

# SCIENCE DEVELOPS INVISIBLE SUBSTITUTE FOR SPECTACLES: LENSES WORN BENEATH EYELIDS

By Dorothy Masters

**I**NVISIBLE contact glasses which fit over the eyeball, underneath the eyelids, may seem a little far fetched—as did the first "horseless carriage" and the early flying machine. But they are here. And the appearance of contact lenses—as they are known—might possibly be the forerunner of a new era, when nearsighted, farsighted, and astigmatic spectacle wearers will discard their glasses. Although they are not as yet recommended for general wear, they are being worn in a few cases.

Actors and actresses of the screen and stage, artists, and lecturers in increasing numbers are using the lens. These people prefer the contact lens because of its invisibility. Ordinary spectacles, no matter how trim and neat looking they are, often are unbecoming. Rims cast shadows and shade attractive eyes. Lenses sometimes are so thick as to cause distortion and form visible rings around the edge of the glasses.

But there are other advantages, as well. Since the contact lens clings closely to the eye, and participates in all its movements, it eliminates image-forming defects arising from the fixed spectacle lenses with the movements of the eye. Disadvantages due to the interval between the spectacle lenses and the eyes also are erased. There is no danger of breakage, as the lens rests safely beneath the lids, and in sports, where defective vision is a decided handicap, the contact lens solves the problem.

Only one lens is worn. If both eyes are bad, and they generally are, the prescription is made for the worst one. Obviously, then, the contact lens cannot restore perfect vision, which is one of the reasons it is not considered universally practical. Another reason lies in the fact that it cannot be worn for long periods. Twelve hours probably is the maximum time. The lens is about the diameter of a nickel. It is curved to fit the eyeball and is surmounted by another moundlike curvature, so that the entire lens resembles a tiny tropical sun helmet, with its shallow crown and its drooping, curved brim. Since the shape of the eyeball is a



When not worn, the contact lens may be carried in the small case shown here.

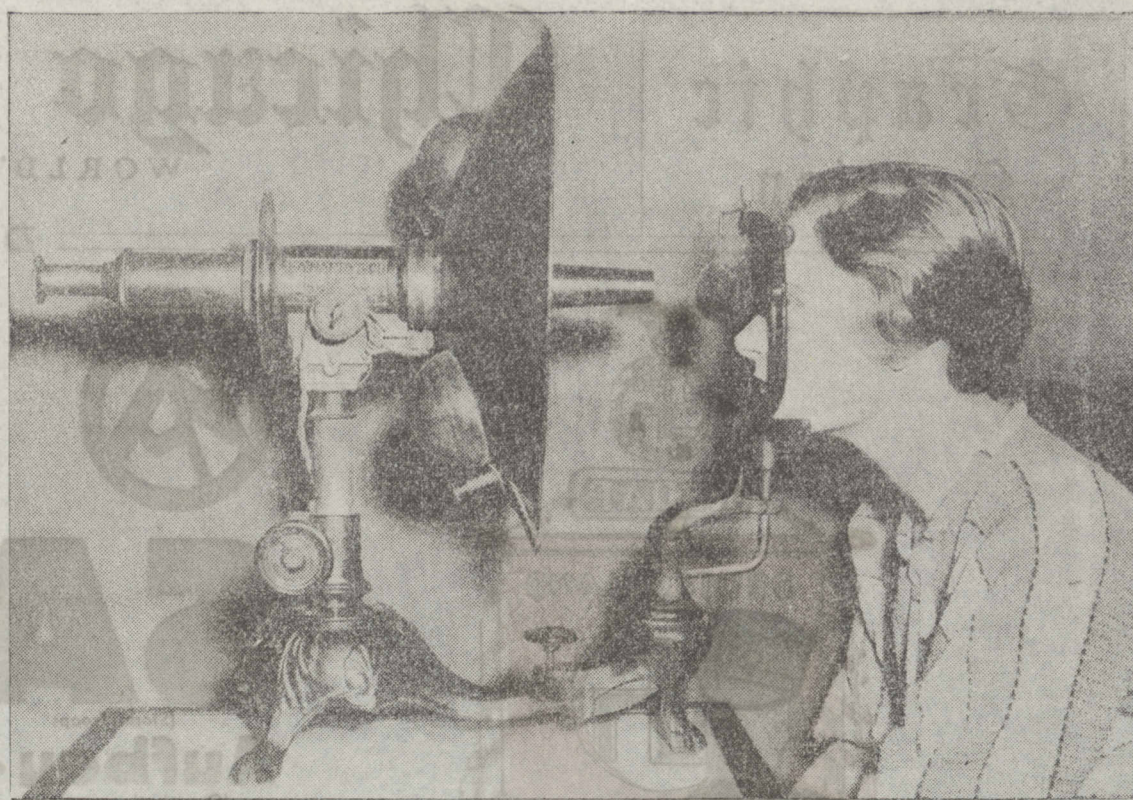


The invisible lens can be inserted in the eye by means of a rubber suction nipple.

factor in near and far sightedness, the eyeball has to be measured by machines before a prescription for the contact lens can be given. As a result, the crowns of the lenses vary in curvature for different cases.

