

(Specimens.)

J. MURPHY.  
PROCESS OF MANUFACTURING MULTICOLORED PATTERNS OF  
VULCANIZED RUBBER.

No. 543,583.

Fig. 1 Patented July 30, 1895.

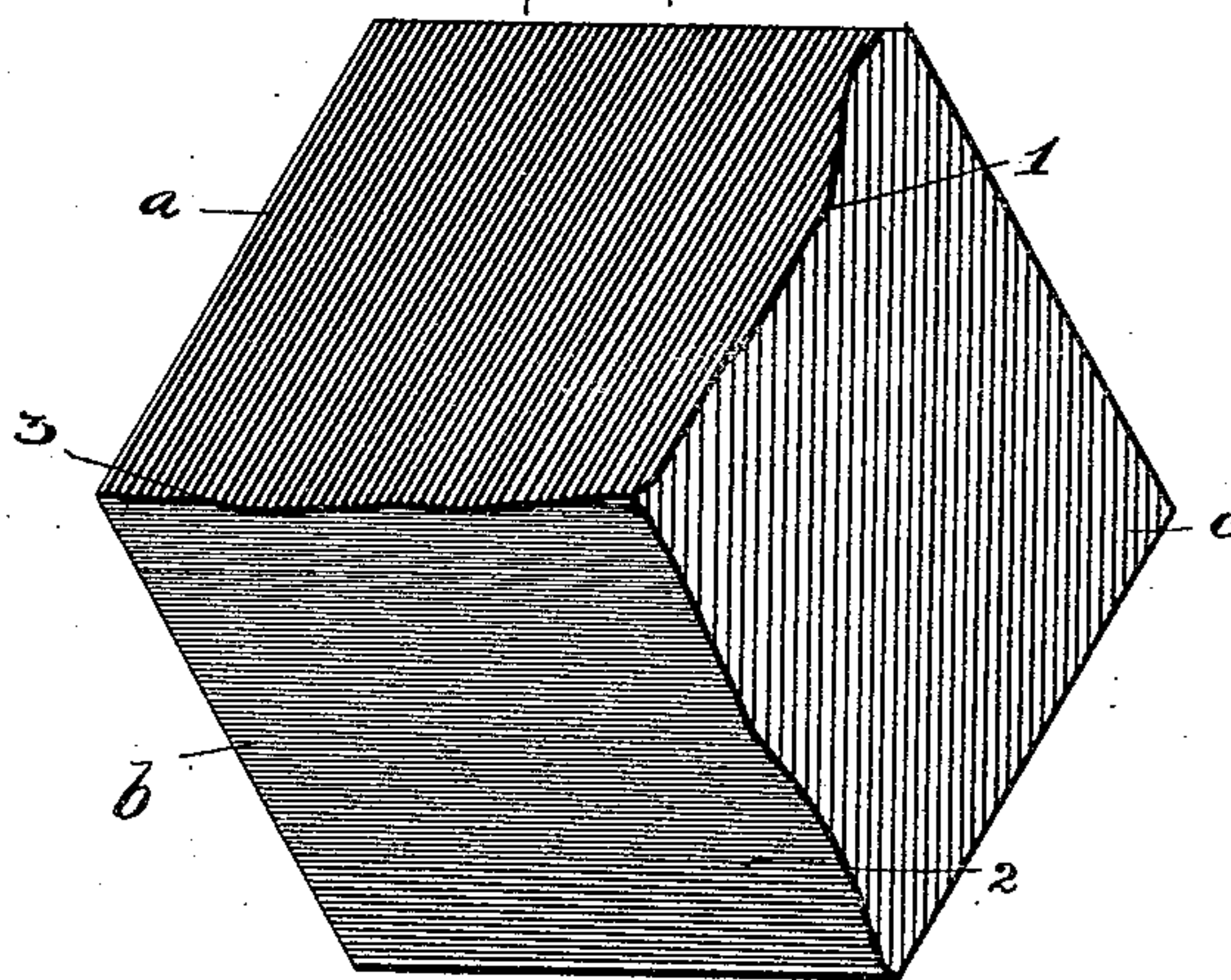


