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MACHINE FOR MAKING ORNAMENTAL IMPRESSIONS ON PILED FABRICS.

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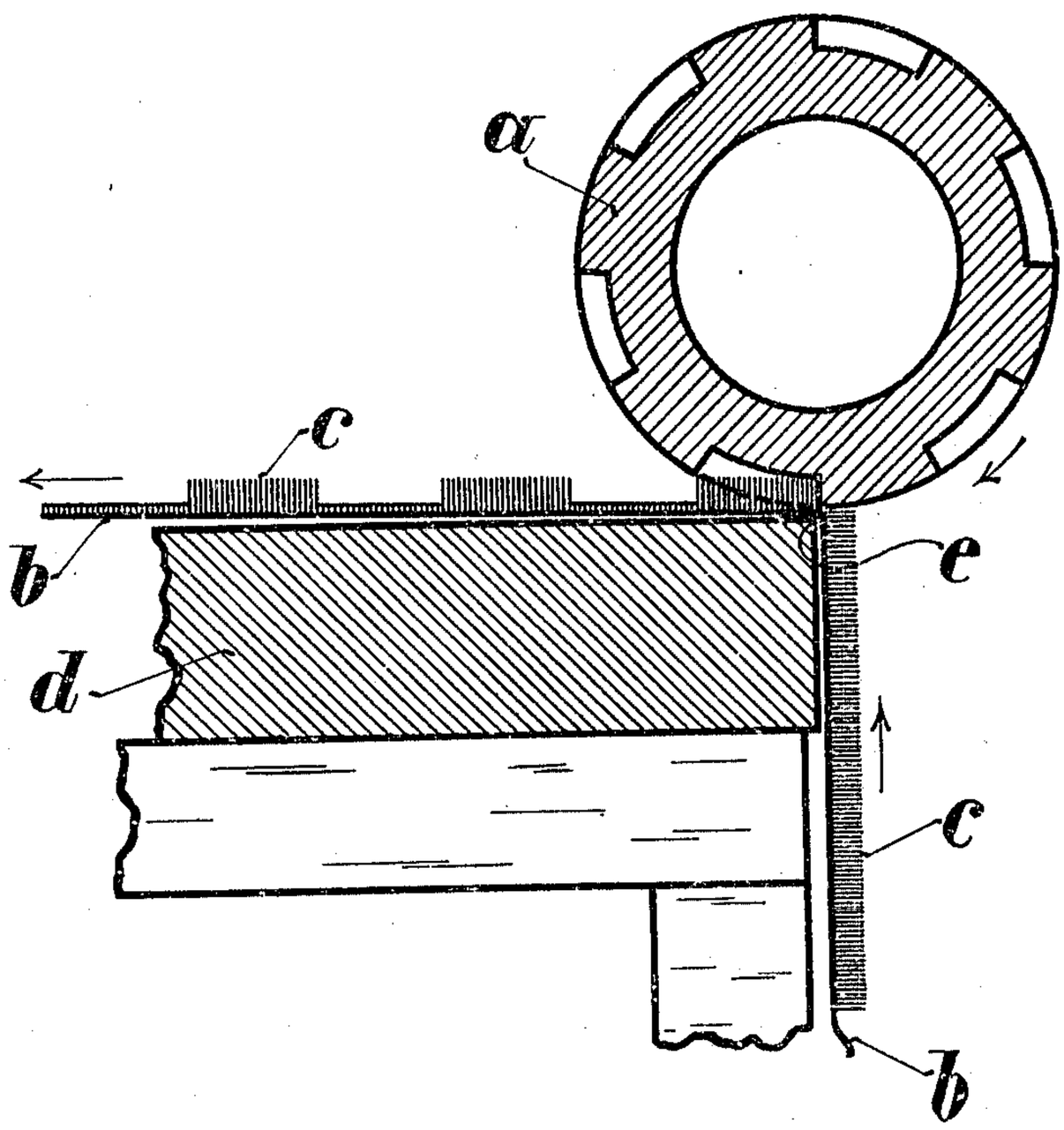

Witnesses

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MACHINE FOR MAKING ORNAMENTAL IMPRESSIONS ON PILED FABRICS.

