Nov. 5, 1940. A. UNGER 2,220,589

METHOD OF MAKING IMITATION ASTRAKHAN

Filed May 25, 1938

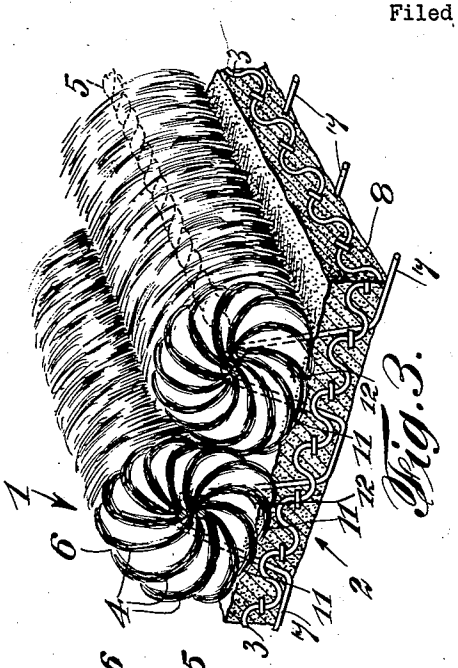


Fig. 3.

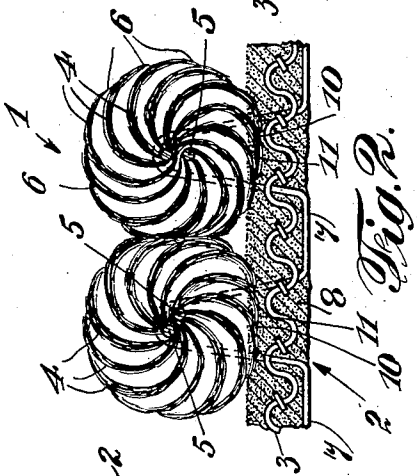


Fig. 2.



Fig. 1.

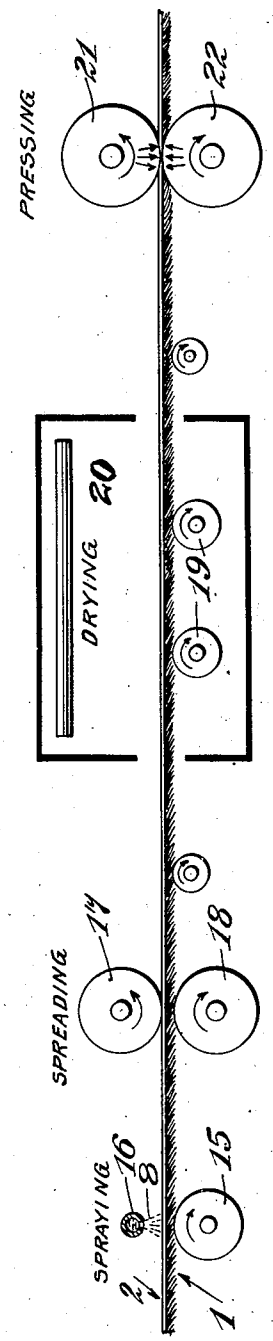


Fig. 4.

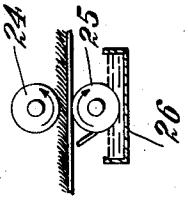


Fig. 5.

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METHOD OF MAKING IMITATION ASTRAKHAN

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Application May 25, 1938, Serial No. 210,081

2 Claims. (Cl. 2—278)

The present invention relates to artificial or synthetic furs and more particularly to a method of making such fabrics resembling astrakhan or the like.

Synthetic furs resembling astrakhan or Persian lamb's wool are used extensively for women's coats and for trimmings for coats, hats or other wearing apparel. Many attempts have been made to simulate astrakran, usually, by attaching irregular loops of chenille yarn to a backing material such as cloth or the like.

The difficulty with synthetic astrakhan fur or cloth used heretofore, is that the fibers at the underside of the chenille yarn readily work their way to the top surface of the fur to increase the fuzziness of the fur in spots and to expose the backing material at other spots. Gluing the yarn to the backing material has been found unsatisfactory because rough usage or inclement weather causes the fibers to be separated from the backing material whereby the appearance of the fur is impaired. In addition, the glue saturates the fibers of the yarn and spoils the woolly appearance thereof. Other difficulties of the present processes are that astrakhan cannot be readily cut because the chenille ravels at the cut edges. Also, certain existing methods of making the cloth are not suitable for making long lengths or bolts.

The present invention aims to minimize or overcome the above difficulties by providing an improved method of making cloth of the class described, in which the chenille is securely held in position and impairment of the cloth, both in appearance and texture, as a result of wear and rough usage, is reduced to a minimum. The invention also provides an improved method of manufacture which is particularly adapted to provide a cloth with the above advantages and to manufacture long lengths or bolts of the improved cloth rapidly and at a low cost.

An object of the present invention is to provide an improved method of making synthetic fur which has the appearance and characteristics of genuine astrakhan.

