

# UNITED STATES PATENT OFFICE.

ALFRED STARR, OF MOUNT VERNON, NEW YORK.

## IMPROVEMENT IN WATERPROOFING COMPOUNDS.

Specification forming part of Letters Patent No. **158,188**, dated December 29, 1874; application filed March 5, 1874.

*To all whom it may concern:*

Be it known that I, ALFRED STARR, of Mount Vernon, in the county of Westchester and State of New York, have invented an Improved Waterproofing Compound, of which the following is a specification:

Collodion has been used as a varnish; but it shrinks in drying, so that it is not adapted to flexible materials, and it is liable to crack.

The object attained by my invention is to render collodion pliable, and to prevent its becoming stiff and harsh, thereby adapting the same as a varnish to any flexible material, and at the same time rendering the material water-proof and adapted to resist acids, petroleum, alkalies, and many other substances, so that my compound is adapted to use in rendering clothing water-proof, to preserving works of art from moisture or injury, such as drawings, engravings, &c. It also can be used on chemists' gloves, and for coating vessels of paper, so as to adapt them to holding liquids or deliquescent solid matter, or to any other use where the composition is available.

The gun-cotton is moistened with ether, so as to allow of its subsequent mixture. Paraffine is dissolved in ether, and the dissolved gun-cotton and paraffine are mixed together gradually and thoroughly, and according to the use to which the same is to be put: so the mixture is thinned out with ether, cologne spirits,

or naphtha for paper, silk, or similar materials; but for leather, benzine, neats-foot oil, castor-oil, or linseed-oil, or a mixture of two or more of them, is preferable, according to the character of leather or similar material to which it is to be applied.

I am aware that xyloidine has been combined with gutta-percha, paraffine, resins, or other materials by the use of mineral oils, linseed-oil, or similar oils; these do not form a compound that is adapted to use as a varnish, and the compound does not possess properties corresponding to mine. By the use of ether as a solvent for both the gun-cotton and the paraffine separately, and then mixing them together previous to thinning them out for use, the paraffine and collodion become intimately associated, so that they can be easily thinned by ether or oils, as described.

I claim as my invention—

The method herein specified of preparing gun-cotton and paraffine with ether and mixing them previous to the addition of ether or oils for thinning the same, as set forth.

Signed by me this 24th day of February, A. D. 1874.

ALFRED STARR.

Witnesses:

GEO. T. PINCKNEY,  
CHAS. H. SMITH.