

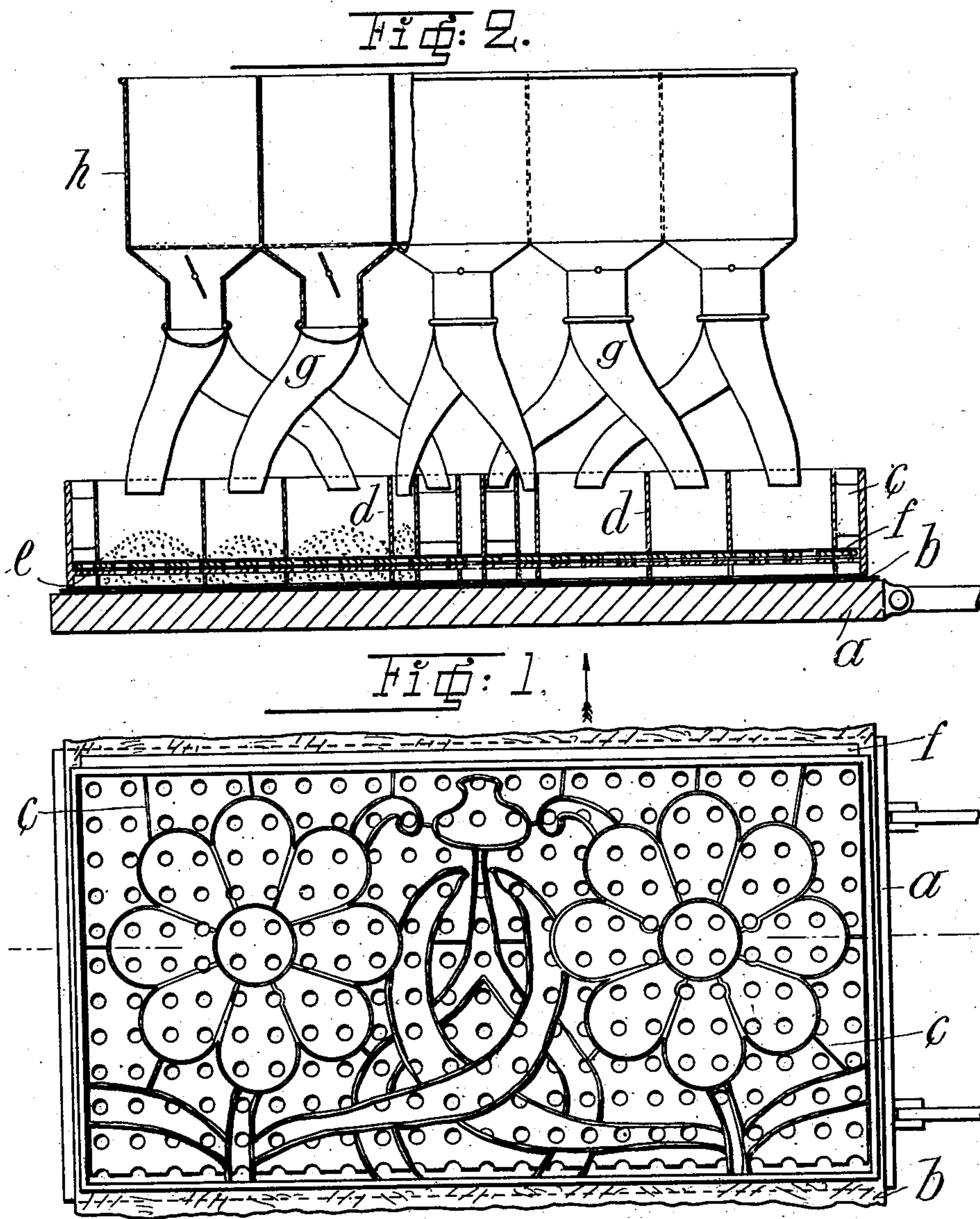
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F. K. MAGNUS AF EKSTRÖM.
METHOD OF MANUFACTURING LINOLEUM CARPET.

APPLICATION FILED APR. 4, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDRIK KONSTANS MAGNUS AF EKSTRÖM, OF STOCKHOLM, SWEDEN.

METHOD OF MANUFACTURING LINOLEUM CARPETS.

SPECIFICATION forming part of Letters Patent No. 754,581, dated March 15, 1904.

Application filed April 4, 1903. Serial No. 151,088. (No model.)

To all whom it may concern:

Be it known that I, FREDRIK KONSTANS MAGNUS AF EKSTRÖM, captain of the army, of Mästersamuelsgatan 45^A, Stockholm, in the Kingdom of Sweden, do hereby declare the nature of my invention for an Improved Method of Manufacturing Linoleum Carpets in Multicolored Patterns and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement.

My invention relates to a method of manufacturing linoleum carpets in multicolored patterns.

