

(No Model.)

H. FISCHER & L. EWALD.

DOOR MAT.

No. 387,678.

Patented Aug. 14, 1888.

Fig. 1

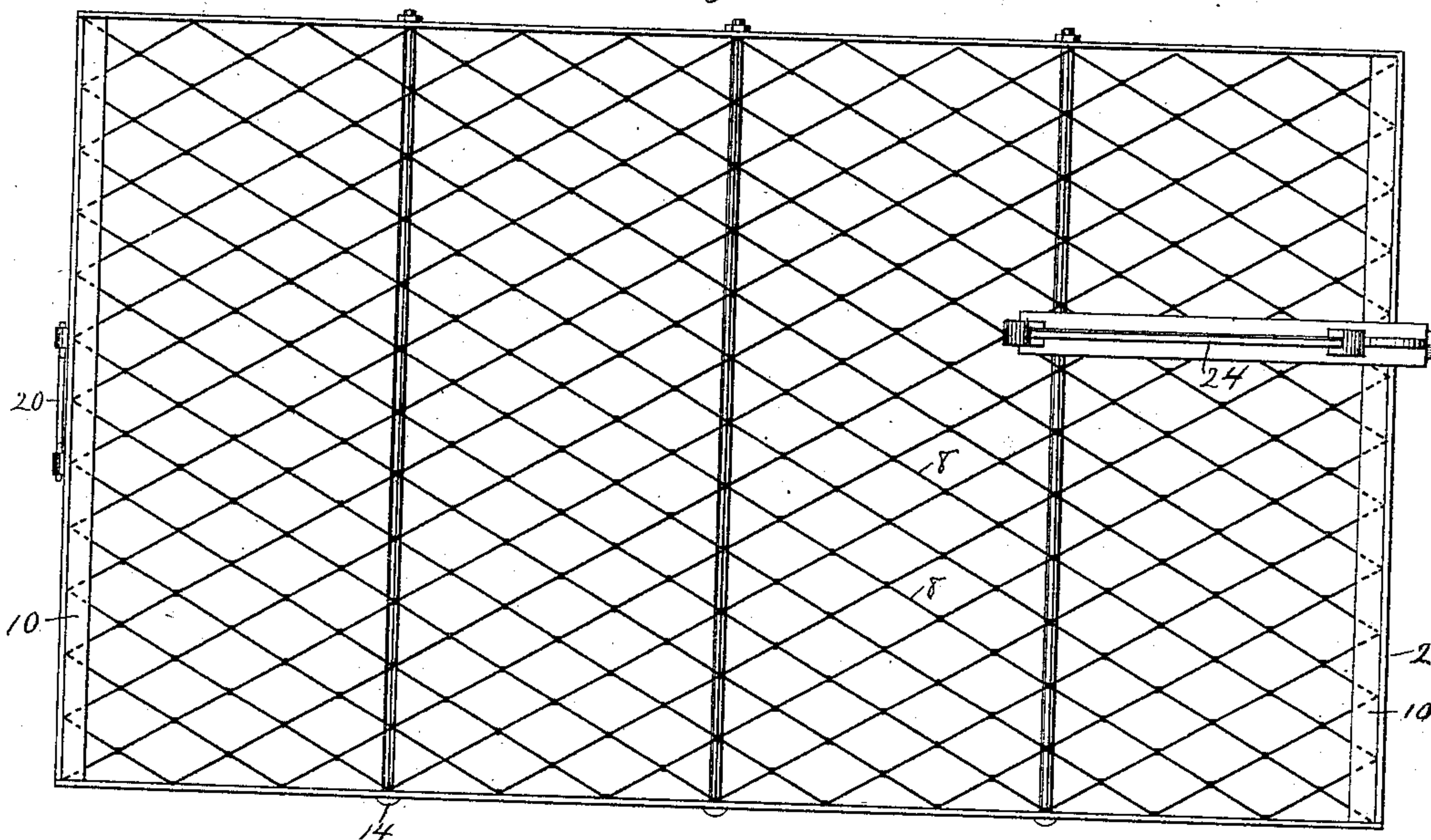


Fig. 2.

