

# UNITED STATES PATENT OFFICE.

WM. K. ASHARD, OF NEW YORK, N. Y.

## IMPROVEMENT IN FRICTION-MATCHES.

Specification forming part of Letters Patent No. 3,146, dated June 24, 1843.

*To all whom it may concern:*

Be it known that I, WILLIAM K. ASHARD, of the city, county, and State of New York, have invented a new and Improved Article of Friction-Matches; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in making matches which are capable of resisting the action of damp, and are indestructible by means of immersion in water, and which ignite and burn without the use or agency of sulphur; and not only do they resist simple dampness and wet, but remain for a long time immersed in water without destroying their quality of ignition and combustion, and are therefore well adapted for transportation by sea, and for use in humid climates and situations. The absence of sulphur from my matches is conceived to be an important desideratum, inasmuch as the fumes of that article while in combustion are well known to be disagreeable and deleterious, and particularly injurious to persons of weak lungs and delicate constitutions.

To enable others skilled in the art to make and use my invention, I will proceed to describe the character and process of manufacture and composition

The splint or stick I saturate in melted beeswax or other material possessing similar properties and capable of producing flame; or, instead of the sticks, I can use strips of cloth or paper, and to the solution of beeswax or other material may be added such perfuming ingredient as may be desired, so that in burning the match may exhale an agreeable fragrance. I then make a compound of the following ingredients, in these, or nearly these, proportions—that is to say, one part phosphorus, two parts chlorate of potassa, five parts of sulphurate of antimony, and two parts of gum-shellac or other resinous gum dissolved in alcohol. Into this preparation or mixture I dip one end of the stick, cloth, or paper saturated and perfumed, as aforesaid, and after drying the article is fit for use.

What I claim as my invention, and desire to secure by Letters Patent, is—

The above-described process of making friction-matches without the use of sulphur.

New York, June 12, 1843.

WILLIAM K. ASHARD.

Witnesses:

GEO. BOWEN,  
JOHN T. DOYLE.