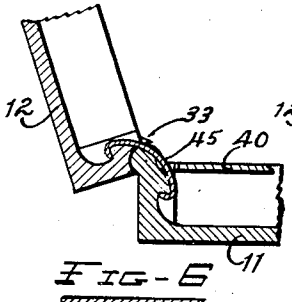


FIG-6

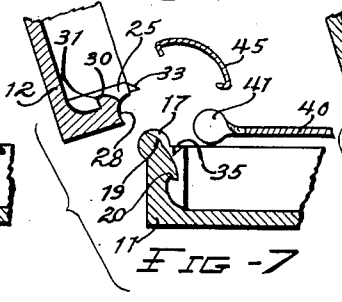


FIG-7

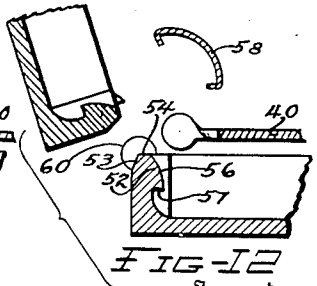


FIG-12

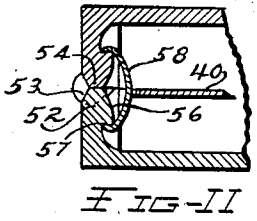


FIG-11

Inventor

Merrill L. Rathbun

By Richmond L. Hayes

His Attorney

June 30, 1936. M. L. RATHBUN 2,046,133

CLOSED RECEPTACLE OR CASE

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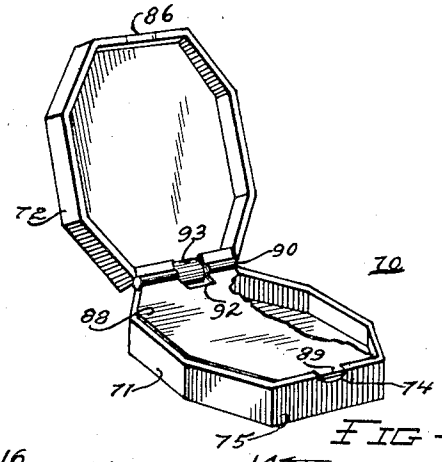


FIG-13

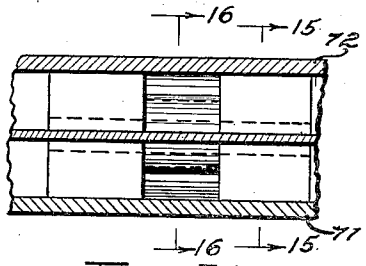


FIG-14

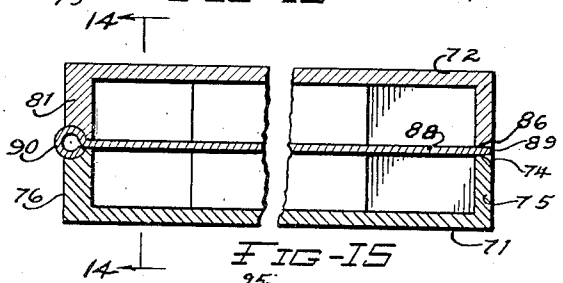


FIG-15

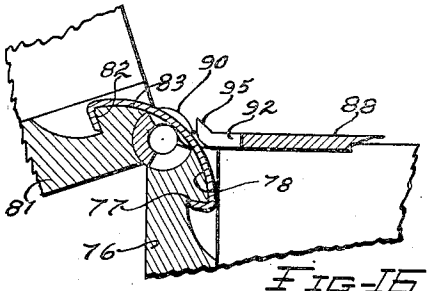


FIG-16

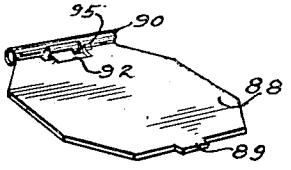
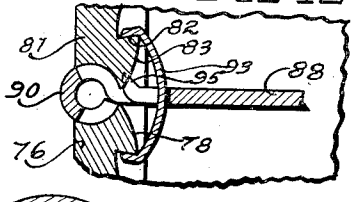


