

June 23, 1953

C. CASTELLI

2,642,987

RECEPTACLE HAVING HINGED COVER

Filed Nov. 27, 1948

2 Sheets-Sheet 1

Fig. 2.

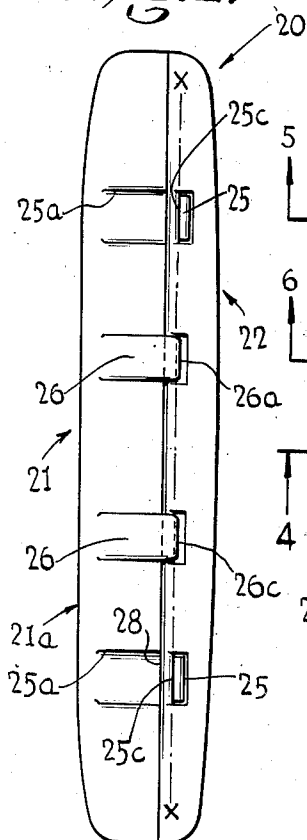


Fig. 1.

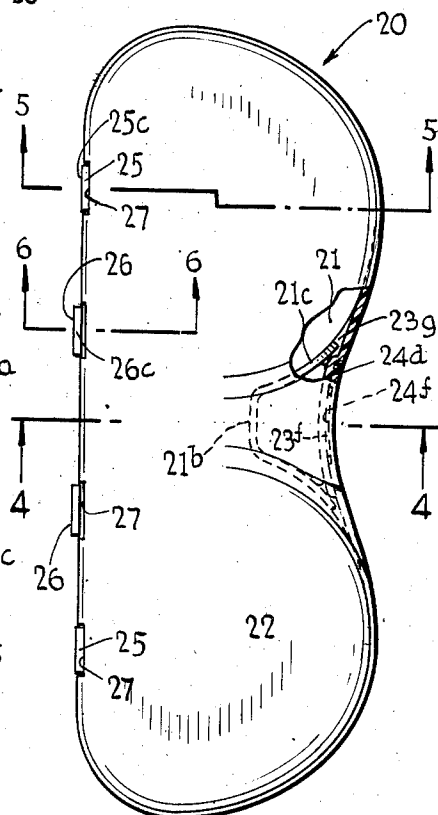


Fig. 3.

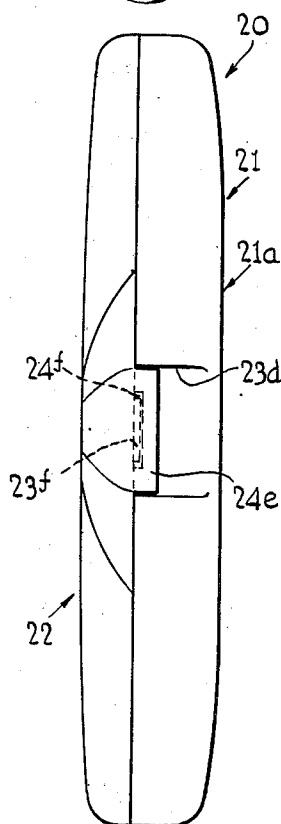


Fig. 6.

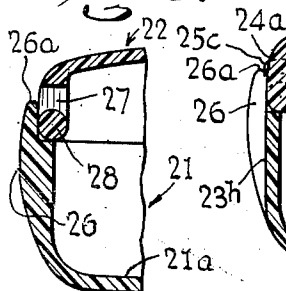


Fig. 4.

