

UNITED STATES PATENT OFFICE.

WILLIAM H. ROOME, OF DERBY, CONNECTICUT.

SILVER-CLEANING COMPOUND.

No. 838,810.

Specification of Letters Patent.

Patented Dec. 18, 1906.

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To all whom it may concern:

Be it known that I, WILLIAM H. ROOME, a citizen of the United States, and a resident of Derby, in the county of New Haven and State of Connecticut, have made and invented certain new and useful Improvements in Silver-Cleaning Compounds, of which the following is a specification.

My invention relates to a compound for cleansing and brightening silver or silver plated or covered articles, the object of the same being to improve upon the ordinary cyanid-of-potassium solution in several respects, and thereby effect a better cleansing action on the surface of the metal than has heretofore been possible.

With these and other ends in view the invention consists of a compound comprising the following ingredients and in substantially the proportions named: soda-ash, six ounces; borax, one and one-half ounces; cyanid of potassium, one-half ounce. In practice these ingredients are first mechanically mixed in powdered form and when desired for use are dissolved in two quarts of water, preferably heated from 180° to 212° Fahrenheit.

The "soda-ash" above mentioned is the article commercially made and sold under that name and containing from forty-eight to fifty-eight per cent. of sodium oxid. The action of this ingredient is to dissolve or release the bond that fixes the sulfid formed on the silver or silvered articles, which sulfid the cyanid of potassium in the solution will then remove without affecting the finish of the article.

The borax combines with the other ingredients and assists in removing the tarnish from the metal and operates to whiten the same. I have found, however, that one-half to three-fourths ounce of ammonium chlorid may be substituted for an equivalent amount of borax, the chlorin in which assists in loos-

ening the sulfid from the metal and in combination with the soda-ash and borax assists in whitening the silver.

When these ingredients are dissolved in water, as above described, the silver or silver-plated article to be cleansed is immersed therein for a few minutes—say anywhere from one to five minutes—when it may be removed and rinsed in clear water, preferably warm water, and dried, whereupon the appearance of the article will equal that when new. The comparatively small amount of cyanid of potassium present in the compound (the solvent action of which is somewhat modified by the soda-ash and borax) leaves the surface of the silver or silvered article in a particularly white, lustrous, and smooth condition, whereas in a compound consisting largely of cyanid of potassium the surface is left comparatively mottled, yellow, rough, and pitted. This is true of the action of the compound even on silver or silvered articles having thereon a satin finish, the latter being in no way marred by the action of the compound, whereas when subjected to ordinary cleansing solutions such finish is often partially or wholly destroyed.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A metal-cleaning compound consisting of soda-ash, six ounces; borax, one and one-half ounces; and cyanid of potassium, one-half ounce.

2. A compound containing soda-ash, borax, ammonium chlorid and cyanid of potassium, in substantially the proportions named.

Signed at Derby, in the county of New Haven and State of Connecticut, this 31st day of January, A. D. 1906.

WILLIAM H. ROOME.

Witnesses:

CAROLINE S. HATHAWAY,
HOWARD B. PECK.