without the appearance of demonstrable edema (fig. 1). Breathing capacity was substantially increased (fig. 6), and a roentgenogram made on the seventh day of treatment showed slight but definite clearing. This improvement continued for another two weeks, and then the diffuse infiltration remained constant.

Our original plan was to have the patient administer ACTH to himself after his discharge on June 28, 1950. However, he could not do this. Instead, 12.5 mg. of ACTH was given twice daily at his plant dispensary. Since this routine permitted only five treatment days each week, it proved to be a poor arrangement. After three months of treatment the administration of ACTH was discontinued on Sept. 8, 1950. Two months later his cough had begun to return and his weight had fallen 10 lb. (4.5 Kg.) below his maximum during the treatment period.

CASE 2 (man, aged 41, University Hospitals no. 286-383).—*Industrial History.*—R. C. worked from June 25, 1938 to Aug. 29, 1947 as an attendent maintaining the sealing and exhaust machines used in the manufacture of fluorescent lamps. Until Oct. 10, 1942, beryllium-containing phosphors were mixed in a room located about 25 ft. (7.5 m.) away from his normal working position, and he would make at least one trip a day into the area, spending on the average

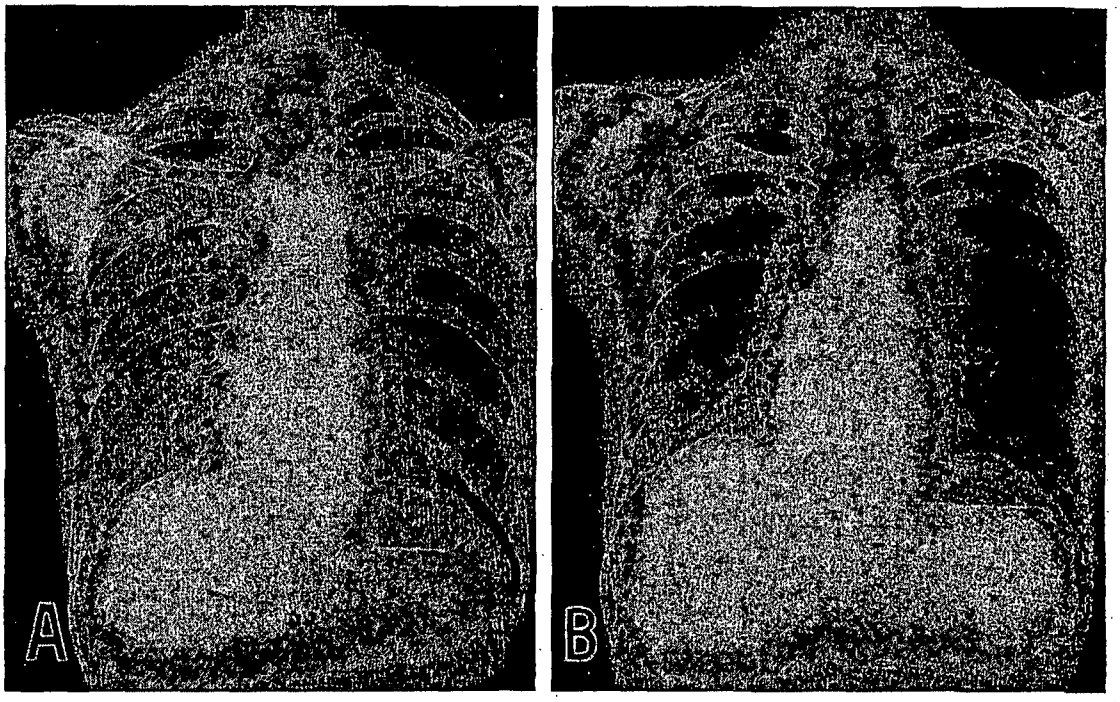


Fig. 2 (case 1).—Roentgenograms of L. T.: *A*, taken before treatment. *B*, taken on the seventeenth day of ACTH therapy. General clearing of the "soft" shadows is demonstrated. There has been a slight increase in heart size.

15 minutes there. The only other contact he had with beryllium was when an occasional fluorescent tube would implode, discharging into the air a small amount of the fine powder.

Medical History.—R. C. had enjoyed excellent health until early in 1945, when he noticed exhaustion, a loss of weight from 190 to 170 lb. (86 to 77 Kg.), chronic cough, dyspnea and night sweats. In April 1946 he was studied thoroughly by Dr. George Wright at the Saranac Laboratory with the following results: Although a chest roentgenogram made sometime in 1944 had been normal, one made on March 5, 1945 was interpreted as showing a generalized miliary type of nodulation scattered throughout both lungs with some tendency toward coalescence in the middle thirds near the hili. There was frank polycythemia with a red blood cell count of 7,650,000 and a hemoglobin content of 20.3 Gm. without a corresponding increase in the total plasma volume above the predicted normal value. This feature had not been described in any other cases observed up to that time. The arterial blood was 77 per cent oxygen saturated at rest, the saturation being reduced to 72.5 per cent after five minutes' exercise at 3 mi. (4.8 km.) per hour on the level. Saturation was complete after the breathing of pure oxygen. On account of the