

UNITED STATES PATENT OFFICE.

WILLIAM REISIG, OF ASTORIA, NEW YORK.

IMPROVEMENT IN WASH-MIXTURES FOR WOOLENS, &c.

Specification forming part of Letters Patent No. **18,160**, dated September 8, 1857.

To all whom it may concern:

Be it known that I, WM. REISIG, of Astoria, in the county of Queens and State of New York, have invented a new and useful composition for removing dirt, grease, and oil from wool, woolen yarns, and woolen cloths or fabrics; and I do hereby declare that the following is a full, clear, and exact description of the same.

To enable others skilled in the art to make and use my invention, I will proceed to describe its nature, and wherein it differs from other compositions devised for similar purposes.

The nature of my invention consists in the employment of an aqueous solution of ammonia, soda-ash, and common soap, in which the yarn or cloth to be cleansed is handled or manipulated until all the grease and dirt contained in it is rendered soluble in water.

All woolen yarns and woolen cloths or fabrics contain a great quantity of oil or grease. This oil or grease is generally mixed with the wool prior to carding it, and imparts to it a quality which enables it to be spun. Such yarn generally contains dirt and a gummy substance peculiar to wool in its natural state. All these foreign substances must be removed from the woolen yarn previous to dyeing it. For this purpose common hard soap in solution and common whale-oil soap have been employed; but besides being very expensive these substances must contain sufficient alkali in excess in order to combine with the grease or oil in the yarn to render it soluble. Some dissolved soda-ash is commonly used mixed with soap for this purpose. These solutions are required to be made very strong, and the yarn has to be kept or handled in them for a long time. They therefore tend to injure the luster, and render the yarn less glossy.

The composition which forms the subject of my invention renders all the grease, oil, dirt, and gummy matters contained in the yarn or cloth perfectly soluble in water without injuring its luster. It is composed as follows: I take twenty-four pounds of common soda-ash, (carbonate of soda,) twenty-four pounds of common liquid ammonia, and two pounds of common whale-oil soap, and mix them in a proper vessel with two hundred pounds of water. The temperature of the water should be sufficiently elevated to dissolve the soda-ash, which is placed in it first.

The several ingredients described are thor-

oughly incorporated together by stirring. The composition is now fit for use.

The quantity described is capable of cleaning one thousand pounds of yarn. It is used in one or more baths with a sufficient quantity of water at a temperature of 120° Fahrenheit to cover and handle the yarn loosely in it. The yarn to be cleansed is first steeped in the bath containing this saponaceous solution for a few hours—from one to five. It is then placed on pins and shaken and turned by the operator. When all the oil, grease, and dirt in the yarn are rendered soluble by these operations the yarn is taken out and washed in clean water, and is then fit for dyeing.

The composition described contains sufficient alkali in excess to unite with the oil and grease for the purpose of rendering them soluble in water, and it also unites with the peculiar gummy matter and dirt in the wool, so that when the yarn is washed in water, after being treated in the composition specified, all the foreign substances are removed from it. When the yarn is treated as described it requires less manual labor than by common processes, and its luster is never injured. After many experiments I have found the described proportions to be the best for accomplishing the desired object.

The composition is kept ready prepared for use in a close vessel to prevent evaporation of the ammonia. The peculiar efficacy of the ammonia alkali renders my composition superior to all others employed for the same purpose.

I am well aware that hard soap has been formed containing ammonia; but it is not suitable for the purpose described, because it cannot be made to contain sufficient ammonia in excess, nor can it retain its ammonia so well as an aqueous solution.

I do not claim any hard or solid soapy compound containing ammonia or soda-ash; but,

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

An aqueous saponaceous composition with the alkalies in excess, as herein described, and in about the proportions specified, for the purposes set forth.

WILLIAM REISIG.

Witnesses:

JOHN R. MORRIS,
GEORGE PARSELLY.