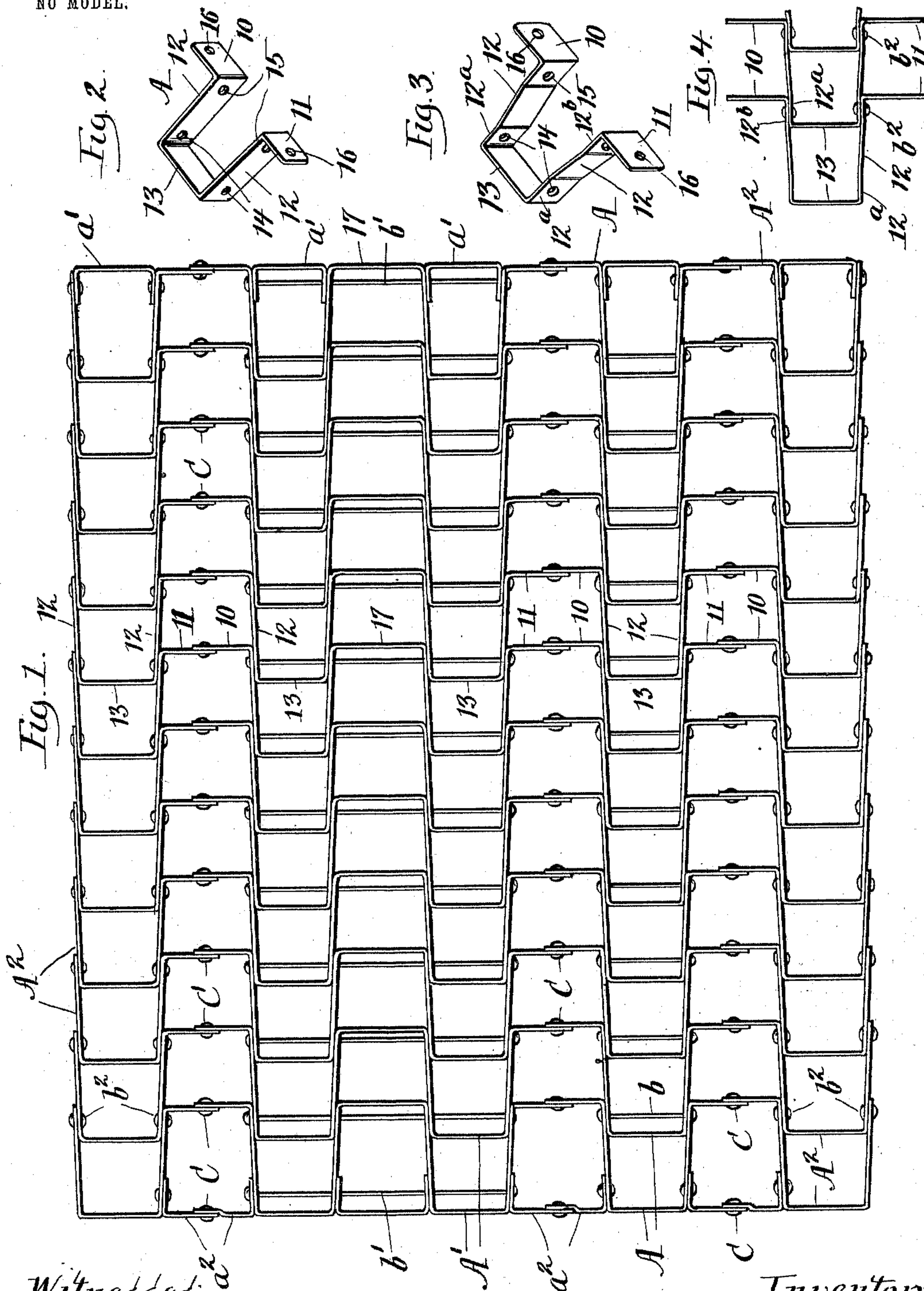


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F. C. SPARKS.
METAL FABRIC OR MATTING.
APPLICATION FILED DEC. 20, 1902.

NO MODEL.



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METAL FABRIC OR MATTING.

SPECIFICATION forming part of Letters Patent No. 760,164, dated May 17, 1904.

Application filed December 20, 1902. Serial No. 136,061. (No specimens.)

To all whom it may concern:

Be it known that I, FRED C. SPARKS, a resident of the city of Marshalltown, in the county of Marshall and State of Iowa, have invented certain new and useful Improvements in Metal Fabrics or Matting, of which the following is a full, clear, and exact description.

The invention relates to fabric made of strips of metal—*e. g.*, such as are employed in the construction of floor-mats.

It has heretofore been common to construct a mat fabric of long strips of metal extending transversely across the entire width thereof and bent to form a succession of U's alternately arranged on opposite sides thereof and flexibly connected by long pivot-rods. In the use of mats thus constructed the long transversely-extending strips and rods frequently become bent or warped, and particularly the marginal portions thereof, either from resting upon an uneven surface or while cleaning or handling the mat or from lateral impact or strains tending to bend or warp the mat upwardly and away from its support.

