females have had breast tumors, 1 C3H mouse died at an early age and the others are living.

To the residue of the tumor-tissue was added an equal amount of 50 per cent. glycerin. This was placed in the refrigerator on 4/17/41, shaken daily and filtered through a wire cloth on 4/24/41. Twenty-five cc of filtered substance was obtained to which was added 40 cc of Locke's solution. The extract was injected intraperitoneally into 16 fostered C3H females (2 cc, each mouse) and 8 BAF_1 females (1 cc, each mouse). Five of the C3H females have developed spontaneous breast tumors; the others are living.

On 5/6/41 an extract of 30 cc of macerated tissue of spontaneous breast tumors and 90 cc of 50 per cent. glycerin was placed in the refrigerator, shaken daily until 5/15/41, when it was removed and filtered (wire cloth). Seventy-five cc of filtrate was obtained to which was added 140 cc of Locke's solution. Fifty-five mice were injected intraperitoneally, each receiving 1 cc. As 43 of the injected mice were dead by the following morning, the others were given the extract in small dishes. The average amount given was 4 cc per animal but little of the material was consumed in two days. Five BAF_1 and 7 fostered C3H females survived the treatment and tumors have been observed to develop in two of the hybrid animals.

SUMMARY

Females of the fostered C3H strain and the BAF_1 hybrid generation, having a normal incidence of breast tumors of 1–2 per cent., were given, by mouth or injection, filtrates (Seitz filter) or extracts of glycerinated-treated tissue containing the active milk-influence for the development of spontaneous breast cancer. Sixty-three experimental mice were observed to have an incidence of 41 per cent. Thirty-six mice received unfiltered or untreated material and have had an incidence of 67 per cent. Many of the mice of each group are still living.

Previous studies indicated that the active milk-influence would not become inactive following desiccation.[4] Following ultracentrifugation the active influence appeared in traces, if at all, in the fat fraction and in the final supernatant fluid, and it is possible that the active agent is a colloid of high molecular weight.[5]

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

A MEANS OF INCREASING THE ILLUSION OF DEPTH IN PHOTOGRAPHS

PHOTOGRAPHS used in scientific illustration generally lack the illusion of depth or three dimensions. The recent introduction and use of film transparencies (translites) has made available a means of obtaining the third-dimensional effect in photographs. "Translites" when held up to the light and viewed from a distance of two or three feet give the optimum of third-dimensional illusion or effect.

An easy, inexpensive means of mounting and viewing the transparencies in front of the laboratory windows is herein described. The films are mounted in metal frames between two sheets of glass. The dimensions of the frames used by us are twenty-two by twenty-nine inches and they hold nine translite films (seven by nine inches) arranged in three rows of three each. The metal frames were obtained from the Multiplex Corporation of St. Louis, Mo.

The frames are held in front of the windows by the following means. Two deeply grooved wooden tracks or window bars are used to keep the frames upright in the lower part of the window. The lower grooved track is permanently fastened to the framework of the window. The upper detachable grooved track is fastened to the framework of the window by means of two bolts passing through holes at each end of the bar and fastened by wing nuts. The upper bar can easily be unfastened to insert the frame containing the translite films. Several frames may be placed in a window and the ventilation or illumination of the room is not appreciably decreased (see Fig. 1 A and B).

Since the films are placed between two sheets of glass, they are not liable to injury by frequent handling and therefore retain their usefulness indefinitely. This method of illustration had been found to be much superior to ordinary photographs and greatly enhances the illusion of the third dimension or depth in photographs.

"Translites" may be made on either translite film or paper (Eastman Kodak). The paper is less expensive than the film, but it does not have the same degree of brilliance or transparency. Each side of the translite film or paper is coated with a photographic emulsion. These emulsions are of different speeds so that when developed the two images are of different densities and are separated from each other by the thickness of the paper or film. The illusion of depth is thus readily obtained when these double-coated, two image films or papers are viewed from a distance of several feet.

Photographic negatives of medium contrast taken in the usual manner are used in making the translites.

[4] *Idem*, SCIENCE, 93: 527, 1941.
[5] M. B. Visscher, R. G. Green and J. J. Bittner, *Proc. Soc. Exp. Biol. and Med.*, 49: 94, 1942.

