No. 786,545. PATENTED APR. 4, 1905.

A. S. BURNELL.

FLEXIBLE MATTING.

APPLICATION FILED DEC. 20, 1902. RENEWED FEB. 25, 1905.

2 SHEETS—SHEET 1.

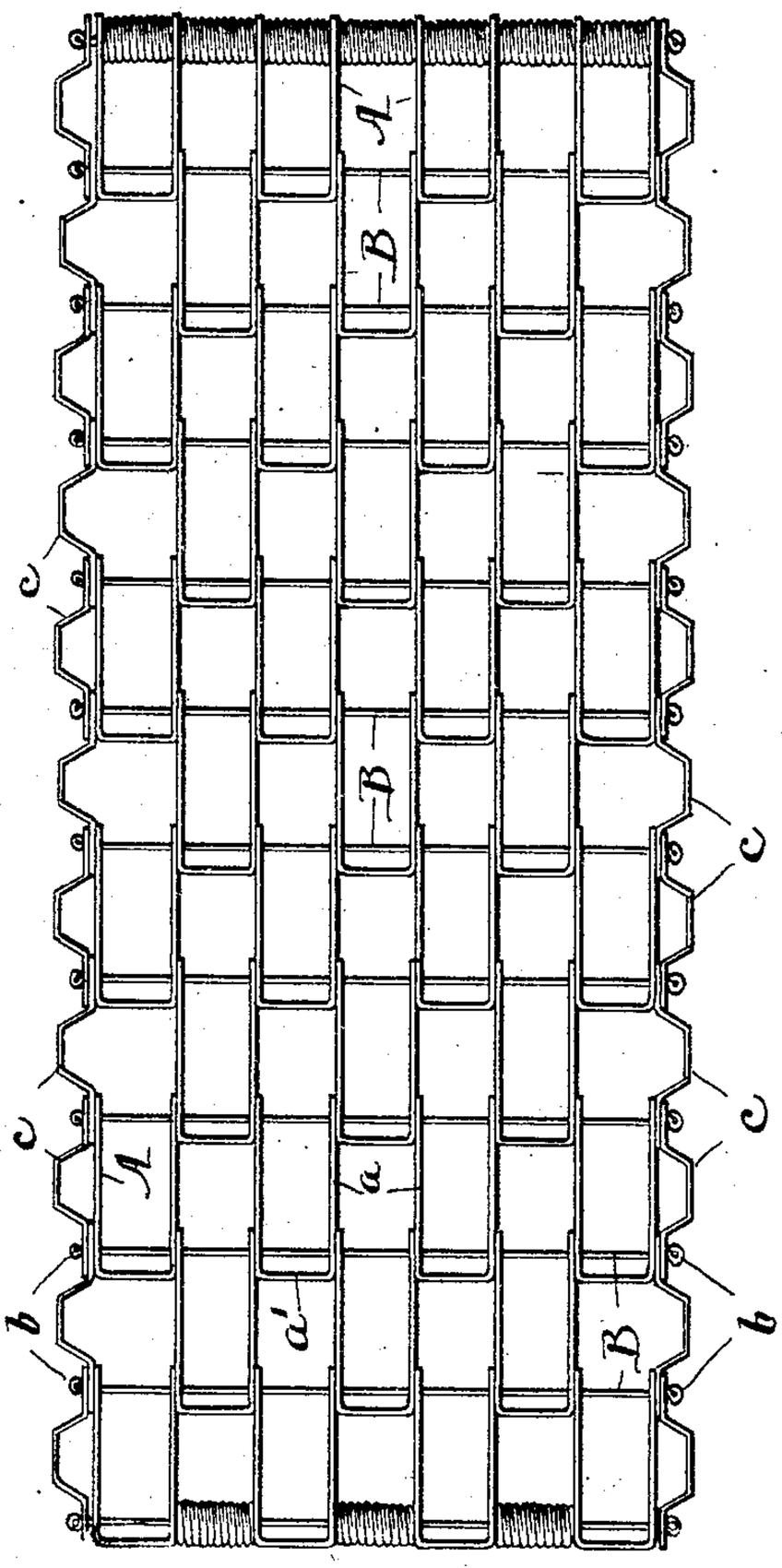

Fig. 1

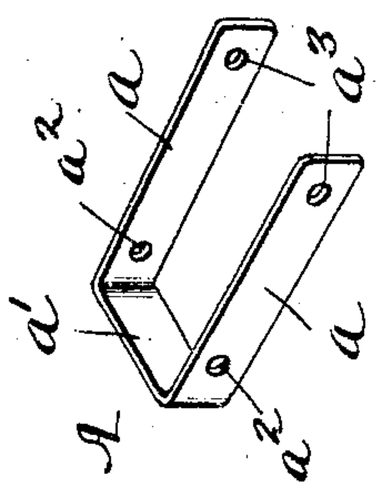

Fig. 2

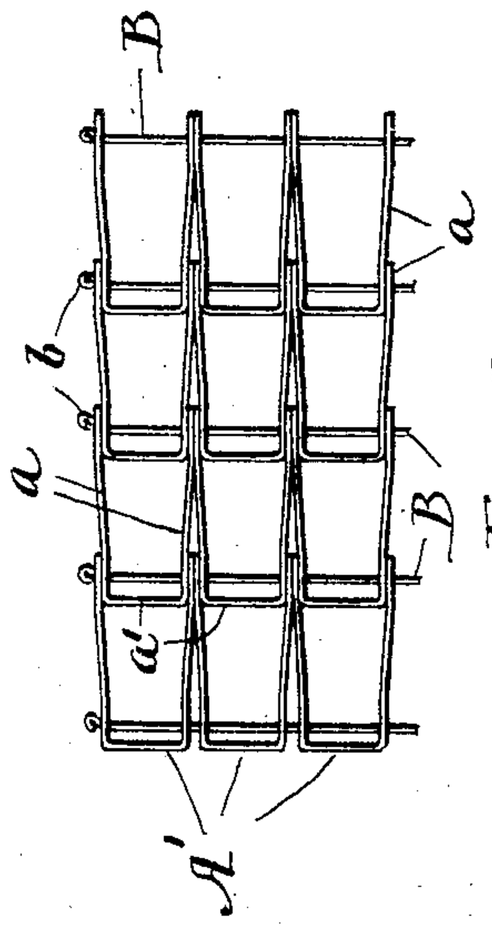

Fig. 3

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2 SHEETS—SHEET 2.

Fig. 4.

