

UNITED STATES PATENT OFFICE.

AUGUSTUS PFALTZ, OF SAXONVILLE, MASSACHUSETTS.

IMPROVEMENT IN ROSIN SOAP.

Specification forming part of Letters Patent No. **15,951**, dated October 21, 1856.

To all whom it may concern:

Be it known that I, AUGUSTUS PFALTZ, of Saxonville, in the county of Middlesex and State of Massachusetts, have invented an Improvement in the Manufacture of Rosin Soap; and I do hereby declare that the same is hereinafter fully set forth and described.

The nature of my invention consists in a mode of producing from common rosin a solid soap, suitable for scouring purposes alone, and which can be used as a substitute for ordinary soap. When we combine with the said soap one-quarter or one-third of its weight of tallow or other fat soaps, the resulting compound is more solid and valuable than the yellow or rosin-mixed soap in ordinary use.

My experiments have proved that the sylvic and pinic acids of rosin combine with soda in different proportions up to a certain point and form soft adhesive compounds, and these are all within the proportion of soda used in ordinary soap-making. These compounds, as is well known, attract moisture, and cause the soap to soften, so that it cannot be shipped to warm climates; but if we add more soda or carbonate of soda to the rosin in the process of manufacture of the rosin soap, a firmer compound results, in which the acids become united to form sub-salts with the soda. For this reason the rosin soap, when it is to be combined with soaps of the fatty acids, must be made by itself and not, as usual, with a mixture of rosin and fat. Heretofore the so-called "rosin soaps" have contained a large percentage of water, while by my process this water is dissipated, so that a firm bar may be made of the rosin soap alone without the aid of fats. Thus formed, the rosin soap can be mixed with soap already prepared from fats to make English rosin or mixed soap, with the great advantage of thus forming a solid soap with a small proportion of soap prepared from tallow or fats.

To enable others skilled in the art to manufacture my soap, I proceed to describe my process.

For producing the combination between the acids of rosin and soda, I use heat by means of steam, the kettles having steam-jackets and

revolving stirrers moved by power, so as to agitate the mass. Soda-ash dissolved in water to form a clear solution is to be made of sufficient density to mark 36° Baumé by boiling or adding more soda-ash. For every pound of rosin one pint of this solution of soda may be taken, and the rosin being melted the solution of soda is added and the whole well mixed by the agitator. Full steam being applied, the mass is agitated and the water evaporated until a piece, on cooling, becomes solid. The soap now contains less than ten per cent. of water, and when made into bars can be kept stored without loss of weight. Common kettles heated by fire, instead of steam-kettles, may be used in the manufacture, but an agitator must be adapted to each kettle. The soap as it forms becomes thick, and requires constant stirring to hasten the evaporation of water and to prevent burning. The solid rosin thus produced I call my "basis soap," and it may be applied to scouring goods in the manufacture of woolens, (by dissolving one pound in twenty gallons of water.) In the soap manufacture its valuable property of carrying its hardness into any mixture renders easy the production of solid soap containing much rosin, and yet not liable to spontaneous change.

I do not claim rosin soap either alone or mixed with other kinds of soap. I do not claim rosin soap as ordinarily made by using so much alkali as will dissolve the rosin; nor does my claim extend to any of the compounds of rosin and alkali which attract moisture.

What I claim as my invention is—

The above-described mode of producing a solid soap from rosin—viz: by the use, as specified, of an excess of soda or carbonate of soda, so as to form alkaline salts with the pinic and sylvic acids, which compounds are rendered nearly anhydrous.

In testimony whereof I have hereunto set my signature this 17th day of April, A. D. 1856.

AUGUSTUS PFALTZ.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.