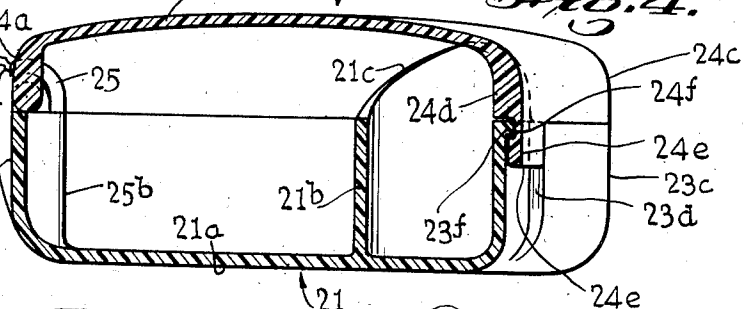
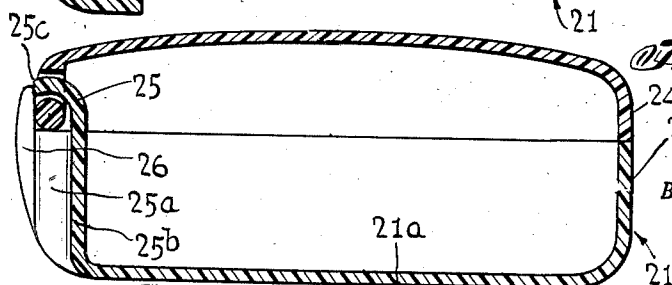


Fig. 5.



INVENTOR.
CHARLES CASTELLI
BY

Louis Barnett
ATTORNEY

June 23, 1953

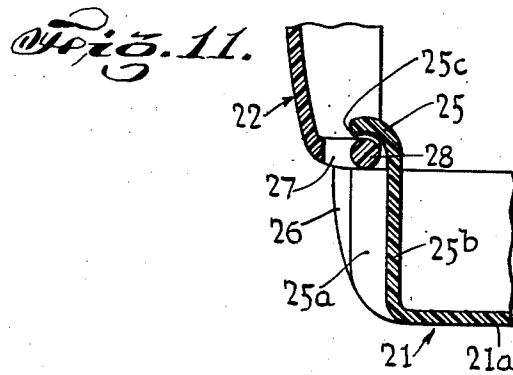
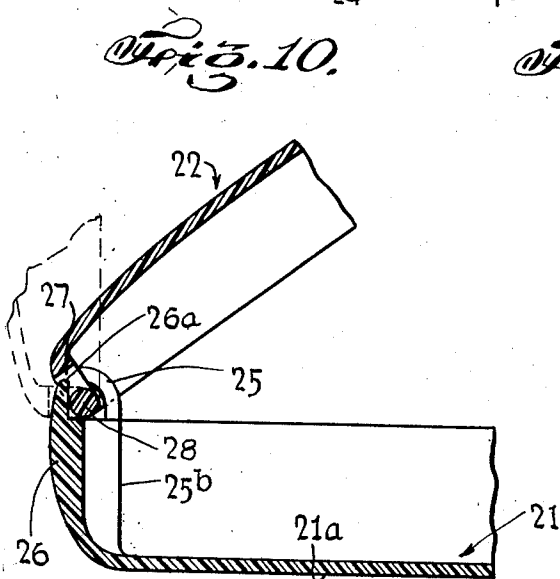
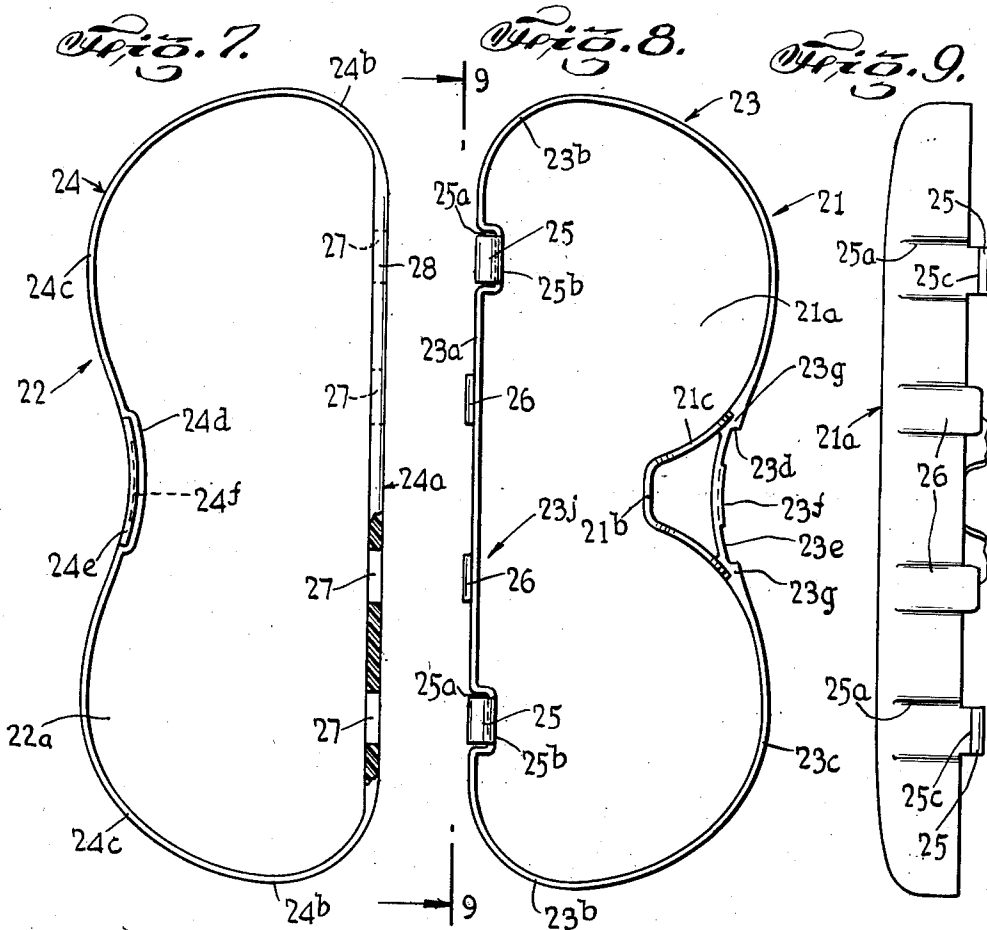
C. CASTELLI