While curvature of these crowns plays an important part in correcting the error of refraction, the lens itself also contributes, being ground for the proper correction, just as are ordinary spectacle lenses.

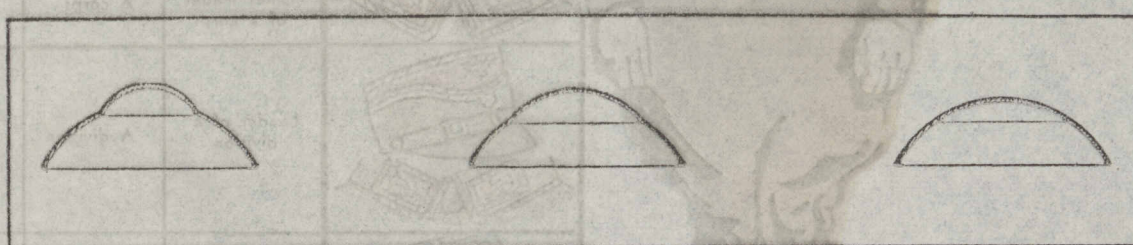
For the first insertion the eye is anesthetized. The lens is filled with a common salt solution, the head is bowed, the lower eyelid is pulled away from the eyeball, and the contact glass inserted by means of a rubber suction nipple. Care must be taken to eliminate air bubbles under the lens, for they interfere with vision. Although the contact glass was first made several years ago by a European lens specialist, it originally was intended for use in cases of conical protrusion of the cornea, and only recently has been offered as a substitute for spectacles.



Before the proper contact lens can be prescribed, the eye must be measured for curvature, to detect varying conditions. This is taken care of by the ophthalmometer, which determines the corneal radius and the extent of defective vision.



These are the contact lenses, which fit over the eyeball, under the eyelid, and provide vision at no cost to beauty. They represent 25 years of research and experiment, and are endorsed by leading eye specialists.



The contact lens, because of the varying curves of the eyeballs, must be made for the individual, after scientific measurement, accurate to 1/100th of an inch. It weighs not more than 8 grains.

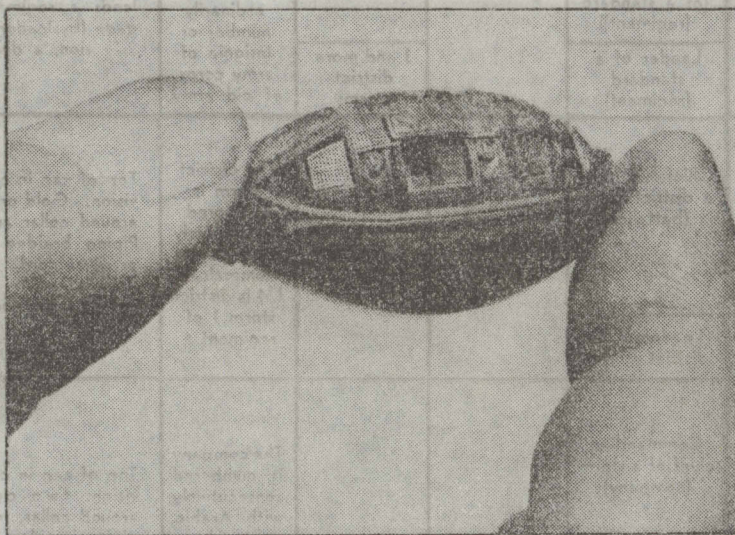
## LONDON PAYS RENT TO THE KING



**F**OR the use of certain lands within the city of London which are owned by the crown, the city has been paying "rent" to the king for more than 700 years. The payment of "quit rent" to the king

