

(No Model.)

A. J. LE CLAIR.
STAIR PAD OR THE LIKE.

No. 567,985.

Patented Sept. 22, 1896.

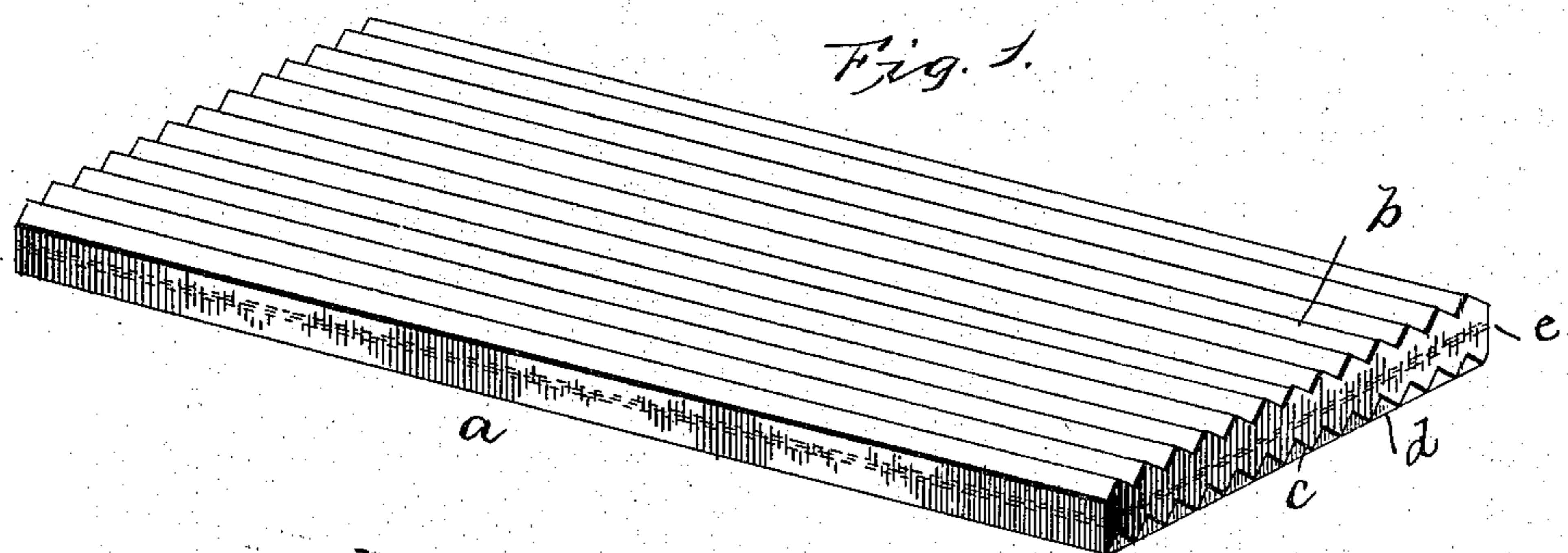


Fig. 2.

