PAINLESS SLIDE-MAKING

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Our firm has wasted a lot of money on ineffective equipment with which we hoped to make 35 mm. records of memorable radiographs. We have even tried to employ a part-time photographer — at great expense and with indifferent results. Anyone who has tried to photograph X-ray films on a vertical viewing-box himself (because no one else knows exactly what he wants) will know how time-consuming and irritating it can be with tripod, camera, light meter, and strips of cardboard for masking an area of film. If there were a really convenient method of producing good copies, perhaps it would be standard equipment in all X-ray departments and even in teaching departments of other branches of medicine.

Such apparatus is available at surprisingly low cost. The 'Durst M35', with a simple modification, now enables us to set up and photograph any X-ray film in rather less than 5 minutes, and produce a slide which is at least as good as the original, often better. The copying stand (and enlarger) is superior to other apparatus of this kind costing twice as much. It requires no focusing for photographing areas 7 - 50 cm. square (20 inches square).

It has a large, clear reflex view-finder. The manufacturers supply interchangeable red and ground-glass windows, for enlarging and photography respectively. The film carrier is loaded with up to 30 feet of 35 mm. film.

We have mounted this machine on a desk (designed by us) with a horizontal viewing box, illuminated by 20 40-watt bulbs with 20 individual switches (Fig. 1). Alternate

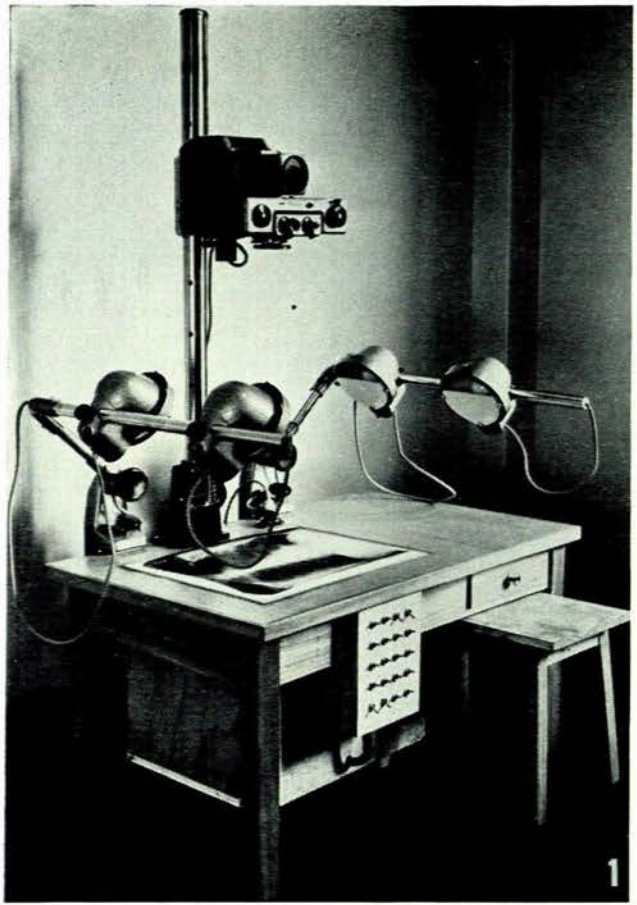

Fig. 1. The Durst M35, mounted on the special desk with built-in viewing box and illuminating device.

lamps are surrounded by short, cylindrical cardboard cones to localize the area illuminated by each lamp. It is therefore possible to reduce contrast of our original by lighting up the darker parts of the film. It is also possible to raise the light intensity in steps until the light meter, held at camera level, records a pre-decided reading which we keep constant for most of our copying (so that the camera setting remains unchanged).

To photograph an X-ray film, it is correctly placed on the viewing box under vision through the camera viewer. The apparatus is lowered until the important area of the film only is covered by the viewer. Still under vision we now place wide strips of rubber mat on all four sides of this area, just outside the field of vision, to cut out surrounding glare. All that remains is to place a serial number on transparent tape on the X-ray film, adjust the light, close the diaphragm and click the shutter.

The film we have been using is 'Kodak direct positive', available in rolls of 100 feet. The film is developed by our dark-room staff with the special chemicals provided by Kodak. The process merely includes bleaching and redeveloping between the usual steps of developing and fixing.

The cost of our apparatus was roughly as follows:

The Durst M35 copying stand and enlarger*	R180.00
The Durst film carrier, Mirep	R85.25
The desk, viewing box and stool	R32.00
Electrical connection, 20 lamps and switches	R35.00
Light meter	R10.00
	R342.25
Optional extra: Illuminating device for document copying	R70.00

* The Durst apparatus is supplied in South Africa by African Consolidated Films, Ltd.