METHODS OF INVESTIGATION

Since resinography is literally the graphic description of resins, polymers, and their products, any scheme of investigation which produces a graphic record is important here. The record could be simply a handwritten one, or typed on a punch card as in Figure 2-1. For easier retrieval, the information could be punched on tape to be fed to a computer memory. Rather than a written record, a pictorial one is often more exact and more compact, since it is the traditional equivalent of a thousand words (see Figure 2-2, which is a photograph showing the structure and morphology of a wartime automobile tire). Finer detail can be recorded by resorting to microscopy, as is evident in Figure 2-3, a montage of three photomicrographs which show the fine structure (at appropriate resolution) of an entire cross section of a commercial artificial leather. Sometimes a cinematograph (a succession of frames on a moving-picture film) provides the record, as in Figure 1-2 of the preceding chapter. And of course, the photomicrograph may be obtained at higher resolution by using an electron microscope, as in Figure 2-4, which shows the very fine structure of an acrylic fiber.

The high quality, convenience, and ready availability of modern photographic materials have made hand drawing almost obsolete, but the student would do well to develop a habit of sketching what he sees, especially during the "quick look" recommended in the last chapter. It not only is quicker and more convenient than setting up for photog-
FIGURE 2-1. Format of punch card for resinography, designed by A.F. Kirkpatrick. Card is 5 by 7 in. in size.