FIG-19



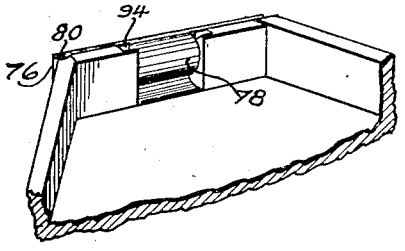


FIG-20

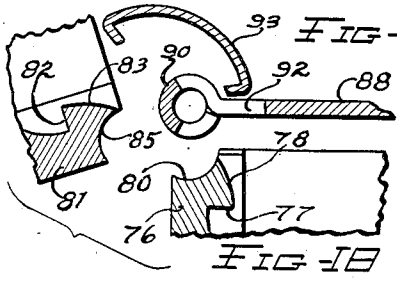


FIG-18

FIG-17

Inventor

Merrill L. Rathbun

By Richmond L. Hayes

His Attorney

Patented June 30, 1936 2,046,133

UNITED STATES PATENT OFFICE

2,046,133

CLOSED RECEPTACLE OR CASE

Merrill L. Rathbun, Jamestown, N. Y.

Application July 2, 1935, Serial No. 29,533

18 Claims. (Cl. 217—57)

This invention relates to an improvement in closed receptacles or cases and more particularly to the pivotal support means for attaching a cover to the body of a receptacle.

The invention is directed to modifications and improvements of my Patent 1,833,305 which discloses a receptacle having a body portion and cover, these elements being retained in pivotal or hinge like engagement with each other through use of one or more springs. The invention is also directed to further improvements over my Patent No. 2,014,951, which discloses modifications prior to those of the present invention. To adapt receptacles utilizing the structure of the above mentioned patents for various uses and to produce it in many sizes, advantageous improvements and changes have been made which constitute the subject matter of the present invention. These improvements include provision for increasing the extent of opening of a cover with respect to the body portion of a receptacle, means for supporting a pivotal intermediate element in the receptacle and utilizing an intermediate element as a complementary connector for the pivotal structure of the body and cover.

The material from which the receptacle and intermediate element is formed has no bearing on the present invention inasmuch as all moldable substances such as rubber, bakelite, and synthetic resins, as well as wood or metal, may be used.

One of the objects of the invention lies in the provision of complementary pivotal means in the body and cover of a receptacle, a spring being engaged with the body and cover to secure these elements in operable pivotal relationships.

Another object of the invention lies in the provision of offset complementary pivotal means in the body and cover which permits opening the cover to almost any desired degree.

Another object of the invention lies in the provision of one or more intermediate elements in a closed receptacle, said element or elements being pivotal with respect to the body and cover and serving to divide the interior thereof into several compartments.

Another object of the invention lies in the provision of means for mounting an intermediate element on a complementary pivot structure.

Another object of the invention lies in the provision of an intermediate element having a pivot portion complemental to the pivot portions of the body and cover of a receptacle in which said element is mounted.

Another object of the invention lies in the provision of a closed receptacle having a dividing element therein which is held in place by the body and cover securing means.

Other and further objects of the invention will be more fully understood from a consideration of the following specification taken in conjunction with the accompanying drawings and in which

Fig. 1 is a perspective view of one modification of the invention showing the cover of a receptacle in open position;

Fig. 2 is an enlarged, fragmentary, vertical, sectional view of a part of the pivot structure of the modification of Fig. 1, being taken on the line 2—2 of Fig. 4;

Fig. 3 is a fragmentary, vertical, sectional view taken substantially on the line 3—3 of Fig. 2;

Fig. 4 is a vertical, sectional view taken substantially on the line 4—4 of Fig. 2;

Fig. 5 is a further vertical, sectional view, being taken on the line 5—5 of Fig. 2;

Fig. 6 is a vertical, sectional view taken on the same section line as Fig. 4 and shows the cover in extreme open position;

Fig. 7 is an exploded view showing the body, cover, intermediate element and spring in position to be assembled;

Fig. 8 is a fragmentary plan view of one type of intermediate element which may be secured in and become a part of the pivotal structure shown in Fig. 1;

Fig. 9 is a fragmentary, perspective view of a modification of the structure shown in Fig. 1 and shows identical complementary pivotal elements for both the body portion and cover of the receptacle;