Fig. 2

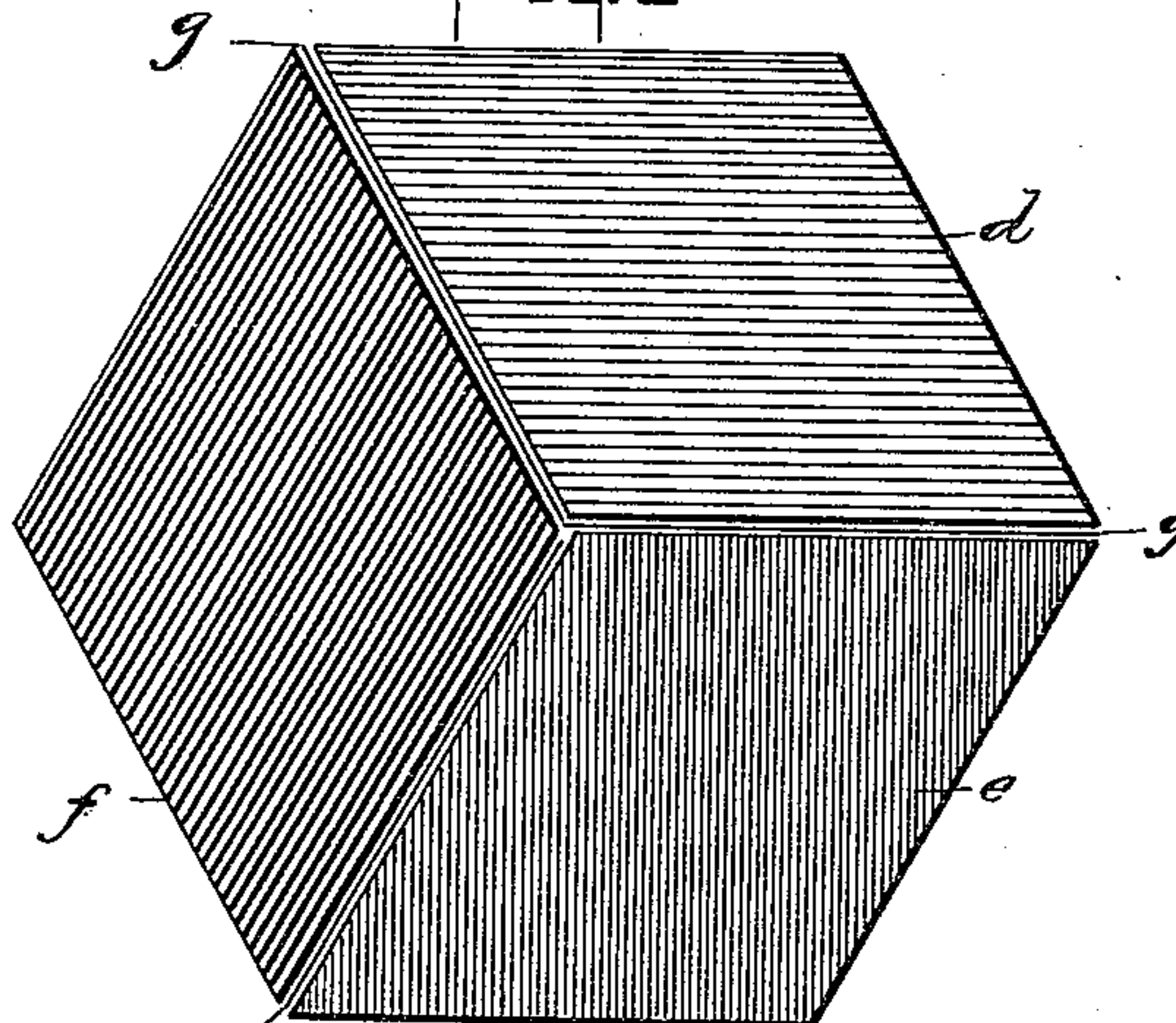
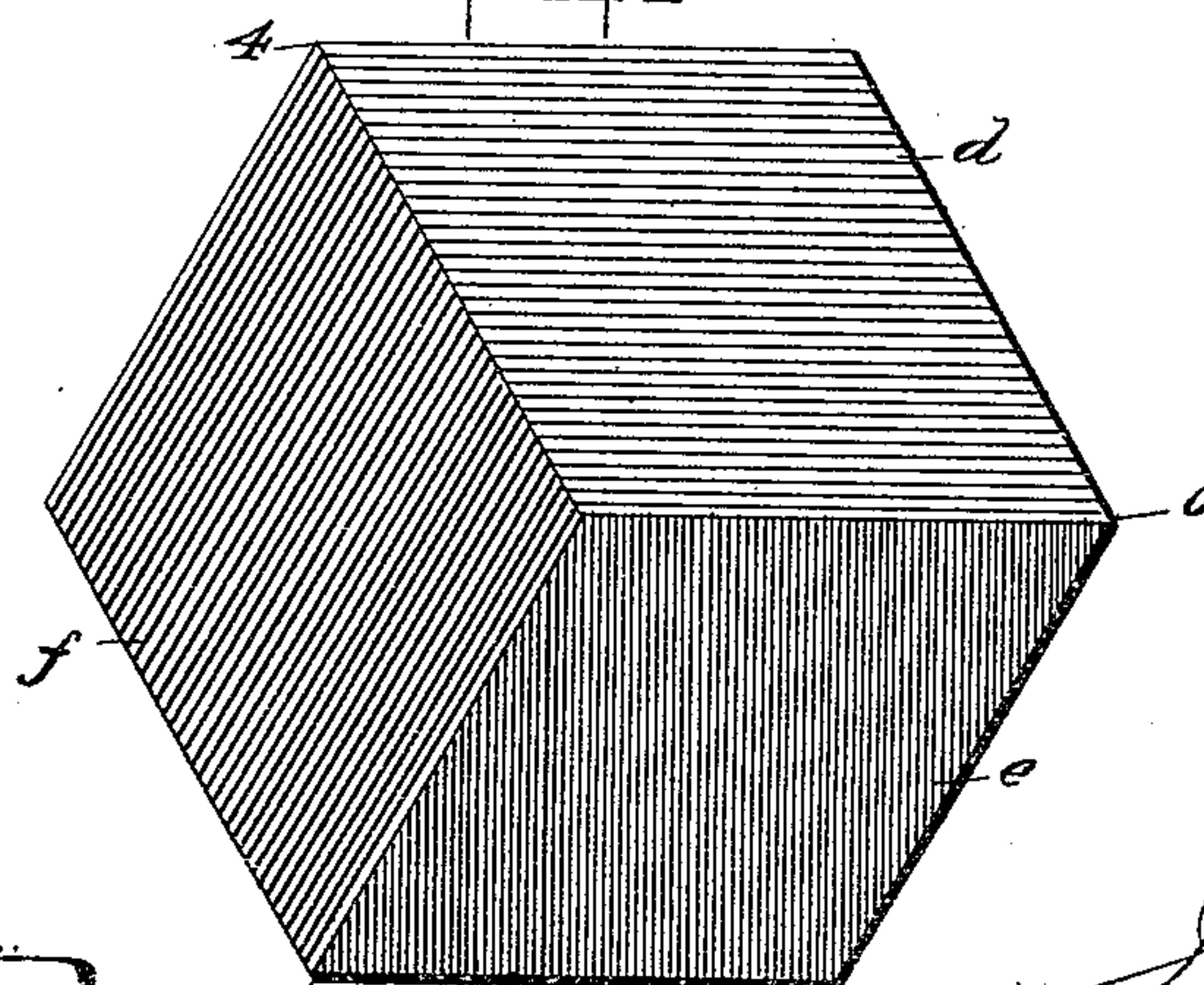


