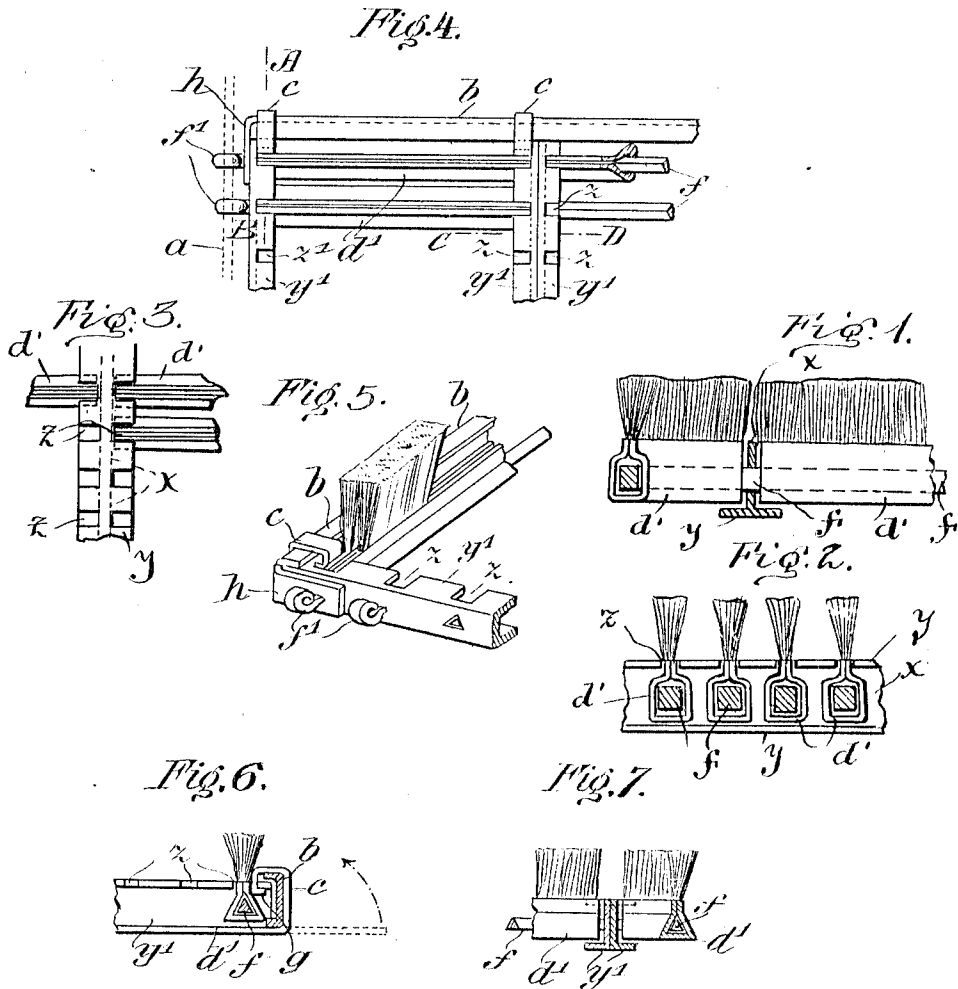


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DOOR MAT.
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1,089,972.

Patented Mar. 10, 1914.



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UNITED STATES PATENT OFFICE.

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DOOR-MAT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAKOB SCHUMANN, a subject of the Emperor of Austria-Hungary, residing at Reindorf-gasse 36, Vienna, XIV, in the Province of Lower Austria, Austria-Hungary, have invented certain new and useful Improvements in Door-Mats, of which the following is a specification.

The present invention relates to that kind of door-mat in which tufts of fiber or the like, mounted in the shape of flat brushes in a metal foundation, are connected to form a mat, and has for its main object to provide a mat of such kind that the brush tufts are prevented from becoming loose either in the transverse or in the longitudinal direction, and thus are prevented from falling out. For this purpose the foundation frames or bases of the brushes are sleeved over shaped bars, in such a way that the latter pass through the said brush foundations which fit the cross-section of the bars, said bars extending through correspondingly shaped perforations in the transverse supporting members on which the brush foundations are supported against longitudinal displacement and twisting.

A further feature of the present invention consists in the particular arrangement by means of which the members are secured and the whole frame is held together.

Figure 1 is a detail perspective section of a part of my improved mat. Fig. 2 is a detail transverse section of the same. Fig. 3 is a detail plan view of the frame. Fig. 4 is a detail view of the corner of the mat, the bristles being omitted. Fig. 5 is a detail perspective view of the corner of the mat shown in Fig. 4, the bristles being shown. Fig. 6 is a detail cross-section on the line A—B of Fig. 4, and Fig. 7 is a detail longitudinal section on the line C—D of Fig. 4.

