W. JOULE.

LINOLEUM RUG MANUFACTURE.

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1,310,346.

Patented July 15, 1919.

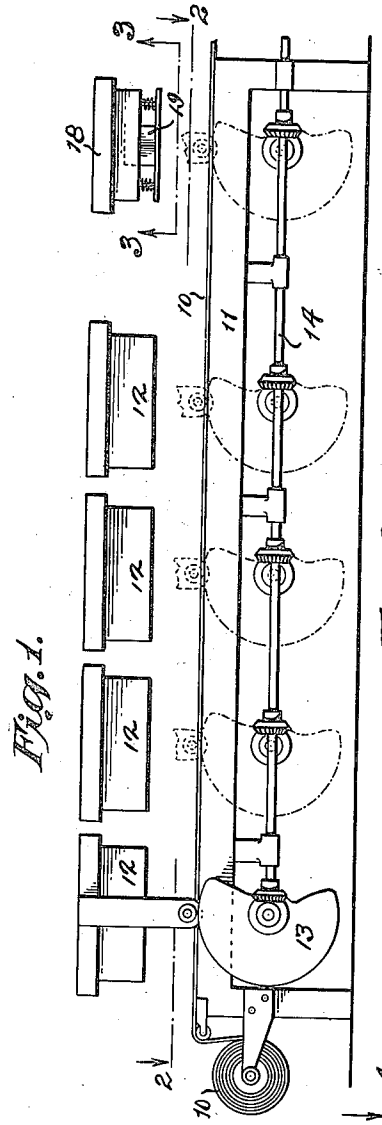


Fig. 1.

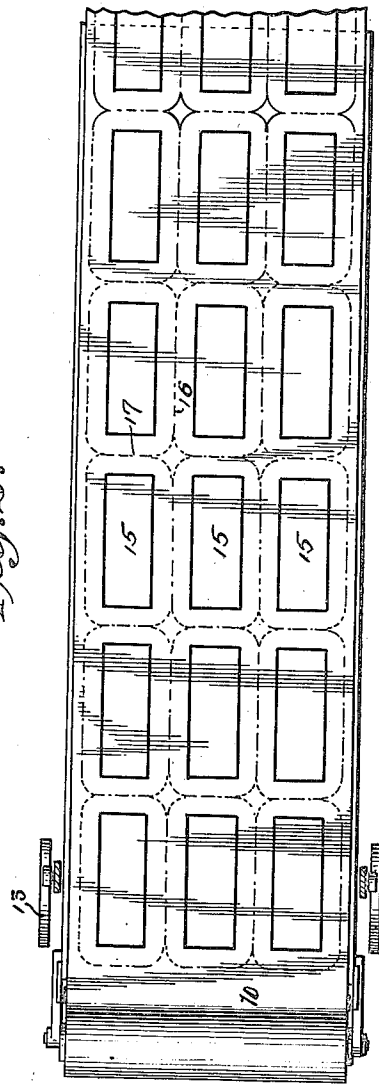


Fig. 2.

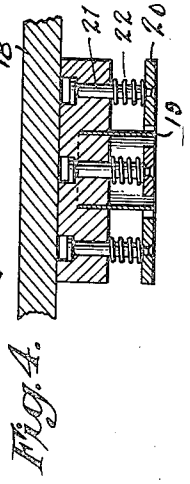


Fig. 4.

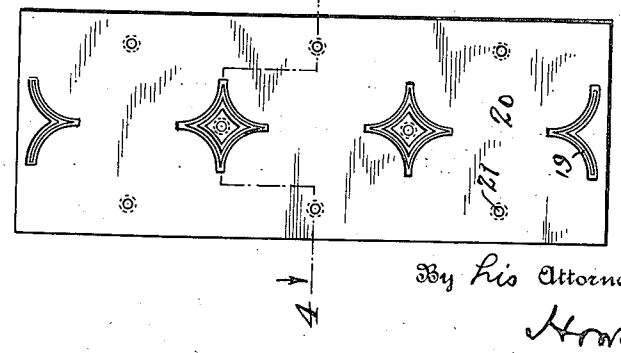


Fig. 3.

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UNITED STATES PATENT OFFICE.

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LINOLEUM-RUG MANUFACTURE.