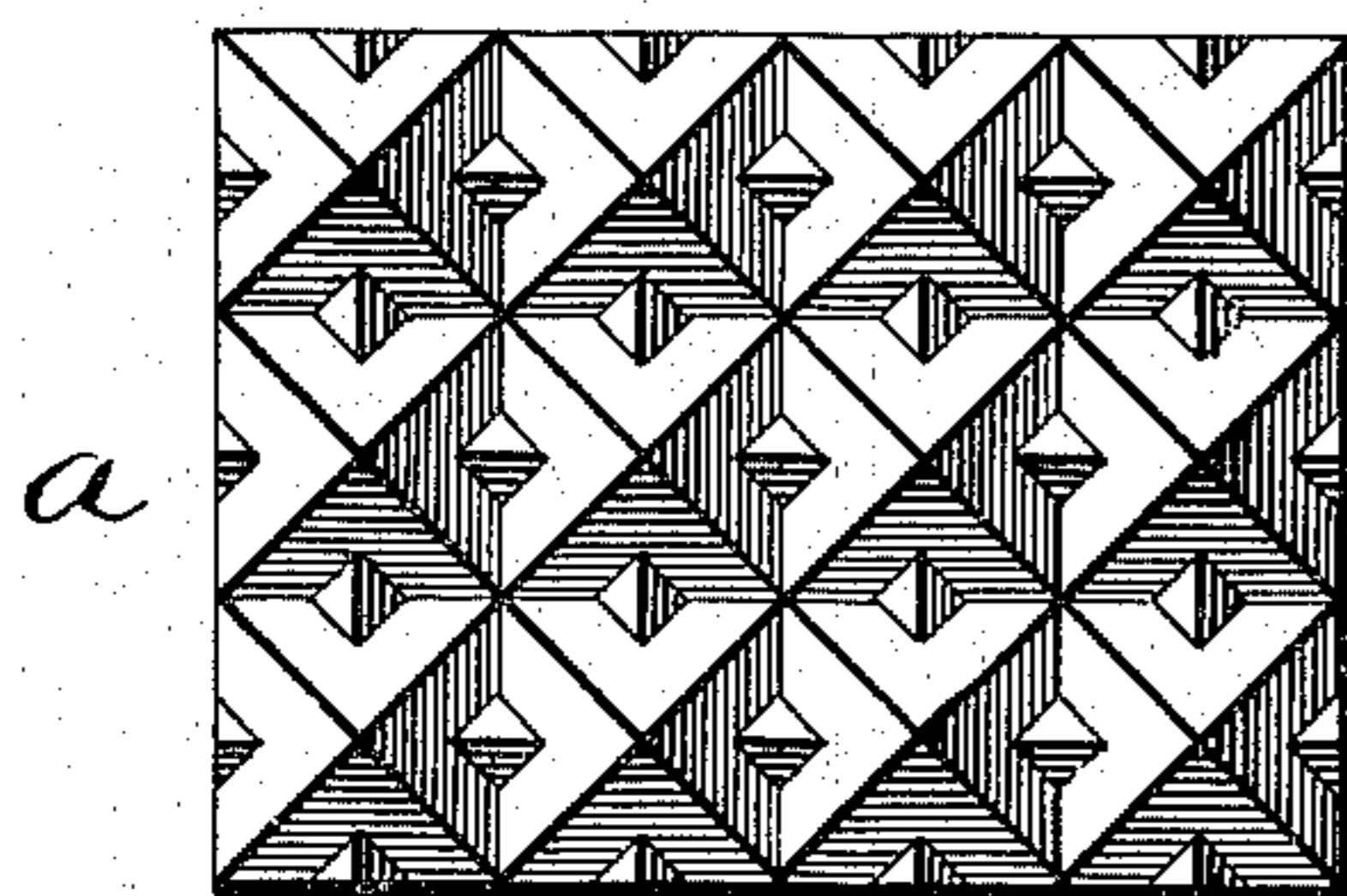


Fig. 3.

