

fire making until a Hamburg alchemist named Hennig Brandt paved the way to the modern match with his discovery of phosphorus in 1668. Brandt spured his own discovery because it wasn't the gold he was trying to manufacture, but a Briton found the gold in it by peddling the easily-ignited chemical to Londoners as a novelty at \$250 an ounce.

It was another 158 years before an English pharmacist John Walker invented and sold the first match—a three-inch wooden splint tipped with sulphur, which showed sparks when rubbed in sandpaper. For 84 years more the book match of today developed step by step, through the genius efforts of a Frenchman, two Swedes and two Americans.

Now the familiar, free match book is taken for granted. Literally thousands of manufacturers, stores, service industries, transport carriers, and restaurants depend on the match covers message to make their names or their products familiar to the public and, for literally millions of smokers the free book match is their only source of fire as it was for their fathers before them. Only in the United States is the practice of free matches followed.

The Frenchman, Dr. Charles Sauria, introduced phosphorus match heads in 1830. The two Swedes developed the safety match, which ignited only when a special composition in the match head is scratched against a special composition in the striking surface.

But it took a Philadelphia lawyer and a sales genius to put 12.5 billion match books into the hands of Americans every year, at no cost to most users. Most of the 250 billion matches in these books are given away with tobacco purchases, or distributed as good will gifts.

It was 60 years ago, in 1892, that patent attorney Joshua Pusey cut and folded a small piece of cardboard, dipped 50 thin cardboard strips into a match head composition he brewed over a potbellied office stove, painted a striking surface inside the folded cover, and stapled the strips inside. Pusey found selling harder than inventing, and so a match company bought his patent.

When a salesman named Henry C. Traute took on the sales job, the company's book production force numbered six girls, each capable of making 300 books an hour. Today, thousands of men and women have jobs making match books in plants all over the country, because people can't resist a good slogan, convenience, and a free gift.

Traute put the striking surface safely outside the match book cover, coined the now-familiar safety slogan, "Close cover before striking," and put the American flare for advertising to work.

A traveling opera company gave him the idea. Preparing for a New York performance, the manager of the Mendelson Opera Company bought up hundreds of blank match books. He set the sing-

ers and musicians to work laboriously lettering a message on each, starting with the phrase "Wait—we are coming." An artistically-gifted singer pasted photographs of the leading lady and comedian on each book.

Traute's combination of advertising messages and free gift has made the match cover a favored means of conveying information to the public. Many factories—and the Armed Forces—put safety messages on match book covers, to reduce the toll of accidents. Hotels, restaurants, railroads, airlines, clubs, schools, politicians and even churches find book match advertising a quick, thorough way to reach vast audiences.

While Traute was overcoming sales resistance to "paper" matches, and introducing them as America's most widely read medium of advertising, William A. Fairburn, a naval architect, solved the industry's worst problem—the tragedy of the phosphorus used in the heads of strike-any-where wooden matches.

Although he was no chemist, Fairburn made up and tested formula after formula—in the fashion of Thomas Edison. Finally, after thousands of tests he came up with a successful formula. It was not poisonous to humans and was distasteful to rodents—which had set many fires previously by chewing phosphorus match heads.

To protect the public and the entire match industry, Fairburn's company deeded the formula to the people of the United States, for all to use without royalty. President Taft commended the company publicly, and Fairburn became its president.

That ended mankind's ages-old search for a convenient source of fire which could be carried on the person without danger.

The caveman carried burning twigs from forest fires. In ancient Babylon, Egypt, Greece and Palestine, fire was started by rubbing sticks. Later, Egypt, Palestine, and Rome saw the development of flint and stone, although as late as 752 A. D. the Christian church regarded use of sticks as the only hallowed method of lighting candles. The tinder box of flint, steel, and tinder was everyone's necessity for centuries, but George Washington would have envied us our matches as much as our automobiles because flint and steel made fire-making a slow job. Charles Dickens once complained that it took half an hour to strike a light from a tinder box on a damp day. At that rate, we'd spend ten hours lighting our daily pack of cigarettes!

Today, with all the free book matches, America uses 57 million matches an hour. Yet some instinct inherited through the ages makes us thrifty in using match books. Of 9,000 discarded match books gathered from Chicago's streets, only seven contained unused lights out of the 180,000 matches originally in the books.