PHOTOGRAPHY

Stereoscopic Movies in Home Possible with New Invention

Pictures Are Taken With Two-Lens Camera of View As Seen by Two Eyes, Then Shown With Two Projectors

PRESENTATION in the home of stereoscopic movies that show full relief are made possible with a new invention by Edwin H. Land, of Boston, and Joseph Mahler, of Nemecky Brod, Czechoslovakia. For it they have just been granted United States Patent No. 2,203,687. In a paper in the *Journal of the Optical Society of America,* (June) the method is described, and the name "vectograph" is given to pictures so produced.

Mr. Land is the inventor of polaroid film, which causes light passing through it to vibrate in a single plane, instead of in all directions, as it does ordinarily. This has previously been used for stereoscopic motion pictures; for example, at the New York World's Fair, where visitors to one building can see three dimensional movies of an automobile being assembled.

To do this, the pictures are taken with a two-lens camera, one lens recording the view as it would appear to an observer's right eye, the other as it would look to his left eye. With two projectors, or a single projector using an attachment in which the light is divided into two beams, these pictures are shown together on the same screen. To the naked eye, they are somewhat blurred. To avoid this, polarizing films are placed over the projecting lenses, so that one image, say that for the right eye, is formed of light vibrating up and down, the other of light vibrating from side to side.

When a member of the audience is provided with special polaroid viewing glasses, these are separated. Over the right eye is placed a film that passes only up and down light, while the one for the left eye admits side to side vibrations exclusively. The pictures are sorted out, and each eye sees only its proper view, as it would at the original scene.

The new invention, however, allows such movies to be shown with an ordinary projector, either of the theater or home type, without any special attachment, other than the viewing glasses used by the audience. For still pictures, special lantern slides can be used in an ordinary magic lantern.

The two pictures are superimposed on a single film. Each image is itself formed in a polarizing layer, by destroying the polarizing properties over a limited area corresponding to the picture. Thus, when projected on a screen, the parts of the picture that both eyes should see are formed of unpolarized light. This, naturally, goes through either viewing lens. The part of the picture that one eye should see is made of polarizing material set to the proper direction of vibration for that eye. For the blacks in the picture, where neither eye sees any light, both layers retain their full polarizing effect. Having their planes of transmission at right angles, no light passes through these parts.

The patent specifications suggest a number of methods by which the polarizing properties of the films may be destroyed to produce the images. Some are with chemicals, others make use of the action of light or other radiations. Gradations of light and shade in the picture may be obtained, it is claimed, by only partially depolarizing the layers. Further, the pictures do not need to be projected, but may be made as prints, still requiring the use of the viewing glasses.

Another patent, number 2,204,604, has been granted to Mr. Land for one method of producing the vectograph images. By the action of light, the film is so treated that when exposed to certain vapors, its polarizing power is reduced or destroyed. Probably pictures, and other images, so produced will have applications in advertising displays.

Science News Letter, July 6, 1940

MEDICINE

Eye Drop Chemical Is New Antidote for Scorpion

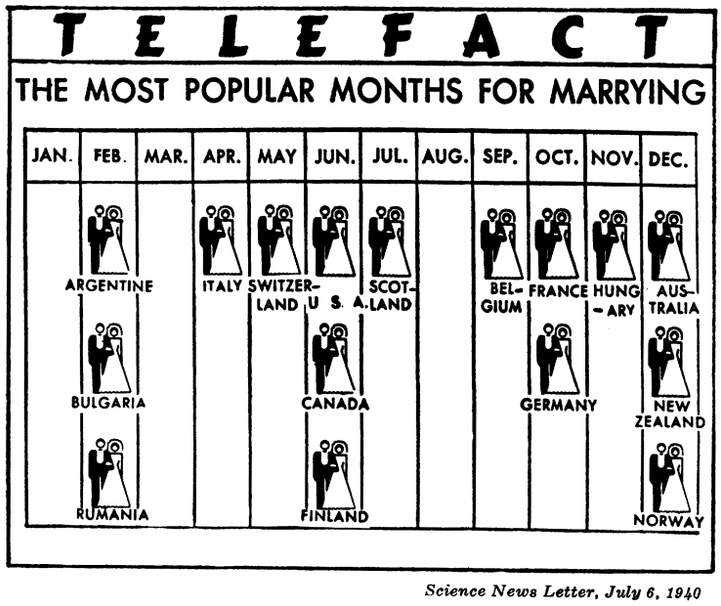
TWO new antidotes for poisoning from the scorpion's sting are suggested by Dr. Ali Hassan and Ahmed Hassan Mohammed, of the Faculty of Medicine, Egyptian University, Cairo. (*Lancet,* June 1)

Atropine, familiar to laymen chiefly as the drops put in one's eyes for examination for eyeglasses, and ergotoxin are the two drugs suggested as scorpion toxin antidotes. They could be used alone or with the specific antiserum to cure persons poisoned by a scorpion's bite, it is suggested.

No human trials are reported but one injection of the two drugs simultaneously given within two hours of a fatal dose of scorpion toxin saved the life of a dog. Rats were saved by either drug alone.

Science News Letter, July 6, 1940

Chemists report that adding two per cent of glycerine to *peanut butter* prevents the oil from separating out.



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