

## NOTES ON THE FELKER DI-MET ROCK SAW

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This small laboratory rock saw (Model 11-B),\* which for several years has been available for geological work, is of more universal use than any other known to the writer at present. A wide range in specimen shapes and sizes can be successfully handled, and, as plasticene is used for mounting instead of rigid clamps, there is little damage to saw blades.

The makers advocate the use of oil rather than water in order to prolong the life of the blades. Although this is undoubtedly true in principle it is not a satisfactory procedure for plasticene mounting. Oil tends to dilute the clay and loosen the specimen beyond the safety point. As an alternative, two liberal streams of water, applied one on each side of the blade from small faucets, have been found superior in every respect. Upon changing specimens it is only necessary to remove with a cloth any water or rock fragments adhering to the surface of the plasticene.

Two manually operated drives have been added to the saw in use by the writer. One of these moves the specimen table, the other adjusts the height of the saw above the table. This latter drive is highly desirable as it permits gradual vertical adjustment while a cut is being made. It also makes vertically directed cuts possible in cases where the specimen shape is unsuited to the normal horizontally directed cut.

In order to make parallel cuts without shifting the specimen, a brass plate has been laid over the specimen table and held in place by bending its ends under the back and front of the table. The edges of the plate parallel to the sides of the sliding table are bent up so as to be easily grasped by the fingers. By making this plate an inch or so narrower than the specimen table, a small lateral movement is provided which is adequate for all ordinary work and saves considerable time where parallel cuts are needed. Construction of an elaborate lateral drive for this purpose would reduce the effective size of the specimen table and thus the general usefulness of the saw.

The addition of this plate necessitated the removal of the adjustable bars intended to aid in holding the specimen. It was found that these bars could be dispensed with entirely. Instead, the plate was scored with a sharp cutting tool, thus providing the plasticene with a roughened base. With large specimens it has been found advantageous to pound the plasticene into place around the base of the specimen with a hammer.

\* Musto-Keenan Co., Sales Division, 1801 S. Soto St., Los Angeles, Calif. Also John Neu, Inc., 34-50 Vernon Blvd., Long Island City, N. Y.

This is more rapid than use of the fingers alone (particularly if the plasticene is stiff) and insures adequate binding of the specimen to the saw table.

The improved saw as just described has the great advantage of flexibility of use without encumbrance by too many mechanical features. In commercial work where a uniform product is being cut and precision is necessary, as in quartz crystal processing, the use of goniometric devices and an automatic hydraulic drive is undoubtedly justified. For general purposes, however, these are unnecessary and add greatly to the initial cost and maintenance of the machine.

## PROCEEDINGS OF SOCIETIES

### PHILADELPHIA MINERALOGICAL SOCIETY

*The Academy of Natural Sciences of Philadelphia Dec. 3, 1942*

A stated meeting was held in the library of the Academy of Natural Sciences on the above date with Dr. Hersey Thomas presiding. Mr. Henry E. Millson gave a lecture on "Fluorescence and Phosphorescence of Minerals and other Materials" which was illustrated by a number of Photochrome lantern slides. These slides compared side by side minerals taken in white light and in ultra violet. Mr. Millson also displayed a series of polished minerals lighted by a 72-inch cold quartz light. A demonstration was also given on how phosphorescence and fluorescence are being used by war industries and for war purposes during blackouts. Mr. Trudell described a trip taken by the Society to Easton, Pa. on Nov. 15.

*Jan. 7, 1943*

Dr. Hersey Thomas presided, with fifty-eight members and visitors in attendance. Mr. Felix B. Shay of the Foote Mineral Co. gave a lecture on "Ilmenite, Rutile and Zircon." Mr. Shay described the commercial uses of these minerals and their occurrences as ores. A series of lantern slides were shown illustrating the different methods of mining and separating these minerals. Charles Toothaker displayed an interesting suite of crystals of rutile, brookite and octahedrite from several localities. Harold Arndt reported on a trip with the secretary on Jan. 2 to an asbestos mine near Rosetree, Del. Co., located on the estate of P. F. Biddle. Asbestos and anthophyllite were found intermixed in serpentine.

*Feb. 4, 1943*

Dr. Hersey Thomas presided, with fifty-two members and visitors present.

Mr. George D. Cremer of the Hardy Metallurgical Co. of New York gave a lecture on "Powder Metallurgy" which was illustrated by a number of lantern slides. The deaths of Harry Warford and Edward Allen were announced.

J. S. FRANKENFIELD, *Secretary.*