

MEDICINE

Three-Dimensional Movies

Films of surgical operations, made with two cameras set to take what each eye would see, appear three-dimensional when viewed through polarizers.

By JANE STAFFORD

► MEDICAL MOVIES are going three-dimensional. These are not the men-in-white films you see at your neighborhood theater. The new three-dimensional films, in color, are pictures of surgical operations taken for showing at medical meetings and post-graduate instruction courses for doctors.

So far, there are only two of these new medical pictures. The first was made at the Lahey Clinic in Boston. I just saw a prevue of the second when it was shown before cutting and editing to Dr. Brian Blades and assistants at George Washington University Hospital, Washington. The picture was taken a few weeks ago when Dr. Blades was removing a mediastinal tumor from inside the chest of a woman patient. The tumor in this case was not a cancer but had to be removed because it was pressing against the woman's heart.

To see these movies, the surgeons and I donned polarized viewers—polarizers in light cardboard frames worn like eye-glasses—because for three-dimensional movies your left eye must see the left eye picture and your right eye must see the right eye picture. The two are fused in your brain to give an illusion of depth to the picture you are seeing.

As one of the audience put it, we seemed to be watching the operation through a plate glass window instead of on a motion picture screen. Because of this illusion of depth, we felt we were looking with the surgeon into the patient's chest instead of looking onto a picture of it. We seemed to see rubber gloved fingers reaching into the chest instead of moving across a flat surface of bones and flesh.

The reason we normally see depth, of course, is because we have two eyes set approximately two and one-half inches apart. One eye sees one view of what is in front and the other eye sees another view. The two views are fused in the brain into one view with depth.

To get this depth, or three-dimensional, effect in motion pictures, Floyd A. Ramsdell of the Worcester Film Corporation at Worcester, Mass., uses two cameras set, in this case, a little over one inch apart. One camera takes what the left eye would see and the other what the right eye would see. The two films are taken synchronously and projected synchronously.

The space between the two camera lenses is not the same as the space between two eyes. It must be calculated, Mr. Ramsdell finds, on the basis of the distance from the object being photographed and other factors.

The three-dimensional movie I saw, as well as the one of a stomach operation by Dr. Samuel Marshall of the Lahey Clinic, Boston, were made under a grant from Ethicon Sutures Laboratory. It will be shown to surgeons at the meeting of the American College of Surgeons in New York in September. The Marshall picture is now being shown at medical meetings in Dublin, London and Edinburgh following a tour of surgical meetings in this country.

Science News Letter, August 23, 1952

GENETICS

Grass-Like Plant as Immediate Corn Ancestor

► THE IMMEDIATE ancestor of corn may have been a grass-like plant known as Corn grass, Dr. Ralph W. Singleton of Brookhaven National Laboratory, Upton, N. Y., has found.

If so, the Corn grass was changed to corn by a macromutation, that is, the mutation of one gene in a very decided way. Such a change from a narrow-leaved plant with no ear to one resembling today's corn would probably be spotted immediately by the primitive Indian. The chances are good that

this plant would have been cared for and its seeds propagated.

Dr. Singleton bases his suggestion on a Corn grass plant that was found on a farm in New Jersey. This plant was the result of a macromutation of one of today's corn plants to a grass-like structure. If macromutation will work one way, it should also work in reverse, Dr. Singleton believes.

Most scientists have looked for the ancestor of corn by searching for a maize plant only slightly changed by a series of micro-mutations, or comparatively small changes in the plant's form at any one time.

Beta radiation from radioactive phosphorus and gamma radiation from radioactive cobalt were tried to get the reversed mutation, but neither was successful.

Science News Letter, August 23, 1952

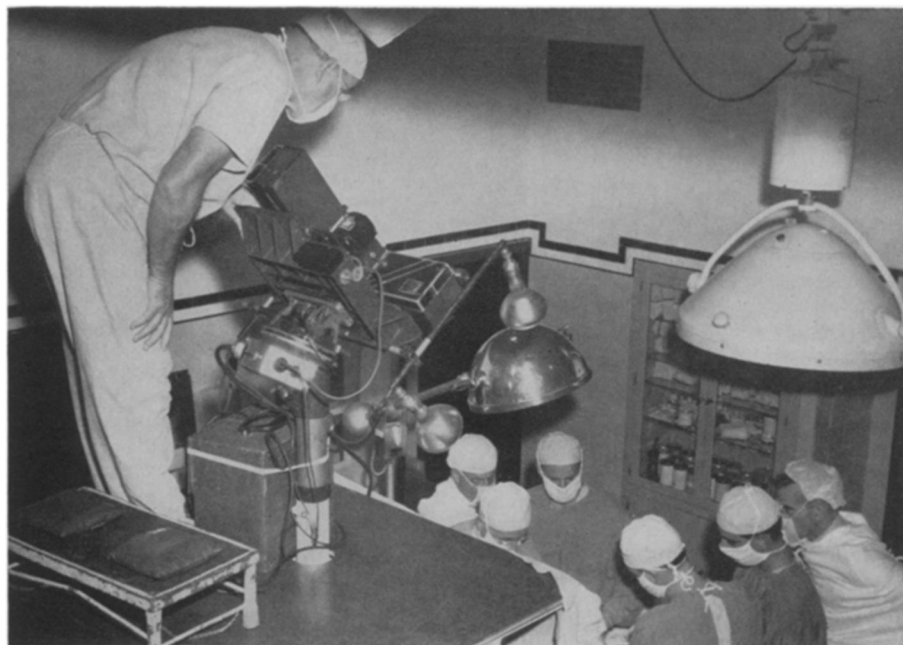
BIOCHEMISTRY

"Hot Ragweed" Enters Hay Fever Fight

► NOW THEY are making "hot" ragweed to help in the fight against hay fever. It probably will not be used as a medicine, but Dr. E. M. K. Geiling and associates of the University of Chicago hope that pollen from the "hot" weeds they are growing will give new knowledge about the course the irritating pollen chemicals take through the body.

This and the mechanism of antihistamine action in checking hay fever symptoms will be studied in experimental animals and maybe, much later, in human hay fever victims.

Science News Letter, August 23, 1952



THREE-DIMENSIONAL MOVIE—The first surgical operation to be filmed in color with the new three-dimensional camera was a stomach operation performed by Dr. Samuel F. Marshall at the Lahey Clinic, Boston.