

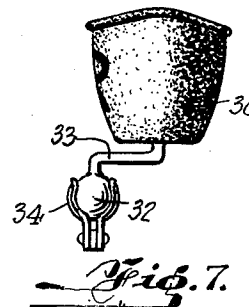
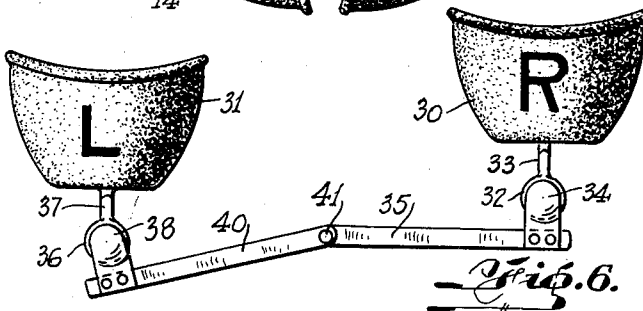
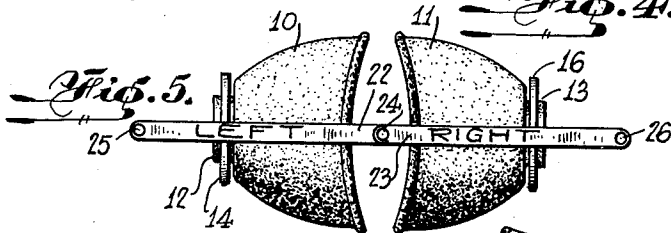
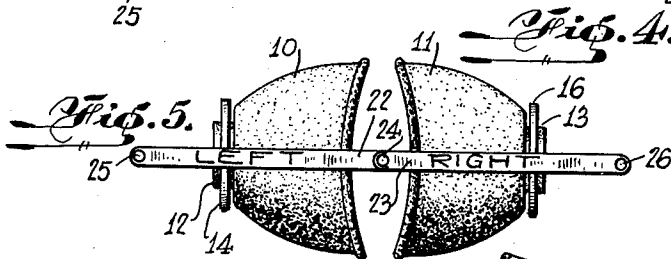
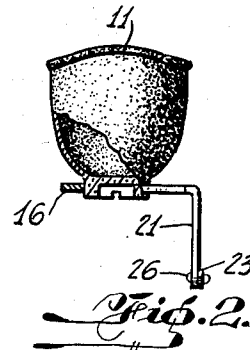
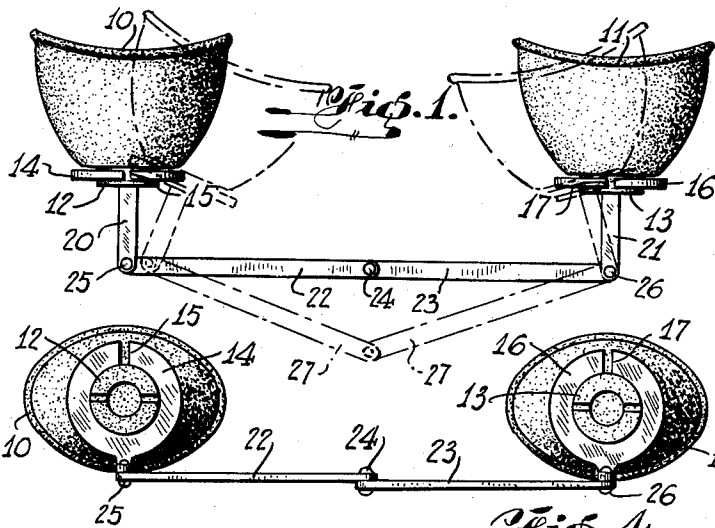
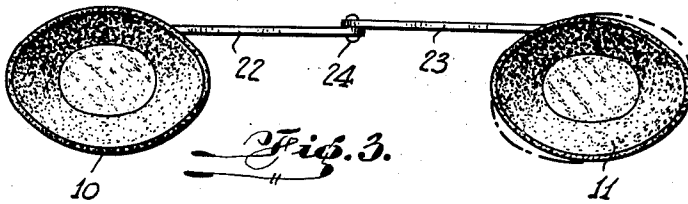
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ADJUSTABLE TWIN EYECUP SET

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ADJUSTABLE TWIN EYECUP SET

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5 Claims. (Cl. 128-249)

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The present invention relates to an adjustable twin eyecup set.

