


NEW PATENTED FABRICS.

PLUSH OR CUT PILE FABRICS.

 N invention has been patented relating to a process for making plush, or cut pile fabrics, which differs essentially from the mode of manufacture previously employed, inasmuch as the nap or pile is produced without being woven into a back or supporting fabric, the fibres of the said pile being connected together by means of a layer or film of adhesive material which may itself form the back or ground or the medium of connecting the pile to the backing of ordinary woven fabric. The material from which the pile of the plush is to be made, whether in the form of threads, fibres, or ribbons, is wound on cores in the form of flat plates or strips of uniform width, corresponding to the intended length of the pile; these are placed with their broad faces in juxtaposition, and are clamped firmly together in a suitable press in which they stand up edgewise, their upper edges, over which the material to form the pile is wound together forming an approximately level surface. Upon this surface, a layer or film of adhesive material, such as caoutchouc, is spread, to which a thin fabric may be caused to adhere, in order to strengthen it and form a backing. The material to form the pile is then cut along the opposite edges of the cores, which then fall out, and the plush is finished. The plush material may either be wound on pairs of plates or on laths of any suitable substance, for instance, of cardboard, wood, iron, ribbon, bands, or sheets, &c., either by hand or by a reeling machine, suitably adapted for the purpose. A number of pairs of plates are wound as above stated, squeezed or pressed together on a bed or table between pressing cheeks, by means of screws or other means. To prevent those near the middle from rising with the pressure, they are held down by clamps applied over their ends, the clamps engaging under the bed or table, and being drawn down by screws. The upper side of the series of plates thus wound and pressed together is, as above mentioned, coated or covered with an adhesive substance (caoutchouc) whereby the threads, fibres, bands, &c., to form the pile, are united together. The operation of cutting the material to form the pile is effected by passing a knife along, and between the lower or opposite edges of each pair of plates. When the adhesive substance is dry, a thin fabric may be caused to adhere upon it, the root ends of the pile being thereby more securely fastened. When the pairs of plates are made of iron bands or strips, each pair of strips is soldered together along one longitudinal edge the knife for cutting the pile being passed between them at the opposite edge. Instead of pairs of plates as above described, single plates may be employed, provided throughout their length with a groove along one edge, through which the knife for cutting the pile is guided. Further, the plates may each be provided at their ends with upwardly directed knives which cut through the threads of the pile when the plates are being drawn out. Instead of winding the plush material upon the plates, it may be brought upon a warp beam and conducted to the above-mentioned pressing table, where the warp threads are led in a zig-zag direction, alternately over, and under, and between plates, or pairs of plates, the plates being placed in succession on the table, and alternately under and over the pile threads, &c., as they come from the beam, so as to cause them to assume the desired zig-zag direction. When thus arranged and clamped as before described, the upper side of the whole series is coated with an adhesive substance, to which a fabric is caused to adhere, whereby the bends of the threads which are uppermost in the press are united to the fabric. Or the fabric may be dispensed with, if a suitable adhesive substance be used, as before mentioned. The lower bends of the threads are then cut through in the manner above described, and the plush is finished.

PRODUCING PERMANENT COLORED LINES ON
WATERPROOF CLOTHS.

To produce colored lines upon waterproof cloth is the object of a recent invention, and to carry this out, there is mixed with a rubber solution, such as is employed in waterproofing cloth, a suitable pigment of any desired color, and this colored solution is used in the manner in which an ordinary solution (whether colored or not) is employed in waterproofing, but for the purpose of marking on the lines, or bands, a knife is employed, constructed along its lower or bearing edge as a graining comb, that is with

notches in such edge corresponding in width and position to the lines or bands which it is desired to form on the surface of the cloth or rubber, and of only such depth as will allow the proper amount of colored solution to pass through as the cloth or sheet is drawn under the comb. The comb may be conveniently formed of a piece of zinc or other sheet metal, or of any suitable material, fixed by screws passing sideways through it, and screwed into a spreading knife of the ordinary description, or into a bar employed in lieu thereof, as will be readily understood, or may be otherwise fixed to such knife or bar. The solution employed is, of course of a sufficiently liquid character for the purpose, and it is laid upon a surface of unvulcanized rubber previously laid upon the cloth in the usual manner, or forming the substance of the sheet. After the colored solution has been laid on in lines or bands, the cloth or sheet is vulcanized or treated in an analogous manner to make it fit for use. In carrying out this invention, there is frequently a tendency, in making the lines or bands direct upon the surface to be ornamented, for the colored solution to spread somewhat, and prevent the clearness of the outline which is desirable. In this case, it is better to mark the lines in the manner above described upon a "taping" cloth, and after they have set to a slight extent, to transfer them to the surface to be ornamented, or lined by rolling the taping cloth in contact with such surface between "doubling" rolls. Very clear lines may thus be produced with certainty upon the surface to be ornamented. It is impossible to describe in words the exact consistency which is best for the colored solution in laying on the lines or bands, or the degree to which it should set upon the taping cloth before being transferred in the manner described, but these matters will be readily understood by persons skilled in the art to which the invention relates, and a very little experience will enable a workman to carry out the invention with the best results. The lines or bands may be formed wavy, zig-zag, curved, or slanting, if desired, by reciprocating the comb endways by means of a cam or crank action, or by the operation of inclined bearing surfaces, as the cloth or sheet is drawn thereunder, as will be readily understood by mechanics; a check pattern may be formed by first laying on the lines in one direction on the cloth and afterwards in the other direction, in which case, if the taping cloth is employed, as is preferred, the lines are first laid on in one direction and transferred and afterwards laid on in the other direction and transferred. In some cases, such as when a small surface only is required to be marked with lines or bands (as, for instance, for sheet rubber intended to be made into tobacco pouches or the like, or formed into rings such as are used with umbrellas), the comb may be drawn across the surface by hand, the colored solution for producing the lines or bands being, in such case drawn forward by the comb, except for that portion thereof which escapes through the notches as the lines or bands are being formed.

FELT STAIR CARPETS AND SQUARES, AND BORDERS
FOR SQUARES.

This invention relates to the manufacture of bordered stair carpets and squares of felt, and borders for squares, the object of the invention being to produce upon the material a border having a more artistic and ornamental effect than hitherto obtained. In the manufacture of such bordered stair carpets and squares, and borders for squares, it has always been usual to produce the border by printing only, and if it was desired to obtain an artistic effect, this could only be done on plain dyed wool felts by printing, which does not give so clear and distinct a design as is obtained by this invention, according to which the whole width of the carpet can be made of white, gray or dyed wool, as preferred and a border of the most artistic effect that can be desired can be worked thereon by taking a piece of felt, either dyed and printed, or plain dyed or printed on the white or gray and cutting it up into strips of the required width for stair carpeting, or borders for squares, or into squares of the required size, and embroidering an ornamental border thereon by means of a chain stitch, or other embroidery machine, in woolen thread, or other suitable material, and by these means, the most brilliant ornamental borders in bright or sombre colors on different colored grounds can be produced, much superior to, and more artistic in appearance, than any borders that have hitherto been produced upon felt carpeting by printing or other ordinary means.—*Journal of Fabrics, Eng.*