J. D. TOMLINSON.

MACHINE FOR THE PRODUCTION OF SUEDE COTTON CLOTH.

APPLICATION FILED JULY 31, 1920.

1,411,071. Patented Mar. 28, 1922.

FIG. 1.

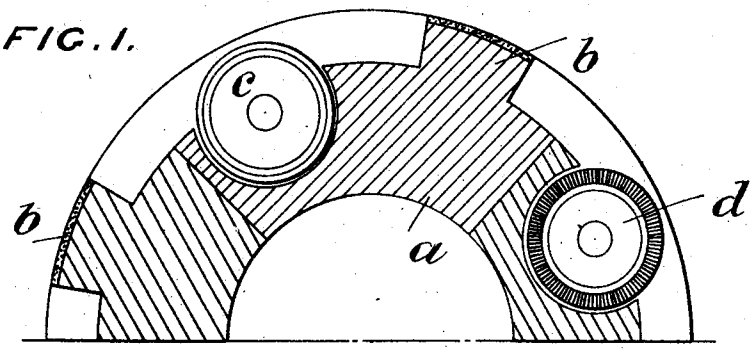


FIG. 2.

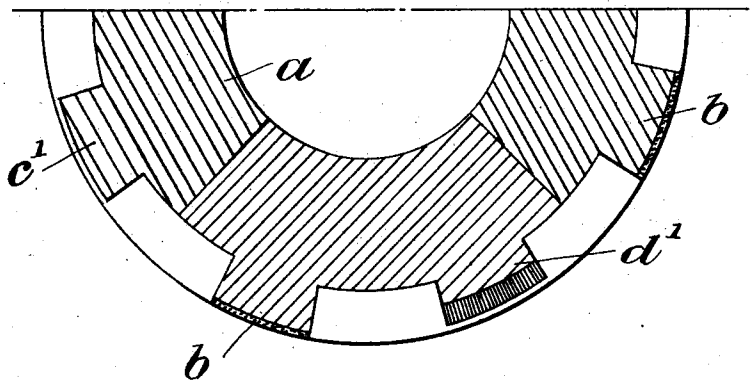
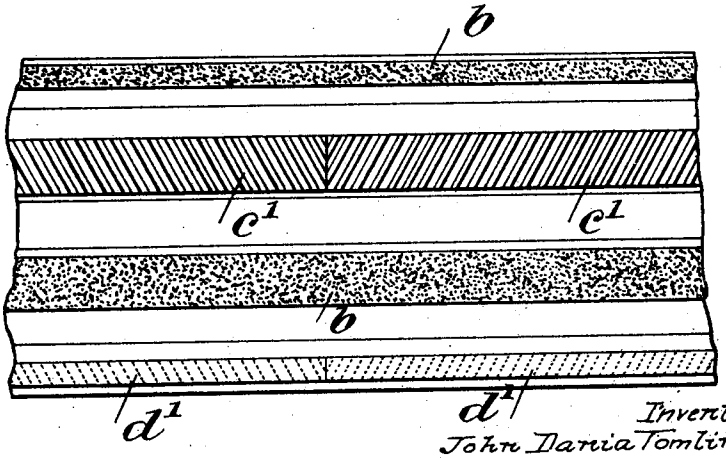


FIG. 3.



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MACHINE FOR THE PRODUCTION OF SUEDE COTTON CLOTH.

1,411,071. Specification of Letters Patent. Patented Mar. 28, 1922.

Application filed July 31, 1920. Serial No. 400,416.

To all whom it may concern:

Be it known that I, JOHN DANIA TOMLINSON, a subject of the King of Great Britain and Ireland, residing at Soho Works, Rochdale, in the county of Lancaster, England, have invented new and useful Improvements in or Connected with Machines for the Production of Suede Cotton Cloth, of which the following is a specification.

