

UNITED STATES PATENT OFFICE.

THEODOR ROSENTHAL, OF NUREMBERG, GERMANY.

PAPER-LIKE MATERIAL AND PROCESS OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 683,070, dated September 24, 1901.

Application filed June 7, 1901. Serial No. 63,643. (No specimens.)

To all whom it may concern:

Be it known that I, THEODOR ROSENTHAL, a subject of the Emperor of Germany, residing at Nuremberg, Bavaria, Germany, have made certain new and useful Improvements in Paper-Like Materials and Processes of Making Same, of which the following is a specification.

The present invention has for its object to produce a material in thick layers with the means at disposal in paper manufacture, which material excels the ordinary paper products, more particularly pasteboard, in its extraordinary softness and great power of absorption. This object is attained by the material being mixed with animal or human hair while being disintegrated in the rag-engine. The quantity of this hair is such that in spite of this addition the material can be further treated by hand or machinery in the manner usual in the manufacture of paper.

The manufacture of this improved material is carried out in the following manner: The paper-pulp produced by the ordinary method from rags is mixed with about ten to fifteen per cent. of its total bulk of hair in the rag-engine and the hair is ground into the paper mass. The unsized material on completion of the grinding is either filled into troughs or tubs for the manufacture of hand-paper and divided into comparatively thick layers or is further treated by the process usually adopted for making machine-made paper. The sheets or bands thus obtained are dried, calendered, and then present a porous material which equals or exceeds hair felt in its softness and absorptive qualities, while the cost of manufacture is very low. This improved material may therefore serve in many cases for advantageously replacing felt, and especially in view of the deodorizing action inherent in it

without further preparation is particularly suitable for hygienic purposes—for instance, for insertion as socks or soles in boots. The process hereinbefore described also enables the material to be provided for such uses in a very simple manner with any suitable admixture and additions.

In cases where it is of importance that the material have a certain toughness or durability this property may be increased in a simple manner by inserting during the compression between two layers of the material a core or insertion of fabric—for instance, gauze—which considerably increases the cohesion of the substance. Of course by making it of suitable thickness several layers may be formed in one sheet, and, if desired, the sheets may be coated on both sides with layers of fabric.

I declare that what I claim is—

1. An improved material resembling paper of great absorptive qualities composed of animal or human hair mixed with the usual paper materials in the rag-engine, and then treated in the usual manner in paper manufacture, substantially as hereinbefore described.

2. A process of manufacturing an improved material resembling paper, which consists in adding ten to fifteen per cent. of animal or human hair to the usual paper-making materials in the rag-engine, and then operating in the usual manner for paper-making substantially as hereinbefore set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

THEODOR ROSENTHAL.

Witnesses:

ANDREAS STICH,
OSCAR BOCK.