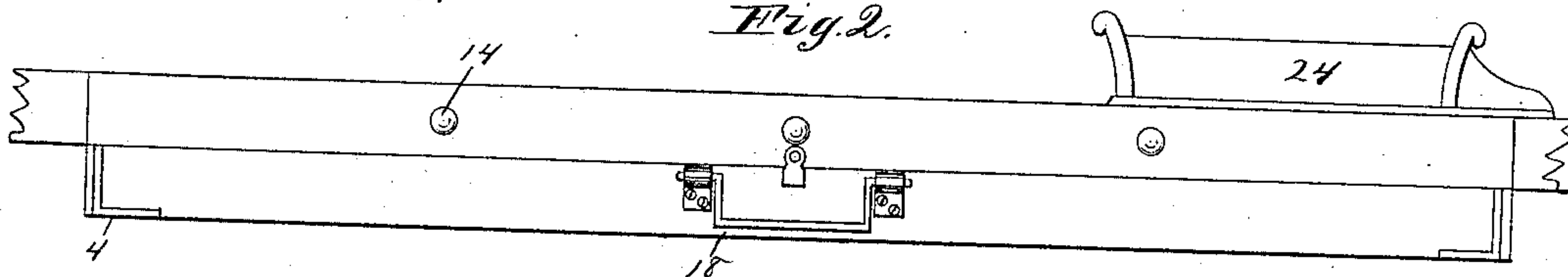


Fig. 3.

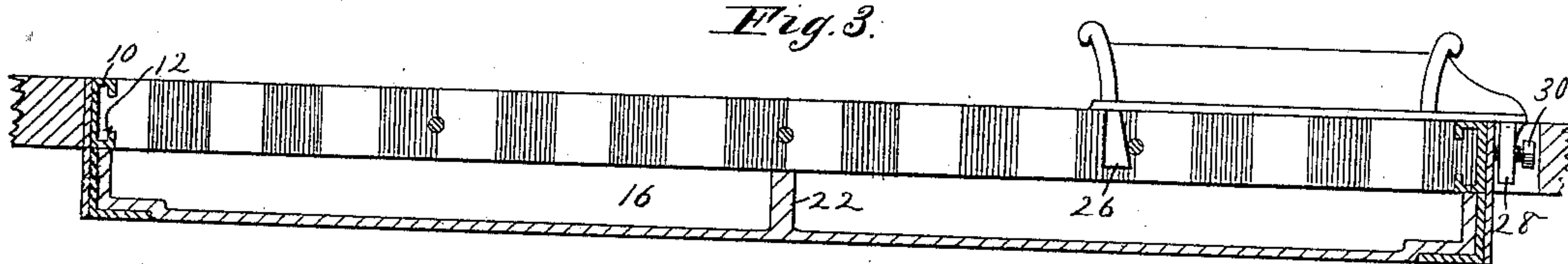


Fig. 4.

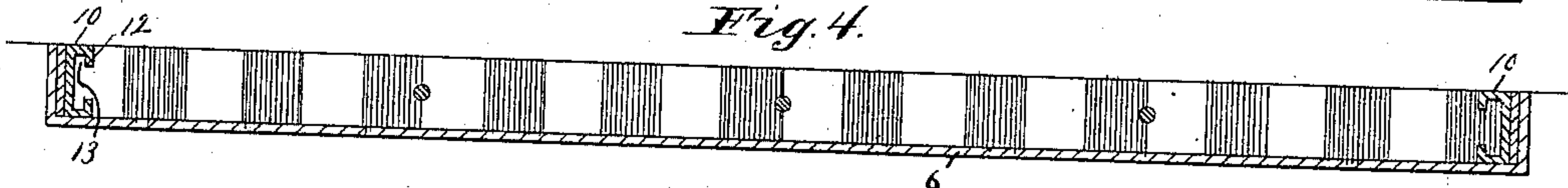


Fig. 5.

Fig. 7.