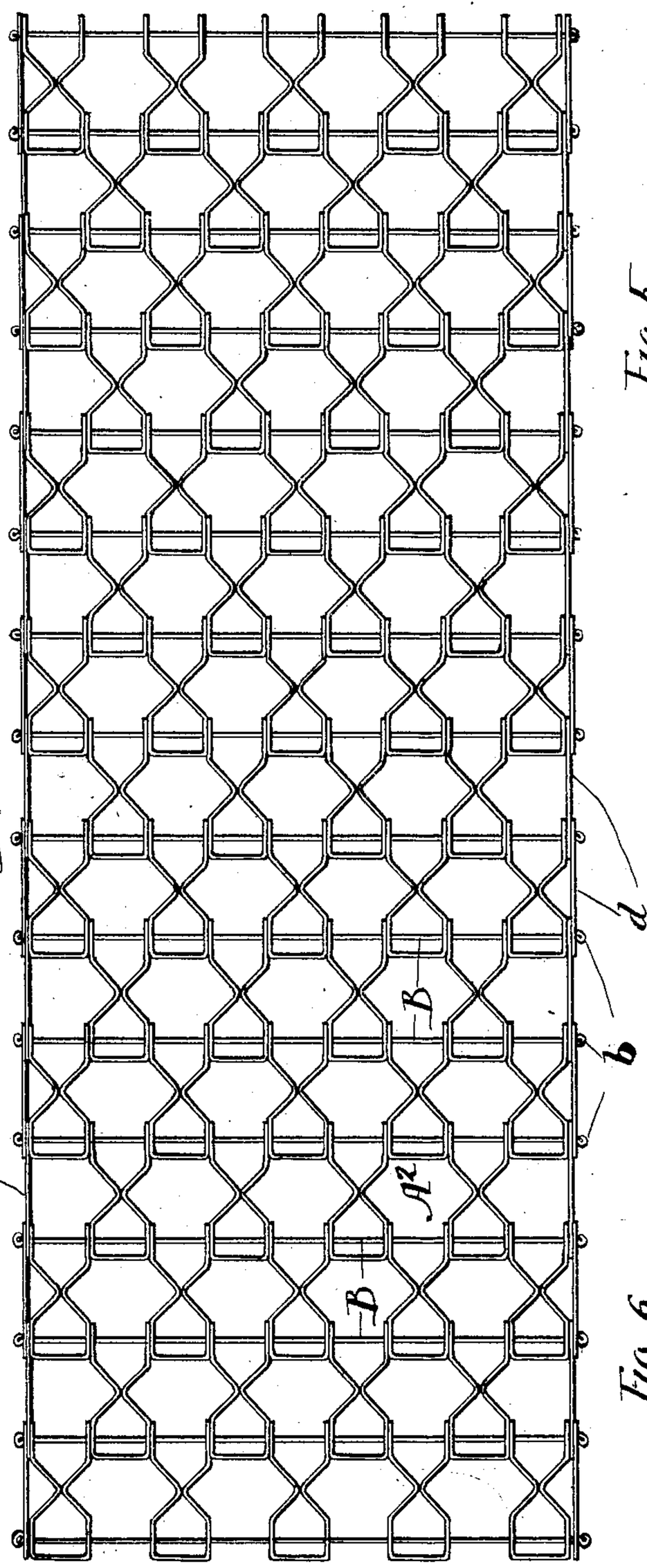


Fig. 5.

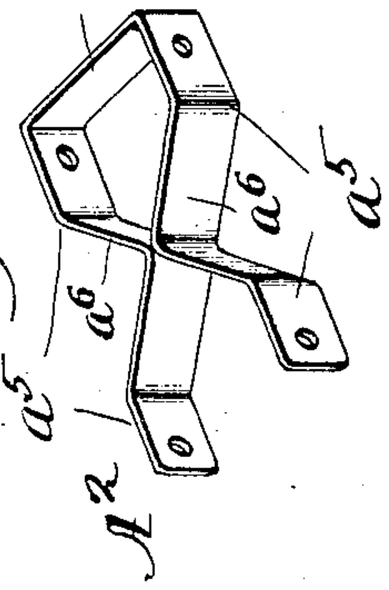
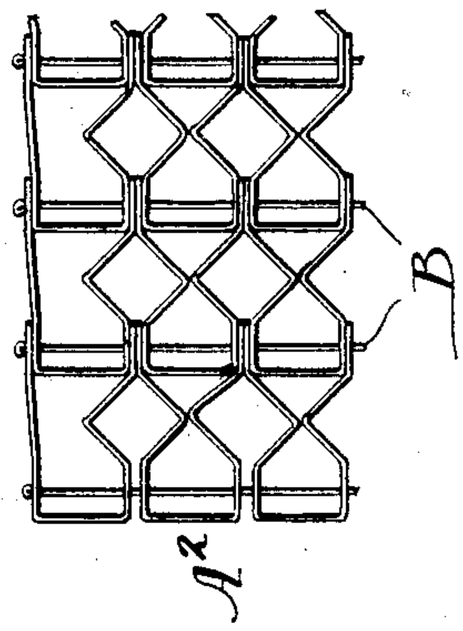


Fig. 6.



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UNITED STATES PATENT OFFICE.

ARTHUR S. BURNELL, OF MARSHALLTOWN, IOWA.

FLEXIBLE MATTING.

SPECIFICATION forming part of Letters Patent No. 786,545, dated April 4, 1905.

Application filed December 20, 1902. Renewed February 25, 1905. Serial No. 247,249.

To all whom it may concern:

Be it known that I, ARTHUR S. BURNELL, a resident of Marshalltown, in the county of Marshall and State of Iowa, have invented certain new and useful Improvements in Flexible Matting, of which the following is a full, clear, and exact description.

The invention relates to flexible fabrics or matting formed of strips of metal—*e. g.*, such as are used in door-mats.

The invention designs to provide an improved flexible fabric or matting formed of flat strips of metal which can be readily bent into shape and quickly and easily assembled and which when assembled provide a fabric or matting which is durable, flexible, and inexpensive.

The invention consists in the several novel features hereinafter described, illustrated in the accompanying drawings, and more particularly defined by claims at the conclusion hereof.

In the drawings, Figure 1 is a plan of a floor-mat embodying one form of the invention. Fig. 2 is a detail perspective of one of the strips. Fig. 3 is a partial plan of a modification, showing a mat having the strips differently arranged. Fig. 4 is a plan of another modification, showing a mat having its metal strips bent into different shape. Fig. 5 is a detail perspective of one of the said strips of the modification shown in Fig. 4. Fig. 6 is a partial plan of a modification, showing said strips differently arranged.