2,642,987

RECEPTACLE HAVING HINGED COVER

Filed Nov. 27, 1948

2 Sheets-Sheet 2



INVENTOR.
CHARLES CASTELLI
BY

Louis Barnett
ATTORNEY

UNITED STATES PATENT OFFICE

2,642,987

RECEPTACLE HAVING HINGED COVER

Charles Castelli, Union City, N. J., assignor, by mesne assignments, to Columbia Protokosit Co. Inc., Carlstadt, N. J., a corporation of Delaware

Application November 27, 1948, Serial No. 62,259

9 Claims. (Cl. 206—6)

1

This invention relates to receptacles provided with hinged covers and more particularly to an improved eyeglass case construction such as used for goggles.

Among the objects of the invention is to generally improve devices of the character described, which shall comprise few and simple parts which are readily assembled to form a rugged, neat appearing structure having swingable cover closure, which shall be light weight yet adapted to withstand rough usage such as frequent opening and closing of said cover closure, which shall be relatively cheap to manufacture, which shall be capable of being molded from a plastic material in two parts and manually assembled into a completed hinged unit without additional parts or special tools or equipment by relatively unskilled persons, which shall provide a receptacle that is easily manipulated for opening and closing and which shall be practical and efficient to a high degree in use.

Other objects of the invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists of features of construction, combination of elements and arrangements of parts which will be exemplified in the construction hereinafter described, the scope of the application of which will be indicated in the claims following.

In the accompanying drawing in which one embodiment of the invention is shown,

Figs. 1, 2 and 3 are top plan, rear and front side views of an improved plastic molded goggle case constructed to embody the invention.

Figs. 4 and 5 are enlarged cross sectional views showing details of the hinge and snap locking means taken on lines 4—4 and 5—5, respectively, in Fig. 1.

