Oct. 13, 1959 E. F. McCLUNG 2,908,027

FLOOR MAT

Filed Aug. 4, 1958

Fig. 1.

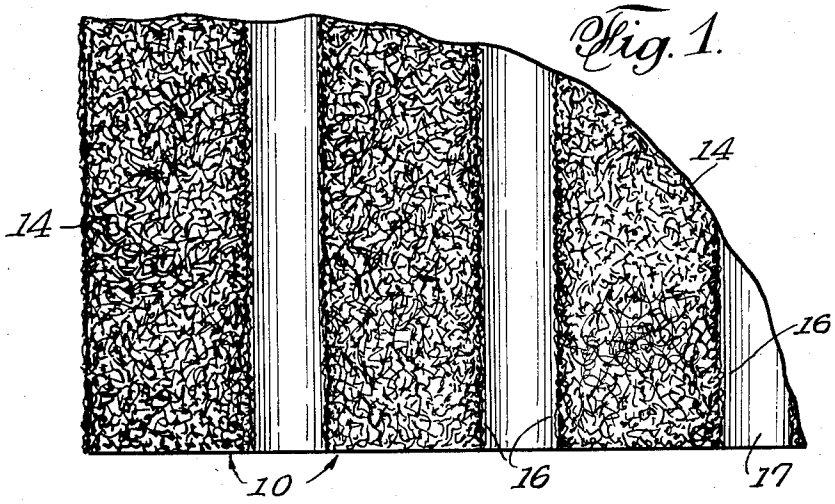


Fig. 2.

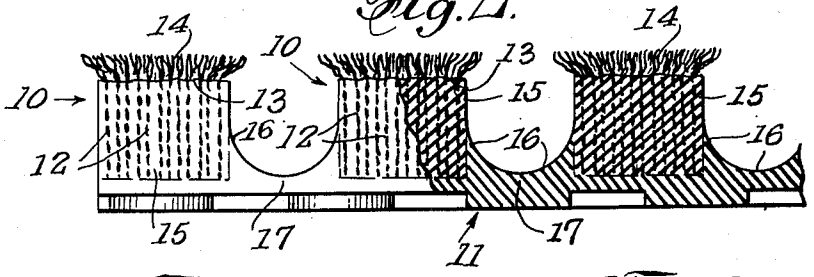


Fig. 4.

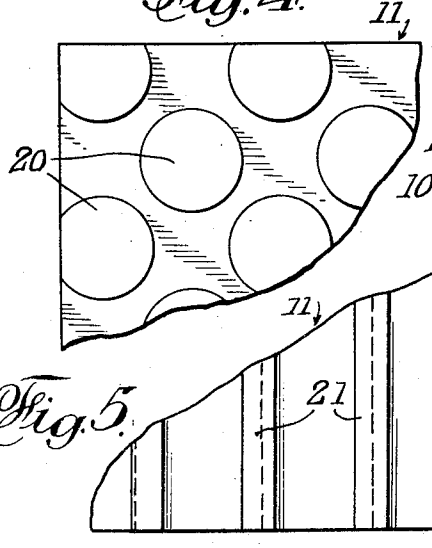


Fig. 3.

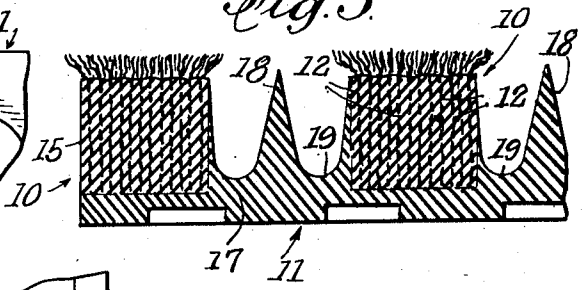


Fig. 5.

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FLOOR MAT

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Application August 4, 1958, Serial No. 752,866

6 Claims. (Cl. 15—217)

This invention relates to a floor mat and deals more particularly with a mat that is usually placed at entries and outside doors for intercepting and collecting street dirt.

An object of the present invention is to provide a strong and durable mat made of inexpensive materials.

Another object of the invention is to provide a floor mat that integrally comprises a flexible base part and a set of parallel wear strips integrated with said base part.

A further object of the invention is to provide a floor mat that has a series of parallel, spaced shoe-cleaning surfaces comprised of fiber or cord ends and supported by solid flexible binder material, such as rubber.

A still further object of the invention is to provide a mat in which there are shoe-scraping portions alternately arranged with the shoe-cleaning surfaces.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawing merely shows and the following description merely describes, preferred embodiments of the present invention, which are given by way of illustration or example only.

In the drawing, like reference characters designate similar parts in the several views.

Fig. 1 is a fragmentary plan view of a floor mat according to the present invention.

Fig. 2 is a partial end elevational and partial sectional view thereof.

Fig. 3 is a fragmentary cross-sectional view of a modification.

Fig. 4 is a fragmentary bottom view.

Fig. 5 is a similar view of a modification.

The present mat comprises, generally, a series of wear strips **10**, and a base **11** common to all of the strips and mounting the same in an integrated manner.

