R. J. BELL.

MAT.

APPLICATION FILED JUNE 9, 1921.

1,425,830.

Patented Aug. 15, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

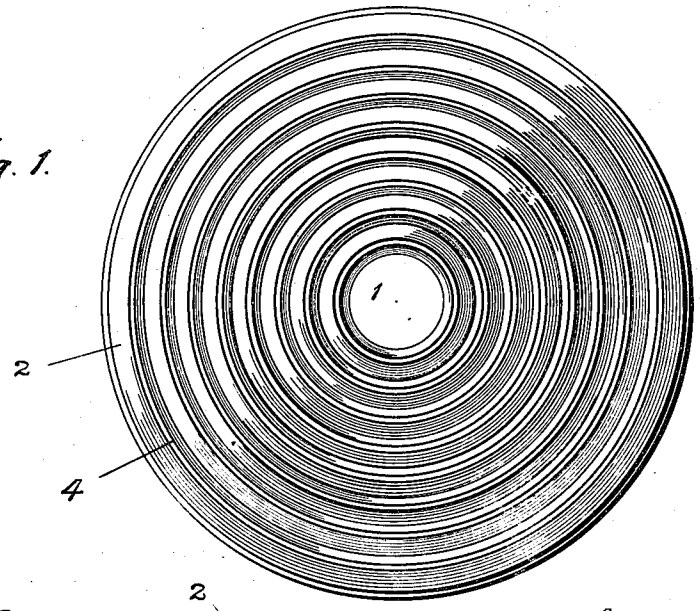



Fig. 2.

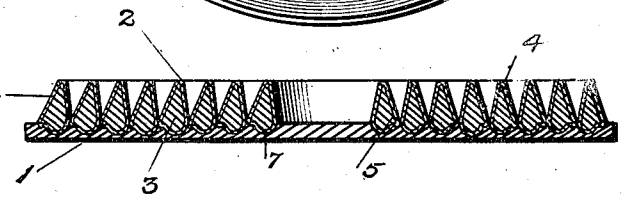
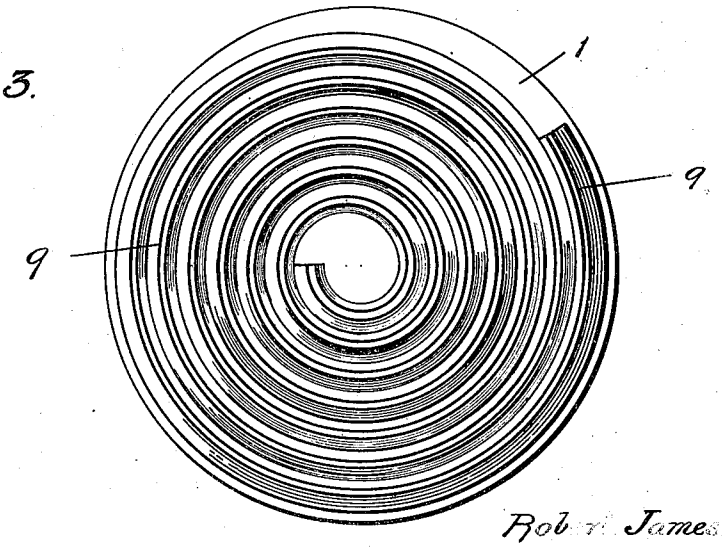



Fig. 3.




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2 SHEETS—SHEET 2.

Fig. 4.

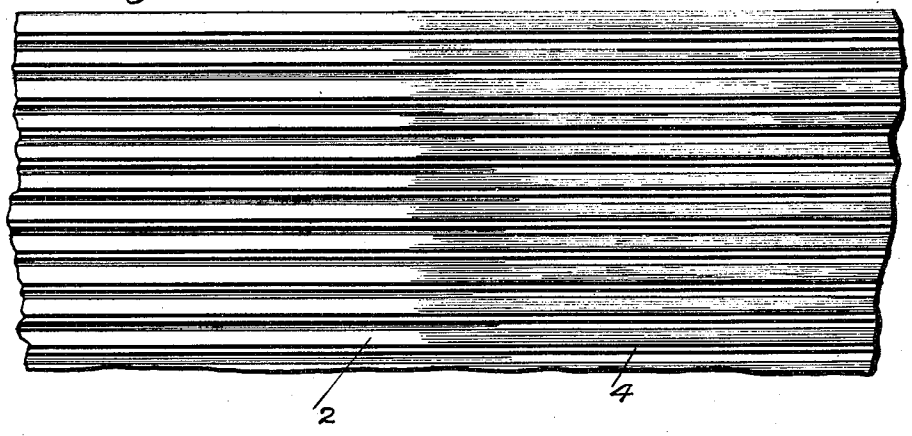



Fig. 5.