Fig. 3



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN MURPHY, OF BROOKLYN, NEW YORK.

PROCESS OF MANUFACTURING MULTICOLORED PATTERNS OF VULCANIZED RUBBER.

SPECIFICATION forming part of Letters Patent No. 543,583, dated July 30, 1895.

Application filed May 8, 1895. Serial No. 548,501. (Specimens.)

*To all whom it may concern:*

Be it known that I, JOHN MURPHY, a resident of Brooklyn, Kings county, State of New York, have invented certain new and useful  
5 Improvements in the Process of Manufacturing Multicolored Patterns of Vulcanized Rubber, of which the following is a specification.

My invention relates to the production of multicolored patterns or tiles of vulcanized  
10 india-rubber; and it consists in the process and article of manufacture hereinafter set forth and claimed.

Multicolored tiles of india-rubber have heretofore been made in the following manner:  
15 The rubber for each specified color was first produced in the form of a sheet; thus a blue sheet and a green sheet and a red sheet of unvulcanized india-rubber were made. Unvulcanized sheets or raw sheets in the various colors having been produced, there were  
20 cut from each sheet the pieces of the desired forms, such as lozenge form or whatever may be made. The raw pieces cut from these sheets were then adjusted in conjunction with  
25 one another to produce the desired tile, which necessarily, owing to this mode of formation, could only be a very small tile of about three, or a few more than three, specific pieces. When these raw pieces had been laid side by  
30 side they were vulcanized conjointly—that is to say, the entire small tile was vulcanized. Now the effect is, and it has been found so in the preparation of such goods, that in the act of vulcanizing the exactness of outline was  
35 lost, the soft rubber during the first stages of vulcanizing flowing from one piece to the other, and thus the colors which were intended to produce the specific outlines would flow over, rendering the lines irregular and blending  
40 to an extent the design instead of making it as sharp as required. The present invention avoids all these difficulties and enables me to produce tiles of much larger size than heretofore, tiles which will be as large as  
45 twelve or more inches in either direction.

My invention will be understood by reference to the accompanying drawings, in which—

Figure 1 is a representation of the old form  
50 of tile. Fig. 2 represents my new tile in process of formation. Fig. 3 represents a completed tile.

Referring particularly to Fig. 1, it will be

seen that this figure represents a hexagonal tile consisting of three lozenge-shaped tiles  
55 *a*, *b*, and *c* of different colors. This tile is made in the old way—that is to say, the lozenges are cut out from sheets of unvulcanized rubber and placed side by side in a mold and  
60 thereupon vulcanized. By this process, however, portions of the various sections *a*, *b*, and *c* fuse or flow over onto the adjacent section and thus the lines of demarcation 1 2 3 between the sections are irregular, producing a  
65 tile of irregular unsymmetrical appearance. Now by my invention I take a number of sections *d*, *e*, and *f* of different colors from partially-vulcanized sheets of rubber—that is to  
70 say, the rubber is brought to the proper vulcanizing temperature and the vulcanization arrested after a short period, so that the sheets are only partially vulcanized. These  
75 sections *d e f* are laid side by side and films or strips *g* of unvulcanized rubber are laid in the joints, as shown. The whole tile is there-  
80 upon put in a mold and completely vulcanized, the strips *g* assisting in preventing the spread or flowing of the colored sections one to another. There is thus produced a tile, as shown  
85 in Fig. 3, in which the lines of demarcation 4 5 6 between the tile-sections are sharply marked. These strips or films *g* may be uncolored or of a neutral color. I may also cut the sections from raw rubber and partially  
90 vulcanize them before placing them together, if such a step is deemed advisable.

What I claim, and desire to secure by Letters Patent, is—

1. In the art of making multi-colored tiles of india rubber, the process which consists in  
95 first semi-vulcanizing the sheets of various colors, in then cutting out small pieces of these semi-vulcanized sheets, in then laying these semi-vulcanized sheets side by side in the form of a tile, interposing between them  
100 unvulcanized films of india rubber, and thereupon proceeding to completely vulcanize the entire tile.

2. Multi-colored india rubber tiles consisting of fully vulcanized tile sections and interposed films of india rubber.

JOHN MURPHY.

Witnesses:

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F. J. MORRIS.