The invention consists in feeding the linoleum composition in the shape of powder from a holder having several compartments containing said composition intermingled with different coloring-matters down into corresponding divisions or compartments of a stencil or stencil-tray beneath which is divided to conform to the pattern required and rests on the cloth, serving as backing for the carpet, said stencil being advanced, together with the cloth, through a distance corresponding to the length of the stencil and at the same time (together with the cloth) given a shaking motion, whereupon it is lifted and returned to its starting-point to be subsequently advanced repeatedly with the cloth. The linoleum composition or mixture is thus caused to be distributed in a layer of uniform thickness over the portion of the cloth which is covered by the stencil to a certain depth and in colors and forms determined by the pattern of the stencil. In order that the linoleum composition may not continue to drop from the stencil in its return movement, whereby a spoiling of the pattern colors last applied would take place, the stencil is provided with a sliding bottom, by means of which its contents can be shut off and retained while the stencil is being moved back. The cloth thus provided piece by piece with the pattern formed by layers of pulverized-linoleum composition of different colors, according to the figure or design represented by the stencil, said layers being applied the one after the other, continues its motion to a pair of heated rollers, and the linoleum layers

in passing between said rollers are compressed to solid fields, as in ordinary linoleum carpet.

In the accompanying drawings the apparatus referred to is illustrated in a plan view in Figure 1, the color-holder being removed and in a vertical section in Fig. 2.

It consists of a support *a* for the cloth *b*, said support being movable, together with the latter, while at the same time it can be set into a rapid shaking movement—for instance, up and down or transversely, in the latter case by means of a pair of arms connected with the support and a rapidly-rotating crank-shaft. Resting on the cloth is a stencil *c*, adapted to be secured to the support and formed by a frame into which partitions *d* are inserted corresponding to the form of the pattern. In the frame is located a horizontal bottom *e* at a distance from the bottom edge of the frame corresponding to the depth of the layer of linoleum to be applied on the cloth. This bottom is provided with fine perforations arranged in rows and at distances apart which are equal to or greater than the diameter of the perforations, counting in the direction of motion of the cloth or at right angles thereto. On this fixed bottom rests another bottom, *f*, arranged to slide in the said direction or at right angles thereto, and being likewise perforated, with its perforations arranged as in that first mentioned. Pieces of hose or tubes *g* lead to the different compartments of the stencil from the respective compartments or pockets of a superposed holder *h* for linoleum composition of different colors, which composition in its granular or pulverized state during the shaking motion of the apparatus drops into the compartments of the stencil and through the perforations of the bottoms onto the cloth, where it collects in layers according to the shapes of the pattern. The object of the holes in the bottoms is to distribute the composition uniformly in the corresponding compartment, so as to give the layer the same depth everywhere. When the stencil, together with its support and the cloth, has been moved through a distance corresponding to the length of the stencil, it strikes against a stationary abutment, whereby the shaking mechanism be-

comes disconnected, (the means for effecting this not being shown in the drawings, as it may be arranged in various ways,) whereupon the stencil is lifted from its support and, together with the latter, returned to its original position, where the stencil is once more deposited on the cloth and the shaking device automatically set in motion. When the advancing movement of the stencil ceases, the bottom *f* is automatically pulled out sufficiently to cause its rows of perforations to come opposite the spaces between the rows of perforations in the lower bottom, so that the linoleum composition resting on the bottoms cannot continue to drop on that spread over the cloth.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. An improved method of manufacturing linoleum carpets in multicolored patterns, consisting in placing on a longitudinally-movable web of cloth a form or stencil divided into compartments conforming to the pattern required and divided off by a perforated horizontal bottom, setting said stencil in a shaking motion while its compartments through tubes or passages are being filled with linoleum compositions of the required colors from a superposed holder divided into corresponding compartments or pockets, and letting this form or stencil accompany the web of cloth in its motion through a distance equal to the length of the stencil subsequently closing the perforations of the aforesaid bottom and returning the form or stencil to its starting position while the web of cloth continues its movement to a pair of press-rolls between which the layer of linoleum on the web is pressed.

2. The herein-described method of manufacturing linoleum carpets of multicolor patterns

consisting in feeding upon a cloth backing, through a patterned stencil carried thereby, powdered, colored linoleum compositions, the backing and stencil being vibrated during the feeding of the compositions, and finally subjecting the backing with the compositions thereon to pressure, substantially as set forth.

3. The method herein set forth of manufacturing multicolored linoleums consisting in mounting a cloth backing for longitudinal and vibratory movement, placing a stencil divided into the desired pattern upon said cloth, feeding linoleum compositions upon the cloth through the said stencil, vibrating the cloth and the stencil carried thereby during the feeding of the compositions, and conducting the backing with the compositions thereon through pressure means, substantially as and for the purpose set forth.

4. The herein-described method of manufacturing colored linoleums consisting in mounting a cloth backing for vibratory and longitudinal movement, placing thereon a stencil provided with pattern-forming compartments and being divided off from the backing by interposed perforated bottoms, feeding colored linoleum compositions into the compartments of the stencil, vibrating the backing and stencil during the feeding of the compositions, closing the perforations of the interposed bottoms upon the cloth and stencil being moved longitudinally a distance equal to the length of the stencil to stop the feed of the compositions, and then subjecting the backing with the compositions thereon to pressure, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

FREDRIK KONSTANS MAGNUS AF EKSTRÖM.

Witnesses:

H. ICLANDER,
T. RISBERG.