The fabric consists of a plurality of short flat strips of metal A, bent to form a pair of longitudinally-extending side portions a and a laterally-extending connecting portion a', arranged in transverse series. Each transverse series of strips forms a section and is flexibly connected with the next section by a transverse pivot-rod B. Each strip thus bent forms a rectangular open-ended link. Each side portion a is formed with a transversely-extending alined perforation a^2 near the connecting portion and with an alined transverse perforation a^3 adjacent its free terminal. The side portions are secured in spread relation by the connecting portion a', while the free ends are held by adjacent strips. Transverse rods B flexibly connect the strips and extend through perforations a^2 of the strips of one transverse series and through perforations a^3 of the adjacent transverse series. The integral connecting portion secures the side portions against disarrangement. In Fig. 1 the strips are alternately arranged in adjacent transverse and longitudinal series—*i. e.*, the strips of one transverse series are arranged between and position the strips of each adjacent transverse series, and the rod extends through both side portions of one strip and next through both side portions of the next strip. These strips, being bent substantially in the shape of a U, can be manufactured at a low cost. In this matting or fabric overlapping side portions are avoided as far as possible. The strips can be quickly assembled. An ornamental border can be formed of short metal strips c, having laterally-bent portions and straight ends wherethrough the terminals of rods B pass. The laterally-bent portions protect the headed terminals b of rods B, which confine the strips against lateral movement along the rod.

In Fig. 3 the flat metal strips A′ are shaped so the connecting portion a' will fit between the side portions a of another strip of the same form. The strips are also arranged in closer relation and in close succession along each transverse rod—*i. e.*, the opposite free terminals of the strips of a transverse series are contiguous and the connecting portions of the strips of one transverse series are arranged between the free ends of a longitudinally-adjacent strip. This arrangement is of advantage in instances where the fabric is subjected to unusual strains, because each end of each terminal is secured against inward and outward strain by the connecting portions and contiguous side portions of adjacent strips.

In the preferred form of the invention (illustrated in Figs. 4 and 5) each strip A^2 is formed with a connecting portion a' and a pair of side portions a^5, having those portions between the connecting portion and the free end bent inwardly and toward each other, as at a^6. The arrangement of strips in Fig. 4 is similar to that shown in Fig. 1. When the strips are thus bent, portions of the longitudinal side

portions will abut against each other and secure each other against inward movement, while the free ends of the terminals are secured against outward movement by contiguous side portions of adjacent strips, thus providing fabric in which the strips are arranged so the strips of one section are alternately arranged between and space the strips of an adjacent section and in which the side portions of all of the strips are secured against lateral movement in either direction. Straight links *d* are usually employed to secure the rods against tendency of laterally-expanded strips to spread the rods when the strips are subjected to severe lateral strains. In Fig. 5 the fabric is formed of strips A^2, having their side portions bent toward each other to secure each other against inward movement, and the arrangement of the strips is similar to that illustrated in Fig. 3.

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

1. Fabric or matting formed of pivotally-connected sections, the sections comprising a plurality of short flat strips of metal, each bent to form a rectangular open-ended link comprising a pair of side portions perforated near their ends, and a laterally-extending connecting-bar at one end of the link, the side portions being separated at the connected end.

2. Fabric or matting formed of sections, the sections comprising a plurality of short flat strips of metal bent to form side portions and a laterally-extending connecting portion, the side portions of a strip being separated at their ends, and having their central portions bent toward each other and transverse pivots connecting the strips of one section with those of the next.

3. Fabric or matting formed of sections, the sections comprising a plurality of short flat strips of metal bent to form side portions and a laterally-extending connecting portion, the side portions of the strips being perforated near their ends and having portions between their ends, extended for abutment against each other, and transverse rods pivotally connecting the strips of one section with those of the next.

4. Fabric or matting formed of sections, the sections comprising a plurality of flat strips of metal, bent to form a pair of side portions and a laterally-extending connecting portion, the strips of one section being alternately arranged between the strips of the next section, and a pivotal connection between the strips of adjacent sections.

5. Matting or fabric formed of sections, the sections comprising a plurality of flat strips of metal bent to form a pair of side portions and a connecting portion, the strips of one section being alternately disposed with respect to and arranged between the strips of the next section, the free ends of the strips of one section being contiguous to the connected ends of the sides of the strips of the next section, and transverse rods pivotally connecting the sections and extending alternately through both sides of the strips of one section and through both sides of the strips of the next section, the sides being bent toward each other.

ARTHUR S. BURNELL.

In presence of—
FRED GERLACH,
EMMA GERLACH.