Another object of the invention is to provide an improved method for securing the underside of the yarn to the backing material to prevent fuzziness or a "rat-tail" effect.

Another object of the invention is to adhesively secure the chenille yarn without saturating the fibers and spoiling the curly or wooly effect of the yarn.

Another object of the invention is to provide a method of making improved artificial astrakhan fur which is readily cut without loosening or ravelling of the yarn at the cut edges.

Another object of the invention is to provide a simple inexpensive and more rapid method of making artificial astrakhan.

A further object of the invention is to provide a method of making synthetic fur resembling astrakhan in continuous lengths or bolts.

Other and further objects of the invention will be obvious upon an understanding of the illustrative embodiment about to be described, or will be indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

A preferred embodiment of the invention has been chosen for purposes of illustration and description and is shown in the accompanying drawing, forming a part of the specification, wherein

Fig. 1 is a top plan view of a piece of synthetic astrakhan or Persian lamb's wool made by the present method;

Fig. 2 is an enlarged schematic end view of a portion of the cloth illustrating the chenille secured to the backing member;

Fig. 3 is an enlarged schematic perspective view of a portion of a strand of chenille illustrating the manner in which the lower ends of the fibers are held in place and prevented from uncurling;

Fig. 4 is a diagrammatic view of an apparatus illustrating one way of practicing the preferred method of making the astrakhan; and

Fig. 5 is a diagrammatic view illustrating another method of applying the adhesive.

Referring more particularly to the drawing, there is shown in Figs. 1 and 2, synthetic astrakhan or Persian lamb's wool which is made by securing chenille yarn 1 or the like to a cloth backing member 2 having an open weave 3 shown in Fig. 1. Any other suitable backing material such as gauze or screening may be used, if desired.

The chenille yarn illustrated herein preferably is substantially circular in section and comprises relatively soft strands or fibers 4 of silk, dyed any suitable color, and two or more mounting threads 5 twisted about tufts of silk strands at substantially the middle thereof (Fig. 2). The free ends 6 of the strands or fibers are curled or swirled substantially spirally to simulate lamb's wool and are kept in curled position by subjecting them to heat during the curling operation. If desired, the chenille yarn may be

made of strands or fibers of imitation silk, wool or other suitable material.

The chenille yarn preferably is arranged in irregular loops on the backing member to create the appearance of astrakhan and is sewed thereto by threads or stitches 7. The stitches extend transversely across the mounting threads 5 and are spaced relatively close to each other along the length of the yarn to prevent raising of the yarn in spots and to prevent it from being pulled bodily upwardly. Due to the softness of the strands 4, the stitches are pulled through the upper portions of the yarn to sink into proximity with the mounting threads 5 so that the stitches are concealed by the upper portions of the yarn. To further conceal the threads 7, they are formed of the same material and have the same color as the strands 4 of the yarn. Preferably, the stitches do not crush the yarn or substantially distort the circular section of the yarn, but are entirely concealed.

After the sewing operation has been performed, a thin latex solution 8, a suitable rubber cement or other satisfactory adhesive, which is odorless, waterproof and pliable when dry, is applied to the side of the backing member opposite the side upon which the yarn is mounted. The adhesive is directed through the openings 3 of the backing member into contact with the ends of the strands or fibers 10 at the lower portion of the yarn to secure the strands to the backing member.

The adhesive is not required to prevent the chenille from separating from the backing 2 as the stitching adequately performs that function. Therefore, a thin coating of a thin adhesive may be utilized for holding the lower curled ends of the fibers in place and for preventing the chenille yarn from turning. Very little adhesive is necessary for this purpose. By applying the adhesive from the underside of the backing 2, the chenille is not saturated with or subjected to an excess of adhesive which would impair the lustre or curly appearance of the finished cloth. The open weave of the backing insures uniform distribution of the latex or other adhesive. In addition, the adhesive adheres to and stiffens the backing and increases the weight thereof, which makes the cloth more like fur. By sewing the chenille to the backing prior to the application of the latex, high speed sewing machines or "schiffli" machines can be utilized as the backing offers little resistance and no adhesion to the needles piercing it.

In the finished cloth, the lower fibers cannot be twisted or pulled up to increase the number of fibers at the top and create a fuzzy appearance in spots as they are held in place by the adhesive. Also twisting or uncurling is minimized in the upper fibers which are not adhered to the backing by the latex, but which are intermediate or adjacent the adhered fibers. For example, as shown in Fig. 3, the lower ends 11 of certain fibers or strands are adhesively secured to the backing member while the ends 12 of other fibers or strands are not. Due to the curling operation to which the chenille yarn is subjected prior to mounting it, the curled fibers which do not extend sufficiently near the backing to be adhered to it, are entwined with or intermediate fibers which are held in place by the latex. The adjacent secured fibers protect and, to a considerable extent, hold in place the adjacent or entwined fibers which have not been adhesively secured to the backing. In the event that the fiber ends, out of contact with the backing, are forcibly uncurled or raised, they have a tendency to curl into place or can be ironed or pressed into place to restore the appearance of the fur, due to the adjacent fibers being held in place. If the unadhered fibers are raised and do not return to their original position, the backing 2 is not exposed because there are sufficient adhered lower strands or fibers of the chenille yarn to cover the backing member and present a curly, wooly appearance.