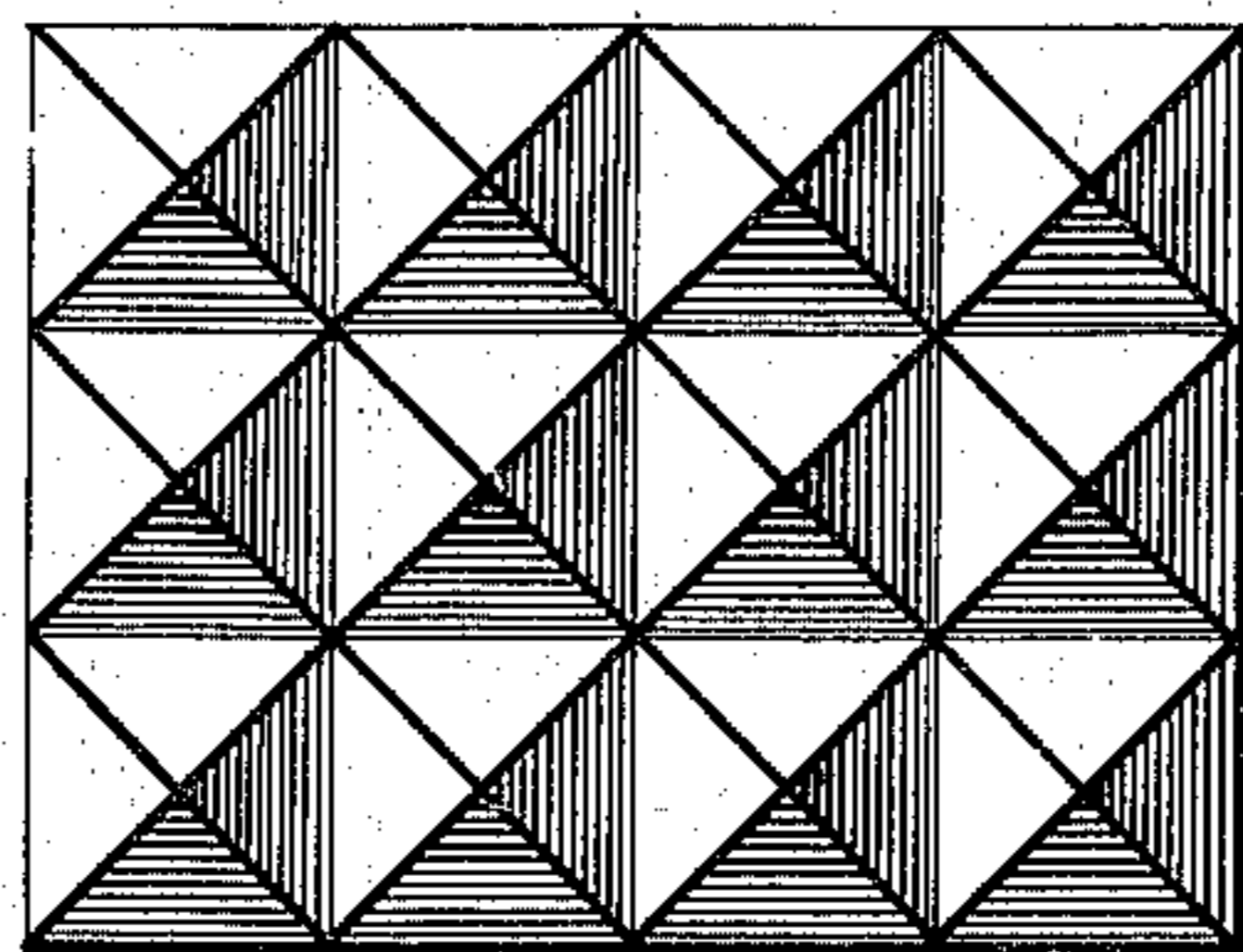
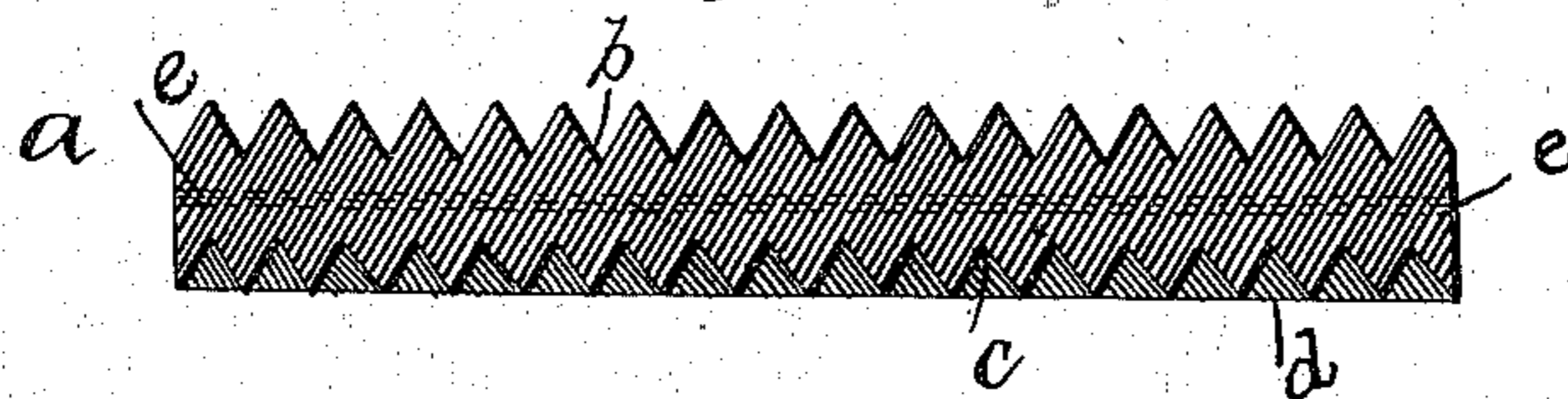