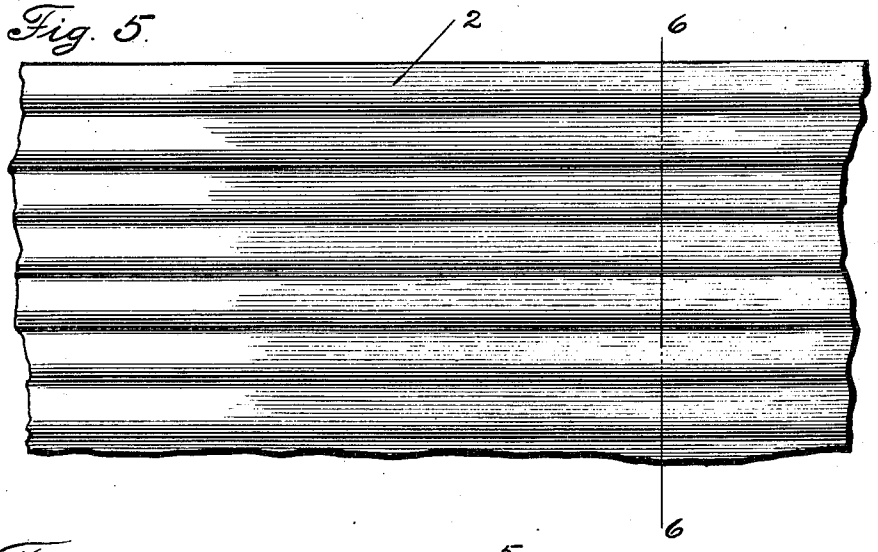
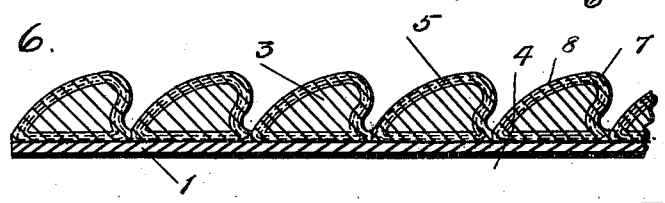



Fig. 6.




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# UNITED STATES PATENT OFFICE.

ROBERT JAMES BELL, OF RICHMOND, VIRGINIA.

## MAT.

1,425,830. Specification of Letters Patent. Patented Aug. 15, 1922.

Application filed June 9, 1921. Serial No. 476,195.

*To all whom it may concern:*

Be it known that I, ROBERT JAMES BELL, a citizen of the United States of America, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Mats, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to mats; and particularly to mats to be placed at the doors of residences, public buildings, and on the running boards of automobiles, ships' passageways, etc.

These articles are a necessity, but it is well known that their usefulness is of short duration because of wear. A door mat is primarily intended for removing mud and moisture from the shoes; and for convenience sake it is placed in a vestibule or on a porch where persons entering and leaving the building will walk upon it. In consequence it wears out rapidly. In its nature it must have an upper surface formed of bristles or ribs, and these as usually arranged or constructed wear so quickly that the cost of the mat is out of proportion to its term of use. To overcome this objection mats have been made of sheet or strip metal; but mats of this material, though useful for removing mud by scraping, injure the material of which the shoe is made.

The object of my invention is to provide a strong and durable mat which shall improve upon the structures heretofore in use.

In the drawings: Figure 1 shows one form in which my invention may be embodied. Figure 2 is a cross section. Figure 3 is a slight modification. Figure 4 shows the mat of rectangular form instead of circular; and Figures 5 and 6 illustrate a modified form of rib, Figure 6 being a section on line 6—6 in Figure 5.

Referring first to Figures 1 and 2: I provide a mat base of any desired material, such as rubber or fabric. Upon this base I mount a rubbing surface of peculiar construction. This consists of a series of rings or circular sections 2, each including an elastic core 3, preferably of rubber or rubber composition, and an outer casing 5 made of woven fabric with which is incorporated an elastic substance such as rubber. The resulting synthetic article is stiff and durable. This ring or section may be of any suitable form. For one class of mat I use it in a triangular form, and so set it upon the mat base 1 that the apex 4 of the triangle shall form the tread or rubbing surface of the mat. For another class of mat which is used more to provide a resilient, durable and non-slipping surface, I prefer that the upper surface of the section or ring be less pointed or abrupt, and more rounded or flat, so that it may present to the foot of the pedestrian a sufficiently even surface. This class of mat is illustrated in Figures 5 and 6; whereas the class of mat having the triangular form is illustrated in Figures 1, 2, 3, and 4.

To lessen the cost of manufacture, in making the several classes of mat, the section may be made of substantially triangular form, having one acute angle 4, a less acute and rounded angle 7, and a rounded side 8 adjacent to the rounded angle 7. Then, it will be noted, by simply changing the position of the section relative to the mat base 1 I can form both of the types of mats shown in Figures 2 and 6. In making the mat the section is placed in a form of suitable shape, and to the base of the section is applied a cement. Upon the base of the sections so arranged and cemented is laid the base mat, which I prefer to provide with a thin rubber surface, and the sections and the base mat are then "cured" or vulcanized together. The plurality of rings or sections so arranged on the base mat provide a surface of maximum strength with sufficient resiliency.

The mat surface need not be made of a series of separate sections or rings as shown in the figures just described. It may be made of a single length of material, as shown in Figure 3, where the convolutions 9 make up the series of sections 2. Or the section may be arranged to form any other design, geometric or otherwise. Likewise the mat need not be circular. It may be of rectangular form, as shown in Figure 4 and Figure 5.

Whether the mat be formed with upstanding sections or ribs as shown in Figures 1 to 4, or with flatter sections as shown in Figures 5 and 6, the flexible core 3 and the woven fabric casing 5 are maintained.

I claim as my invention:

1. In a mat, a base, a tread surface secured to said base and consisting of a plurality of sections each comprising a flexible core and a casing of woven fabric incorporated with a flexible material, said sections being substantially triangular in cross section to pro-

vide a series of spaced apart upstanding elements when assembled on the base.

2. In a mat, a base, and arranged upon the base a flexible rib of substantially triangular section, the said rib being formed of an elastic core and a woven fabric incorporated with an elastic substance and surrounding said elastic core.

3. In a mat, a base, a series of ribs secured to the base each rib being formed of a flexible core and a woven fabric incorporated with a flexible material and surrounding said flexible core, the ribs forming a series of spaced apart upstanding elements.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

ROBERT JAMES BELL.

Witnesses:
THOMAS BELL,
F. J. MANHART.