July 5, 1932. W. S. PARKER 1,865,785

DUST PUFF

Filed May 19, 1928

Fig. 1.

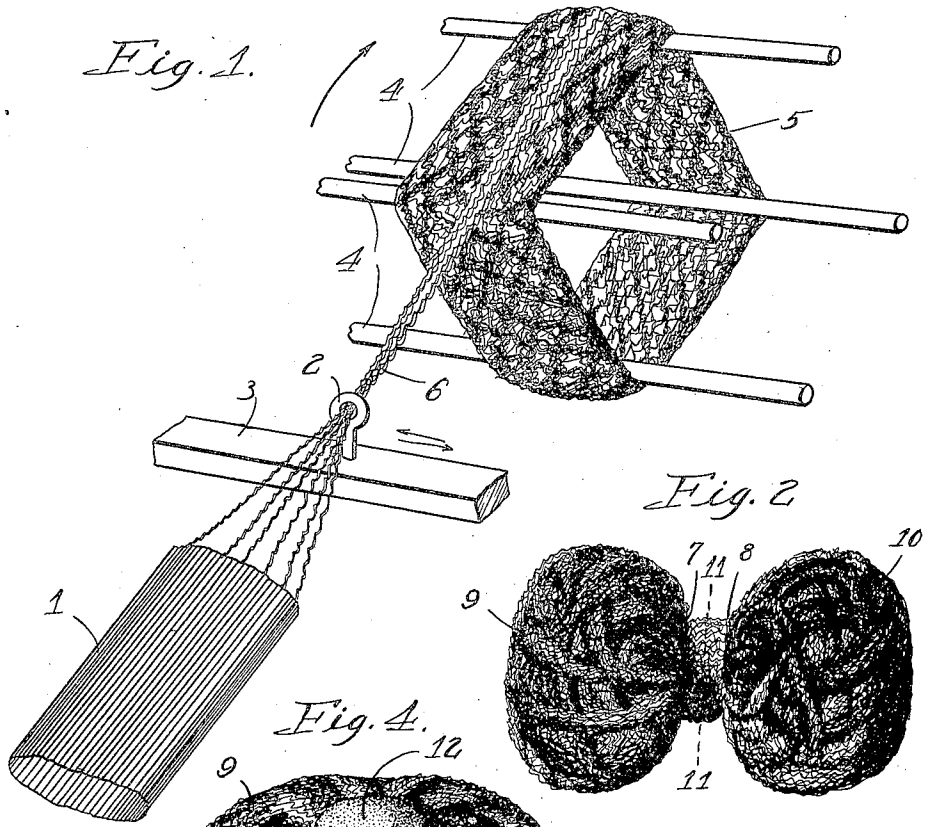


Fig. 2

Fig. 4.

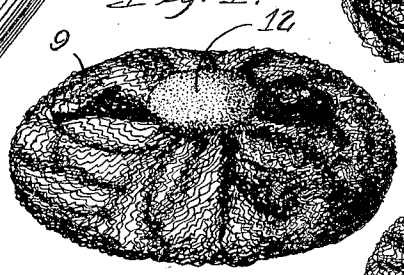


Fig. 3.

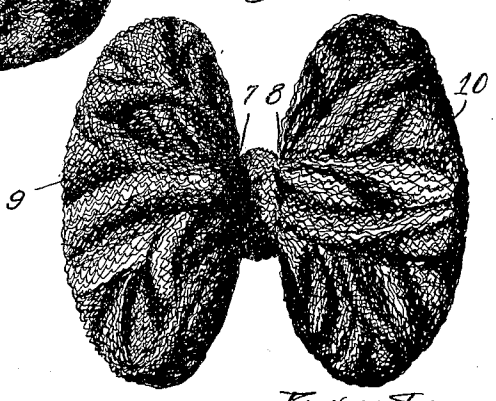
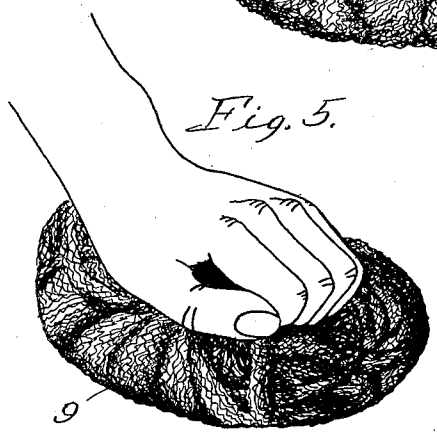


