

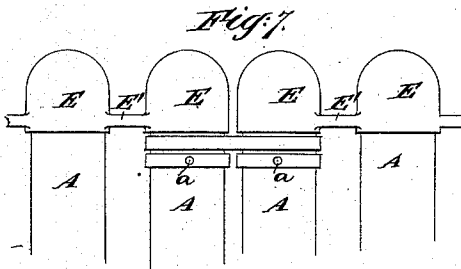
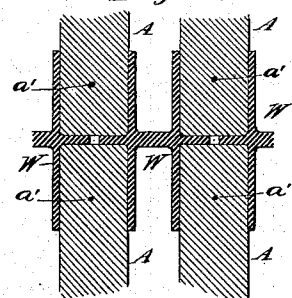
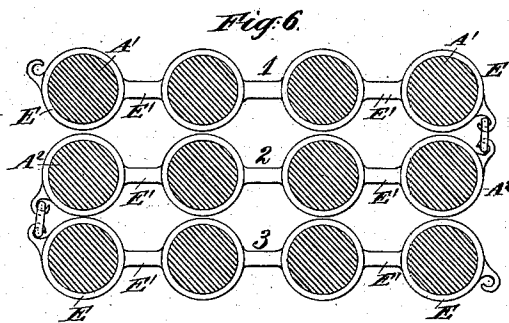
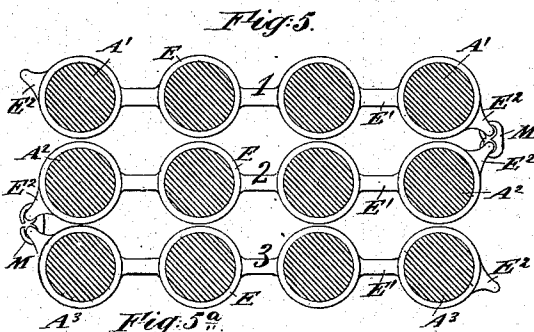
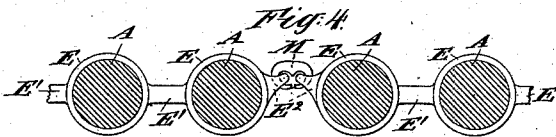
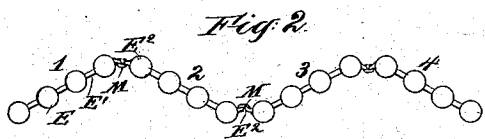
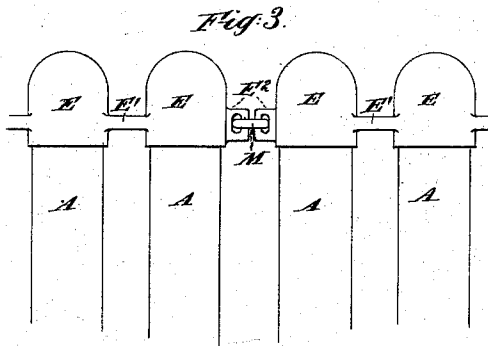
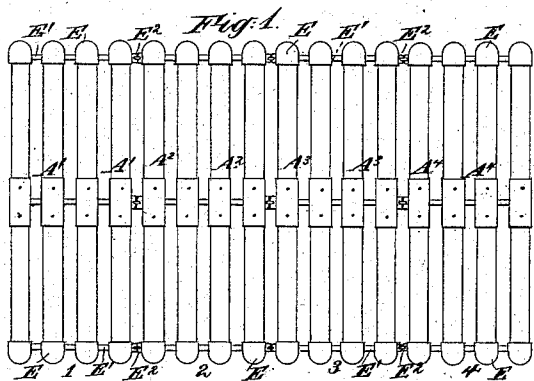
(No Model.)

R. MARTINEZ.

MAT.

No. 295,782.

Patented Mar. 25, 1884.



WITNESSES:

Charles F. Deane,
M. F. Boyle,



INVENTOR:

Rafael Martinez
by his attorney
James S. Stetson.

UNITED STATES PATENT OFFICE.

RAFAEL MARTINEZ, OF NEW YORK, N. Y., ASSIGNOR TO EMIL GUTMANN
AND HENRY GOODMAN, BOTH OF SAME PLACE.

MAT.

SPECIFICATION forming part of Letters Patent No. 295,782, dated March 25, 1884.

