No. 805,823. PATENTED NOV. 28, 1905.

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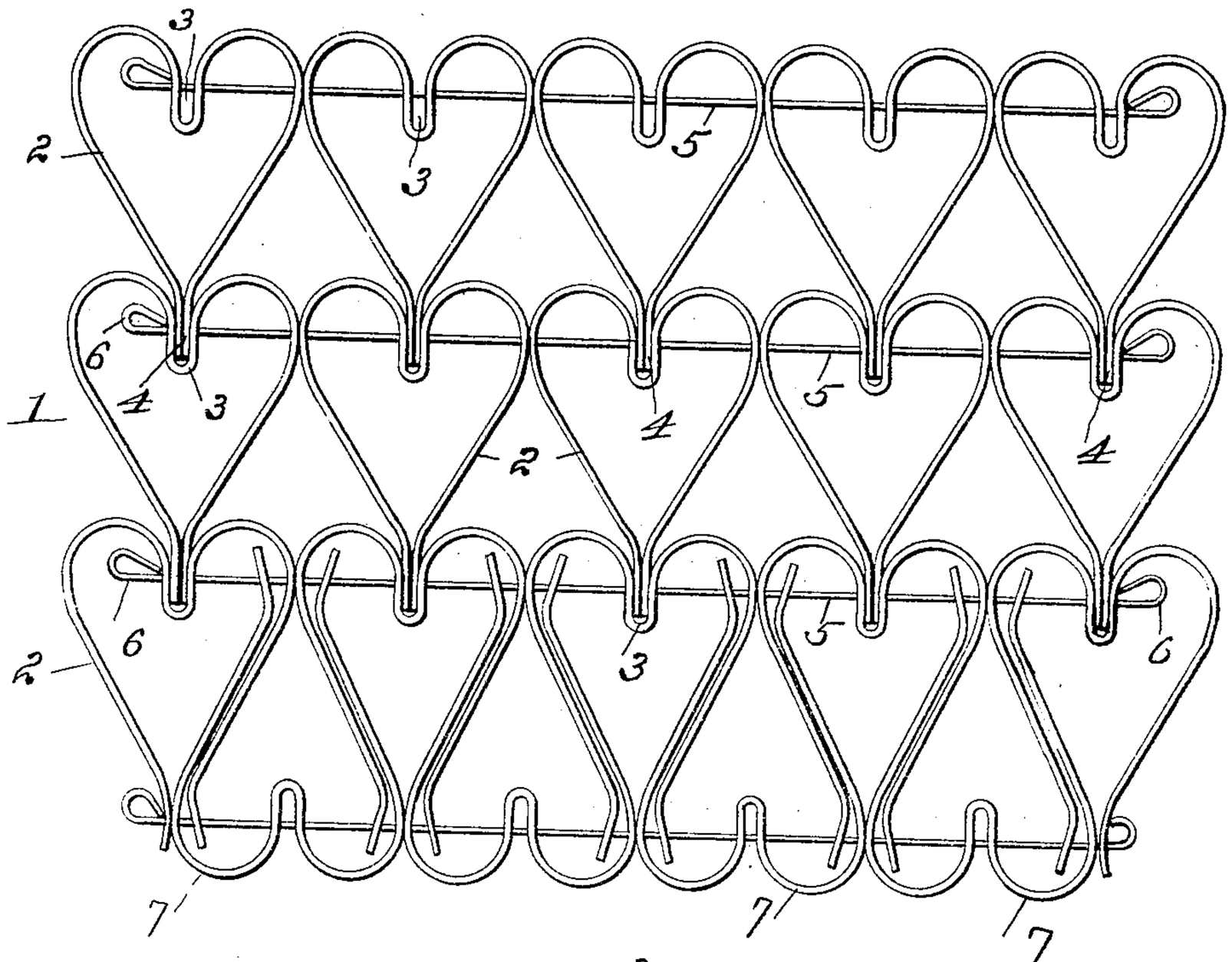
METALLIC MAT.

APPLICATION FILED MAR. 14, 1905.

