

UNITED STATES PATENT OFFICE.

ROBERT J. STRATFORD, OF JERSEY CITY, NEW JERSEY.

ARTIFICIAL UPHOLSTERING-HAIR AND METHOD OF PREPARING THE SAME.

SPECIFICATION forming part of Letters Patent No. 367,681, dated August 2, 1887.

Application filed February 3, 1887. Serial No. 226,438. (No specimens.)

To all whom it may concern:

Be it known that I, ROBERT J. STRATFORD, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Artificial Upholstering-Hair and Method of Preparing the Same, of which the following is a specification.

The object of my invention is to provide a comparatively cheap substitute for curled hair as a filling for beds and pillows or for upholsterers' use in stuffing furniture, such substitute material being more elastic and durable, and thus better fitted for upholstering purposes than other similar imitation materials now in use. To this end I have discovered that the fiber of the *agave sisalana*, a species of hemp known as "sisal," and which is very tough and hard or wiry, will, when properly treated and crimped or curled, form an excellent substitute for the best curled hair, and will have a close resemblance thereto.

For the purpose of economy, I prefer to utilize old sisal ropes in the manufacture of my improved product. In such case the ropes are first cut into pieces, some six or eight inches in length, and are somewhat opened or unstranded by being agitated or tumbled with hot water in a rotary-boiler, and are next further opened and disintegrated by being agitated in hot water in a washing-machine or tub, the latter and the rotary-boiler being preferably such as are now in common use in the manufacture of oakum. After being properly loosened in the washing-machine, the fiber is next preferably dyed, the dye-stuffs being introduced into the washing-machine before the loosened fiber has been removed therefrom. When the dye has become properly set in the fiber, the latter is removed from the washing-machine or tub and is washed out with cold water and then dried in any suitable manner. After being dried, the fiber is crimped or curled by being passed between heated corrugated or fluted rollers, and is also subjected to the action of a picker—such as is commonly used in picking oakum—to thoroughly loosen it. The picking operation may either proceed or follow the curling or crimping operation. After being curled or crimped and picked, the better class of the fiber is pref-

erably carded by any well-known carding machinery to render it still more light and loose.

Owing to the extreme hardness and toughness of the sisal fiber, the latter, after being curled or crimped by the hot corrugated rolls, as above stated, forms a very light as well as elastic and springy upholstering stuffing material, which is only surpassed by the best curled hair in its capacity to resist a tendency to become matted by use and pressure.

Although I prefer, for cheapness, to make my sisal stuffing material from old sisal rope treated in the manner above stated, I do not wish to be understood as limiting my invention thereto, as the said material may be made directly from the raw or new fiber, which will not require the preliminary opening necessary to loosen the strands of the sisal rope, and which need not even be dyed if it be not considered essential to make the fiber closely resemble black curled hair in appearance, the more important feature of novelty of my invention being the crimping or curling of the sisal fiber by passing it between the heated corrugated rollers. As the said rollers, as well as the other machinery by which my invention may be carried into effect, are or may be such as are now in common use, and are not of my invention, the same need not be herein shown or described.

I am aware that it is not new to crimp or curl various fibrous articles by passing the same between heated fluted or corrugated rollers, and I do not, therefore, wish to be understood as claiming, broadly, the method of crimping or curling such substances by passing them between heated corrugated rollers.

I am also aware that it has been proposed to make "vegetable hair" from the bark of certain palm-trees by disintegrating the fibrous bark, boiling the same in lye to remove resinous and ligneous matters, and afterward dyeing and curling the fiber, and I do not therefore claim, broadly, an artificial upholstering hair made from curled or curled and dyed vegetable fiber.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. As a new or improved manufacture, curled or crimped and dyed sisal fiber, substantially as set forth.

2. As a new or improved manufacture, an artificial upholstering-hair made of disintegrated and curled or crimped sisal fiber, substantially as set forth.
- 5 3. The herein-described method of preparing sisal fiber from old sisal ropes, the same consisting in first cutting the ropes into pieces, next unstranding or loosening the said pieces by moistening and agitating them, then drying the unstranded fiber, and afterward crimping or curling the same by passing it between heated corrugated rollers, and picking it to make it soft and loose, substantially as set forth.
- 15 4. The herein-described method of treating sisal fiber in the manufacture of upholstering

material, the said method consisting in cutting old sisal ropes into pieces, next unstranding or loosening the said pieces by moistening and agitating them, then dyeing, washing, and 20 drying the unstranded fiber and afterward crimping or curling the same by passing it between heated corrugated rollers, and also picking and carding it to render it soft and loose, substantially as set forth. 25

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT J. STRATFORD.

Witnesses:

EWELL A. DICK,
HENRY COLVER.