Fig. 10 is an enlarged, vertical, sectional view taken substantially on a line 10—10 of Fig. 9;

Fig. 11 is a vertical, sectional view of the body and cover of a receptacle in closed position being taken substantially on a line 11—11 of Fig. 9;

Fig. 12 is an exploded, vertical, sectional view of the body, cover, intermediate element and spring of the modification of Fig. 9;

Fig. 13 is a perspective view of a case or receptacle involving a further modification of the invention;

Fig. 14 is an enlarged, vertical, sectional view of the pivotal structure of the modification of Fig. 13, being taken substantially on the line 14—14 of Fig. 15;

Fig. 15 is a vertical, sectional view showing the pivotal and free end structure of an intermediate element;

Figs. 16 and 17 are fragmentary, vertical, sec-

tional views showing the cover in open and closed position respectively, these figures being taken substantially on the line 16—16 of Fig. 14;

Fig. 18 is an exploded fragmentary, sectional view of the structure shown in Figs. 16 and 17;

Fig. 19 is a perspective view of one modification of an intermediate element; and

Fig. 20 is a fragmentary, perspective view showing a seat common to both the body and cover for receiving and seating the pivot portion of an intermediate element.

Reference is now had to Figures 1 to 8 inclusive of the drawings wherein the invention is generally indicated by the reference numeral 10 and comprises a body portion 11 and cover 12. The body portion 11 is formed with a rear wall 14 having one or more reinforced portions 15 depending on the size and utility of the case. Along the upper edge of the reinforced portion 15 and projecting rearwardly of the wall 14 is a rolled portion or bead 16. This bead may be interrupted at one or more places in its length by a recess or slot 17 which continues downwardly of the reinforced portion 15. The base wall 18 of the recess is preferably formed in a predetermined curve or provided with a projection 19 which terminates in a spring seat 20. The curved portion of the base wall 18 or the projection 19 serve as a stop to limit opening of the cover to a desired degree by contact thereof with a strap spring which forms part of the structure. The side and front walls 21 and 22 of the body portion 11 are of any desired shape and may be optionally formed with or without projecting edges or recesses with which to engage a cover 12 for the purpose of providing an overlapping or interfitting when the cover is closed down upon the body portion.

The rear wall 25 of the cover 12 is formed with one or more reinforced portions 26, these portions corresponding in number and location with the reinforced portions 15 of the body portion 11. The portion 26 terminates along its lower edge in a recess or seat 28 which receives and is complemental to the bead 16 of the body portion 11. The reinforced portion 26 is also interrupted by one or more recesses or slots 29 which correspond in position to the recess 17 and has a curved base wall 30 which terminates in a spring seat 31.

Adjacent the aligned recesses 17 and 29 of the rear walls of the body portion and cover there may be provided, as deemed necessary, complementary engageable portions such as lugs 33 and recess 35. The number of lugs, contour thereof, and corresponding number and contour of recesses, is largely dependent on the type, size and material from which the receptacle is made. When the cover is closed upon the body portion, the lug of one element of the receptacle projects into the recess of the other element and prevents twisting or misalignment of the cover with respect to the body portion.

It is found desirable in certain types of closed receptacles to provide an intermediate element which may divide the interior of the receptacle into several compartments. Provision in the present invention is made for such an intermediate element, and this element indicated by the numeral 40 may be formed from metal with polished surfaces to constitute a mirror if the receptacle is used as a vanity case, or may be made from the same material as the receptacle. The element 40 conforms generally to the inner contour of the receptacle and fits therein as shown in Fig. 1 of the drawings. The rear edge of the element is formed with one or more arms 41 which in side elevation are substantially circular and have a diameter corresponding to the diameter of the bead 16. Suitably located slots or recesses 43 are made in the bead 16 to receive the arms 41. A slot 44 is made in the rear edge of the element 40, preferably mid-way of the arms 41, to permit mounting a spring 45. The forward edge of the element 40 may be formed with a tab 46 which will fit into a shallow recess 47 in the front wall 22 of the body portion 11.

