

The End of Poisonous Matches

**MATCH PATENT ENDED
FOR HUMANITY'S SAKE**

PATENT SURRENDER FILED.

Statutes Provide for Dedicating Exclusive Rights to the Nation.

Special to The New York Times.

WASHINGTON, Jan. 28.—The deed by which the Diamond Match Company surrenders its patents on the sesqui-sulphide process of match-making in order that the poisonous sulphur process may be eliminated was executed to-day and filed with the Patent Office. Such a deed is authorized by statute and is frequently executed by officers in the engineering corps of the army and navy.

Only recently Col. Squier invented a great improvement in the ordinary telephone whereby six messages might be sent over one wire, and in accordance with the custom of the service he donated his invention to the Nation.

The subject of the manufacture of sulphur matches has been agitated for a long time. Labor leaders have long urged legislation, and still more recently a committee, including George Winfield Scott of New York, a lecturer on international law at Columbia University and now an active member of the Bureau of Legal Research, aided by his colleague, Mr. Andrews, has been pressing for reforms in the match industry.

It was largely through their efforts, aided by the public opinion that has been aroused, that the Diamond Match Company made its first move in the desired direction and formed the Board of Trustees consisting of Prof. Seligman, Charles P. Neill, and J. H. Ralston. Mr. Ralston said to-night that he had done his part in the renouncing of the patent to-day, and he imagined his co-Trustees had done likewise.

In 1826, a man named John Walker made a discovery. He was stirring a mixture of chemicals with a stick. When he removed the stick, he noticed that it had a dried blob at the end. To get it off, he scraped it on the floor. Guess what he got - FIRE!

There was no phosphorous in the match, though. It was antimony sulfide, potassium chlorate, gum, and starch. Like all dummies, he didn't bother to patent his invention. He showed it as a novelty to everyone.

Then, a man named Samuel Jones saw his demonstration, and realized its market value. He named the matches Lucifers. He sold tons. In fact, smoking increased dramatically as a result of the matches.

Problem - the matches had a very strong odor and ignited with a burst of fireworks. There was a warning on the matches that they were dangerous to your health (yet, the cigarettes were not!).

What to do? What to do? In 1830, a French chemist named Charles Sauria reformulated the match with white phosphorous to eliminate the odor. No smell, but...

This led to a nearly epidemic disease known as "phossy jaw", as the phosphorous was deadly. Workers in the match factories had poisoned bones. Children sucked on the matches, which caused infant skeletal deformities, and one pack of matches had enough phosphorous on it to kill a person (used in many a suicide and murder).

By 1910, there was a worldwide push to ban the use of matches made from white phosphorous. In the United States, the Diamond Match Company held the patent for the first nonpoisonous match. They used a harmless chemical called sesquisulfide of

phosphorous. So important was this invention, that United States President William H. Taft publicly asked the patent holders to give up their patent. Diamond Match did the humanitarian thing and surrendered the rights to their patent on January 28, 1911.

Soon after, Congress passed a law that placed a prohibitively high tax on matches made with the poisonous white phosphorous and their production soon came to an end.