

UNITED STATES PATENT OFFICE.

ALFRED PARAF, OF MULHOUSE, FRANCE.

IMPROVED MODE OF TREATING SPONGE FOR PRODUCING TEXTILE FABRICS.

Specification forming part of Letters Patent No. **72,322**, dated December 17, 1867.

To whom it may concern:

Be it known that I, ALFRED PARAF, of Mulhouse, in the Empire of France, have invented a new and Improved Method of Treating Sponge to Convert the Same into Fiber Capable of Being Felted, Spun, &c., being a new manufacture, of which method I hereby declare the following to be a full, clear, and exact description.

Among the shells and animals contained in the ocean, or taking growth upon its shores, one of the low-graded animals has been applied to many purposes, owing to the quantity of pores which its fibrous skeleton contains. It has been in use for years under the name of "sponge," being principally employed for washing and cleaning purposes.

The best quality of sponge is gathered in the Mediterranean sea; but an excellent quality, as well as an inexhaustible quantity, is found upon the rocks of the Bahamas and the coast of Florida. The sponge, when torn from the rocks to which it adheres, appears at first as a heavy black-looking mass, having a strong and offensive odor. In order to clean the sponge, it is buried in the earth for some weeks, at the end of which time all the organic matter will be decomposed, only the pure fibrous skeleton remaining.

Having observed that in appearance the organic fiber of the sponge greatly resembles ordinary wool taken from the back of sheep, I have instituted a course of experiments to find out if this fiber, as it may be termed, could be easily bleached, if it would take colors readily, and, more especially, if it could be carded, felted, spun, &c.

Having fully succeeded in carding, felting, spinning, bleaching, and dyeing the sponge-

fiber, I will proceed to describe the manner in which my method, which I desire to have secured to me by Letters Patent, may be put into practice.

The sponge, when purified, is liable to become exceedingly hard, and therefore unfit to be used as a material for weaving cloth. To obviate this I first take the purified sponge and immerse it in water containing from ten to twenty per cent. of glycerine, then squeeze it dry, after which it will be entirely soft and elastic. It is then cut into small pieces, and put through the carding process, and then felted. Only certain qualities of sponge are capable of being spun. One of them is the kind known as "chipoul," which has comparatively a long fiber. The felted sponge may be used for hat-bodies, carpets, &c., the sponge cloth for clothing, &c.

Sponge thus prepared may be worked in the preparation of fibrous and textile fabric, with or without the admixture of other ingredients or fibers; for instance, it can be used to advantage in connection with woolen and other similar substances.

Having now described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

The herein described mode of treating sponge to convert the same into fiber capable of being felted, spun, &c.

In testimony whereof I have subscribed this my specification in presence of two witnesses.

ALFRED PARAF.

Witnesses:

A. POLLOK,

GEO. S. HARWOOD.