

FIG. 1. Front and side views of mercury lamp.

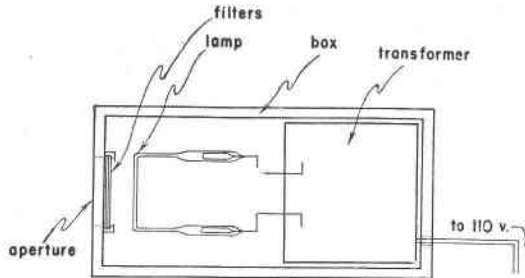


FIG. 2. Diagram of complete monochromatic light unit.

METHOD FOR POLISHING DIAMOND-DRILL CORE SPECIMENS

LOUIS MOYD¹

Petrographic laboratories and museums occasionally find it necessary to polish large diamond-drill core specimens of rocks for study or display purposes. The writer is not familiar with any published procedure for accomplishing this and therefore considers that the method evolved at this laboratory may be of value to others confronted by the same problem.

Recently, a diamond-drill core, $2\frac{1}{8}$ inches in diameter and about four feet long, of a dark-colored, dolomitic limestone, containing clay seams and cut by numerous joint fissures healed with white coarsely crystalline dolomite, was received at this laboratory. Since this core exhibits numerous features in connection with the investigation of the suitability of rocks proposed for use as aggregates in concrete, it was decided that it be polished and retained as a display specimen in our museum.

¹ Geologist, Concrete Research Division, Waterways Experiment Station, Corps of Engineers, U. S. Army, Clinton, Mississippi.

Both ends of the core were cut square with a diamond saw. Shallow holes were drilled in the centers of the core at both ends, then the core was mounted in a wood-turning lathe.

The scoring made by the diamond-drill bit was removed by rubbing the core with strips of coarse emery paper as it revolved. Finer grades of emery paper were used, and the final polish was obtained with No. 304 emery in water, on a felt pad.

MEMORIAL OF BERNARD FISHER

ESPER S. LARSEN, JR., *Harvard University, Cambridge, Mass.*

Bernard Fisher was born in Boston, September 10, 1918. He was educated in the public schools of Boston and was graduated from Boston Latin School in 1935. He entered Harvard University, received his A.B. degree, *magna cum laude* in 1939, and continued graduate work in the Division of Geological Sciences at Harvard until the spring of 1942, when he joined the United States Geological Survey. In June 1942 he volunteered for the Army and in September of that year he went to England as a Second Lieutenant in the Army Engineers. He remained in England throughout the war, for a time with the Engineers and later with the Military Police. In 1944 he was promoted to Captain and, because of his training and ability, was assigned to a group of British and American Engineers who were stationed at Oxford, England, and engaged in preparing military maps and other important military data. He served with this group until the end of the war.

In November 1945 he was released from the Army and spent the following winter completing his thesis for the doctorate, which he received in June 1946. In March of 1946 he rejoined the United States Geological Survey and became a member of the group of geologists who were to study for the Army the active volcanoes of the Aleutian Islands.

In April he left for Umnak Island, Alaska. During the late spring he carried on his field investigations in the typically adverse Aleutian weather, with frequent high winds accompanied by rain, fog and sleet. On many evenings he returned from a day's field work completely drenched, but always with several pages of field notes and a happy disposition, much to the admiration of his colleagues.

As part of the study of the geology it was necessary to visit the small islands adjoining Umnak. On the afternoon of June 22, 1946, he and two Army officers left Umnak in a small boat to examine Ship Rock, a small but steep-sided island one mile offshore. The weather on that day was clear and calm and seemed ideal for the trip. The men in the boat were last seen as they went behind Ship Rock on the seaward side. It was thought that they had landed on the far side of the island. As they did