(No Model.)

T. PERRINS.

METALLIC DOOR MAT.

No. 371,474. Patented Oct. 11, 1887.

Fig. 1.

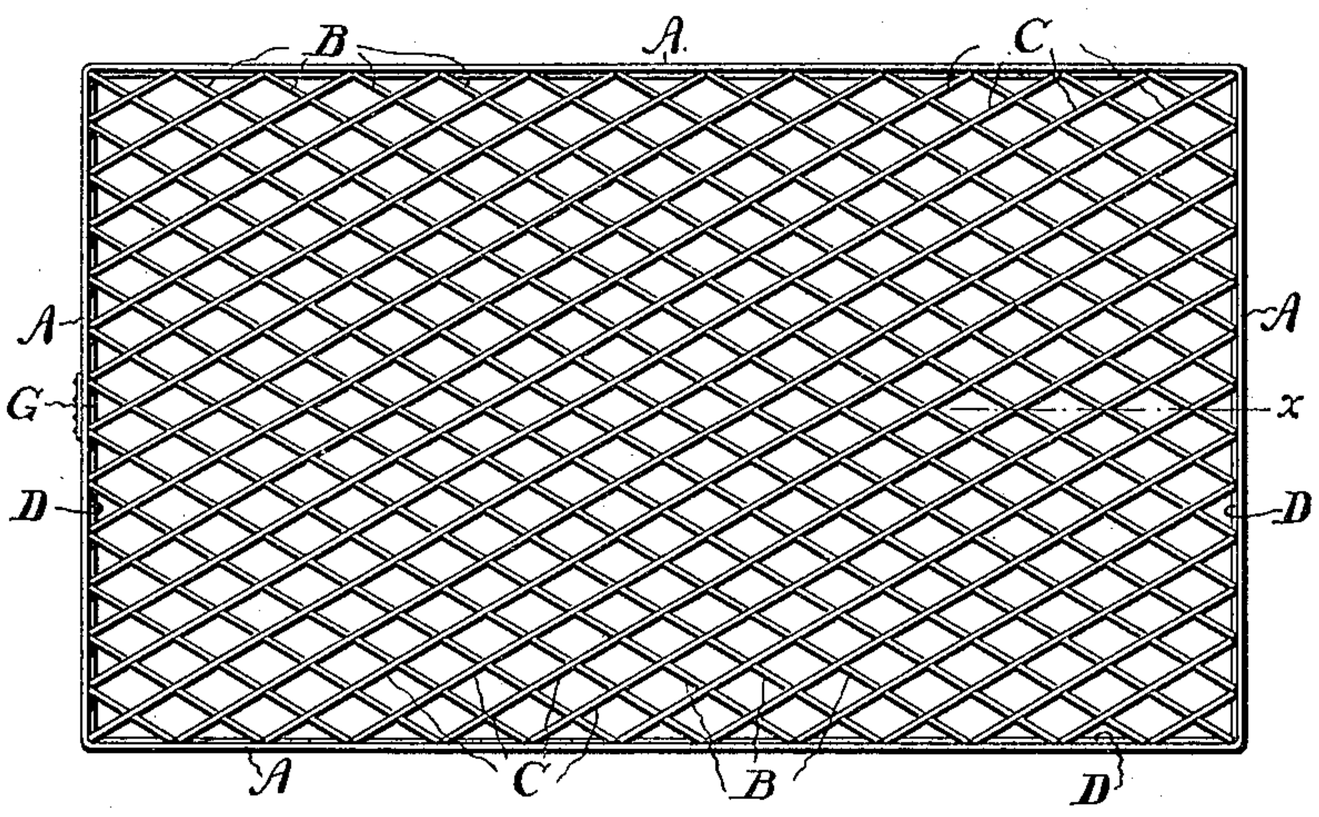


Fig. 2.

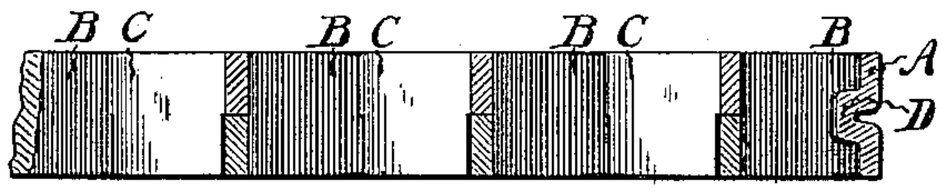
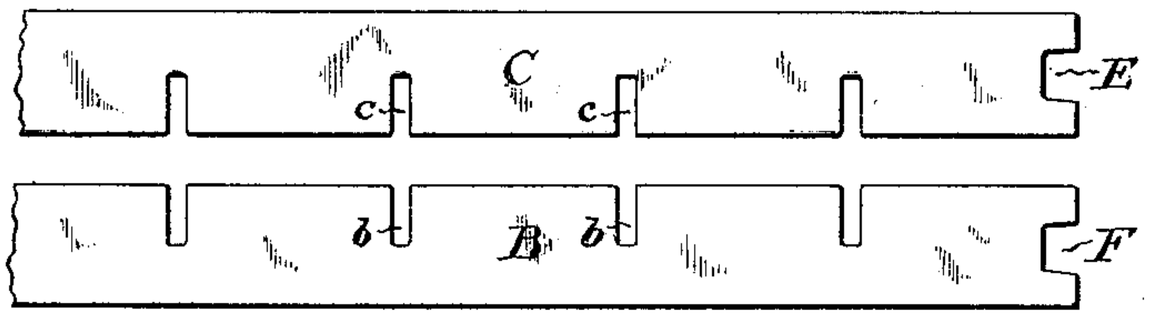


Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS PERRINS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO THOMAS A. HARRIS, OF SAME PLACE.

