TARGET & SCOPE

After an initial study, it was observed that users rarely fully perform the entire contact lens maintenance process, which led us focus our proposal on optimizing the method of hygiene and conservation of lenses. The final result presented below improves lens hygiene in cases where not all the necessary resources are available. However, it can also be used in the domestic environment, improving the sequence of traditional use.

This product is aimed at people with an active lifestyle, such as users with a passion for long term outdoor activities (climbing, hiking, mountaineering, etc...) or people who travel very often without access to a washroom, even for those with very limited luggage space.

NEEDS

The main function of the concept is to sanitize the lenses in the most optimal way. To do this, you must solve two of the biggest problems encountered during document analysis and discussions with users:

1. Avoiding direct contact with the lenses by the wearer.
2. Emptying the lens fluid bottle after each use.

It will also have a number of secondary functions to provide a better user experience:

1. Optimize the available space: In the area where this product is going to be used, it is very important that the user has everything at hand, this proposal allows you to have everything necessary to perform the entire process of putting on and taking off the lenses by hand and in a compact way.
2. Liquid storage for lenses: This allows not only to eliminate extra elements from the process but also to make the sequence faster for the user.

METHODOLOGY

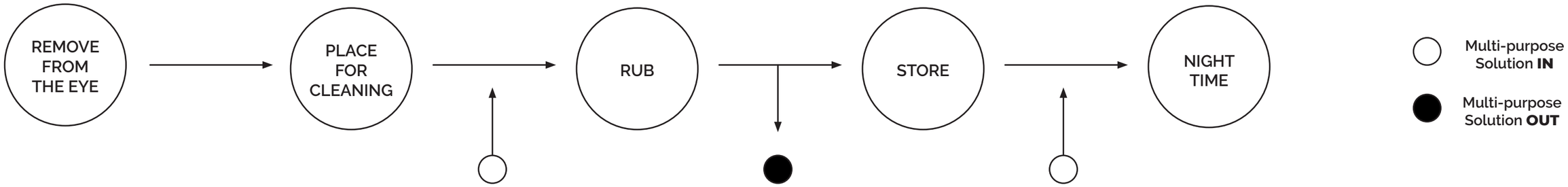
The methodology used seeks to achieve the design of a user-centred product, i.e. taking into account the needs, problems and opinions of users from the first stages to the last. To this end, we began by carrying out documentary research based on different reports in which user problems were presented. Once it was decided which problems to tackle in greater depth, a series of sessions were designed with users and professionals related to the sector (opticians, ophthalmologists, industrial designers...) to find out their experience with these problems and try to find possible solutions. A sifting of all the solutions obtained was carried out and, with those that came out best, they were developed. This development was divided into:

1. Design and choice of mechanisms and optimization of the sequence of use.
2. Formal design and definition of limiting measures.
3. Choice of materials.

MANTEINANCE CYCLE

In order to overcome the problem detectet using the information gathering for creativity sessions the maintenance cycle was defined taking into account the stages where manipulation of the contact lenses and use of Multi-Purpose Soution were needed.

From each stage the user movements and the relationship between these and the several products designed to improve the cycle were defined and put into discussion. The analysis of these elements let us realize that the user hands where used to get in contact with the eye and also as as surface to place and support the rubbing stage where the contact lenses were released from proteins (due to its friction against the tear film withing the eye) and other residual materials.

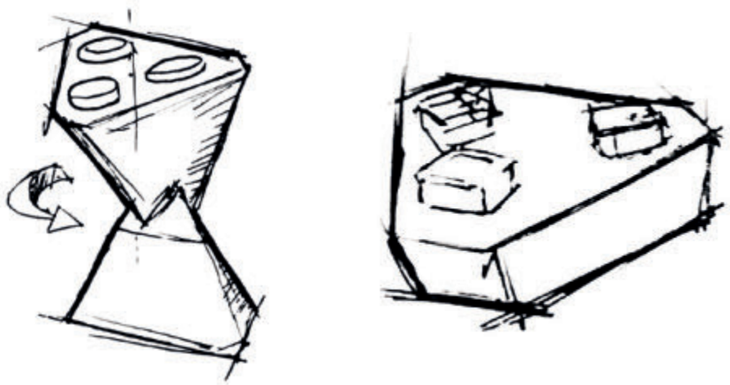


FIRST IDEAS

A portable unit that incorporates the elements that form products find in the market was defined as base for our design challenge that was looking for innovation taking into account user experiences and problems. This unit was dived in two levels for storage.

As our focus is give an alternative to users for manipulate the contact lenses without having to wash its hands it was important to give a surface to support the rubbing stage different from the hand with the same surface charecteristics in the case lid. This also allows eliminate transport movements

But also the remove phase needs a unit that protects the eye from a dirty finger used for that purpose. Some devices used for it where objects that in many cases are percived by the eye in a way that makes difficult get in contact with it (it closes as it recognize the object) being the finger a valuable, efficient and useful unit to adress the remove stage.