The invention designs to provide an improved fabric formed of bent and perforated strips of metal which are flexible longitudinally and transversely and which can be produced at a low cost. Flexibility in one direction—*e. g.*, longitudinal—is desirable to permit the mat to be rolled or folded for convenience in cleaning or transportation. Flexibility in the other direction—*e. g.*, transverse—is desirable to permit flexure, whereby the fabric will adjust itself to a floor. It is also desirable to avoid employment of long strips, connecting-rods, or wires, which are liable to become bent or warped while in use or when being handled.

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

In the drawings, Figure 1 is a plan view of a mat embodying the invention. Fig. 2 is a detail perspective view of one of the flat metal strips. Fig. 3 is a similar view of a modification, showing the strip bent into a slightly-

different form. Fig. 4 is a plan view of a portion of a mat embodying the modified form of Fig. 3.

The strips forming the mat are arranged in longitudinal and transverse series and are formed of flat metal bent into desirable shape. The strips intermediate the marginal series of the mat are each bent to form longitudinally-extending side portions 12, laterally-extending connecting portions 13, forming substantially a U, and outwardly-extending terminals 10 and 11. Each of the side portions is formed with alined perforations 14, through which the pivotal connection between the strip and one of the longitudinally adjacent strips are extended, and also with alined perforations 15, through which the connections for the other longitudinally adjacent strip are extended. Terminals 10 and 11 are bent laterally and are each provided with a perforation 16, whereby the strips can be flexibly connected with the transversely adjacent strip at each side thereof. The strips may be connected with longitudinally adjacent strips by transversely-alined rivets b^2 , which extend through the contiguous side portions of adjacent strips. When assembled, the connecting portion 13 of one strip fits and is disposed between the side portions of the longitudinally adjacent strip, and the outer surface of the side of one strip fits against and is contiguous to the inner surface of the adjacent strip. Pivots extending through the contiguous side walls flexibly connect the transverse series with each other and permit the matting to be rolled or folded longitudinally. The laterally-extending terminal 10 of one strip is connected by pivot C, such as a rivet, with the oppositely-extending terminal of the strip of the adjacent series. Pivots C are longitudinally alined and permit transverse flexure of the fabric on the line of said pivots. Rivets C may be loose to permit unlimited flexure or may be formed to secure the terminals frictionally and permit limited flexure sufficient to adjust the strips to an uneven bearing-surface. The strips of longitudinal series A, which are adjacent the margin, are bent to form a single U and laterally and oppositely extending ter-

minals. The central portion of the mat is preferably formed of long strips A' , which are bent to form a succession of alternately-arranged U 's and laterally-extending terminals 10 and 11, connected by rivets C to the oppositely-extending terminals of the marginal series of strips, the strips being pivotally connected by rods b' . Such construction renders the central portion rigid and flexibly connects the marginal portions thereto. In the marginal series A^2 the outer one of the laterally-bent terminals of each strip is omitted to form a substantially straight border. Oppositely-extending laterally-bent terminals 10 and 11 of the strips are slightly offset with respect to each other. The object of so forming these terminals is to provide an arrangement in which the strips of uniform construction can be employed and in which the transversely-extending pivots of the several strips of a transverse series will be truly alined without use of strips having the transverse perforations differently located. In other words, by thus forming alinement of strips the perforations will remain alined without employing strips perforated at different points.

At the end of the mat pieces of suitable shape, such as a' and a^2 , are used to form a straight end portion. Strips a^2 are flexibly connected by pivots C , alined with the pivotal connections between the oppositely-projecting terminals of transversely-adjacent strips.

In Fig. 3 the strip A is shown as having its side portions formed with truly-longitudinal portions 12^a and 12^b , which fit snugly against the adjacent side of contiguous strips and are of advantage in flexibly connecting the strips

by rivets, because the surfaces are truly perpendicular to the line of flexure.

It will be understood that the width and length of the mat can be readily varied by variation of the number of transverse and longitudinal series employed.

The invention is not to be understood as restricted to fabric used for floor-mats, because it can be readily used in many instances where a flexible metal fabric is used.

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

1. Matting comprising sections, each section comprising strips of metal arranged to form a succession of alternating U 's, each strip having terminals bent transversely and pivotally connected to the laterally-bent terminal of a transversely-adjacent strip to render the matting flexible on a longitudinal line, the U 's of one section fitting into those of the next, and transverse pivots connecting the sides of adjacent U 's.

2. Matting formed of sections comprising a rigid central portion formed of long strips bent to form a series of longitudinally and transversely extending portions, and laterally-extending terminals, one or more series of short strips adjacent the margin, and having laterally-extending terminals, connected by longitudinally-extending pivots, to the terminals of adjacent strips, and transverse pivots connecting the strips of one section to those of the next.

FRED C. SPARKS.

In presence of—

A. S. BURNELL,
A. L. FRAZERS.