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALFRED J. LE CLAIR, OF NEW YORK, N. Y., ASSIGNOR TO THE MINERALIZED RUBBER COMPANY, OF NEW YORK.

STAIR-PAD OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 567,985, dated September 22, 1896.

Application filed June 16, 1896. Serial No. 595,823. (No model.)

To all whom it may concern:

Be it known that I, ALFRED J. LE CLAIR, of New York, in the county and State of New York, have invented certain new and useful Improvements in Stair-Pads or the Like; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention has for its object the manufacture of rubber carpet, tread, matting, step or stair pads, and similar articles in rubber or its compounds, which may be corrugated, embossed, or otherwise prepared with surface patterns and which will be destined for use under foot or other similar purposes in such a manner as to greatly prolong the life, wear, and usefulness thereof. Heretofore rubber carpet, tread, pads, and other articles destined to be laid down as floor or other underfoot covers have been manufactured in lengths as convenient or made in special sizes and have had the corrugations or patterns stamped or embossed on one side only, and from necessity these corrugations or patterns have only penetrated a portion of the whole thickness of the tread, mat, carpet, or other similar article. Consequently when these corrugations or other surface patterns, whether designed for purpose of ornamentation or intended to prevent slipping, were worn off the tread, carpet, matting, pad, or other similar article has become useless. To prevent this waste which has heretofore existed, I propose to place the corrugations or embossing on both sides of the carpet, mat, tread, pads, or other similar articles required to be manufactured.

Referring to the accompanying drawings, Figure 1 is a perspective view of my improved pad. Figs. 2 and 3 are top plan views showing different patterns of my pad. Fig. 4 is a cross-sectional view of the pattern shown in Fig. 1.

Like letters of reference mark the same parts through the different views.

a indicates a stair-pad, mat, or carpet provided with longitudinal grooves *b c*, as shown

in Fig. 1, or with raised surfaces or configurations, as illustrated in Fig. 2. These surfaces are formed on both sides of the pad, as hereinafter described, and where so formed, as to contain longitudinal grooves a large number of such pads can be closely packed together for shipment, as the raised surfaces of one pad can be placed or inserted in the grooves of the next adjoining pad in transportation, so that the amount of space required in packing is considerably reduced and a smaller space is consequently required for the reception of such pads than has heretofore been the case. Heretofore the impression, whether corrugation or embossing, has been obtained by means of a mold or plate of metal or other suitable material, which had the pattern desired to be impressed on the rubber, cut, engraved, or otherwise placed thereon; and this mold or plate has generally been used in the press, vulcanizer, or other machine in which the rubber tread, carpet, pad, or similar article was vulcanized or cured by means of heat applied after the raw rubber had been properly mixed with the other necessary or desirable compounds to obtain the requisite consistency, durability, and other desirable qualities, (having a due regard to cost,) together with sufficient sulfur or other vulcanizing material to insure the proper vulcanization of the rubber when subjected to heat for that purpose.