Fig. 1



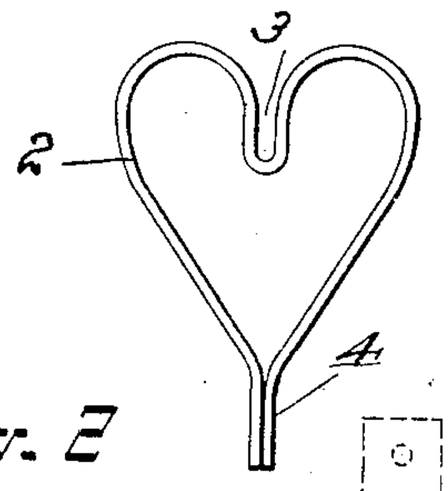


Fig. 2

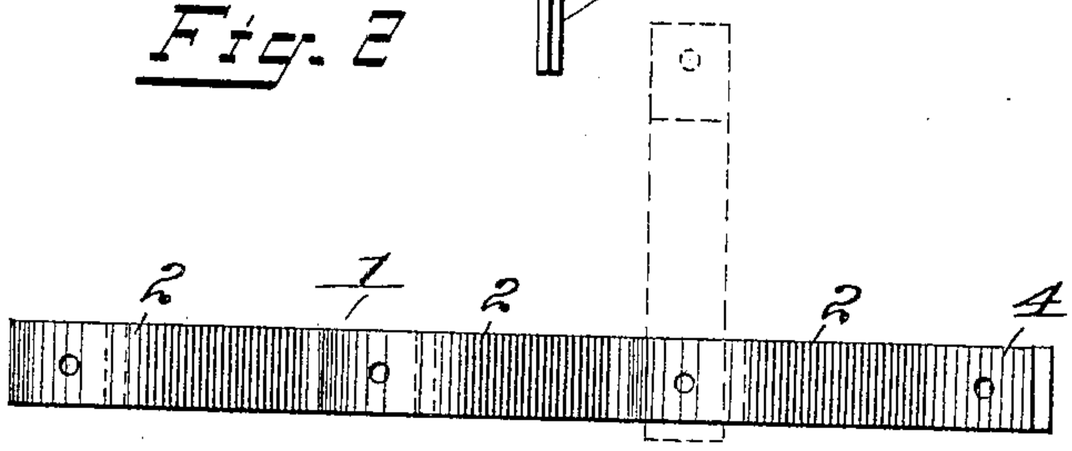


Fig 3

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE CAMPBELL SLEETH, OF NEWARK, NEW JERSEY.

METALLIC MAT.

No. 805,823. Specification of Letters Patent. Patented Nov. 28, 1905.

Application filed March 14, 1905. Serial No. 250,028.

To all whom it may concern:

Be it known that I, GEORGE CAMPBELL SLEETH, a citizen of the United States, residing at Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Metallic Mats, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a plan view of a portion of the mat; Fig. 2, a detail of one of the elements thereof, and Fig. 3 an edge elevation.

This invention relates to that class of floor-mats which are made up of sections or elements secured together by transverse tie-rods or other suitable devices in such a manner that the edges of the strips of steel from which the elements are made form the wearing-surfaces of the mat.

It is one of the main objects of this invention to form the elements or units of the mat in such manner that said units may be interlocked one within the other and all lateral vibration or movement of the various members avoided.

Another object of the invention is to provide a mat made up of elements of such form that there will be no sharp or rough ends exposed along the sides of the mat and so that the ends of the tie-rods may be turned up within the outermost members of the mat, said turned-up ends of the tie-rods being thereby protected. The outer walls of the side members form shields to prevent the clothing of persons walking over the mat from being caught by the heads of the tie-rods.

It is a further object of the invention to provide a mat composed of identically-shaped members which are adapted to interlock and tie-rods which are adapted to be passed through the interlocked portions of the members.