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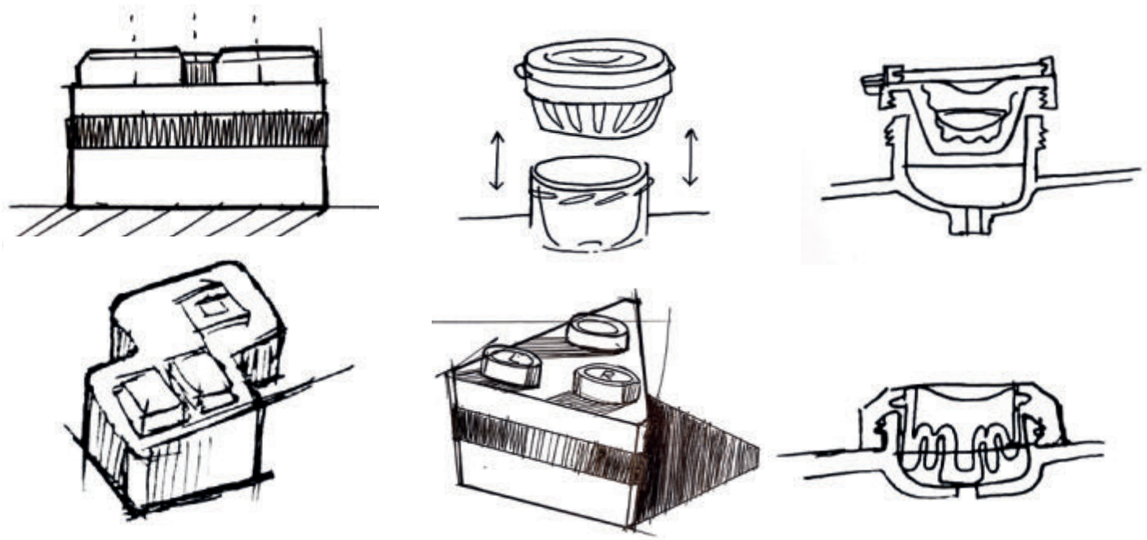
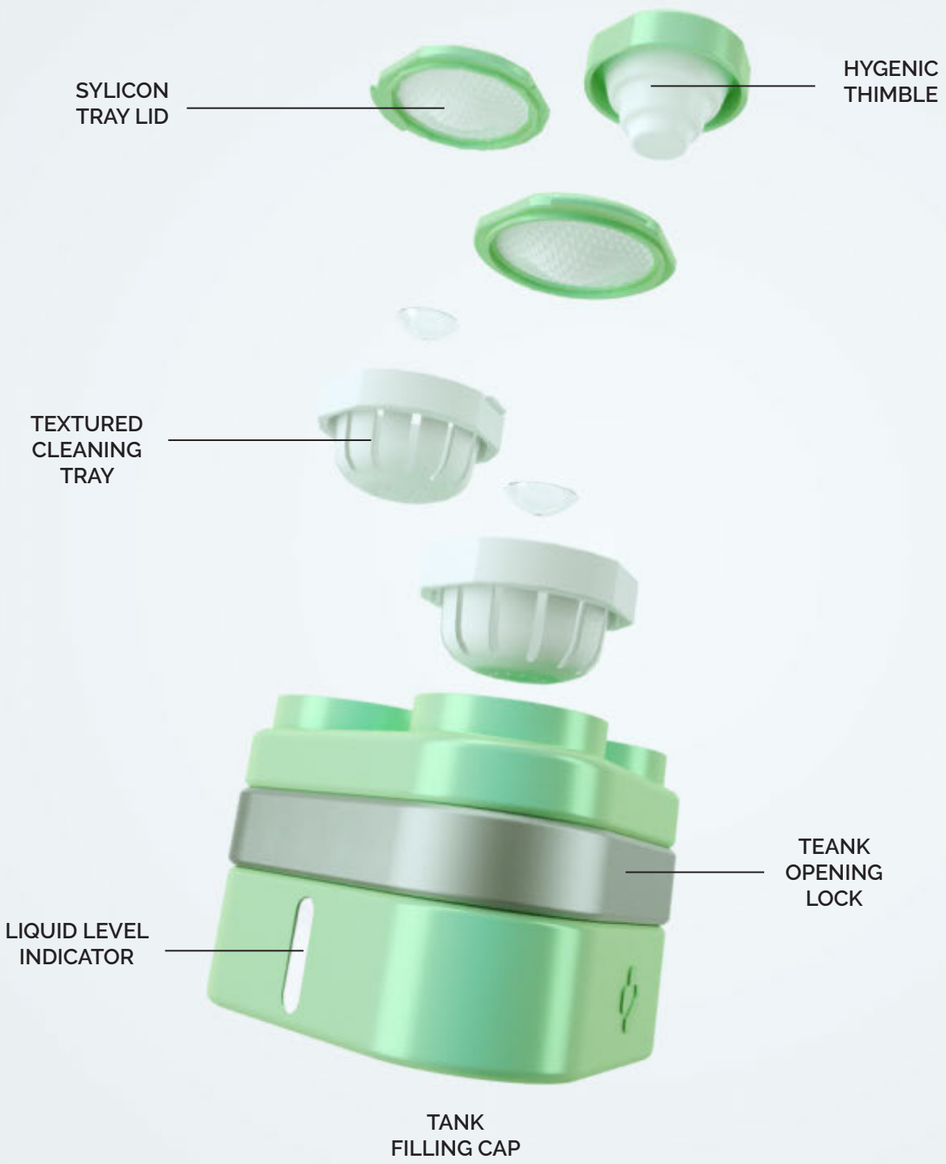
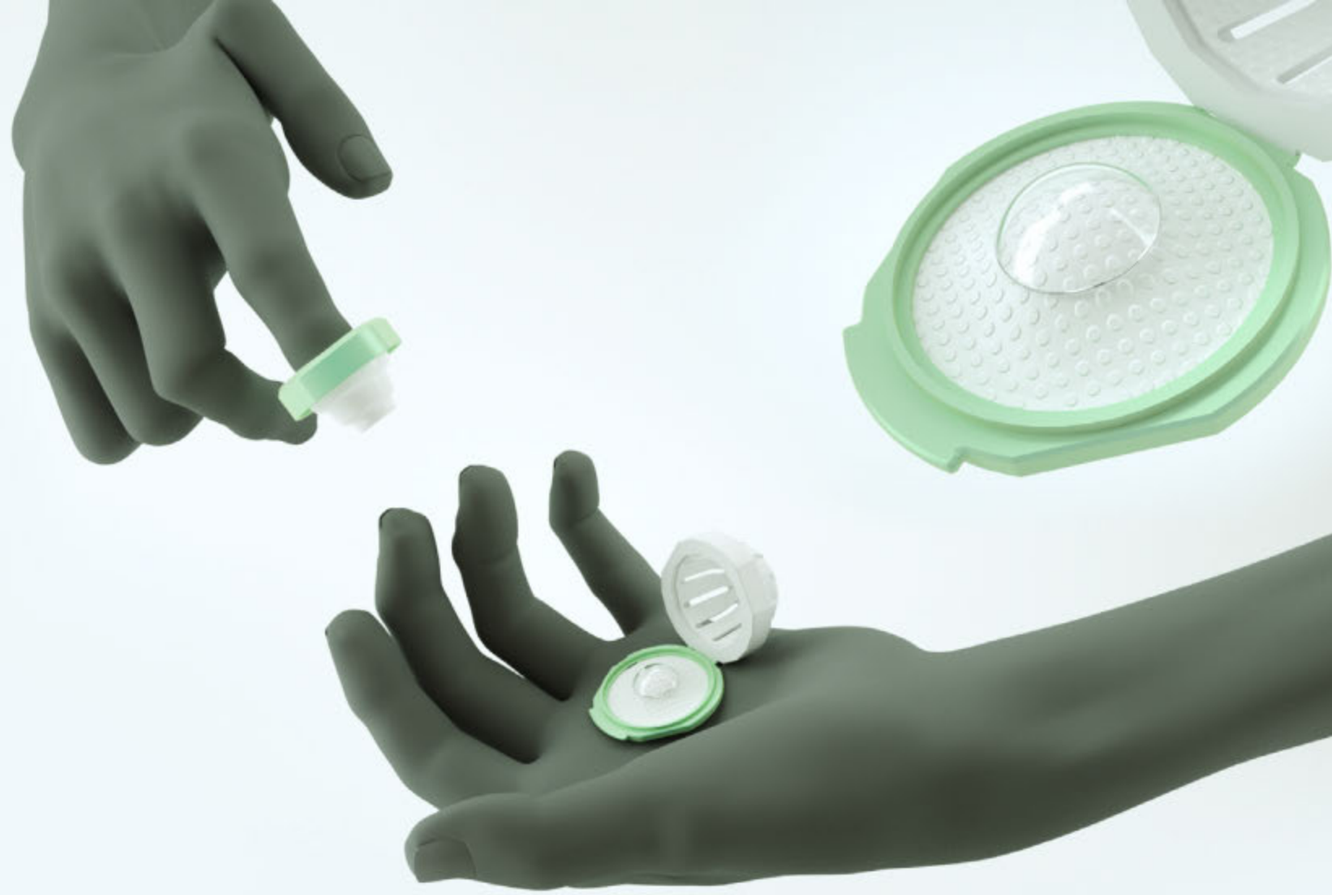


Hygienic Thimble: Remove and placement. A suction cup holds down the contact lense while it is moved from eye to tray.

Silicone tray lid: The silicone from the tray lid functions as protection for the eye during the rubbing stage using for that the finger as in traditional maintenance process.

Textured cleaning tray: Accommodates the contact lense. The textured surface simulates that from the hand supporting the lense and also enhancing the cleaning of proteins and particles embedded in the contact lense matrix.





Tank filling cap: Filling from the Multi-Purpose bottle.

Contact lense solution tank: Unit for the storage of 100 ml Multi-Purpose Solution

Tank opening lock: Lets the Multi-Purpose liquid fluid from tank to tray by gravity. For that, the element is moved from the horizontal position along the longitudinal axis by 45 degrees, turning over the unit during 2 to 3 seconds.

Liquid level indicator: Signalling that a new batch of Multi-Purpose liquid is necessary

KONVO

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