UNITED STATES PATENT OFFICE.

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SOAP.

SPECIFICATION forming part of Letters Patent No. 238,445, dated March 1, 1881.

Application filed July 30, 1880. (No specimens.)

To all whom it may concern:

Be it known that I, ADRIAN CLAYTON SELBY, of Maysville, in the county of Mason and State of Kentucky, have invented a new and useful Improvement in Soap; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is to provide an improved soap that is adapted to all of the household uses, for cleaning clothing and fabrics, furniture, tinware, and for toilet use, the properties of the soap being such that it will remove grease, ink, and iron stains from fabrics without changing their color and causing the colored figures of the fabric to run upon the lighter ground.

My improved soap is composed of the following-named ingredients: sal-soda, unslaked lime, soft water, bar-soap, resin, alum, borax, benzine, salt of lemon, and cream of tartar.

To make twenty pounds of the soap, take two pounds sal-soda and one and one-fourth pound of good lump unslaked lime. Put the sal-soda and lime together in a large bowl, churn, or crock, and pour over them two and one-eighth gallons of boiling water. (The water must be soft and boiling when poured.) Wait five minutes, and then stir it well and let it settle. Then take eight pounds of hard bar-soap, cut it into thin pieces, and put it in a large pan or kettle, and mix two ounces of pulverized resin with the soap. Then pour off the lime and sal-soda solution, being careful that none of its settlings go in on the soap. Set the mixture on the fire, and let it remain until it is well dissolved. Have one and one-sixteenth pound alum and two and one-half ounces of borax dissolved together, and dissolve one ounce of salt of lemon and two ounces of cream of tartar in the same solution. Immediately after taking the soap off the fire, pour in the last-named solution of alum, &c., (about two quarts.) Stir a little, and let it cool a short time, and then put in one and one-half ounce benzine. Let it cool, and it is then ready to cut out.

The bar-soap used in the compound is to give the compound a body, and make it settle into hard soap.

The lime-water tends to harden the mixture and prevent the sal-soda from turning the clothes yellow.

The lime-water also gives healing properties to the soap.

The alum serves to set the color in washing fabrics, and acts to harden the soap and prevent it from rapidly wasting away when used.

The use of borax and sal-soda is well known in soap compounds, and they are employed here for like purposes.

Benzine will remove grease at a touch, and will prevent the hands from chapping or getting sore in cold weather.

The salt of lemon and cream of tartar are employed to make the soap effectually take off iron-mold and ink-stains, and give to the compound certain acid properties that will not destroy the action of the ingredients that have opposite chemical properties.

The resin will readily melt with the fatty constituents of the compound, and tends to dry the soap after it has been used when in contact with the air. It will also harden the soap and prevent the soap from becoming soft when left in the water.

As a whole the compound is of such a nature, when dissolved in water, that it has a chemical effect upon the water and dirt, and will make the dirt leave the clothing to unite with the water, after which the clothing may be rinsed, and will be found perfectly clean, without the employment of machinery, pounding, or laboriously rubbing the clothes by hand.

I am aware that salt of lemon and cream of tartar have been used independently of the other ingredients for removing ink, fruit-stains, and the like from fabrics, and that the other materials employed by me have been used separately, and such I do not claim, broadly; but the salt of lemon and cream of tartar, when used alone upon colored fabrics, cause the dyes thereof to run, become changed, or entirely removed, and can therefore only be employed with perfectly white goods, and are inapplicable to general household purposes. By my improvement the action of these salts is so modified that they only attack the fugitive colors, and have no effect upon dyes ap-

plied with proper mordants, and hence my compound can be used in the same manner as ordinary soap to remove grease, as well as ink, fruit, and other stains.

What I claim as new is—

The herein-described soap, composed of sal-soda, unslaked lime, soft water, bar-soap, resin, alum, borax, benzine, salt of lemon, and cream of tartar, combined in the manner substantially as described.

ADRIAN CLAYTON SELBY.

Witnesses:

M. F. MARSH,

P. P. PARKER.