UNITED STATES PATENT OFFICE.

STEPHEN STRUNZ, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHRISTOPHER LIPPS, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN SOAPS.

Specification forming part of Letters Patent No. **165,627**, dated July 13, 1875; application filed July 7, 1875.

To all whom it may concern:

Be it known that I, STEPHEN STRUNZ, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Soap, of which the following is a specification:

This invention consists in certain improvements in the manufacture of soap, its object being to combine with the same a coloring matter that will impart to it a highly ornamental appearance, and serve as a substitute for the indigo heretofore separately used for laundry purposes, and at the same time serve as a distinguishing mark by which the soap may be readily recognized in the market. The invention consists in combining with the soap litmus in various proportions, which, in the presence of the alkali of the soap, when subjected to the action of the oxygen of the air, develops a blue coloring matter, imparting to the exposed surface in contact with the atmosphere a color which will be modified according to the natural color of the soap. As the coloring matter is only developed by the joint action of the alkali and oxygen, the outer or exposed surfaces alone are colored, the interior retaining its natural color until the soap is cut and a fresh surface exposed, thus forming a distinguishing mark by which the improved soap may be known from other brands in the market.

In carrying out my invention I employ the coloring matter in various proportions. For a bright and decided color, and one which will impart a highly ornamental appearance to the soap, I take one thousand pounds of ordinary white or yellow soap, and one pound of the ordinary litmus of commerce. I prefer to scald the litmus with water or lye to extract the coloring matter, and mix the same with the soap while in a liquid state, before framing, thoroughly commingling the two. The soap is then framed or run into molds, or otherwise formed into bars or cakes. The color will be gradually developed upon the exterior surfaces of the soap which are exposed to the atmosphere, owing to the action of the oxygen on the coloring matter, while the interior portions of the same will retain their natural color until the bars or cakes are cut, exposing fresh surfaces to the action of the atmosphere, thus furnishing a distinguishing mark by which my improved soap may be known from all others in the market.

Indigo has heretofore been employed for the manufacture of transmission soap, but has not fully answered the purpose, owing to the fact that it oxidizes very slowly and incompletely, and fails to impart a uniform color to the surfaces of the soap when exposed. The coloring principle of litmus is very rapidly developed in the presence of an alkali and the oxygen of the air, and forms, in combination with the ordinary soap ingredients, a compound in which the characteristic blue color of the litmus is rapidly developed upon exposure to the air, imparting a uniform and highly ornamental color to the exposed surfaces, which it is impossible to obtain by the use of indigo.

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

In the process of manufacturing soap, the employment of litmus in combination with the ordinary soap compounds, as herein specified, whereby the influence of the alkali and the oxygen of the air develops the peculiar coloring matter of the litmus, and rapidly changes the natural color of the soap upon its exposed surface, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

STEPHEN STRUNZ.

Witnesses:

CHRISTOPHER LIPPS,

JAMES L. NORRIS.