Referring to the various parts by numerals, 1 designates the mat proper, which is formed of the heart-shaped members 2. These members are each formed at one end with the central inward-extending pocket or socket 3 and at its other end with the outward-extending tongue or projection 4. As shown in the drawings, this tongue or projection is formed by the two ends of the flat strip of steel from which the heart-shaped member is formed. While this is the preferred form of the device, it is obvious that the projection need not be made in this manner. The socket 3 and the projection 4 are longitudinally in line with each other and are at diametrically opposite points.

When the members are assembled to form the mat, as shown in Fig. 1, the projections 4 of one line of members fit closely in the sockets 3 in the adjoining line of members and the sides of the members in each line abut closely together, so that there will be no lateral play or vibration between the members. When the members are assembled in this manner, tie-rods 5 are passed through the walls of the sockets, through the projections 4 contained in said sockets, and through the abutting sides of the members, as shown clearly in Fig. 1, perforations being formed in the members at the proper points during the process of manufacturing them. The ends of the tie-rods are turned up to form heads 6 within the members forming the outer sides of the mat, as shown clearly in Fig. 1, said heads being so formed that they bear against the socket-walls and hold the tie-rods against lateral movement, thereby preventing any shifting of the members on the tie-rod.

Along one edge of the mat an extra set or line of members 7 is used. These members are reversed as to position and are assembled as shown, their arms being placed between the arms of the adjoining members. The purpose of this is to inclose the last row of projections 4 within the members 7, and thereby protect them. The members 7 also form shields for said projections, and thereby prevent the garments of persons walking over the ends of the mat from being caught in them. This extra set of elements also strengthens the mat along this edge making it very solid and substantial. It is apparent that this extra set of members thoroughly protects the ends of the strips of which the adjoining members are formed and prevents them being bent or crushed or moved along the tie-rod.

From the foregoing it will be seen that I provide a mat made of identically-shaped members, each of which is formed with a socket at one end and with an outward-extending projection at its opposite end, the projection of one member being adapted to fit closely within the socket of the said adjoining member, and that tie-rods are provided which pass through the interlocked parts of the member, and secure them all together in such manner as to prevent lateral vibration or movement. Each tie-rod forms a pivot on which the entire row of members secured by it may be swung, so

that the mat may be folded or rolled for convenience in transportation or storage.

One of the great advantages of my form of mat is that it may be cut or formed into any desired shape by simply heading up the tie-rods at the proper place. It will also be readily appreciated that one of the members or as many as may be desired may be removed from the mat by simply cutting the tie rod or rods at the proper place or places so that the members it is desired to remove may be disconnected from the body of the mat. It is obvious that the tie-rods may then again be headed at the proper places to retain the remainder of the members in proper position in the mat. By the peculiar shape and arrangement of the members of this mat a very large wearing-surface is provided, and by providing the projections 4 and the sockets 3 the mat is greatly strengthened, there being four thicknesses of the steel strip at these points to support the weight placed upon the mat. It is clear, therefore, that a mat constructed according to my invention will be extremely simple of manufacture. It is a very simple operation to assemble the members. It will be extremely durable and will not endanger the clothing of persons walking on it.

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

1. A metallic mat comprising a plurality of sheet-metal members, each member being formed from a strip of metal and provided at one side with an inward-extending socket and the adjoining member being formed with an outward-extending projection, whereby when the members are assembled the projection of one member will fit in the socket of an adjoining member, transverse tie-rods extending through the interlocked sockets and projections, and heads formed on the outer ends of said tie-rods within the outermost members, said heads bearing against the walls of the sockets of said outermost members and preventing any lateral movement of said tie-rods.

2. A member for a metallic mat formed of a single strip of sheet metal having a substantially continuous wall and provided with an inwardly-extending socket at one side said socket extending within the margin of the member, and with an outward-extending projection at a diametrically opposite point.

3. A member for a metallic mat formed of a single metal strip bent into a substantially heart shape having a continuous wall and provided at one end with an inward-extending socket said socket projecting within the margin of the member and at a diametrically opposite point with an outward-extending projection the walls of the socket and the projection and the sides of the member being provided with suitable perforations for the passage of tie-rods.