The bottom part of the mold, plate, or other device used to obtain the pattern has heretofore been plain. In some cases the mold or plate had no bottom, but was simply a metal plate placed on the surface of the rubber about to be cured or vulcanized, the posterior surface of such rubber resting on the bottom plate of the press or mold, or in other position, as most convenient. Now I prepare a plate or mold for the bottom of the tread, carpet, pad, or other similar rubber article about to be produced, with an impression engraved or otherwise effected on said bottom plate or mold, which, when the rubber tread, pad, carpet, or other similar article required to be produced is placed in contact with in the course of vulcanization or curing said rubber article has produced thereon an impression or fluting, corrugation, or otherwise, as desired, in the same manner as it is obtained

at present by the top plate, mold, or other method, thus producing a rubber tread, carpet, pad, or other similar article, corrugated, fluted, or embossed, as may be desired, on both top and bottom; and while this pattern or impression so produced may commonly be the same or a similar pattern on both top and bottom of the rubber carpet, pad, tread, or other similar article produced, yet I do not confine my claims wholly thereto but claim to produce any desired impression on the top surface or on the bottom surface, which patterns or corrugations may, if desired, be dissimilar to each other, this by the means herein described. The utility of this is obvious. Tread, carpet, stair-pads, or other similar articles, designed for wear underfoot or other similar or useful purposes, are often discarded as useless merely because the corrugations or pattern are worn off the surface. By my process I am enabled after the first surface is worn or impaired, or indeed at any time, to turn over and reverse the carpet, tread, pad, or other similar article and present a new surface, and to all intents a new carpet, tread, pad, or other similar article, as in most cases the body or strength of the material is unaffected by the mere wearing off of the surface pattern. In obtaining this result I claim no special method of manufacture, except as herein described, to produce the pattern or embossing on both surfaces.

I have not described any particular means for preventing the wear of the underneath portions of the pad caused by the pressure on the upper portion thereof, but if desired any suitable flexible material might be interposed between the floor and the side of the mat or carpet bearing against the floor, so that the raised portions thereof will be protected against wear.

In locations where the carpet or matting is subjected to great wear, such as public halls, railroad-stations, front doors, or the like, the probability would be that the corrugations or fluting would flatten, and to avoid this possibility I fill the under side of the fluted matting with suitable plastic or other material

d, which will readily separate itself when the matting is reversed or turned upside down. Thus it will be seen that the opposite side is preserved in its original contour and freshness and without the least defect from wear, the same as if it were new. I regard this filling of grooves, cells, or the like, of much importance in the light of economy, and inasmuch as it never has been done before I claim, broadly, any means by which the filling may be accomplished.

The article to be produced can be made of any of the various compounds or mixtures now used for similar articles which are corrugated on one side. It may contain one or more strengthening plies or layers of suitable cotton or other fabric, or it may be produced without such plies, as may be most desirable to the operator, and the various compounds, mixtures, or methods now in use may be followed without further change than above described or is necessary to produce the corrugation, fluting, embossing, or other pattern on the posterior as well as on the surface of the pad or other similar article.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A stair-pad composed of rubber or other flexible material provided on both sides with roughened or corrugated surfaces, and plastic material between the flutes or projections on the under side of the pad for the preservation of the roughened surface, as set forth.

2. A stair pad or carpet consisting of rubber or other flexible material having longitudinal grooves on both sides and plastic material interposed between said grooves on the under side of the pad, for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ALFRED J. LE CLAIR.

Witnesses:

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GEO. B. HEWLETT.