Application filed December 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, RAFAEL MARTINEZ, a subject of the King of Spain, residing in the city and county of New York, in the State of New York, have invented certain new and useful Improvements in Mats or Removable Floor-Coverings, of which the following is a specification.

My improvement applies to that class of mats in which the main body is composed of parallel slats or rods of wood held a little distance apart, adapted to lie on the floor and to retain dust, mud, snow, &c., in the spaces between the rods. Caps of malleable cast-iron or other suitable material are applied on the ends.

I have in a patent granted to me dated August 21, 1883, No. 283,501, set forth the employment of soft vulcanized rubber in the form of strips or bearing-pieces applied on one or both faces of the several rods. I propose to thus equip the rods whenever it is desired. The rods extend transversely of the length of the mat. The present invention relates to the means of connecting the rods. I divide the entire length of the mat into a number of separate sections, each section embracing four, six, or other convenient number of the parallel rods, rigidly connected by frames of cast-iron or other suitable material, one at or near each edge of the mat, and in large mats one or more at intermediate points. I connect the several connections together flexibly, and so arrange the parts that when it is desired to store away or transport a mat it may be packed in a small compass by folding or zigzagging the sections, so that each applies facewise against its neighboring section. The method of packing is distinct from rolling. Rolling would involve difficulties which my invention avoids.

The means for attaching the parts together may be varied considerably. It is only essential that the joints be strong and sufficiently flexible, and that they do not interfere with the use of the mat when extended on the floor by not projecting below the lower surfaces of the rods and their attachments or extending above the upper surfaces thereof, and that they allow two adjacent sections to apply together facewise and lie parallel and completely in

contact when the mat is folded. Where my mat is to be made of such width that a single length of rod would be liable to warp and distort the mat, I employ two or more rods stiffly coupled together.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a plan view of one of the mats extended for use. Fig. 2 is an end view of the mat when only partially extended. The remaining figures are on a larger scale. Fig. 3 is a plan view of a portion. This shows the mat in the extended condition. Fig. 4 is a corresponding section transverse to the rods or longitudinally of the entire mat. Fig. 5 is a corresponding section, which I will call a "longitudinal section." This shows the three sections of a mat in the folded condition. Fig. 5^a is a longitudinal section through one of the rods, showing the means of joining two short rods. Fig. 6 is a section corresponding to Fig. 5, but differing therefrom in employing complete links instead of hooks, and forming the sections with hooks instead of links on their ends. Figs. 7, 8, and 9 show further modifications. Fig. 7 is a plan view, showing the mat extended. Fig. 8 is a corresponding transverse section; and Fig. 9 is a section showing only the edge rods of two sections, with the means for uniting them.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

The several rods of wood are all alike, and are designated by the same letter, A; but additional marks, as A' A², &c., are added to designate certain rods. Four rods (each marked A') are secured rigidly together by metal pieces, applied one at each end, and which I will mark by the single letter E, certain portions being designated, when necessary, by additional marks, as E' E². They may be made of malleable cast-iron. They are composed of caps adapted to inclose the ends of the several rods, and of rigid connections E' between the said caps. I designate as a "section" the rigid collection of the four rods and the rigid connecting metal pieces. I provide

as many sections, all of equal size, as may be required to produce a mat of the proper length. I will designate the several sections as 1 2 3, and the several rods therein by the corresponding numerals appended to A.

Referring to Figs. 1 to 5, E^2 are eyes formed on the ends of the metal pieces E. They receive double hooks, loops, or connecting hinge-pieces M, which form a flexible but strong joint between each section and the adjoining section. The eyes E^2 are not in lines joining the centers of the several rods. They are arranged at an angle, as shown. When the mat is extended on the floor, two sections are connected by eyes E^2 E^2 and hinge-pieces M, lying close to the floor. Then one of those sections is joined to the next adjacent by corresponding eyes and hinge-pieces held up near the plane of the top of the mat. Then the next junction is effected by eyes, which are depressed, and so on. The peculiarity of this arrangement becomes available when the mat is folded into the position shown in Fig. 1. The position of the eyes allows the mat to be folded closely.