1,310,346. Specification of Letters Patent. Patented July 15, 1919.

Application filed October 25, 1917. Serial No. 198,473.

To all whom it may concern:

Be it known that I, WILLIAM JOULE, a citizen of the United States, residing in Kearney, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Linoleum-Rug Manufacture, of which the following is a specification.

My invention relates to linoleum rug manufacture and particularly to the method of cutting rugs from the web upon which they are printed, the object of my invention being to obviate the necessity of hand-cutting the rounded corners of the rugs.

In the accompanying drawings,

Figure 1 is a schematic representation of a linoleum printing apparatus in which my invention is embodied;

Fig. 2 is a plan of the web of linoleum showing the method of operation;

Fig. 3 is an enlarged bottom plan of the cutter plate;

Fig. 4 is a cross section on the line 4—4, Fig. 3.

In the manufacture of printed linoleum rugs, it is customary to feed a wide web 10 of linoleum intermittently over the printing table 11, above which are arranged the printing plates, diagrammatically illustrated at 12, and by which the several colors of the pattern are impressed upon the web at successive steps as the web is advanced. The printing blocks are operated in synchronism by a series of cams 13 geared to a shaft 14, extending lengthwise of the table 11, after the fashion of the apparatus shown in the Eisenhardt Patent No. 476,135.

The web 10 is of sufficient width to accommodate two or three rugs 15 arranged side by side on the web, and it is consequently necessary to cut the web at the points indicated in dot and dash lines, Fig. 2, to separate the several rugs. It is ordinarily desired to provide the rugs with rounded corners. While it is a relatively simple matter to make the longitudinal and transverse straight cuts 16 and 17 by hand, as it is customary, it has been found difficult to cut the rounded corners uniformly and expeditiously by hand. I have now provided the press with an additional element by which the corners are cut automatically before the web leaves the printing table, thus limiting the subsequent hand operation to the straight longitudinal and transverse cuts which are not difficult to accomplish properly.

To this end I have arranged above the printing table 11 a cutter block 18 carrying on its lower face curved cutter blades 19, shaped to the desired radius for the rug corners and properly spaced transversely of the web to slit the latter, through an angle of 90°, at the rug corners as indicated in Fig. 2. In addition to the blades 19, each block 18 carries a stripper plate 20 with guide pins 21 and springs 22. The block 18 is longitudinally adjustable along the table 11 in like manner as the printing blocks 12 to vary the position of the cut in accordance with the variation of the size of the rugs. The operation of the cutter is synchronized with that of the printing blocks. In fact, a printing block may be utilized as the mount for the cutter, and its method of support and operation are identical.

If rugs be printed extending the full width of the web 10, the diamond-shape cutters operating upon the mid portion of the web would be omitted, leaving only the V-shaped marginal cutters at each side.

The operation is readily understood. As the web is fed forward step by step, the printing of the rugs in their several colors is completed. At each impression, the cutter block 18 descends simultaneously with the printing blocks 12 and slits the web at the corners of the rugs as indicated in Fig. 2. The cuts are made at opposite ends of the rug at successive operations, those at the adjacent ends of successive rugs being made simultaneously. Only the longitudinal and transverse cuts remain to be effected by hand. A much more uniform corner cut is thus obtained, as well as a much more expeditious handling of the web than has heretofore been possible where the rug corners, as well as the sides and ends, have been cut by hand.

I claim as my invention:

1. In a linoleum printing machine, a series of intermittently operated printing blocks, a cutter block spaced therefrom longitudinally of the printing table, means for operating said cutter block simultaneously with the printing blocks, and arcuate knives on said block for slitting the web at the rug corners and leaving the separate printed rugs uncut between the points of slitting simultaneously with the printing of the web.

2. In the manufacture of floor coverings, a stationary combined printing and cutting table, means for passing thereover a continuous web of floor covering material, a series of different color printing blocks spaced lengthwise of the web above said table, each of said blocks serving to print simultaneously a plurality of rugs transversely of the web, means for intermittently pressing said blocks upon the web to print simultaneously thereon at successive steps the several rug colors, and cutters operating at one point simultaneously with the printing blocks to slit the web at the corners and thereby leaving the several rugs uncut between the points of slitting of the several rugs printed side by side transversely of the web.

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

WILLIAM JOULE.