Patent No. 2,144,683, issued January 24, 1939, describes the wear strip **10** and the manner of their production from old tire casings. As can be seen, said strips are preferably rectangular and comprise incorporated threads or fibers **12** which extend above the surface **13** and form a flocculent matting **14** of soft and wear-resistant fibers. The height of said matting **14** is dependent on how much of the embedding rubber **15** is removed by attrition above the attrite surface **13**. It will be noted that the matting **14** fluffs out and thereby presents a tread appearance wider than the rubber **15** of strip **10**.

The base **11** preferably comprises a sheet of flexible rubber that is formed at **16** with portions that enclose the sides of the strips. Thus, the strips **10** are partly embedded in the base and the same are integrated as by vulcanizing. The portions **17** between the strips are quite flexible transversely and enable the mat to be rolled up

for more convenient shipping and storage. For reasons of strength, the cross-sectional form of the portions **17** is curved. The portions **17** form round-bottomed concave grooves facilitating run-off of water.

The structure of Fig. 3 varies from the mat above described by the inclusion, between adjacent strips **10**, of a shoe-scraping bead **18** that is preferably of triangular cross-section, as shown, and somewhat less in height than the strip **10**. The intermediate portions **19** are curved in section as the portions **17**.

The bottom face of the base **11** may be plain and flat. However, in practice, it is preferred to provide the same with a multiplicity of projections **20** or strip-like beads **21**. These projections are relatively shallow, lend body to the base, reinforce the same, and save material over a base that has a plain underface and of comparable thickness.

It will be seen that the strips **10** and base sheet **11** are completely integrated to provide the mat with strong, fabric-reinforced wear portions that are of limited flexibility, and intermediate portions that are materially more flexible; that the foregoing is obtained in an inexpensive manner, and with the use of only a proportional amount of new rubber as compared to the total amount of rubber in the mat; and that, although quite strong and position-retaining in use, the mat is light and easily handled.

It will be realized that any attempts to embody reinforcing and wear fabric or cord in the production of a mat in which the strips **10** are formed from the rubber provided for the base **11** would cause such great expense of production as to render the manufacture of the mat economically unfeasible. Even if it were possible to do this, the result could not favorably compare with the present inexpensively produced mat.

While the foregoing specification illustrates and describes what I now contemplate to be the best modes of carrying out my invention, the constructions are, of course, subject to modification without departing from the spirit and scope of my invention. Therefore, I do not desire to restrict the invention to the particular forms of construction illustrated and described, but desire to cover all modifications that may fall within the scope of the appended claims.

Having thus described my invention, what is claimed and desired to be secured by Letters Patent is:

1. A mat comprising a flexible rubber base, a plurality of rubber fabric strips mounted in spaced relation on said base and joined thereto, the base being formed with round-bottomed grooves between strips, said strips being arranged with upwardly extending fibrous cords embedded therein, each strip having an attrite upper surface with ends of fibrous cords extending vertically from the attrite surface and projecting upward and from the edges of said attrite surface to fluff over and form flocculent mat surfaces of greater width than said strips.

2. A floor mat comprising spaced strips of cord reinforced tire casings, a base rubber sheet vulcanized to said strips so that the strips extend from one face of the base sheet and flat projections on the opposite face of the base sheet at different spacings from the strips so as to be staggered with respect thereto, the base rubber being formed with concave round-bottomed grooves between the strips.

3. A floor mat comprising a plurality of longitudinally arranged and transversely spaced cord-reinforced strips of tire casing, and a base sheet of flexible rubber connecting said strips and being vulcanized to the bottoms and parts of the sides of the strips, the portions of the base sheet between adjacent strips having transversely curved concave upper surfaces.

4. A mat comprising a base designed for horizontal placement having a plurality of flat-bottomed, square-

edged longitudinal grooves therein alternating with a plurality of round-bottomed grooves, a plurality of strips of rubber material fitting into said flat-bottomed grooves and having fibrous cords embedded therein, the upper portion of embedding rubber being removed to leave cords extending vertically and projecting sufficiently from the upper edges of said strips to fluff over and form flocculent mat surfaces of greater width than said strips, said base comprising flexible rubber material with recesses in the under surface thereof to leave relatively thin flexible structure to facilitate rolling and handling the mat, said strip being vulcanized to said base to form an integral structure and form the round-bottomed grooves into continuous surfaces with the sides of the strips, tangent thereto.

5. A mat comprising a base designed for horizontal placement having a plurality of flat-bottomed, square-edged longitudinal grooves therein, a plurality of strips of rubber material fitting into said grooves vulcanized thereto and having fibrous cords embedded therein, the upper portion of embedding rubber being removed to leave cords extending vertically and projecting sufficiently from the upper edges of said strips to fluff over and

form flocculent mat surfaces of greater width than the said strips, said base comprising flexible rubber material, the material between grooves having a concave upper surface and being formed to make curving junctions with said strips.

6. A mat comprising a base designed for horizontal placement having a plurality of flat-bottomed square-edged longitudinal grooves therein, alternating with a plurality of round-bottomed concave grooves, a plurality of strips of rubber material fitting into said flat-bottomed grooves, said base comprising flexible rubber material with the strips vulcanized to said base to form an integral structure and form the round-bottomed grooves into continuous surfaces with the sides of the strips.

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