The same procedure is followed as in making ordinary enlargements on bromide or chloro-bromide papers except that translite film or paper is used instead.

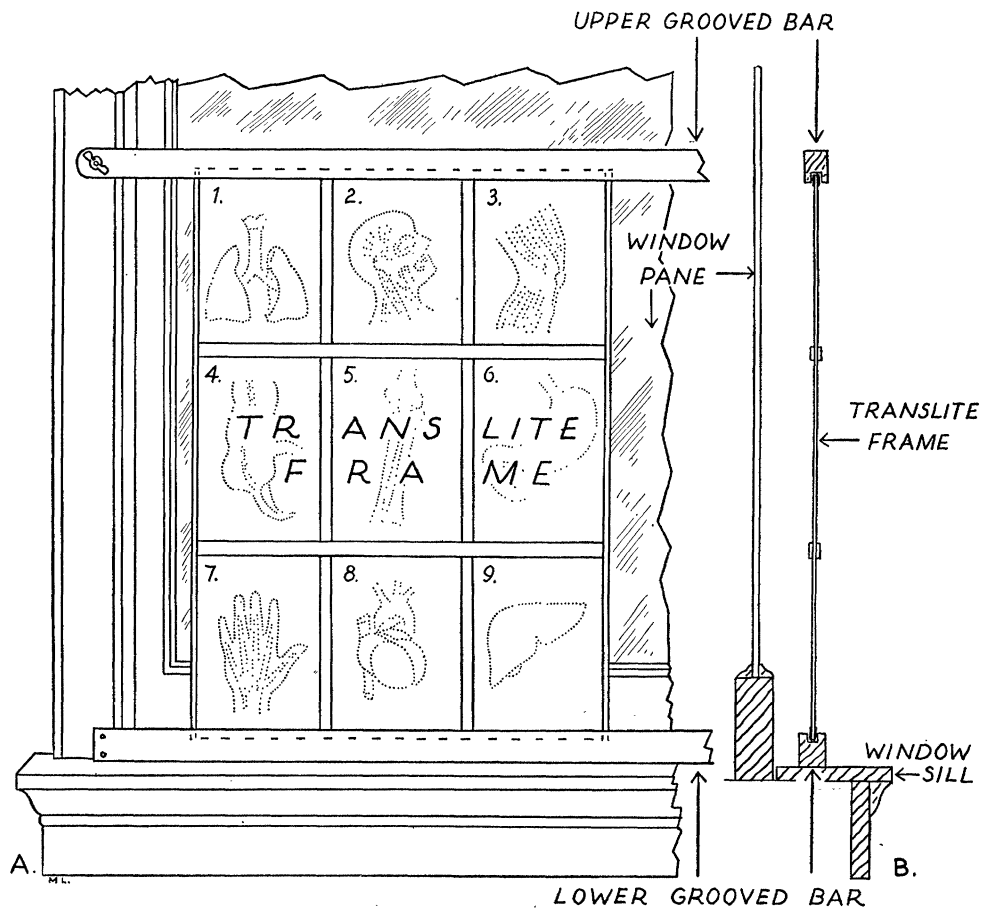

FIG. 1. Front (A) and cross-sectional (B) view of window frame with translites in place for viewing. The translite frame may be removed from the window by unscrewing the wing nut fastening one end of the upper grooved bar.

The translite film or paper requires no special technique in handling and developing. The development, the fixing and the washing of the translite film or paper is similar to that employed in preparing ordinary photographs. Wide variations in exposure of the translite film are possible since the translite film has a rather wide latitude.

Translites may easily be made to resemble the specimen more closely by the application of coloring pigments directly to either side of the film or paper. Eastman Transparent Oil Colors are best suited and should be used undiluted and applied directly with cotton applicators and then blended. Excess color may be removed easily by means of "thinner" applied in a similar manner.

Photography has been used as an inexpensive means of recording detail of preparations, etc., for further study. Ordinary photographs usually fail to create the illusion of depth so that it becomes difficult to determine the relationship of successively deeper planes to one another. The use of translites enhances the illusion of depth, and this means of mounting and illuminating translites is efficient and inexpensive.

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