Fig. 5.



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UNITED STATES PATENT OFFICE

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DUST PUFF

Application filed May 19, 1928. Serial No. 278,960.

This invention relates to a dust puff and the method of making the same.

A dust puff in order to serve most efficiently should have a very resilient body, the parts of which should be so interlocked that they will not become disengaged readily and form separated bunches or lumps which do not cooperate with each other. A good dust puff also should be free from the tendency to harden and become incrusted when a cleaning oil is used with it in dusting and polishing.

The materials used in the making of this dust puff have been so selected and arranged that each of the above desirable qualities is incorporated in the resulting dust puff and other qualities peculiar to this invention are also found to be possessed by the dust puff made from this process.

One of the objects of this invention is to provide a dust puff made of fibrous material which naturally assumes and retains an ellipsoidal shape which is suitable for use in dusting.

Another object of this invention is to provide a dust mop which is composed of a plurality of strands of fibrous material and having both ends of each strand securely tied so that none of the ends may become free.

Another object of this invention is to provide a dust puff which is composed of strands of fibrous material and having both ends of each strand brought into a single knot where the ends are firmly secured into a compact knot which also serves as a grip for the user.

Another object of this invention is to provide a dust puff made of many strands of a fibrous material, each strand having previously been given a kinky form by means of knitting or some other suitable operation so that the strands when laid in proximity to each other in many layers will become considerably intermeshed and interlocked by means of the interengagement of their kinky portions.

Another object of this invention is to provide a process for making a dust puff which will produce a compact puff whose kinky strands are so well intermeshed as to prevent the puff from separating into disconnected bunches and yet which is assembled by a very simple arrangement of successive layers wound one upon the other.

Another object of this invention is to provide a method of making a dust puff from kinky strands of fibrous material which facilitates and cheapens the problem of tying the ends of the strands so that they may not become loose and separated from the puff.

Another object of this invention is to provide a method of making dust puffs which utilizes kinky strands of fibrous material, which strands may be prepared by knitting especially for their subsequent use in mops or which may be obtained from defective knitted materials, the strands in either case being raveled from the knitted material.

Other objects, advantages and capabilities are inherently possessed by this invention as will later become apparent from a perusal of this specification.

In the drawing:

Fig. 1 shows how the strands are raveled from a knitted piece and wound upon a reel,

Fig. 2 shows one side elevation of the dust puff after it has been tied at two slightly separated points near its middle after removal from the reel,

Fig. 3 shows another elevation of the dust puff taken at 90° to Fig. 2 showing that the puffs are ellipsoids more closely resembling an egg in shape than the common circular type of door knob,

Fig. 4 shows one of the puffs after it has been cut from the double puff shown in Figs. 2 and 3, and

Fig. 5 shows how conveniently the knot in the puff may be grasped when the puff is being used.

Referring in detail to the drawing, a knitted tubular piece 1 is held in some suitable relation to the reel by means which is not shown nor which is material to this invention. The strands are raveled from it as indicated and pass through a loop 2 mounted on a reciprocating bar 3 which moves alternately to the right and to the left as indicated by the arrows. The group of strands after passing through the guide loop 2 are wound upon a simple reel having the separated rods

4. The apparatus for rotating the reel is not material to this invention and need not be shown. The reciprocation of the guide loop 2 will cause the groups of strands to be wound in successive layers which are crisscrossed. This crisscrossing is employed in order to bring about the most effective intermingling of the kinky portions of the strands.