METALLIC DOOR-MAT.

SPECIFICATION forming part of Letters Patent No. 371,474, dated October 11, 1887.

Application filed September 27, 1886. Serial No. 214,581. (No model.)

To all whom it may concern:

Be it known that I, THOMAS PERRINS, of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Metallic Door-Mats, of which the following is a specification.

My invention relates to metallic door-mats of the class made up of flat metallic strips presenting their edges for the feet to rest upon, and which are fastened together so as to bind them into a solid durable mat having openings, interstices, or meshes, through which the dirt, &c., may fall to the floor or surface beneath.

The object of my invention is to improve such mats, to the end that the mat may be improved in structure with less cost in manufacture.

The subject-matter claimed by me is particularly pointed out in the claims at the close of this specification.

In the accompanying drawings, which illustrate my improvements as embodied in the best way now known to me, Figure 1 is a plan or top view of the improved mat. Fig. 2 is a partial longitudinal section therethrough on the line *x x* of Fig. 1; and Fig. 3 is a partial side view of the strips which compose the body portion of the mat, showing the details of their construction.

The mat is made up of a body portion consisting of strips B C, of thin metal—such as strap-iron, for example—crossing one another, as shown, and the whole interlocked edgewise, and of an outer inclosing or surrounding rim or frame, A, preferably of rolled iron, with which the ends of the strips B C, forming the body portion of the mat, are interlocked. The mat thus constructed is then covered and all the parts more securely and firmly united by a coating of metal applied in any suitable way, as by dipping or by depositing it thereon by galvanic action.

To construct the body portion of the mat, I take strips of thin metal—preferably strap-iron—each of sufficient width to form a proper height of mat, but thin enough to be somewhat elastic when their edges are trodden on. The strips B C are notched at intervals along their edges, as shown at *b c*, the notches extending, preferably, just half-way through the respective strips. A number of the strips B C are then put together at any desired angle crosswise and edgewise and interlocked by fitting their respective edge notches, *b* and *c*, into one another. The sectional view of Fig. 2 shows them thus combined, where, it will be seen, they overlap one another, so as to make their edges flush throughout the whole structure. A sufficient number of the strips having been thus put together to form a parallelogram or other desired figure of the proper or desired size, I next apply the rim or frame A thereto around the edges of the thus-constructed body portion of the mat, whose strips have notched ends, as shown at E and F. This rim or frame A consists, preferably, of a band of rolled iron somewhat heavier than the strips B C of the body portion, and it is preferably applied in the following manner: Each end of the strips B C is notched or grooved, as at F E, respectively, as I have before stated, and along the middle of the rim or frame A, on its inside, is a projecting rib, D, of a length to fit into the notches F and E in the ends of the body-strips B C, and thus form a secure interlocking connection between the ends of said strips and said rim or frame, and this is an important feature of my invention. The rim or surrounding frame A, having been bent to the proper shape to inclose or surround the body portion of the mat, is placed in position with its rib D engaging and interlocking with the ends of all the strips B C, and its ends are or may be then secured together, as shown at G, by means of rivets or in any desired manner.

By reference to Fig. 1 it will be seen that the ends of the strips B and C bear against one another at their respective abutments or contact with the inner side of the rim or frame A, whose rib D acts as a tenon, so that the structure is in a great measure interlocked together, and the only liability to displacement is from the springing of the strips where they overlap one another and abut against the rim. I have found that in a structure thus combined and interlocked this liability can be completely overcome by a coating of metal, as by electro-plating, and that the coating may be so thin as not to affect the elasticity of the structure nor add materially to its weight. I prefer to use

zinc for this coating, and it may be applied by any of the well-known methods of galvanizing.

I do not of course claim, broadly, a metal coating for the parts of a metallic mat, nor do I limit myself to the details of the interlocking connection between the ends of the body-strips and the rim or frame which surrounds and strengthens them. So, also, it is not necessary that the notches *b c* of the body-strips should each extend exactly half-way into the respective strips, although it is desirable that the combined depths of the notches should be sufficient to permit the strips to come together with their edges flush; nor do I claim the interlocking of the body-strips *per se* as of my invention.

The contour of the mat may be curved instead of angular, and the rim or frame A may have its ends secured by other methods than by riveting.

My invention results in an improved mat, lessens the cost of its production, and increases its durability, while the metal coating, in addition to its aiding in securing the parts of the mat together, closes the joints and prevents rusting of the metal.

I claim as my invention—

1. A metallic mat consisting of a body portion made up of flat strips interlocked edgewise and crosswise, and of a surrounding rim or frame, between which and the ends of said interlocked strips there is a rib-and-notch interlocking connection, substantially as described.

2. A metallic mat having crosswise interlocked strips and a surrounding rim or frame with the ends of said strips coming together at the inner side of said rim, and a rib-and-notch interlocking connection, and a metallic coating of said mat, substantially as described.

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