

UNITED STATES PATENT OFFICE.

PATRICK S. DEVLAN, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN TREATING SPONGE TO RENDER IT SUITABLE FOR PACKING JOURNAL-BOXES.

Specification forming part of Letters Patent No. **146,884**, dated January 27, 1874; application filed July 25, 1873.

To all whom it may concern:

Be it known that I, PATRICK S. DEVLAN, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Treating Sponge, of which the following is a specification:

This invention relates to preparing sponge by first cutting it up in small pieces and extracting the calcareous matter mixed with it; then exposing it to the action of sulphurous acid or any other of the known agents for bleaching sponge; and, finally, putting it into a solution of borax, water, and glycerine, in such a manner that the sponge is rendered elastic and fit for various purposes, such as packing for journal-boxes, shafting, &c.

In carrying out my invention, I first cut the sponge in small pieces by suitable machinery, and free the same from the calcareous or other foreign matters that may be mechanically mixed with it. I then put the sponge into a solution of sulphurous acid, in water, or treat it with any other of the well-known bleaching-agents, thereby freeing the sponge from the mucilage. I then wash the sponge in clear water and pass it through pressing-rollers for the purpose of expelling the water.

After having prepared the sponge, as above described, I put it into a solution composed of ten (10) pounds of borax, dissolved in ten (10) gallons of water and fifteen (15) to twenty (20) pounds of glycerine. On removing the sponge from this solution, I again pass it through pressing-rollers so as to expel the liquid therefrom, and then the sponge is ready for use.

The borax, or equivalent salts, has a tendency to soften the sponge, and imparts to it a certain amount of elasticity, and by mixing it in water with the glycerine the cost of the

solution is much lessened. A further effect produced by the glycerine with the borax upon the sponge is that it will not commingle with the oil, and it prevents the oil from hardening the sponge. In this elastic waste, owing to the elasticity of the sponge, it will act as a spring and as an oil-reservoir, thus retaining itself in immediate contact with the journal, and, at the same time, hold and deliver the oil uniformly to the hair, asbestos, or other suitable fiber, which latter acts as a base or feeder. The asbestos possesses the property of a semi-lubricator, and, being of a cooling nature, it prevents heating of the journals.

By the above-described process the sponge is rendered elastic and specially fit for packing of journal-boxes.

I do not broadly claim treating sponge with glycerine, for such is old and well known in the art of preparing sponge as a stuffing for mattresses.

I claim as my invention—

1. The within-described process of treating sponge, by first cutting it into small pieces, then treating it with a suitable bleaching-agent, and finally with a solution of borax and glycerine, or its equivalent, substantially as set forth.

2. A packing, for railroad journal-boxes, axles, or other machinery, made from an elastic sponge, treated substantially as described, with or without a fibrous material, essentially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of July, 1873.

PATRICK S. DEVLAN.

Witnesses:

A. J. DE LACY,
T. J. KANE.