After a sufficient number of layers have been incorporated in the loop 5 of the intermeshed material, the group 6 of strands is severed and the loop of wound material is removed from the reel. The loop of intermeshed strands is now pinched together at its middle in a plane through the axis of the loop and is tied very firmly at the two separate points 7 and 8 which causes the outside portions of the loop of wound material to naturally form into two ellipsoidal puffs 9 and 10.

After the two separated ties are completed a sharp knife cuts through the narrowed portion of the puff on the line 11—11 which results in producing two puffs 9 and 10 each of which has a central button 12 in which both ends of each strand of the puff are securely tied. Not only does the button 12, or knot, hold the ends of the strands securely and permanently but this button also serves as a convenient grip for the user. The thumb and fingers may be inserted in back of this button if desired or they may grip the button as shown in Fig. 5. This button is such a firm and compact body that it may be used for attachment to a handle if desired.

It is found that a dust puff made in accordance with this process naturally forms into an ellipsoidal shape which it continues to retain even with prolonged use. This shape is of course most convenient for its intended uses. The kinky strands produced by the knitting are found to intermesh and interlock in such a way that they do not separate in bunches and groups even though they are subjected to hard usage and despite the tendency which cleaning oils have to mat strands of fibrous material together. The kinky shape of the strands also gives this puff unusual resiliency which makes it more useful in absorbing dust and oil and which increases the utility of the dust puff. Not only do the kinks in the strands as produced by the previous knitting process give the puff the characteristics above described but it also provides a much larger puff than could be obtained by the use of perfectly straight strands. This makes possible a great economy in the use of material and consequently reduces the costs of the puffs.

It should be understood that the foregoing description and drawing illustrate only the preferred embodiment of the invention and that the invention comprehends modifications differring from the illustrated embodiment which will yet be within the spirit and scope of the invention.

Having shown and described this invention I claim:

1. The method of making dust puffs comprising winding raveled strands in a continuous loop in superimposed intermeshed layers, until a desired quantity of intermeshed layers are formed, bringing opposite sides of the loop together to bring the strands at that point into close relation with one another in cylindrical form and tying the strands in compressed relation, whereby the looped ends are caused to flare out to form puffs.

2. The method of making dust puffs comprising winding raveled strands in a continuous loop in superimposed intermeshed layers, compressing the loop intermediate its ends, binding the strands together in the compressed portion at two separated points, and cutting the compressed portion of the loop between the two said points to thereby produce two independent puffs each having both ends of its strands firmly secured under its respective bound portion.

3. A method of making dust puffs comprising winding kinky strands in a continuous loop in superimposed layers to cause the kinky portions of adjacent strands to intermesh, bringing opposite sides of the loop together into a compact cylindrical body and securing them together, and securing two portions of each strand in said body and the intermediate portion of each strand being extended from said body in a loop through the intermeshed layers.

4. The method of making dust puffs comprising winding kinky raveled strands into a loop having a plurality of intermeshed resilient layers of kinky strands, compressing together into cylindrical form and tying in the compressed relation opposing sides of the loop to hold the strands so tied in a fixed mutual relation, whereby the intermediate portions of said strands puff outwardly from the tied portion in an ellipsoidal resilient body.

5. The method of making dust puffs comprising winding kinky raveled strands into a loop having a plurality of intermeshed resilient layers of kinky strands, compressing together in cylindrical form and tying in the compressed relation opposed sides of the loop at spaced points to hold the strands so tied in a fixed mutual relation, whereby the intermediate portions of said strands puff outward from the tied portion in an ellipsoidal resilient body, and cutting the strands of fibrous material between said spaced points to produce two separate puffs.

In witness of the foregoing I affix my signature.

WILLIAM S. PARKER.