Fig. 6 represents a modification. It shows another mode of joining the edges of two sections. It will be understood that these sections may be in all other respects similar to those shown in the preceding figures; but the eyes E^2 and the hooks or hinge-pieces M are omitted. In the form of the invention shown in Figs. 7, 8, and 9 the two rods A, which form, respectively, the edges of two adjacent sections, are held more closely together than the rods generally; thus giving a peculiarly striped or figured effect to the mat when it is extended for use. The junction in these figures is formed by castings, which are substantially two rings rigidly united in a single casting, forming the figure eight, (8.) These castings are applied on the edge-bars within the caps, and are kept in place close to the caps by nails a , driven in rings applied on the rods A. The importance of making these castings M short, so as to hold the edge-rods close together, is appreciated when the mat is folded. If these rods were held the same distance apart as the others, two adjacent sections would not lie flat one against the other, but would be held too far apart at the points where the castings M are introduced. By making these castings short, as shown, I insure a compact folding and a firm support by each section of the next. My mats made either way may be piled in the folded condition to any reasonable height without straining or otherwise injuring the parts, because the sections lie firmly in contact on a large portion of their several faces.

I have discovered a difficulty in using sticks or rods A beyond a moderate length, due to their tendency to warp and bend out of their correct parallel positions. Even the introduction of an additional fastening at the mid-length of long rods does not prevent the mat from becoming distorted by the bending of the rods, so as to seriously mar the appearance.

I produce wide mats, when required, by applying two or more short rods, A, together, end to end, and inserting the abutting ends in a suitable casting, W, and securing them by nails a' . Fig. 5^a shows such a mode of fastening the abutting ends of two short rods. The casting has a general cylindrical exterior, with a socket in each end of sufficient size to receive the end of a rod, and a partial or complete partition of metal cast in one with the other parts. Each rod abuts against that central partition, and on driving a nail or inserting other suitable fastening to secure each rod to the casting the job is complete. It will be understood that when I employ this mode of joining two rods these central castings may be engaged together in the same manner as the end castings, and the effect is to produce a mat in all respects as shown in Figs. 1 to 6, but with a line of castings and connections along the mid-length. There can be more than two rods thus joined, if desired. In case there are three so joined, there will be two lines of these junction-castings.

Rigid caps, as shown, possess an advantage over rigid rings. Caps keep the rods in position and prevent one or more rods from moving endwise, and thus protruding irregularly at the edges; but I can carry out the invention with some success by using rings rigidly connected to form the sections and applying separate caps, or dispensing with caps. Further modifications may be made. The proportions may be varied within wide limits. I can, as already intimated, increase or somewhat reduce the areas of the several sections. I can use ten (10) or other large number of rods A in each section. The connections E' and the eyes E^2 may be made on rings separate from the caps—that is to say, the connecting-castings E may be composed, essentially, of rings connected by the parts E' and having the eyes E^2 , and separate caps may be made to cover the ends of the rods A. The rods A may in some styles of mats be covered with india-rubber caps or with thin brass caps; or they may be left unprotected. There may be another line of connections corresponding to E' and of eyes corresponding to E^2 along the mid-length of each set of rods A. In the form shown in Figs. 1 and 2 there may be flexible ties corresponding to E^2 at one or more points intermediate between the end connections. The metal parts E may be elaborately formed of any suitable metal and nickel-plated or otherwise made to present a rich and highly decorative appearance.

I have in my experiments used always rods which are cylindrical throughout; but it is not essential that they be cylindrical, except at points where the rings G are turned. The main bodies of the rods can be of rectangular section or of various other forms. It may be of advantage in many or most to make the first and last rod of each mat of wedge-section, with the thin part of the wedge outward.

The mode of joining two short rods to produce wide mats without distortion (shown in

Fig. 5^a) may be applied with other kinds of mats—that is to say, the same mode of joining the short rods may be employed with mats where each rod is hinged independently to the adjacent rods on each side, or where all the rods are joined stiffly together by the castings at the ends. In each case the central castings will be correspondingly hinged together or stiffly connected.

10 I claim as my invention—

1. A mat or floor-covering composed of parallel rods A of wood, united in rigid sections 1 2 3, in combination with flexible connections between the several sections, all combined and arranged for joint operation substantially as herein specified.

2. In a mat, substantially as described, the parallel rods of wood, as A, made in sections, combined with the castings W, which receive the abutting ends of said sections, substantially as set forth.

In testimony whereof I have hereunto set my hand, at New York city, New York, this 22d day of October, 1883, in the presence of two subscribing witnesses.

RAFAEL MARTINEZ.

Witnesses:

THOS. W. TOLSOM,
JOSEPH E. LABADIE.