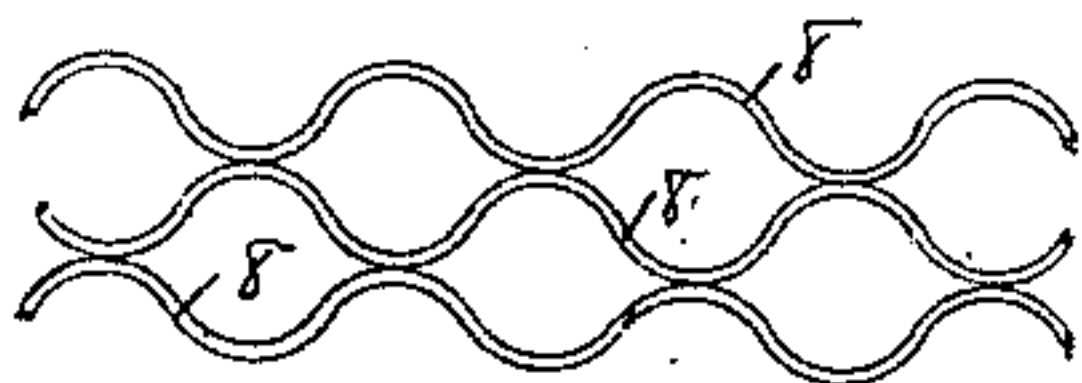
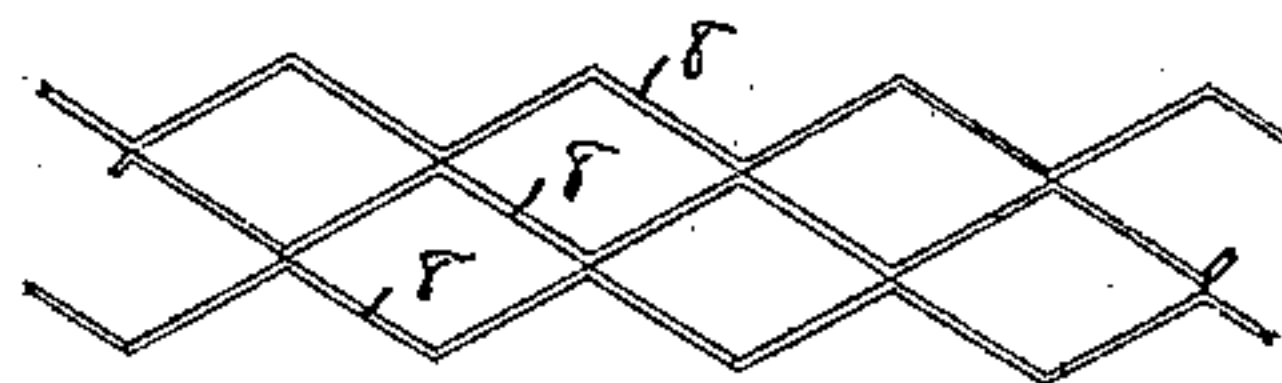


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY FISCHER AND LEO EWALD, OF MINNEAPOLIS, MINNESOTA.

DOOR-MAT.

SPECIFICATION forming part of Letters Patent No. 387,678, dated August 14, 1888.

Application filed November 14, 1887. Serial No. 255,031. (No model.)

To all whom it may concern:

Be it known that we, HENRY FISCHER and LEO EWALD, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Door-Mats, of which the following is a specification.

Our invention relates to an improved door-mat for cleaning the mud and dirt from the feet, and a receptacle beneath said mat for collecting said dirt in order that it may be conveniently removed.

Our invention consists, generally, in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the drawings which form part of this specification, Figure 1 is a plan view of our improved mat. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal vertical section. Fig. 4 is a similar section showing a modification. Fig. 5 is a modification showing the mat let into the floor. Figs. 6 and 7 are details.

In the drawings, 2 represents the outer frame or casing which surrounds the mat. This casing may be made of sheet metal or band-iron, in which case it is preferably provided at each end with the angle-irons 4, which are secured to the casing upon the inner surface, with the angles turned toward the center, as shown in Fig. 3. We do not, however, confine ourselves to this construction, as the bottom plate, 6, may be secured to the casing and cover the whole lower surface, as shown in Fig. 4.

Strips of band or hoop iron or other metal, 8, are preferably crimped or corrugated and placed side by side, with their edges uppermost in the upper part of the casing, each section placed so that the bent portion of one strip will touch the bent portion of the strip next to it, and form diamond, oval, or other shaped openings between the separate sections. These sections or strips are preferably secured at the ends to the casing, or to a separate end frame which is let into the casing. The fastening which we prefer to use for the ends of the strips is shown in Figs. 3 and 4. The end holder, 10, is provided with the lips or flanges 12, which are rolled or otherwise conveniently formed upon the supporting-plate, thus leaving a rectangular recess, 13, partially inclosed by the

same flanges. The ends of the crimped plates 8 are cut out to correspond with the lips or flanges 12 and fit into the recess 13. Any desired number of plates to give the required width to the mat may be passed into this recess and will be securely held in position. A number of bolts, 14, are preferably passed through the frame and laterally through the plates 8. These bolts serve as a support for the plates, and also to bind the whole together.