953,181. Specification of Letters Patent. Patented Mar. 29, 1910.

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To all whom it may concern:

Be it known that I, ADOLF SCHNELLEN, a subject of the German Emperor, residing at 47 Westwall, in the town of Crefeld, Germany, have invented new and useful Improvements in Machines for Making Ornamental Impressions on Piled Fabrics, of which the following is a specification.

The present invention relates to an improved construction of machines for making ornamental impressions on piled fabrics, such as velvet, plush, and the like. The principles on which such machines are generally constructed, are of three kinds:—(1.) The fabric is passed between two rollers one of which is adapted to make the respective impressions on the said fabric; (2.) the same method as in the previous example with the difference that the press roller rotates slower than the fabric and therefore somewhat slides on the same; and (3.) the fabric is passed with its reversed side against the rotating press roller, so as to slide with its piled side over a heated, stationary, surface. Machines constructed according to these principles have certain disadvantages: In the first instance the impressing parts of the roller descend on the top of the pile, thus causing the threads to break and fall irregularly, so that the impressions get a dull, unfavorable, appearance; in the second instance the impressions on the fabric become larger than the corresponding figures on the press roller and therefore appear with indistinct outlines; and in the third instance the pile of the fabric suffers more or less from the contact with the heated surface, which again results in indistinct impressions. Through the improved construction of the machine, said disadvantages are completely obviated. The ornamental figures impressed on the piled fabric are made to correspond exactly with those on the press roller, the threads of the pile are bent uniformly and quite straight and are pressed down all in the same direction, so that the impressions become glossy and assume the appearance of having been woven, and, lastly, the unimpressed parts of the pile do not suffer from contact with any heated surface.

In the annexed drawing the invention is illustrated by way of example.

The letter *a* indicates the press roller, *b* the fabric, *c* the pile of the fabric, and *d* a table which at *e* is provided with a quite straight and rather sharp edge.

The *modus operandi* is as follows:—The fabric is passed in the direction of the arrows with the back side over the edge *e* and under the press roller *a*, the axis of which is arranged perpendicular with said edge *e*. The roller is, when working, pressed against the edge *e*, but is adapted to be raised by suitable means. Before passing the edge *e*, the threads of the pile have a horizontal position. Having passed said edge, however, they assume a vertical position on the table *d*. At the moment of changing position at *e*, the threads are divided and form, therefore, at said edge a constant gap. If now the press roller is placed on the edge *e* and rotated together with the fabric, the impressing parts of said roller will meet the threads in their horizontal position, *i. e.*, the threads will fall flat on said parts and be pressed by them, during the rotation, uniformly and in perfectly straight condition to the fabric. The impressions thus made on the fabric will be even and glossy and assume a woven appearance; the outlines of the figures will be sharp and distinct and completely in accordance with the pattern on the press roller.

For the purpose of subjecting the fabric for a longer time to the pressure of the roller, the table *b* may be constructed so that its surface, from the edge *e*, for some distance more or less coincides with the section of the press roller. The fabric may also be passed half a turn or more around the roller, whereby the same result is obtained. The press roller *a* may, of course, be adapted to be heated, and all other, usual, mechanical arrangements may be applied to the machine, as long as the principle of passing the fabric between an edge and a press roller, the axis of which is placed perpendicular to said edge, is adhered to.

I claim:—

In a machine for making ornamental impressions on piled fabrics, a table provided

with a straight and rather sharp edge, a press roller adapted to press the fabric against said edge and arranged so as to rest with its axis perpendicular to said edge, so that the impressing parts of said roller descend in the gap formed by the pile at said edge and so that the threads of said pile fall flat on said impressing parts, substantially as set forth.

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