

film suggested atelectasis. Increased aeration, such as one sees in emphysema, occurred in a few cases. Thickened pleura and adhesions were noted in a few cases. The average movement of the domes of the diaphragm of the positive group was less than that of the negative exposed or control groups. Three of the positive and two of the negative group were found with roentgenological evidence of healed tuberculosis. Further evidence of pulmonary disease in four of the positive group was clubbing of the fingers.

The occurrence of asbestos bodies and the presence of *B. tuberculosis* were determined in a single specimen of sputum obtained from each person. Each employee was instructed in the proper method of obtaining the sputum specimen, and was requested to collect a morning sample. An equal volume of antiformin was added to each sample. After complete digestion of the mucus, the mixture was centrifuged for three minutes at approximately 2000 r. p. m. and the supernatant liquid decanted. Distilled water was added to the solid centrifuged portion, and the mixture recentrifuged for three minutes. A drop of the deposit was transferred to a microscope slide and examined for the presence of asbestos bodies under both 8 mm. and 4 mm. objectives.



**FIGURE 3. PHOTOMICROGRAPH OF
ASBESTOS BODY. MAGNIFICATION 600
DIAMETERS**

The greater percentage of sputum specimens were of a whitish color, but a few were muco-purulent. The asbestos bodies were a pale yellowish brown color and varied in size, shape, and number. The largest asbestos body found measured 117 microns in length. The bodies occurred singly, clumped, and as fragments. When present singly or in clumps, they presented a bead-like appearance or a dumb-bell shape, with bulbous ends tapering into a narrow strand at a position midway between the ends. Figure 3 is a photomicrograph of a single asbestos body. In one specimen an average of two or three asbestos bodies or fragments of bodies were seen in