models, showing the habits of individual minerals. Every one of the specimens was carefully indexed. As Professor Buttgenbach proudly stated in his description of the museum, "I have made it a point to prepare a complete catalogue, on filing cards, so that we know exactly what we possess."

Now the Liége Mineralogical Museum, sharing the fate of the historic Law Courts, is a charred heap of rubble. Gone, the unique heterobrochantite. Gone, the beautiful kipushite. Gone, the rare Moresnet hopeite of 1826. Gone, the exquisite ruby silvers of Ungemach. Gone, the Rhisnes calcites. Gone, all of them! Destroyed—along with Ungemach's goniometer, the keepsake which his children had presented to the Institute, along with the microscopes, the refractometers, the books, the laboratories, the offices, the shop—and the catalogue. Today, Professor Buttgenbach and his associates, Messrs. Mélon and Bailly, no longer need their complete catalogue, with its thousands of cards, to know exactly what they possess.

REFERENCE

BUTTGENBACH, H., *Le Musée de Minéralogie de l'Université de Liége*, 41 pages. H. Vaillant-Carmanne, Liége **(1938).**

BOOK REVIEW

THE PHOTOGRAPHY OF THE RECIPROCAL LATTICE by M. J. BUERGER. ASXRED MONOGRAPH NO. **1.** Published by the American Society for X-ray and Electron Diffraction. ix+27 pp., 18 figs. Copies may be obtained from the Murray Printing Company, 18 Ames St., Cambridge 42, Mass. Price $1.50.

This monograph describes a method of photographing the reciprocal lattice which is based upon the geometrical principles of de Jong and Bouman for obtaining undistorted projections of the reciprocal lattice, combined with a precessing motion of the crystal, first described by the author in his "X-ray Crystallography." The method is consisely but clearly presented, and the underlying theory, the apparatus design, and the types of photographs secured are well illustrated.

Interpretation of the photographs is comparatively simple, since they are scaled photographs of individual lattice levels. Thus the method is of special value for crystals with very large unit cell dimensions. In setting the apparatus for *n*-level photographs, each precession photograph contains a measure of the error in the reciprocal lattice value used. The method can be used to locate a rational axis in an unoriented crystal fragment. Exposure times for regular exposures are short, and for orientation, exposures of a few minutes suffice for correction purposes. Perfection of the crystal is required only for a very small cylindrical volume through the crystal; possible adjacent twinned or distorted areas do not enter the *x*-ray beam. Compared with the Weissenberg method, less of the reciprocal lattice is recorded, and *n*-level photographs lack a record in the center.

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