To aid in assembling the structure above described attention is directed to Fig. 7 of the drawings. The element 40 is mounted in the body portion, arms 41 being projected into recesses 43, and tab 46 into recess 47. It is to be noted that the upper face of the tab 46 may be flush with the upper edge of the wall 22 of the body portion and also that arms 41 fill the recesses 43 and complete the broken contour of the bead 16 so that cover 12 may be mounted on the body portion and recess 28 receive the bead 16 and arms 41. One end of the spring 45 is now projected through the slot 44 and caused to engage the seat 20 of the body portion. Pressure is now applied mid-way of the spring and the other end thereof snaps into engagement with the seat 31 of the cover. The receptacle is now assembled and since the spring seats are offset from the pivot center, the cover will be caused to move under spring tension into open or closed position. In view of the fact that the bead 16 is rearwardly offset from the rear wall of the body portion, it is possible for the cover 12 to swing about the bead during the act of opening beyond a 90 degree position. The extent of opening is, therefore, controlled by two elements of the structure, namely, the extent of offset of the bead and the size or location of projection 19. If the projection 19 is of sufficient height, opening will be controlled by the central portion of the spring contacting with this projection. On the other hand, if this projection is not of sufficient height, the cover may swing into a position such that the rear edge thereof contacts the rear wall of the body portion directly beneath the offset bead. It is contemplated that the bead may be set rearwardly sufficiently to adapt receptacles having the pivotal connection above described for all practical uses. Attention is also directed to the fact that when the cover is in open position as shown in Fig. 1 of the drawings, the intermediate element 40 may be moved about its pivot point and swung forwardly into position within the cover 12 in order to expose the compartment formed by the body portion. Thus, independent movement of the intermediate element is possible when the receptacle is open and the intermediate element will, when out of position, be moved into position within the body portion when the cover is again moved to close the receptacle.

Reference is now had more particularly to Figures 9 to 12 inclusive wherein is shown a modification of the invention above described. In this instance the receptacle comprises two identical elements, namely, body portion and cover. One only, therefore, will be described in detail. For purposes of explanation, the disclosure of Fig. 9 may be considered as the body portion of a modified receptacle, being generally indicated by the reference numeral 50. This receptacle may be of any desired shape and differs

from the previously described receptacle 10 only in the pivotal supporting structure. The rear wall 51 is formed with a central spring receiving portion 52. This portion includes an inwardly sloped wall 53 which terminates in a horizontal shoulder 54. Continuing downwardly within the body portion from the shoulder 54 is a curved wall 56 which terminates in a spring seat 57. When two identical elements are fitted together to form a closed receptacle (see Fig. 11) the shoulder 54 of one element abuts the shoulder 54 of the other element and these elements are held in place by a spring 58. To one side of the central portion 52 is a bead 60 which projects above and slightly to the rear of the wall 51 (see Fig. 10). On the other side of the portion 52 is a recess or depression 61. The recess 61 is formed in an arc having the same radius as the radius for the bead 60, both being developed on a common axis. It will be noted that the inwardly sloped wall 53 meets shoulder 54 at a point exactly on center with the radius center of both the bead 60 and recess 61. Consequently, when the cover of the receptacle is moved to open position there will be no interference as between portions 52 of the body portion and cover of the receptacle. At one side of the portion 52 in the wall 51 a lug 63 is provided. At the other side of the portion 52 is a recess 64 which is of a size and shape to receive a lug in the cover corresponding to the lug 63. When two identical receptacle elements are brought together in opposed relationship, it is found that the bead 60 of one element enters the recess 61 of the other and vice versa. This is also true of lugs 63 and recesses 64. Since the highest point of the central portion 52 is at the axis of rotation of each element there will be no interference from this portion of the structure when the cover is moved from one position to another. The receptacle 50 may be made to provide a single compartment or may include an intermediate element 69 (shown in Fig. 3). In the latter case a recess 35 is cut into the bead 60 of the body portion and cover elements which corresponds to recesses 43 of the modification of Fig. 1. In this instance, however, arms 41 of the intermediate element 69 are fitted one into the bead 60 of the body portion and the other into the bead 60 of the cover. When these three elements are assembled and spring 58 snapped into engagement with spring seats 57, the intermediate element 69 will function as heretofore described.