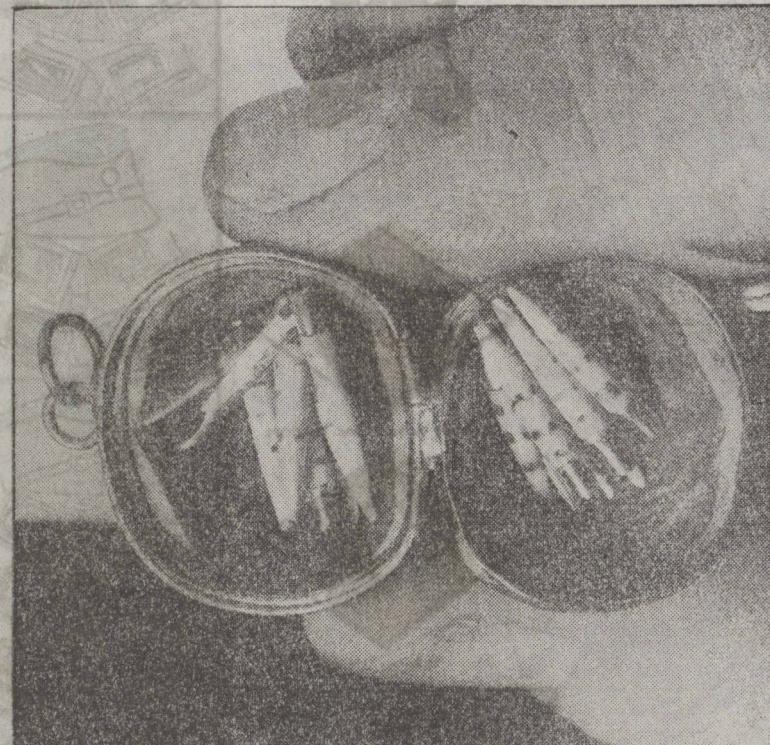
is an annual rite, performed in the city law courts. The "rent" usually consists of a bundle of faggots, a few horse shoes, and a number of nails. Observance of the ceremony is portrayed in the picture.

## THE "SMALLEST" ART COLLECTION ON RECORD



This tiny figure is a miniature Chinese junk, carved out of an olive seed. It has windows, doors, and images of 42 men. (Acme photos.)

**J**ULES L. CHARBNEAU of Seattle is the owner of a remarkable collection of miniatures, some of which are shown in the accompanying pictures. The Chinese junk, carved out of an olive seed, is an unusual example of handicraft. In addition to the windows, the doors, and the images of forty-three men carved on its sides, the bottom is engraved with 300 characters. Some of the curios in the collection are so small that a magnifying glass must be used to see them plainly.



Twelve miniature pocket knives, shown above, are an interesting part of Mr. Charbneau's collection of tiny art objects.

## DISCOVERS FOUR NEW GASES



**D**R. HAROLD S. BOOTH, associate professor of chemistry at Western Reserve university, Cleveland, and head of the chemistry department of Cleveland college, recently announced his discovery of four new gases, all of them compounds of fluorine. Dr. Booth is shown here in his laboratory. Fluorine is a pale greenish-yellow gas with a sharp smell. It was discovered in 1771 by Scheele and was first isolated by H. Moissan in 1886 by the electrolysis method. Fluorine never is found in an uncombined condition, but in combination with calcium as fluor-spar, and is widely distributed. It is the only chemical element never found in combination with oxygen, and there is only one compound with hydrogen—namely, hydrofluoric acid. The vapor of this gas is highly injurious to the respiratory organs.

## EXCHANGING VEGETABLES FOR LODGING



**M**EMBERS of the high school football team of Forks, Washington, wanted to go to Seattle to see the game between the University of Washington and the University of California, but they didn't have sufficient funds. Undeterred, they asked the Seattle Y. M. C. A. if they might exchange home grown vegetables for lodging. The institution agreed, and the boys came to town with more than a truckload of garden produce with which to pay their hotel

## DIVERS AT WORK IN THE THAMES



**D**IVERS are portrayed here at work in the Thames river, London, inspecting and repairing buoy moorings. In the background are the famous Houses of Parliament, where the Lords and Commons enact laws and debate questions of public policy.



**"Ben-Gay" penetrates deeper, stays in longer, routs pain quicker!**

Don't be a slave to pain—kill it this quick way. Rub on "Ben-Gay," the original Baume Analgesique. Its hypo-sensitizing (pain relieving) action is sure because it penetrates through the skin into the muscles and the joints themselves.

Because "Ben-Gay" gives such relief, hoards of imitators have sprung up. They do not possess the same hypo-sensitizing and antipyretic action of "Ben-Gay." Look for the red "Ben-Gay" on the box—it's your guarantee. Don't suffer from pain an hour longer.

**RUB PAIN AWAY WITH BAUME "BEN-GAY" IT P-E-N-E-T-R-A-T-E-S**