

UNITED STATES PATENT OFFICE.

WILLIAM ADAMSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN HAIR FOR STUFFING CUSHIONS, &c.

Specification forming part of Letters Patent No. 125,246, dated April 2, 1872.

Specification describing Improvements in Treating Stuffing for Cushions, &c., invented by WILLIAM ADAMSON, of Philadelphia, Pennsylvania.

My invention consists of hair or bristles treated in the manner described hereafter, so as to render it moth-proof and improve it in quality. Hair used for stuffing is generally washed, boiled, and baked or dried, and attempts have been made to disinfect it and render it moth-proof by boiling it in a solution of sulphate of iron, or exposing it to the action of chlorine gas; but the effect of this treatment, although it may serve for the time being to destroy the insects, is but temporary, for as soon as all traces of the sulphate of iron or chlorine are gone, the animal secretions which remain at the roots and in the interior of the hairs are in a condition to encourage the breeding and support of moths and other insects. The treatment, moreover, has a tendency to impair the quality of the hair as a stuffing material.

Wool has been treated with hydrocarbon vapors, as in the patent granted to Louis S. Robbins, March 24, 1868; reissued October 23, 1871; but the process described in this patent was restricted to simple removing of the oily and fatty matter with which the wool is impregnated without regard to the removal or destruction of other secretions and animal matter to be found at the roots and in the interior of hairs, and especially of such as are used for stuffing purposes. Mucous secretions, together with tissues and other animal matter are most abundant in such hair as is pulled up by the roots—hogs' hairs or bristles, for instance—and is also present in a greater or less extent in the hairs of cows, horses and other animals; and it is these secretions which induce the presence of moths and other insects.

I have found that by continuing the hydrocarbon treatment for a sufficient length of time two important results are attained: First, independently of the removal of oils and fats, the tissues, mucous, and other animal matter above referred to are dislodged, rendered antiputrescent, and incapable of supporting moths and other insects. Second, the hair is clarified, bleached, and, what is of great importance, rendered more efficient as a stuffing material, owing to its increased elasticity.

I prefer to curl the hair in the usual man-

ner, before, instead of after, the hydrocarbon treatment, for a reason explained hereafter.

This treatment may be accomplished by steeping the hair in heated benzine, benzole, gasoline, or naphtha, for a sufficient length of time; but I prefer to expose it to benzine vapor under pressure as a more effective and economical process, as the vapor can be condensed after passing through a mass of hair and revaporized, so that there is little or no loss of hydrocarbon.

Hair varies so much in quality, and in the extent of its impurities that no definite data can be given as to the time required for the hydrocarbon treatment. Hogs' hairs or bristles, for instance, require a longer time to prepare than the hair of horses; and the hair of cows is of many different qualities; that of some animals being much more free from impurities than others. The most satisfactory guide for the treatment is by preliminary tests, for marked changes, readily understood by those engaged in the business, and familiar with the properties of curled hair, take place after the hydrocarbon treatment has been continued for a proper length of time, the changes consisting of a general clarification, bleaching, and hardening of the hair, and an increased elasticity, the properties being easily ascertained by examination and by handling a mass of hair.

As before remarked, I prefer to curl the hair before it is subjected to the hydrocarbon treatment, for the latter has a tendency to fix the curls, or, in other words, to retain the hairs in their curled condition, and at the same time impart to the hair increased elasticity. After the treatment the hair is ready for use, no washing, such as ordinary curled hair requires, being necessary.

I claim as my invention—

1. As a new article of manufacture and commerce, animal hairs or bristles, treated in the manner described.
2. The treatment described, of hair, subsequent to the curling of the same, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses: WILLIAM ADAMSON.

H. HOWSON,

CHS. F. A. SIMONIN.