In the treatment of eye infections by periodic washing with an antiseptic solution, the usual practice is to require the patient to wash the non-infected eye in addition to the infected one. The reason for this is to preclude the spreading of the infection to the former. With the conventional single eyecup, the patient, of necessity, must wash one eye at a time in sequence, and thus is liable to communicate the infection from one to the other. While this has been appreciated by the medical profession generally, the only precaution taken is to admonish the patient to thoroughly wash or sterilize the eyecup after applying to one eye and before applying to the other.

It is an object of the present invention to eliminate the inconveniences and dangers associated with the above practice. The device protects a patient from the dangers arising from failure to sterilize the eyecup when required.

The object is accomplished by providing a set of twin eyecups permanently but adjustably interconnected and suitably identified, as to right and left eye, so that both eyes can be washed simultaneously, each eye always being washed by the same respective cup. In this manner, the cup contacting the infected eye need never come near the normal organ and, in fact, never will as long as the patient heeds the identification on each cup and uses them for the corresponding eyes.

The invention will now be described in detail with the aid of the accompanying drawings, in which:

Fig. 1 is a plan view of an adjustable twin eyecup set constructed in accordance with the present invention.

Fig. 2 is an end view thereof, partly in section.

Figs. 3 and 4 are top and bottom views respectively, of the embodiment in Fig. 1.

Fig. 5 is a plan view of the obverse side of the structure in Fig. 1, showing the set in folded position suitable for packaging.

Fig. 6 is a plan view similar to Fig. 1, showing another embodiment of the invention.

Fig. 7 is an end view thereof.

Fig. 8 is a plan view of a single cup showing a further modification.

Referring now to Figs. 1 through 5 of the drawings, wherein like reference numerals designate the same element throughout, a pair of conventional eyecups are shown at 10 and 11. For the

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purpose of simplicity, eyecup 10 may also be referred to as the left cup while eyecup 11 may be referred to as the right cup. This corresponds to the normal designations of the respective eyes of the user to which the eyecups are to be applied.

Eyecups 10 and 11 are each provided with a boss, 12 and 13, respectively, integral with its base. As best seen in Fig. 4, a ring 14 having a slot 15, embraces boss 12 while a similar ring 16 having a slot 17, embraces boss 13. Both rings are flexed over their respective bosses, the diameter of the boss being slightly larger than the normal internal diameter of the ring whereby the rings are retained on the bosses by combined friction and clamping action.

An arm 20, integral with ring 14, extends laterally from a point on the periphery of said ring while ring 16 is provided with a similar integral arm 21. Arms 20 and 21 are interconnected by a pair of links 22 and 23. Links 22 and 23 are pivotally joined together by pin 24 and are pivotally connected at their free ends to the extremities of arms 20 and 21, respectively, by means of pins 25 and 26.

With the above arrangement, the two eyecups are capable of universal adjustment for adaptation to the particular eyes of the user. As shown by the dot-dash lines in Fig. 3, eyecup 11 may be rotated about an axis perpendicular to its base and passing through the center thereof. This movement is accomplished by rotating the boss 13 relative to the ring 16. Eyecup 10 is capable of similar motion. This rotational movement is necessary to adapt the unit to the slant of the eyes in the vertical plane.

Links 22 and 23 can be articulated about pin 24 as shown by the dot-dash lines 27 in Fig. 1, in order to adjust the spacing between the cups. In order to accommodate the unit to the angularity of the eyes in the horizontal plane, the pivots 25 and 26 are employed. As seen in Fig. 4, the arms 20 and 21 are extended to a slight degree radially of their respective rings in the plane of the rings before being bent into L shape. This extension is arranged so that the plane of articulation of the associated link 22 or 23 will clear the body of the eyecup. As a result, the cups and arms may be folded upon their respective links as shown in Fig. 5, in order to provide a compact unit conveniently suited for packing. With a larger diameter ring, the slight extension can be dispensed with.

As stated above, it is important that some readily recognizable indicia be present on the unit to discriminate between right and left cups.

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To this end, the links 22 and 23 may be inscribed with the words "right" and "left," in the manner shown in Fig. 5. In Fig. 3, the inscription would thus appear on the upper surfaces of said links and would be readable from a position in front of and slightly above the unit. Since it is convenient to hold the unit with the links uppermost as in Fig. 3, when using the device, it will be apparent that the inscription is always visible. To accommodate those persons who may use the unit with the links lowermost, similar inscriptions can be placed additionally upon their opposite surfaces.