Fig. 6 is a fragmentary enlarged cross sectional view showing details of the stop portions of the hinge taken on line 6—6 in Fig. 1.

Fig. 7 is a plan view of the cover closure section detached from the assembled goggle case shown in Fig. 1 showing the inside construction, partly broken away to expose the hinge slots.

Fig. 8 is a plan view of the improved goggle case bottom section detached from the cover showing the inside thereof and the arrangement of the hooks and stops of the hinge structure.

Fig. 9 is a rear side view of the goggle case bottom section on line 9—9 in Fig. 8.

Fig. 10 is an enlarged fragmentary sectional view corresponding to Fig. 6 taken through the goggle case shown in full lines in partly open position and in broken lines in full open position with

2

the stop pieces abutting the walls of the slots, and

Fig. 11 is a fragmentary sectional view through the hook portion of the hinge with the case in fully open position.

Referring in detail to the drawing, 20 denotes an eyeglass case or receptacle constructed to embody the invention, preferably made of molded plastic material of any desired color, opaque or transparent, and as here shown when adapted as a goggle case is sized and shaped to receive a pair of goggles with temples folded (not shown) in the well understood manner.

Said receptacle 20 may comprise a receiver portion or case bottom section 21 provided with a swingable attached cover closure section 22. The case bottom section 21 may be made with a substantially kidney shaped bottom side 21a which has an integral peripheral wall 23 upstanding therefrom. Said wall 23 may be formed with a straight rear wall portion 23a, arcuate end wall portions 23b and a curved front wall portion 23c, the latter being recessed as at 23d to provide a concave front center portion 23e having an integral lip 23f extending outwardly therefrom, as shown in Fig. 8.

Cover closure 22 is similar in contour to case bottom section 21 and as shown in Fig. 7 same may be formed with a top side 22a, corresponding in shape to bottom side 21a, and an integral peripheral flange or wall 24 extending downwardly from said top side 22a, said wall 24 having a straight rear wall portion 24a, arcuate end wall portions 24b and a curved front wall portion 24c. The latter is formed with a concave center portion 24d having an integral extending snap locking tab 24e formed with a notch 24f. When case 20 is in closed position, locking tab 24e snugly fits into recess 23d with the notch 24f engaging and yieldably interlocking with said lip 23f, as is clear from Figs. 3 and 4.

An improved snap-in hinge structure between case bottom section 21 and the cover closure 22 is provided which is seen to comprise a plurality of hooks 25 and stop pieces 26 alternately positioned in spaced relation integrally formed to upstand from rear wall portion 23a above the level of the periphery of wall 23. As seen in Figs. 2, 8 and 9, two sets of hooks 25 and stop pieces 26 are provided, one set inwardly of each end of the bottom section 21, the two stop pieces 26 preferably being positioned between the hooks 25, and spaced from each other and from the hooks 25. The rear wall portion 23a may be recessed to form hinge wall portions 25b from which hooks

25 extend upwardly, said hooks having rearwardly and downwardly curved free ends 25c which terminate in plane X—X above said level of wall 23.

Stop pieces 26, as seen in Figs. 4, 5, 6 and 10, extend upwardly from outer surface 23h of wall portion 23a, the free ends of said stop pieces 26 projecting up beyond plane X—X.

To hinge cover closure 22 to bottom section 21 through said hooks 25 and stop pieces 26, rear wall portion 24a is provided with coacting slots 27 of an eyelet structure spaced from the free edge thereof. Portions of said wall 24a between the slots 27 and said free edge serve as pivot forming means 28 for hooks 25 and stop pieces 26.

Rear wall portion 23a may be constructed to have a section 23j thereof between the hooks 25 resiliently displaceable out of a normal plane of the rear wall portion 23a for the purpose of assembly as hereinafter described.

