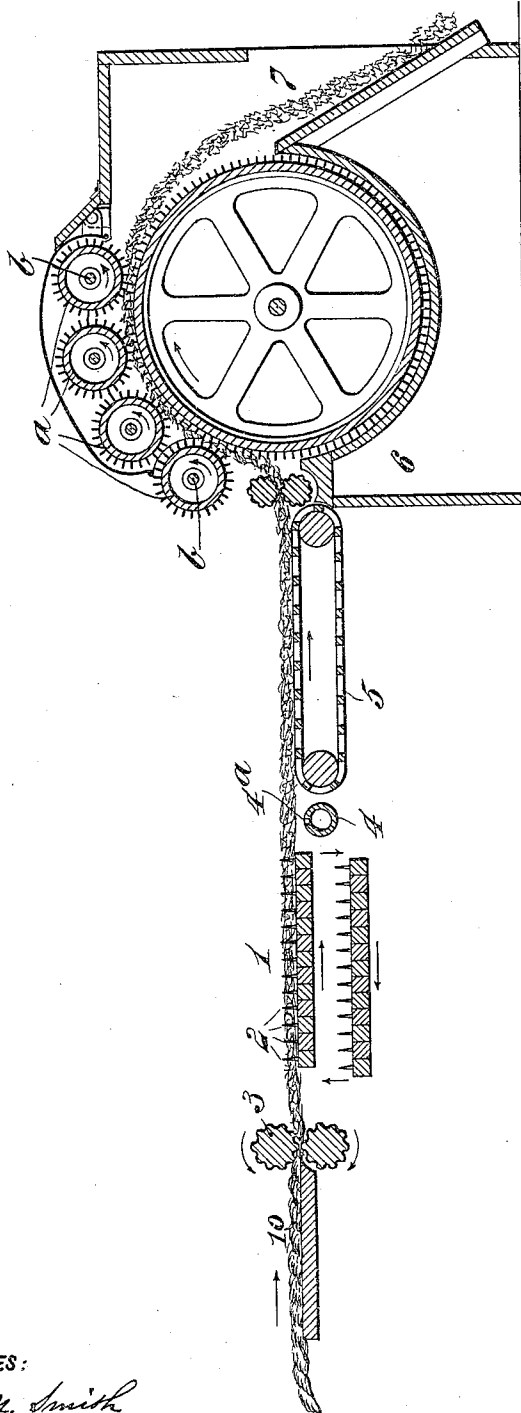


P. WOLL, JR.
 ART OF TEASING OR PICKING CURLED HAIR.
 APPLICATION FILED FEB. 3, 1909.

952,857.

Patented Mar. 22, 1910.



WITNESSES:

Thomas M. Smith
 S. M. Conner

INVENTOR
 Peter Woll Jr.
 BY
 J. Walter Douglas
 ATTORNEY.

UNITED STATES PATENT OFFICE.

PETER WOLL, JR., OF PHILADELPHIA, PENNSYLVANIA.

ART OF TEASING OR PICKING CURLED HAIR.

952,857.

Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed February 3, 1909. Serial No. 475,783.

To all whom it may concern:

Be it known that I, PETER WOLL, JR., a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in the Art of Teasing or Picking Curled Hair, of which the following is a specification.

10 In the manufacture of curled hair, after the raw hair, with or without an admixture of vegetable fiber, has been spun or placed in rope form and the "curl" set, by steaming and drying in the ordinary way, the ropes are untwisted preparatory to teasing or finishing, whereby the fibers are designed to be thoroughly separated and the product brought to a fluffy resilient mass, suitable for mattresses and generally for stuffing purposes. 20 This result aside from the old hand picking method, has been sought to be accomplished most generally by the use of the ordinary gill box or frame or by a carding machine, consisting of a toothed cylinder and workers designed to engage with and separate the matted fibers of the mass, but owing to the peculiar nature of the material neither of these devices has proven entirely satisfactory, inasmuch, as the gill box or frame will not 30 disintegrate or separate small knots or balls of hair, that do not directly engage with the teeth of the combs, while the hair becomes more or less matted or tangled in being returned to the mouth of the machine, and in consequence, more or less broken in each desired repetition of the operation; on the other hand, if the untwisted ropes be passed through a carding machine the matted and tangled material is torn off in bunches by 40 the cylinder and workers and passes through the machine without being properly separated, while each required repetition of the operation results in a continued breaking and shortening of the staple and thus greatly 45 reducing the value of the product.

The principal object of my invention is to produce a thoroughly picked product or article of uniform texture and above all a product in which is preserved the natural 50 length of the staple or article. According to my invention this is accomplished in a continuous operation, by first combing the strands or fibers of the twisted ropes of hair to separate and parallelize the same, slightly

moistening the strands or fibers, which 55 owing to their hygroscopic nature has the effect of increasing their pliability or elasticity without affecting the curly condition thereof and finally thoroughly carding the curly strands or fibers to derive a fluffy-like resilient product with the length of the strands or fibers practically preserved. 60

The nature, scope and characteristic features of my invention will be more fully understood from the following description 65 taken in connection with the accompanying drawing illustrating diagrammatically one form of a combined, and when operating, continuous plant found suitable and practical for carrying out the defined method of 70 my said invention.

Referring to the drawings 1, represents an ordinary gill box or frame having combs or gills 2, arranged to move forward, then drop out of action to a lower level, when 75 they are brought back to the starting point and raised again into action by suitable well known actuating-mechanism, not shown.

The ropes untwisted by fluted rollers 3 are slowly fed to the gill box or frame and 80 as the combs 2 are raised into action the teeth of the latter penetrate and engage with these ropes 10, and by reason of the retarding action of the rollers 3, pass and repass through the hair, combing and more or 85 less thoroughly separating the constituent strands or fibers to parallelize the same, which are then carried forward in a lengthwise condition to a traveling apron 5, and by the latter then delivered endwise to a 90 carding machine 6. Between the gill box and apron 5, as shown, is located a steam pipe 4, with perforations 4^a, for momentarily moistening the hair with vapor or steam, in passage above said pipe, which by 95 reason of the hygroscopic nature of the hair, renders it more pliable or elastic and consequently less liable to break into small bits, in the subsequent carding operation, to be hereinafter more fully explained. 100

The carding machine 6, comprises a revolving cylinder having teeth or pins closely disposed about the periphery of the same, and a series of toothed workers *a*. Each of the workers *a*, is carried by a shaft *b*, held 105 in suitable bearings in the side of the casing, and each worker is rotated in the direction of its respective arrow, so that the teeth of

said workers may coact with the teeth of the cylinder and travel in a forward direction with the latter, but at a slower speed of movement, so as to exercise a retarding effect upon the strands or fibers, while the teeth of the more rapidly revolving cylinder pass through and through the said material, which is finally discharged from chute 7 of the machine, thoroughly picked or teased in a curled, fluffy-like and resilient form and of a uniform texture; and furthermore with the length of the staple or article also practically preserved.

As premised herein, the separate use of the described gill box or frame and carding-machine are not new, because such machines have been in general use for many years past and I therefore do not lay claim to such as of my invention, but

What I do claim as new and desire to secure by Letters Patent is:—

The art of teasing curled hair, which consists in first combing the strands or fibers of the twisted ropes to separate and parallelize the same, slightly moistening the strands or fibers to increase their pliability without affecting the curly condition thereof and finally thoroughly carding the curly strands or fibers to derive a fluffy-like resilient product.

In witness whereof, I have hereunto set my signature in the presence of two subscribing witnesses.

PETER WOLL, JR.

Witnesses:

ALBERT E. ZACHERLY,
ANDREW BROGAN.