A preferred method of making the imitation astrakhan, fur or cloth described above, is illustrated in Fig. 4. This method comprises the steps of first sewing the chenille yarn to the backing 2, applying a latex solution or the like to the underside of the backing, spreading and forcing it through the openings thereof, partly drying the latex, and pressing the lower fibers or strands of the chenille yarn against the latex on the backing member.

Preferably, the method is carried out by continuously passing long lengths or bolts of backing material 2 having chenille 1 sewed on one side thereof over a supporting roller 15 and spraying an atomized or finely divided stream of latex or other adhesive 8 on the side of the backing material opposite the yarn. The spraying means employed may be a hand operated compressed air sprayer or a perforated pipe 16 extending sidewise across the moving astrakhan. When the latex is sprayed or otherwise directed on the backing 2, it passes through the openings 3 thereof to contact and adhere the strands or fibers 10 at the underside of the chenille yarn and permeates the backing to increase its weight and stiffness, thereby giving a greater resemblance to fur.

In order to provide a uniform film or layer of latex, the astrakhan material is passed between a pair of rollers 17 and 18. Preferably, the rollers exert slight pressure on the material to spread the latex substantially uniformly and to force it through the backing material.

Thereafter, the astrakhan material is passed on supporting rollers 19 through an oven or drying chamber 20 having an atmosphere of hot air therein, having a temperature and circulation adapted to dry the latex fairly rapidly to a tacky state. Preferably, the astrakhan material passes through the oven at such a rate of speed or is kept therein a sufficient length of time so that the latex becomes tacky or sticky, but is not completely dried. The backing member, by being material of an open weave or mesh, facilitates rapid drying at low temperature and eliminates the necessity of high temperature.

After leaving the oven, the astrakhan material passes between a pair of pressing rollers 21 and 22, which exert sufficient pressure to firmly embed the lower portions of the yarn into the tacky latex at 10 (Fig. 2). The pressure exerted by the rollers 21 and 22 is uniform through the width of the astrakhan material, whereby no undesirable surface irregularities are created. Also, the chenille retains its substantially circular cross-section, due to the curled fibers being sufficiently dense to reassume their original shape. Further drying of curing of the latex may be effected by hanging the astrakhan material on racks or the like, or by passing it through another drying chamber.

In Fig. 5 another method of applying the adhesive is illustrated which comprises passing the astrakhan material between an upper roller 24

and a lower roller 25, with the chenille yarn facing upwardly, and applying the adhesive by means of the lower roller 25. The adhesive may be applied to the lower roller 25 in any suitable manner, for example, by rotating the roller 25 through a supply of adhesive in a receptacle 26. The adhesive when applied to the cloth in this manner will be uniformly distributed. The spreading, drying and pressing steps may be performed thereafter as described in connection with Fig. 4.

It will be seen that the present invention provides an improved synthetic fur, resembling astrakhan or lamb's wool, made by a rapid, inexpensive, practical method. The chenille yarn cannot ravel because the strands or fibers are firmly secured to the backing material. The sewing prevents the yarn from being pulled bodily upwardly and the latex or other adhesive need only hold the strands or fibers in place. By applying the latex from the underside of the backing member and partly drying the latex before pressing the yarn against the backing member, the danger of soaking or saturating the chenille yarn with latex is eliminated. At the same time, the backing member, by being impregnated with latex, is waterproofed and rendered more like the skin of a natural fur. The synthetic fur can be made in long lengths or bolts by a continuous method. The bolts can be cut into pieces of desired size without shedding of the chenille at the cut edges because the fibers and the stitches 9 are secured to the backing member. The artificial astrakhan described herein, is attractive in appearance and can more readily withstand any rough usage to which it may be subjected.

As various changes may be made in the form, construction and arrangement of the parts herein without departing from the spirit and scope of the invention and without sacrificing any of its advantages, it is to be understood that all matter herein is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A method of making artificial fur of the class described, comprising the steps in the following sequence of stitching chenille yarn formed by fibers secured to and curled about a plurality of twisted threads on one side of a backing member having an open weave, spraying an adhesive through the openings in the backing member from the other side of the backing member, spreading the adhesive, partly drying the adhesive, and pressing the fibers at the underside of the yarn against the backing material after the partial drying operation.

2. A method of making artificial fur of the class described, comprising the steps, in the following sequence of stitching chenille yarn, formed by fibres secured to and curled about a plurality of twisted threads, on a backing member formed of material having an open weave and free from adhesives, directing a latex solution through the openings in the backing member after the chenille yarn has been stitched thereto, partially drying the latex solution to form a tacky mass, pressing the fibres at the underside of the yarn against the tacky latex on the backing member to secure the yarn and the stitches thereto, and completing the drying of the latex.

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