A receptacle, 16, may be placed below the corrugated plates 8, and this receptacle may be in the form of a drawer or box, to receive the dirt which falls through the openings between the sections of the plates. In case a drawer is used we prefer to place a handle or handles, 18, upon each side, for convenience in removing said drawer. Other handles, 20, may be placed upon the outer frame to enable it to be easily moved about.

We prefer to place one or more partitions, 22, through the drawer or lower receptacle, 16, of sufficient height to form a support for the lower edges of the plates 8.

In case a drawer is used the plates and the end holders can be permanently secured to the frame 2; but in case the drawer is not used the plates and end holders are secured in a separate frame and set into the outer frame or case from the top. One advantage of this is that we are enabled to get a greater capacity in the receptacle, as the dirt will fill up between the sections and it will not be necessary to empty it until it reaches the top of the plate, when the said plates can be lifted out and the pan or receptacle can be removed and the dirt thrown out.

In some cases it may be necessary, on account of the height, to allow the plates to rest upon the bottom of the pan or receptacle, as shown in Fig. 4. This will be substantially the same as that already described, except that there will be less depth for collecting the dirt.

A scraper, 24, may be secured to the surface of the mat, and is preferably secured as shown in Fig. 3. The blade of the scraper is held in a suitable frame which rests upon the plates 8. The under side of this frame is provided with downwardly-projecting lugs 26 and 28. The lug 28 is provided with a screw-

threaded aperture, into which the set-screw 30 is placed. This set-screw bears against the outer portion of the frame 2 and draws the lug 26 against one of the cross-rods 14. The 5 lug 26 may be made slightly inclined toward the scraper-frame, to hold it firmly to the rod and prevent it from being detached.

The mat constructed as described may be used for a floor-covering for street-cars and 10 other places where constant use makes it desirable to furnish some means of getting rid of the mud or dirt which is tracked in from the street. In this case the form shown in Fig. 4 will be preferred, as the frame holding the 15 plates can be lifted out and the case or pan be easily removed and emptied.

We have shown in Fig. 5 the device adapted to be let into the tread of a stair. This can be easily done where it is an object to have 20 the top of the mat flush with the platform. The drawer in this case will be taken out from the front by cutting a suitable recess in the riser or the floor. In this instance the wall of the opening that is formed in the tread of the 25 stair forms a frame in which the corrugated metallic plates are arranged.

We do not confine ourselves to the use of a single drawer, as two or more drawers may be more convenient to handle.

30 We claim as our invention—

1. The combination, in a door-mat, with the frame or casing 2, provided with the end bars, 10, having the lips or flanges 12, forming the rectangular recesses 13, of the corrugated 35 metal plates extending across said frame and having ends fitting the recesses 13, and the

bolts 14, passing laterally through the frame and the plates 8, substantially as described.

2. The combination, in a door-mat, with the open frame or casing 2, of the corrugated 40 metal plates 8, extending across said frame, with open spaces between them, the angle-irons 4, secured to the ends of the casing 2, with the flanges projecting inward, and the drawer or receptacle 16, arranged beneath said cor- 45 rugated plates and resting upon said angle-irons, substantially as described.

3. In a door-mat, the combination, with the frame, of the series of crimped or corrugated metallic plates 8, arranged upon their edges 50 in said frame, the rod 14, for securing the plates together, the removable scraper 24, the lug 26, secured to said scraper and engaging said rod, and the lug 28, also secured to said scraper and 55 provided with the set-screw 30, which bears upon the frame and holds the said scraper in place, substantially as described.

4. The combination, in a door-mat, with the open frame 2, of the corrugated plates 8, ex- 60 tending across said frame, with open spaces between them, and the drawer or receptacle 16, arranged to slide in said frame beneath said plates, and provided with the central parti- 65 tion, 22, forming a support for said plates 8, substantially as described.

In testimony whereof we have hereunto set our hands this 7th day of November, 1887.

HENRY FISCHER.
LEO EWALD.

In presence of—

R. H. SANFORD,
A. M. GASKELL.