E. Schnautz,

Hair Trimming.

No. 111,388. Patented Jan. 31, 1871.

Fig. 1.

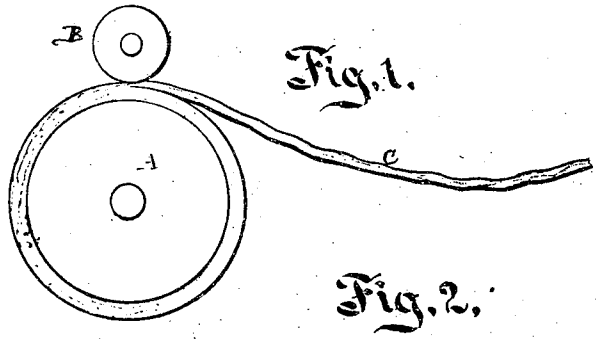


Fig. 2.

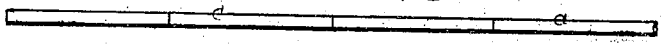


Fig. 4.

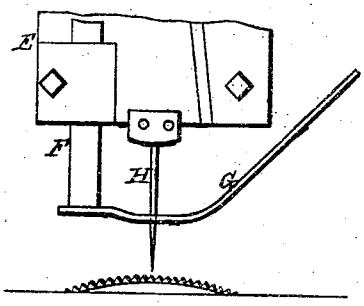


Fig. 3.

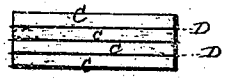


Fig. 6.

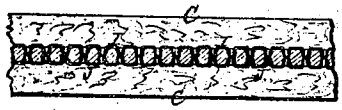


Fig. 8.

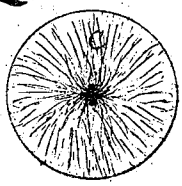


Fig. 5.

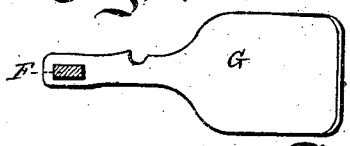
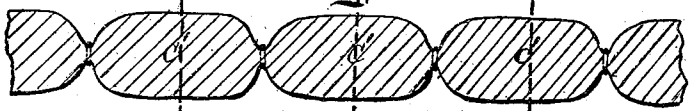


Fig. 7.



Witnesses:

H. E. Price

Wm. E. Ayer

Inventor,

E. Schnautz.

by his attorney

D. D. Slaton.

UNITED STATES PATENT OFFICE.

ELIAS SCHNAUTZ, OF NEW YORK, N. Y.

IMPROVEMENT IN ROLLS FOR HAIR-DRESSING.

Specification forming part of Letters Patent No. **111,388**, dated January 31, 1871; antedated January 21, 1871.

To all whom it may concern:

Be it known that I, ELIAS SCHNAUTZ, of the city and county of New York, have invented certain new and useful Improvements in Rolls for Use in Chignons and analogous Articles for Ladies' Hair-Work; and I do hereby declare that the following is a full and exact description thereof.

Hitherto it has been customary to make what are termed "rolls" or "short hair" of coarse wool, and the ordinary practice has been to attach long tufts of the coarse wool to a central cord or string by means of fine wire wound tightly around. Each lock is applied separately to the string, and one or more turns of the wire are made around it. Such work is manufactured with tolerable rapidity by expert hands, but is open to various objections, among the more serious of which are the roughness of the rolls when they are disturbed by a movement of the hand in the wrong direction, and the annoyance due to frequent breakages of the wire and the protrusion of the ends. My improved roll is made by machinery, is uniform in its structure, may be rubbed either way without producing roughness, and is more uniform, more loose or open in its nature, and is of less weight, while it may be manufactured much more rapidly and cheaply than the ordinary hand-made rolls.

I will proceed to describe what I consider the best means of carrying out my invention, and will afterward designate the point which I believe to be new. The accompanying drawings form a part of this specification.

Figure 1 is a vertical section of the material in the act of being laid together around a drum to form a thick layer or bat with the fibers nearly parallel. Fig. 2 shows the same bat after being removed from the drum and extended on a flat surface and cut up into equal parts or pieces. Fig. 3 shows the same pieces piled up, with book-boards between, ready to be compressed to reduce their thickness to the smallest possible amount, and to hold them in such condition until they have become temporarily set, so as to remain so for a little period. Figs. 4 and 5 are views of mechanism which merely serves to aid in carrying out the invention in the manner which I have found most successful in practice, and will require no minute description. Fig. 6 is a section through the sewed bat. Fig. 7 is another section at right angles to the last, and Fig. 8 is a cross-section of the completed roll.

Similar letters of reference indicate corresponding parts in all the figures.

I take wool or any other suitable material, coarse or fine, which may be uniform in length or of various lengths, and having thoroughly cleaned it by the ordinary means and carded it into approximately regular and parallel positions of the fibers, I lead the broad thin sheet of carded fibers from the doffer of the last carding-machine, (not represented,) and wind it upon a slowly-revolving cylinder, A. There may be one hundred or more layers of the material. At each revolution it passes under a wetted roller, B, which presses the last layer down upon the preceding and very slightly compacts the whole together. After a sufficient thickness has been wound upon the drum A, I suspend the operation, and cutting across smoothly, I unwind and remove the envelope and spread it flat upon the table. I then cut this across into several pieces, each as nearly rectangular as may be, and pile them together with book-boards or thick pasteboard between and submit the whole to a very heavy and long-continued pressure in a hydraulic or other powerful press. (Not represented.) I have designated the several sections of woolen layers thus cut up and compacted by the letter C, Fig. 3, and the book-boards which lie between by the letter D. These sheets C are afterward sewed through in parallel lines, and cut apart between the lines. The compressed material recovers its elasticity with more or less rapidity, and soon becomes a cylindrical roll of highly elastic, light, and flexible character admirably suited for the purpose intended.

In the manufacture of my improved rolls I have found it best to employ sewing-machines adapted for the work by having an extra amount of lift to the presser-foot, which is larger and longer than usual, and bent up at the front, and by providing about double the ordinary tension on the springs applied to the presser-foot, and elevating the feeding device.

In sewing the bats I prefer to use a stout linen thread, and have found it well to assist the feed by pressing with the hands upon the bat or flat mass C, and urging it forward at

each rise of the needle about to the extent which the feed-motion calls for, the mechanical feed underneath thus becoming mainly a feed-regulator.

As the figures represent very correctly the mechanism which I have found most successful in practice, the same will require no further description.

In Fig. 6 I have represented a section longitudinally along one of the seams in my material C before it is cut through and allowed to expand into rolls. It shows the lock-stitch. The upper thread is represented by I and the lower by J. The material C is always liable to expand considerably immediately on coming from the press, and continues to expand more or less rapidly afterward, so that it is certain to be swelled between the lines of the seams. I have indicated these swells by the letters C′ C′, Fig. 7.

In Fig. 7 I have shown a section through the material C at right angles to that in Fig. 6. In this figure the places where the material is to be cut are indicated by dotted lines. The cutting may be effected either with a machine for the purpose or by ordinary shears.

The rolls may be made of various lengths in the first place, so as to economize the material, or, when desired, the pieces may be cut off at each end at right angles to the line of the seams before the material is divided by finally cutting into rolls; and in each case the material so cut off at the ends, which from being near the edge of the original roll A or from any other cause may be imperfect, may be again worked over and mixed with other stock.

I claim—

As a new article of manufacture, a roll for the purposes specified, made substantially in the manner herein set forth.

E. SCHNAUTZ.

Witnesses:
W. H. BAKER,
W. C. DEY.