Naturally, the invention is not limited to the above mode of marking, since any indication would be suitable. For example, the eyecups may be made in individually different colors or they might be marked in the manner to be described below.

In another embodiment of the invention, the L-shaped rings and arms are replaced by ball and socket joints. This will now be described in connection with Figs. 6 and 7, wherein 30 and 31 are conventional eyecups. As will be evident from the drawing, they differ slightly from the eyecups shown in Figs. 1 through 5, in that the bosses have been eliminated. It will be clear from the following description of this form that cups with the bosses present could be employed just as well.

A ball member 32 is connected by means of a suitable extension element 33, integral therewith, to the bottom of the eyecup 30. This is best seen in Fig. 7. The connection is accomplished in any suitable manner such as, for example, by soldering where the eyecups are made of metal or by cementing where a non-metallic cup is used. A similar ball 36 is connected by extension 37 to cup 31. The balls 32 and 36 are held in sockets 34 and 38, respectively, which, in turn, are fastened to links 35 and 40, respectively. Links 35 and 40 are pivoted together at 41. In Fig. 7, it will be seen that the socket 34 consists of two resilient cup-shaped members riveted, one on either side, to the end of link 35. Obviously, other fastening means could be employed besides the rivets. The ball is offset with respect to the center of the cup bottom to facilitate packaging for reasons similar to those set forth in connection with the first embodiment.

In this embodiment, the eyecups are identified by means of the letters "R" and "L" inscribed or embossed on their sides. Inscriptions on the links would be equally effective. The operation of this form is clearly self-evident and, therefore, will not be set forth in detail.

When it is deemed necessary to more permanently secure the slotted rings 14 and 16, in Figs. 1 to 5, to their respective eyecups, the bosses 12 and 13 may be provided with an annular groove or channel 50, as shown in Fig. 8. The rings would be flexed into the respective channels and retained therein against axial displacement. This form may be desirable where it is deemed necessary to positively preclude removal and inadvertent interchange of the cups.

A procedure recommended for obtaining maximum protection with the twin eyecup set comprises first cleansing the area surrounding each eye, keeping the eye closed, and employing absorbent cotton dipped in the eye wash solution. This will prevent foreign bodies which were out-

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side the eye from entering the eye. Thereafter, both cups are cleaned and adjusted to the eyes whereupon they are used in a well-known manner.

I have thus provided a pair of eyecups supported in adjustable spaced relationship capable of simultaneous application to the respective eyes of a patient.

Having now described my invention in connection with two specific embodiments which are obviously subject to modification and change, I desire to secure by U. S. Letters Patent, and, therefore, claim:

1. An adjustable twin eyecup set for simultaneously treating both eyes of a patient comprising a first eyecup shaped to fit over one eye of the patient and a second eyecup shaped to fit over the other eye of the patient, adjustable linking means interconnecting said eyecups and supporting them in adjusted relationships, and different indicia means associated with each eyecup for distinguishing the first from the second, said adjustable linking means including a pair of rigid links, one end of one link being pivotally joined to one end of the other link, the free end of each of said links having pivotally joined to it one of said eyecups.

2. An adjustable twin eyecup set as set forth in claim 1, wherein the pivotal junction between said links and their respective eyecups includes means to support said eyecups for rotation about axes perpendicular to their respective bases and passing through the centers thereof.

3. An adjustable twin eyecup set as set forth in claim 1 wherein the pivotal junction between said links and their respective eyecups comprises a universal joint.

4. An adjustable twin eyecup set as set forth in claim 1 wherein the separate pivotal junctions between said links and their respective eyecups each include a connecting member comprising a resilient open ring and an arm extending laterally from a point at the edge of said ring, said rings each rotatably embracing a boss provided on the base of its associated eyecup, and the free ends of said arms each being pivotally connected to its respective link.

5. A device for simultaneously applying medication to both eyes of a patient a plurality of times without danger of intercontamination, comprising a first cup-like structure adapted to hold a quantity of medicinal fluid, a second cup-like structure adapted to hold a separate quantity of medicinal fluid, articulatory means connecting said first structure to said second structure, indicia means associated with one of said structures identifying it for use only with a particular eye of said patient, said articulatory means including a pair of pivotally interconnected rigid links, two L-shaped members each having one of its arms pivotally secured to the free end of one of said links, the other arm of each said member being pivotally secured to the base of one of said eyecup structures.

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