4. A metallic mat comprising a plurality of open sheet-metal members each of which is formed of a strip of sheet metal bent into suitable shape and provided at one point with an inturned socket portion the walls of which lie within the margins of the member, and at an opposite point with an outward-extending projection adapted to fit closely within the socket formed in the adjoining member, whereby a fastening device may be passed through the interlocked projection and socket of two adjoining members and the heads of said fastening device arranged within the walls of the member in which the socket is formed.

5. A metallic mat comprising a plurality of identically-shaped sheet-metal members, each member being formed of a strip of sheet metal bent into suitable shape, the ends of said strip being brought together so that the member will have a continuous wall, a portion of said wall being extended inward to form a socket lying within the main portion of the member, the two ends of the strip being brought together at a point directly opposite said socket and bent to form an outward-extending projection adapted to fit closely within the socket of an adjoining member, and a tie-rod extending through a plurality of interlocked projections and sockets, said tie-rod being headed.

6. A metallic mat comprising a plurality of members, each member being formed of a strip of sheet metal bent to form converging side walls, the two ends of the strip being brought together to form a downward-extending projection at the point where said side walls meet, the outer ends of said walls being connected by two outward-curved parts said outward-curved parts being connected at a point directly opposite the outward-extending projection by an inward-extending socket part, said socket part lying between the side walls at the broadest portion of the member, said socket being adapted to receive the downward-extending projection of an adjoining member, and a tie-rod passed through the walls of the socket and the inclosed projection of the adjoining member.

7. A member for a metallic mat formed of a strip of sheet metal bent to form converging side walls, the two ends of the strip being brought together to form an outward-extending projection at the point where said side walls meet, the outer ends of said side walls being connected by two outward-curved parts, said outward-curved parts being connected at a point directly opposite the outward-extending projection by means of an inward-extending socket part, said socket part lying between the side walls of the broadest portion of the member and within the margin thereof, said socket being adapted to receive the downward-extending projection of an adjoining member.

8. A member for a metallic mat formed of a strip of sheet metal bent to suitable form and having its two ends brought closely together and extended outward to form a projection,

the walls of the member being extended inwardly at a point opposite the outward-extending projection to form a socket within the margin of the member and adapted to receive the outward-extending projection of an adjoining member whereby the ends of the strip forming each member will be confined within the walls of the socket of the adjoining member and held therein against lateral movement, the walls of the socket and the projection being apertured for the passage of a suitable fastening means.

9. A member for a metallic mat formed of a strip of sheet metal bent substantially into heart shape and provided at the point of juncture of the lobes with an inward-extending, narrow, longitudinal socket which lies within the margin of the member, the two ends of the strip being brought together at the point of the heart shape and extended outward in a line parallel with the walls of the socket, whereby the member will have a substantially continuous metal wall, said projection being adapted to fit closely within the socket of the adjoining member, the walls of the socket and the projection being apertured horizontally for the passage of a fastening device.

10. A metallic mat comprising a plurality of members, each member being formed of a sheet-metal strip bent to form a continuous wall for said member, a portion of said wall extending inward within the margin of the member to form a socket, and a portion thereof extending outward beyond the margin of said member, the socket and the projection being at diametrically opposite points whereby the projection of one member may be fitted into the socket of the adjoining member, the walls of the socket and of the projection and the sides of the members being apertured, and tie-rods passing through the interlocked sockets and projections and the sides of the members, said rods being headed on their ends.

11. A metallic mat comprising a plurality of members, each member being formed of a sheet-metal strip bent to form a continuous wall for said member, a portion of said wall extending inward within the margin of the member to form a socket, and a portion thereof extending outward beyond the margin of said member, the socket and the projection being at diametrically opposite points whereby the projection of one member may be fitted into the socket of the adjoining member, the walls of the socket and of the projection and the sides of the member being apertured, and tie-rods passing through the interlocked sockets and projections and the sides of the members, said rods being headed on their ends within the margins of the outermost members.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 7th day of March, 1905.

GEORGE CAMPBELL SLEETH.

Witnesses:
WM. R. DAVIS,
ROYAL B. CUSHING.