It will be noted in the modification of Fig. 1, that the body position, which includes a bead 16, is not identical in structure with the cover and therefore if the receptacle is molded, two different shaped molds must be provided to produce one receptacle. However, in the case of the modification of Fig. 9, it is possible to make a completed receptacle including body portion and cover through the use of only one mold since these elements are identical and adapted to be fitted together as described

Reference is now had to the drawings, Figures 13 to 20 inclusive covering a further modification of the invention. The open receptacle, shown in Fig. 13 of the drawings and generally indicated by the reference numeral 70, comprises a body portion 71 and cover 72. The body portion 71 may take any desired shape and may be provided with shallow recess 76 in the front wall 75. The rear wall 76 of the body portion is reinforced and provided with a spring seat 77 which connects through a curved surface 78 with an upwardly opening arcuate recess 80. Although the spring seat 77 and wall 78 are located only at such points as a spring may be required, the recess 80 extends the full length of the rear wall 76. The cover 72 for purposes of illustration may be identical with the body portion just described, being provided with a reinforced rear wall 81, spring seat 82, curved wall 83, and arcuate recess 85. Recesses 80 and 85 are produced on the same radius. The front wall of the cover is recessed at 86 to correspond with the recess 74 of the body portion.

An intermediate element 88 is located in the receptacle 70 for the purpose of dividing the interior into two or more compartments. As heretofore mentioned, an intermediate element of a receptacle of this type may be formed from any suitable material depending on its utility. It will, however, be most generally used as a double faced, mirror and will conform to the inner contour of the receptacle. The forward edge of the element has a tab 89 which is adapted to be flush with the exterior front edges of the body portion and cover, this being made possible by the combined opening produced by recesses 74 and 86 when the cover 72 is closed upon the body portion 71 (see Fig. 15). The rear edge of the element 88 may be rolled, molded or developed in any other suitable way into a bead 90. The radius of this bead is identical with the radius from which recesses 80 and 85 of the body portion and cover were developed. Between side edges of the element 88, and cut partly into the bead 90, is a slot or opening 92. This opening 92 is in vertical alignment with the spring seats of the body portion and cover and permits projecting spring 93 therethrough to engage said seats. The bead 90 of the element 88 takes the place of and eliminates the necessity for having a bead on either the body portion or cover as disclosed in the modification of Fig. 1. It also eliminates the necessity for dividing the bead into two parts, one on the cover and the other on the body portion as shown in the modification of Fig. 9, and at the same time permits use of a body portion and cover consisting of identical elements. Should it be found desirable to provide means for preventing lateral twisting or misalignment of the body portion or cover, it is contemplated to produce one of more recesses 94 in the body portion and cover adjacent arcuate recesses 80 or 85. The intermediate element may then be provided with lugs 95 projecting from opposite faces of the element which, when the receptacle is assembled, will fit into recesses 96 of the body portion and cover. It is not contemplated, however, that the lugs 95 and recesses 94 will be necessary when the receptacle includes an intermediate element, such as the element 88, since the tab 89 interfits with both body portion and cover.

It is evident that although applicant has shown and described the bead 90 at attached to or forming a part of an intermediate element 88 which divides the interior of the receptacle into two or more compartments, the bead 90 could be utilized without element 88. In other words, the body portion and cover could be identical and formed with arcuate recesses 80 and 85 and a suitable tab or rod mounted in these recesses, the entire structure being held together by the spring 93. It will be understood that the general design of the receptacles shown and de-

scribed may be varied without involving the subject matter of the invention and that the invenion is primarily directed to modified forms of pivotal connection as between the body portion and cover elements of a closed receptacle and that applicant may vary the structure shown and described without departing from the spirit and scope of the invention as defined in the hereunto annexed claims.

Having thus set forth my invention what I claim as new and for which I desire protection by Letters Patent is:—

1. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and said cover, spring means securing said means in operable pivotal relationship, said pivotal means being outwardly offset to increase the pivotal range of said body portion and said cover.

2. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and said cover, spring means securing said pivotal means in operable pivotal relationship, said pivotal means being rearwardly offset to increase one of the complementary surfaces thereof, whereby to increase the pivotal range of said body portion and said cover.

3. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and said cover, spring means securing said pivotal means in operable pivotal relationship, said pivotal means including a bead on one element of said receptacle, said bead being rearwardly offset to increase the circumferential surface thereof whereby to increase the relative pivotal range of said body portion and said cover.

4. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and cover, an intermediate element in said receptacle, means mounting said element for pivotal movement relative to said body portion and said cover, and spring means securing said element means in operable pivotal relationship.

5. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and cover, an intermediate element in said receptacle, means mounting said element for pivotal movement relative to said body portion and said cover, and spring means securing the element mounting means in said receptacle, said spring means also serving to secure said pivotal means in operable relationship.

6. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and cover, an intermediate element in said receptacle, pivotal means on said element, said means interfitting with said complementary means, and spring means securing said complementary means and said pivotal means in operable relationship.

7. A receptacle comprising a body portion and cover, an intermediate element, complementary pivotal means in said body portion, cover and intermediate element, spring means securing said pivotal means in operable position.

8. A receptacle comprising a body portion and cover, an intermediate element dividing the interior of said receptacle into compartments, cooperating pivotal means in said body portion, cover and intermediate element, spring means engaged with and serving to secure said body portion and said cover in operable pivotal relationship, said body portion and said cover together mounting and securing said intermediate element for independent pivotal movement.

9. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and said cover, an intermediate element dividing the interior of said receptacle into compartments, pivotal means on said element, spring means serving to secure said body portion and said cover in operable pivotal relationship and to secure said element pivotal means to permit independent movement of said element relative to said body portion and said cover.

10. A receptacle comprising a body portion and cover, complementary pivotal means in said body portion and said cover, said means being substantially identical in both elements of said receptacle whereby either element may represent the cover or body portion and spring means for securing said body portion and cover in operable pivotal relationship.

11. A receptacle comprising a body portion and cover, complementary pivotal portions in said body portion and said cover, a spring seat in said body portion and said cover, the seat of each element of said receptacle serving to separate the dissimilar pivotal portions of that element, and a spring engaged with said seats for securing said body portion and said cover in operable pivotal relationship.

12. A receptacle comprising elements constituting a body portion and cover, an intermediate element in said receptacle, complementary pivotal means in said intermediate element and said body portion and said cover, and a spring for securing all of said elements together in operable pivotal relationship.

13. A receptacle comprising elements constituting a body portion and cover, an intermediate element dividing the interior of said receptacle into compartments, complementary pivotal means in said intermediate element and said body portion and said cover, a spring for securing said means in operable position whereby to facilitate relative pivotal movement of all of the elements of said receptacle.

14. A receptacle comprising elements constituting a body portion and cover, pivot seats in said body portion and said cover, an intermediate element in said receptacle, a pivot bead on said intermediate element, said bead being interfitted with the seats of said body portion and said cover, and spring means engaged with said body portion and said cover serving to secure all of the elements of said receptacle in operable pivotal relationship.

15. A receptacle comprising elements constituting a body portion and cover, an arcuate seat on the pivot wall of said body portion and said cover, an intermediate element dividing the interior of said receptacle into compartments, a bead on said intermediate element, said bead interfitting with said seats, and spring means projecting through an opening in said intermediate element and engaged with said body portion and said cover, said spring means serving to secure all of the elements of said receptacle in operable pivotal relationship.

16. A receptacle comprising elements constituting a body portion and cover, an intermediate element dividing the interior of said receptacle into compartments, complementary pivotal means in said intermediate element and said body portion and said cover, spring seats in said body portion and said cover, a spring projecting through an opening in said intermediate element en-

gaged with said spring seats, said spring serving to secure said complementary pivotal means in operable position, said intermediate element being pivotally movable with either element of said receptacle or independently thereof.

17. A receptacle comprising elements constituting a body portion and cover, pivotal means on the body portion and cover, a part of the pivotal means of one element of the receptacle being complemental to another part of the pivotal means of the same element, and spring means for securing the elements of the receptacle in operable pivotal relationship.

18. A receptacle comprising elements constituting a body portion and cover, pivotal means in the body portion and cover, said pivotal means including a bead and seat on each element, the bead and seat of one element interfitting with the bead and seat of the other element, and means for securing the elements in operable pivotal relationship.

MERRILL L. RATHBUN.