

UNITED STATES PATENT OFFICE.

EDWARD K. WARREN, OF THREE OAKS, MICHIGAN, ASSIGNOR TO THE
WARREN FEATHER BONE COMPANY, OF SAME PLACE.

METHOD OR PROCESS OF PREPARING FEATHER-VANES FOR UPHOLSTERING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 327,127, dated September 29, 1885.

Application filed August 19, 1884. (No specimens.)

To all whom it may concern:

Be it known that I, EDWARD K. WARREN, residing at Three Oaks, in the county of Berrien and State of Michigan, and a citizen of the United States, have invented a new Improvement in the Method or Process of Preparing Feather-Vanes for Upholstering Purposes, of which the following is a full description.

10 The object of this invention is to utilize the vanes of feathers when detached from the stems, which have heretofore been considered as waste material; and its nature consists in separating the fibers of the vanes of feathers when detached from the stems so that they will not
15 adhere to each other, and in so treating them during the process of separation that the fibers will be crossed and intermingled so as to become a light springy mass suitable for upholstery purposes.

20 The vanes are separated from the stems of the feathers by a knife, or by any other suitable means, or by suitable machinery, and when so separated the vane in its natural
25 condition forms a flat partly-adhesive body, in which the separate fibers are made to adhere to each other by means of the interlacing of the small barbs or hooks which grow along their adjoining sides, and this tendency to adhere prevents their use for upholstery purposes without additional treatment. The small-size barbs or hooks are
30 broken up mechanically by rubbing the detached vanes with rolling or partly rolling and rubbing process, which process, in addition to mechanically breaking up the barbs or hooks, crosses, recrosses, and twists the separated fibers, so that they form a loose springy mass, which is adapted to all purposes for which upholstery material is used, such as chairs,
40 seats, cushions, mattresses, pillows, &c.

This rolling and rubbing process may be performed by hand for small quantities; but for large quantities a more rapid process or method is desirable, and for this purpose I propose to use wooden disks or metallic disks
4 faced with rubber, set at a suitable distance apart, and made to run in opposite directions either with or without eccentric movements, or run with one stationary disk somewhat similar to a grinding-mill. As I propose to provide a machine for this purpose and apply for Letters Patent for the same, the construction of such apparatus is not herein described.

5 As the small hooks of the separate fibers may be mechanically broken up in a variety of ways, I do not herein limit myself to any special means for accomplishing this result.

This method of treating feather-vanes is more particularly adapted to vanes which have been
6 detached from quills and other large and coarse feathers; but the adhering vanes of feathers of all sizes may be utilized in the same way.

I am aware that it has been proposed to cut up or hash coarse feathers and to cut out the
6 stems of large or quill feathers for making upholstery material, and I do not therefore broadly claim the severing of the feather-vanes from the stems, as the principal part of my invention relates to the treatment of the feather-vanes after they are separated.

7 What I claim as new, and desire to secure by Letters Patent, is—

The method or process of preparing feather-vanes for upholstery uses by rolling and
7 rubbing until the fibers are permanently separated and intermingled, substantially as specified.

EDWARD K. WARREN.

Witnesses:

HENRY CHAMBERLAIN,
JAMES H. HATFIELD.