As seen in Figs. 1, 4 and 8, a substantially U-shaped reinforcing spacer wall 21b may be integrally formed to upstand from said case bottom side 21a to loop about concave center portion 23c to span between spaced apart walls 23g and said recess 23d, said spacer wall 21b being shaped to conform substantially to the contour of nose bridge portions of goggles (not shown), said nose bridge being adapted to be positioned thereabout. Upper free edge portion 21c of spacer wall 21b may extend beyond the level of the plane of periphery of wall 23 and into cover closure 22 and as is clear from Fig. 8, may be double convex for retaining goggles in a seated position in case 20 in the well understood manner.

By providing case 20 with the reinforcing spacer wall 21b, not only is goggle retaining means provided but center portion 23c, from which lip 23f projects, is made rigid to take up the stress and strains of frequent opening and closing operations.

After constructing the parts as described above and shown in the drawings, the cover closure 22 may be hingedly attached to case bottom section 21 by bringing said closure 22 in position at approximately right angles to the said section 21 and then inserting one of the pivot means 28 to engage a coacting hook 25 with the stop pieces 26 inserted into coacting slots 27. The other pivot means 28 can then be engaged in the other hook 25 by deflecting the latter and adjacent resilient section 23j out of its normal position. The hinged connection is completed upon releasing said second hook 25 and resilient section 23j to return to its normal position for complete assembly of the goggle case 20.

It is thus seen that there is provided a novel improved hinge construction particularly adaptable to types of receptacles having a relatively long side for swingably attaching a cover closure thereto.

Goggle case 20 when made of plastic, such as styrene, having a rear wall portion 23a, .062 inch in thickness has been found satisfactory to render such rear wall portion sufficiently resilient for permitting said deflection described above in assembling the case 20. The rear wall portion 24a may be made somewhat thicker to provide longitudinal stiffness in the assembly.

The operation of the hinge structure of case 20 will be apparent. Hooks 25 retain cover closure 22 in engagement with bottom section 21 against forward and upward displacement of the pivot means 28, while the spaced stop pieces 26 extending upwardly beyond the plane X—X of the free

ends 25c of the hooks 25 retain the pivot forming means 28 against rearward displacement, and serve to limit the swinging movement of cover closure 22 as is clear from Fig. 10.

It should be noted that recess wall portion 25a and concave center portion 23e may serve as finger and thumb gripping seats, respectively, for firmly retaining the case 20 grasped in the user's hand and that the rigid construction of said center portion 23e provides for snap locking the cover closure 22 to the bottom section 21, by the engagement of the lip 23f in tab notch 24f as shown in Figs. 3 and 4.

The case 20 as described above and shown in the drawing has the hinge structure so constructed and arranged to give case 20 a surface contour relatively free from objectionable projections at and about the pivotally engaging parts.

It will thus be seen that there is provided a receptacle construction having a hinged cover whereby the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A receptacle hinge structure of the character described interconnecting a first wall portion with a second wall portion to swing from a relatively coplanar relation to a substantially right angular relation comprising a pair of spaced hooks extending from said first wall portion, a pair of pivot forming means integrally formed with said second wall portion engaging in said hooks, and a pair of spaced apart stop pieces extending from said first wall portion between said hooks coacting with said second wall portion for retaining said pivot forming means in engagement with the hooks in all relative positions of said wall portions, said second wall portion being formed with slots for receiving said stop pieces when said second wall portion is swung to said angular relation with respect to said first wall portion.

2. A receptacle hinge as defined in claim 1 in which said first wall portion is formed to provide a resilient structure between the hooks for flexing out of a normal position when assembling the hinge structure.

3. The receptacle defined in claim 1 in which said spaced hooks are outwardly bent, sections of said first wall portion from which the hooks extend being recessed from a plane of the outer surface thereof to position said hooks substantially within the receptacle.