The invention is an improvement upon one for which I have obtained Letters Patent No. 1218131 for the production of cloth to imitate "suede" leather, in which rollers are used which comprises bars or lags of wood covered with carborundum and stretching rollers or expansion bars, in the combination making-up the complete roller. I find in practice, that while the carborundum lags are effective and produce a good result on the surface of the knitted fabric of fine Egyptian cotton such carborundum surfaces individually tend to produce somewhat lengthy fibres, like hairs, on the surface of the cloth. Such lengthy fibres are not necessarily got rid of by the next carborundum covered lag but their removal may require the successive action of several lags thus to some extent interfering with the "sueding" action by their very presence. As a result of this it may be necessary or desirable to pass the fabric more than once over the complete "sueding" roller or over more than one such rollers or otherwise to control the speed or running of said roller. Such fibres or hairy lengths produced by one lag are not necessarily got rid of by a succeeding carborundum covered lag although the end is ultimately accomplished. A too drastic action of the lags may produce a streaky result which is to be avoided.

According to my invention I propose to apply to the "sueding" roller comprising a number of carborundum covered lags or bars and having rollers or bars, or other devices for maintaining the cloth in its curved form when traveling on the roller, one or more needle or wire covered surfaces to assist the action of the carborundum and to produce a better surface on the cloth. A needle or wire covered surface can be ground to a uniform face whereas a carborundum surface is necessarily uneven.

By means of the needle or wire covered surface, operating in cooperation with a carborundum surface, such projecting fibers are caught as the cloth passes thereover, and a more uniform suede surface is produced.

In the accompanying drawings I have indicated means for carrying the invention into effect.

Fig. 1 is a cross section of the upper half of a "sueding" roller in which I have indicated a rotary needle or wire covered surface, and also a rotary stretching roller combined with carborundum covered lags.

Fig. 2 shows the lower portion of a sueding roller indicating a lag provided with a needle or wire surface, and also a stretching bar or lag and carborundum covered lags.

Fig. 3 illustrates a part of the length of a sueding roller on a smaller scale than Figs. 1 and 2, with non-rotary stretching bars or lags and similar non-rotary needle or wire covered bars combined with the carborundum covered lags.

The sueding roller is or may be built-up of segments *a* provided at intervals around its periphery with bars or lags *b* covered with carborundum. Between such carborundum surfaces *b* I dispose alternately a stretching roller *c*, as in Fig. 1, or stretching bar *c'*, as in Fig. 2, and a needle or wire covered roller *d* (Fig. 1) or needle or wire covered bar *d'* (Fig. 2). The needle or wire covered surfaces *d* are located between two carborundum covered lags *b* on or about the "sueding" roller periphery so as to come into action after a carborundum covered lag *b*, the intention being that the needle or wire covered surfaces shall so act on or influence the projecting fibres or hairy lengths which may be produced by a carborundum bar that the same are removed by the action of the succeeding carborundum bar and the fabric will then be straightened out by a stretching roller or bar. At present I propose to employ card or other wire or needle surfaces arranged around a roller surface or in strips or lengths, or otherwise upon a lag or bar, say in the space between any two carborundum lags or between such a lag and a stretching device as may be found most suitable.

I may use only one such needle covered surface per roller or a number of succeeding ones, the series being distributed throughout the roller in the manner found most effective. Provision may be made for adjusting such needle covered surfaces with

respect to the periphery of the complete "sueding" roller. Also with a view to obtaining an additional lateral stretching or straightening effect upon the fabric the needle or wire surface may be disposed spirally from the centre outwards on the roller, or at the desired angles on the non-rotary lag to have the same effect as far as possible upon the fabric as the stretching rollers or bars.

I anticipate being able to get rid of such outstanding fibres or hairy lengths almost immediately after their production whereby a better and more easily controlled result is obtained.

I declare that what I claim is—

1. In a machine for producing a suede effect upon the surface of fabric, the combination of a roller having a plurality of longitudinally extending abrading surfaces disposed at spaced intervals circumferentially of said roller, and cloth retaining members and fiber catching members alternately disposed in the spaces between said abrading surfaces and extending parallel therewith.

2. In a machine for producing a suede effect upon the surface of fabric, the combination of a roller having a plurality of longitudinally extending abrading surfaces disposed at spaced intervals around its circumference, a cloth-retaining roller extending longitudinally of said first roller at one side of each said abrading surfaces, and a longitudinally extending fiber catching roller at the opposite side of each of said abrading surfaces.

In testimony whereof I have signed my name to this specification.

JOHN DANIA TOMLINSON.