According to the form of the invention shown in Figs. 1, 2 and 3, I provide square connecting bars *f*, and hollow brush sections *d'* having lower enlarged square portions corresponding to the shape of the connecting bars. The connecting bars *f* pass through square openings in the web *x* of I-shape transverse bars *y*, which prevents said bars turning. The upper portions of the hollow brush bars are reduced to receive and clamp the bristles. The opposite top flanges of transverse bars *y* are notched at *z*, the notches being in alinement with the openings in the web *x*. The ends of the reduced

upper portions of the brush sections fit in the notches *z*, as clearly shown in the drawing, and prevent said brush sections being bent under the pressure produced in the use of the mat. This construction also serves to hold the parts together, so that it is unnecessary to employ rivet or the like.

In the form of the invention shown in Figs. 4 to 7, I employ two channel irons *y'* placed side by side to form the intermediate transverse bars, while the end bars are formed of a single channel bar *y'*. The upper flanges of the channel irons are formed with notches *z*. In these figures the brush sections *d'* are of substantially triangular shape and the connecting bars are of similar shape. The webs of the transverse bars are formed with triangular openings through which pass the connecting bars *f*. When the parts are assembled the protruding ends of the connecting bars are bent over to form eyelets or heads *f'* which serve to retain the parts of the mat together. Rods *a* (Fig. 4) or the like may extend through the eyelets *f'* in order to fasten the mat for security against theft. The sides of the mat are formed by U-shape side bars *b*, the end center portions of which form extensions *h*, which are bent around the corners of the end transverse bars and receive the ends of the outer connecting bars as shown in Figs. 4 and 5. The lower ends of the transverse bars *y'* are extended as shown at *c* and pass around the side bars *b* and through the outermost notches *z* and under the upper flanged portions of said bars *y'* as shown at *g*. By this construction the side bars *b* are embraced at intervals corresponding to the intervals between the several transverse bars, which with the extensions *h* form a substantial means of locking the parts together.

I claim—

1. A door-mat comprising transverse bars having upper and lower horizontal flanges, the upper flanges having notches and the intermediate web portions of said bars having openings in alinement with the notches in the flanges, hollow brush sections fitting between the webs of the transverse bars, the upper ends of the said sections fitting in the notches, connecting bars extending through the hollow brush sections and the openings in the webs, and means for fastening the connecting bars.

2. A door mat comprising transverse bars

having upper and lower horizontal flanges, the upper flanges having notches and the intermediate web portions of said bars having openings in alinement with the notches in the flanges, hollow brush sections fitting between the webs of the transverse bars, the upper ends of the said sections fitting in the notches, connecting bars extending through the hollow brush sections and the openings in the webs, the ends of the connecting bars being bent into eyelets to fasten the bars and sections together.

3. A door-mat comprising a series of transverse bars formed with end projections, said transverse bars having notched flanges, a series of longitudinal hollow brush sections located between the transverse bars and engaging in the notches, the transverse bars having openings in alinement with the notches, connecting bars extending through the said hollow brush sections and the openings, means for securing said connecting rods in position, side bars against which the ends of the transverse bars abut, the ends of said side bars being bent around the end transverse bars, and the projections on the ends of the transverse bars being bent around the side bars and passed through the end notches and bent under the flanges of said transverse bars.

4. A mat comprising a series of transverse bars formed with upper and lower flanges, the upper flanges having notches and the said bars having openings in alinement with said notches, a series of longitudinal brush sections located between the transverse bars, each section having an enlarged lower por-

tion and an upper reduced portion, the reduced portion fitting in the notches in the flanges, U-shaped side bars against which the ends of the transverse bars abut, the transverse bars having end extensions which extend around the U-shaped side bars and project through the end notches and are bent under the flanges, the side bars having end projecting portions which are bent around the end transverse bars, and means for securing the latter projecting portions.

5. A mat comprising a series of transverse bars having upper and lower flanges and openings formed intermediate said flanges, the upper flanges having notches in alinement with the openings, a series of hollow brush sections interposed between the transverse bars, each of said hollow sections having an enlarged lower portion and an upper reduced portion, the ends of the reduced portions fitting in the notches, connecting bars extending through the hollow brush sections and the openings, means for securing the connecting bars in position, side bars against which the end bars abut, said side bars having projecting end portions which are bent around the end transverse bars and engage the ends of certain of the connecting bars to bind said side bars in position.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAKOB SCHUMANN.

Witnesses:

SIGMUND BAUER,
AUGUST FUGGER.