Self-Extinguishing Cigarette and Fireproof Match Invented

At the request of Representative Edith Nourse Rogers of Massachusetts, scientists at the Bureau of Standards, in a six-month test of nine popular brands, have evolved a "safety cigarette." Its fire-protection factor lies in an inch-long cork tip, lined with water-glass, air-excluding sodium silicate. The scientists also have developed a fireproof match, coated with water-glass within a half-inch of its head. Tossed aside as a fag-end, the self-extinguishing cigarette was found in tests to go out quickly enough to reduce the fire hazard some 90 per cent, as compared with the untreated cigarette. Possibility of accidental fires was reduced approximately one-third by the fireproofed matches.

An annual fire loss of approximately 390,000,000 from carelessness of smokers prompted Representative Rogers to ask scientific aid. P. D. Sale and F. M. Hoffheins, under the supervision of S. H. Ingberg, chief of the fire-resistance laboratory, attacked the problem

They studied discarded cigarette stubs in highways, by-ways, and building corridors. By scientific measurements, they learned that a one and one-quarter inch cigarette stub is the one most frequently discarded, and that two-thirds of the smokers will toss aside a stub between one and one and one-half inches long. Laboratory experiments showed that cigarettes had a 40-to-1 fire hazard as compared to cigars.

It was learned that five seconds is the time most frequently taken for lighting cigarettes, ten seconds for cigars and pipes. The scientists then computed the percentage of water-glassing with the greatest safety factor while retaining the fiery usefulness of the match.

INDUSTRIAL + ENGINEERING Chemistry
Sept. 1929 VOL. 21 No. 9 p. 853