La Fig. 2 montre le parallélisme entre une courbe expérimentale et la courbe théorique. Les valeurs des variables étaient:

$$C_2 = SO_4H_2 \frac{N}{1000}\ 1.23\ (200\ ml); \quad C_1 = 0\ (Eau\ distillée); \quad V = 160\ ml.$$

L'écoulement du réservoir inférieur se faisait dans un petit entonnoir à robinet (volume mort de 20 ml) à raison d'une goutte par seconde. Le dosage a été fait par NaOH dans des fractions collectées de 11.2 ml.

Le volume mort et le volume des fractions collectées expliquent le décalage de la courbe expérimentale par rapport à la courbe théorique. Le parallélisme des deux courbes démontre le mélange correct des phases dans le réservoir inférieur.

Ce travail a été executé dans le cadre de la Fondation de Diététique expérimentale et appliquée (Pr. Ag. H. SARLES), subventionnée par l'Institut National d'Hygiène et le Centre National de la Recherche Scientifique.

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A frame for photographic processing of the autoradiograms of paper chromatograms or electrophoregrams*

The development, washing and fixation of large sized X-ray films in shallow dishes is time consuming when larger series have to be worked up. The usual stainless steel frames with clips which are suspended in high earthenware tanks have the disadvantage that adjacent films can come into contact with each other which might lead to scratching of the emulsion. A frame (Fig. 1, A, B) has therefore been constructed to hold the films and enable them to be transferred from one tank to another as a compact block. It is based on the well-known principle of DATTA's frame[1]. A template (Fig. 1, C) consisting of two plates equipped with aligning pins for a precise location of the film even in complete darkness serves for punching the films, which are then slid onto the rods of the frame.

The main device consists of two frames made of the "Fatradur" hard polyvinyl thermoplastic resin or similar material. The supporting frame is equipped at each of the shorter edges with Fatradur rods with male thread at the top; holes are drilled in the corresponding positions in the top frame. After loading the supporting frame with the films (f), which are separated by one or more spacers to prevent contact, the top frame is placed in position and secured by a nut (N).

The punching device consists of two plates connected by hinges (b). The lower plate (P1) is equipped with three or more aligning pins (R) for the film and holes for the punch. The upper plate (P2) has similar holes as well as pits above the pins. After

* Demonstrated by O. HOREŠOVSKÝ, Z. FRANC AND I. M. HAIS at the Conference on Paper Chromatography in Prague, June 21, 1961.

the film (f) has been placed on the lower plate and aligned to touch the pins, it is covered by the upper plate and the punch (K) is driven in all the holes in succession.

This equipment has been used successfully for a couple of years. Special experiments have shown that there is no difference in the intensity of the blackening of

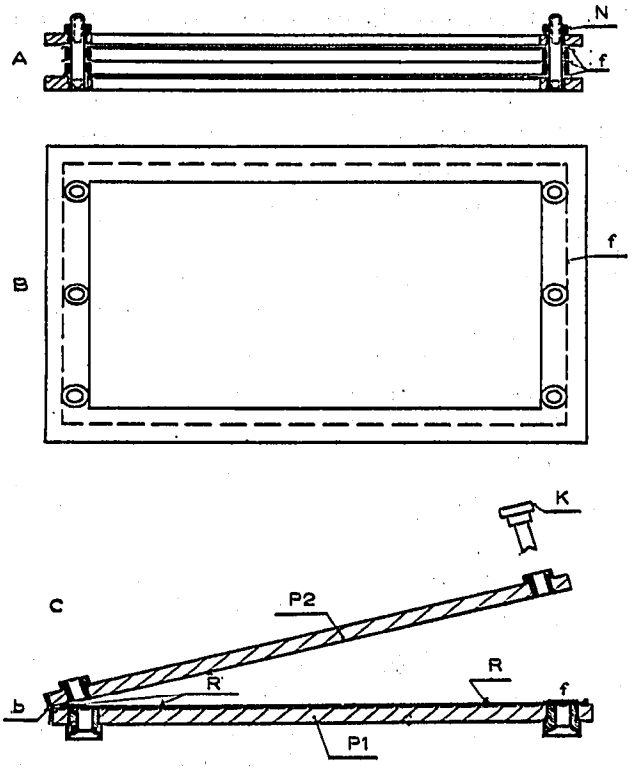

Fig. 1. (A, B) Carrier frame; the actual length of the six rods and number of films depends on the dimensions of the tank. (C) Punching device.

the spots or background, depending on the number and relative position of the films on the frame. There is no obvious reason why the same equipment should not be used for the development and fixation of diagnostic radiographs, but most radiologists prefer individual processing under visual control. On the other hand, in the case of autoradiograms, identical treatment of the whole series is critical for comparative purposes.

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[1] S. P. DATTA, C. E. DENT AND H. HARRIS, *Science*, 112 (1950) 621; *Biochem. J.*, 46 (1950) xlii.

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