4. A hinged receptacle comprising a bottom section and cover closure each formed with an elongated substantially straight rear wall, said walls extending in edgewise abutment and coplanar relation when said cover closure is in a fully closed position on the bottom section, portions of said bottom section rear wall being recessed from a plane of an outer surface thereof, a plurality of spaced hooks extending from an edge of each to said recessed rear wall portions beyond said abutment, means formed in said cover closure rear wall engaging said hooks for swingably mounting thereon, spaced stop pieces extending from said bottom section rear wall be-

5

yond said outer surface plane between a pair of said hooks, said cover closure rear wall having openings for retaining said swingable means in effective engagement in both open and closed positions of the cover closure and receiving free ends of said stop means when said cover closure is swung into open position, said bottom section rear wall being of resilient construction for flexing one of the hooks out of a normal plane to permit snap-in assembly.

5. A receptacle hinge structure of the character described interconnecting a first wall portion with a second wall portion to swing from a relatively coplanar relation in edgewise abutment to a substantially right angular relation, comprising a pair of spaced apart hooks and a stop piece therebetween extending from an edge of the first wall portion beyond said abutment, said second wall portion having spaced eyelets bordering on an edge thereof facing said edge of the first wall portion, two of said eyelets engaging said hooks forming said interconnection and another eyelet aligning with said stop piece, said stop piece coacting with said second wall portion adjacent the respective eyelet thereof for retaining said hooks in said engagement in all relative positions of said wall portions with said stop piece entering in said respective eyelet on swinging the second wall portion to said angular relation with respect to the first wall portion.

6. The receptacle hinge structure as defined in claim 5 in which said first wall portion is a resilient structure between the hooks for flexing out of a normal position for assembling the hinge structure.

7. The receptacle hinge structure as defined in claim 5 in which said hooks are offset beyond one side of the first wall portion and said stop piece is offset beyond the opposite side of said wall portion.

8. A receptacle comprising a bottom section and cover closure each formed with an elongated rear wall, said walls extending in edgewise abutment and coplanar relation when said cover closure is in a fully closed position on the bottom section, a plurality of spaced open hooks extending beyond said abutment from an edge of said bottom section rear wall offset beyond one side thereof, a pivot bar formed in said cover closure rear wall coplanar therewith engaging each of said hooks for swingable mounting thereon, each of said pivot bars being sized with respect to the

6

hook opening to pass freely in and out of engagement therewith, and stop pieces extending from said bottom section rear wall offset beyond another side thereof and being spaced from said hook coacting with said cover closure rear wall to retain the swingable mounting means in effective hook engagement in both open and closed positions of the cover closure, said bottom section rear wall being of resilient construction for flexing one of the hooks out of a normal plane to permit said free passage of the swingable mounting means into engagement with said one hook in assembly.

9. A goggle receptacle of the character described comprising a one-piece bottom section hingedly interconnected along a substantially elongated rear wall to a swingable cover section thereof, said bottom section comprising a front wall opposite said rear wall formed with a concave midportion recessed from an outer surface plane thereof, a reinforcing spacer wall formed integrally with said bottom section looping inwardly from the front wall to span said midportion, and a lip protruding from said midportion, said cover section having a snap locking tab extension formed with a notch positioned to engage said lip when said cover section is in a closed position, said reinforcing spacer wall being shaped to conform with bridge portion of goggles and having a free edge rim extending above the bottom section into the cover closure, the rear wall of said bottom section being formed with spaced recessed portions incorporated in said hinged interconnection, said rear wall recesses and front wall concave mid-portions providing finger and thumb gripping means, respectively.

CHARLES CASTELLI.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
607,645	Leibe et al.	July 19, 1898
1,877,039	Partiot	Sept. 13, 1932
2,205,969	Boenecke	June 25, 1940
2,286,389	Sowin	June 16, 1942
2,332,266	Segal	Oct. 19, 1943
2,375,645	Gordon	May 8, 1945
2,376,487	Jerry	May 22, 1945
2,461,792	Weaver	Feb. 15, 1949
2,487,869	Hamel	Nov. 15, 1949
2,527,318	Magnus	Oct. 24, 1950