collected in water but later studies[10] have shown that counts of impinger samples of asbestos dust taken in water are not reliable. Ethyl alcohol instead of water was used as the collecting fluid in all subsequent experiments.

Results of the investigation, briefly summarized in table 4, show that inhalation of King's floats asbestos dust produced a typical peribronchiolar fibrosis in guinea pigs but not in rabbits or rats.

Reaction in Normal Guinea Pigs. Guinea pigs inhaling this dust for periods up to 33 months developed a characteristic fibrosis occurring in conical patches about the respiratory bronchioles. During this exposure the peripheral alveoli were not involved. The particulate elements in the dust were transported through the lymphatic system to the bronchial nodes, causing no significant reaction in either site; the fibrous elements remained fixed at the points of original localization and were seldom detected in the lymph nodes.

After exposure of approximately a year, a small amount of cellular reaction had been produced about many respiratory bronchioles (fig. 4). As more dust was inhaled, it continued to accumulate in the same location and later stages of the disease (fig. 5) consisted of extensions of the original lesions.

Apparently, the inhaled fibers were caught in the pocket-like alveoli that are given off from the lateral walls of the respiratory bronchioles. There they were phagocytized and many of them were carried into the wall by migratory cells. Mononuclear leucocytes attracted to the area caused an appreciable thickening of the bronchiolar wall. After

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10. Fulton, W.B., Houts, H.L., Dooley, A. and Mathews, J.L.: Asbestosis. Part I. The Collection and Counting of Asbestos Dust. Spec. Bull. 37, Penn. Dept. of Labor and Industry, 1934.