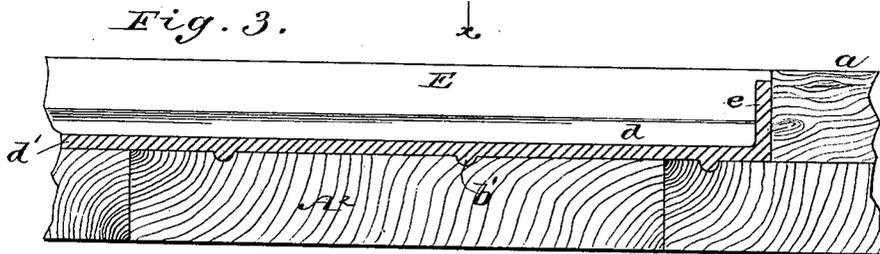
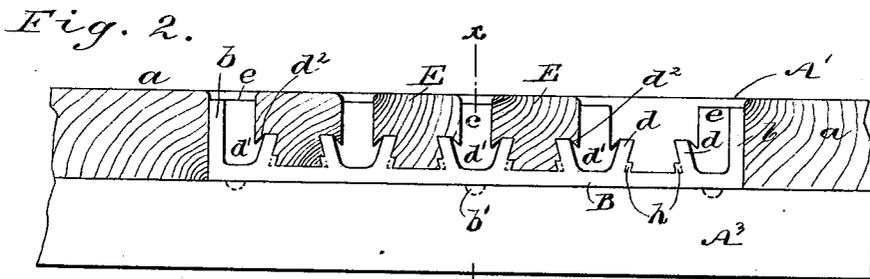
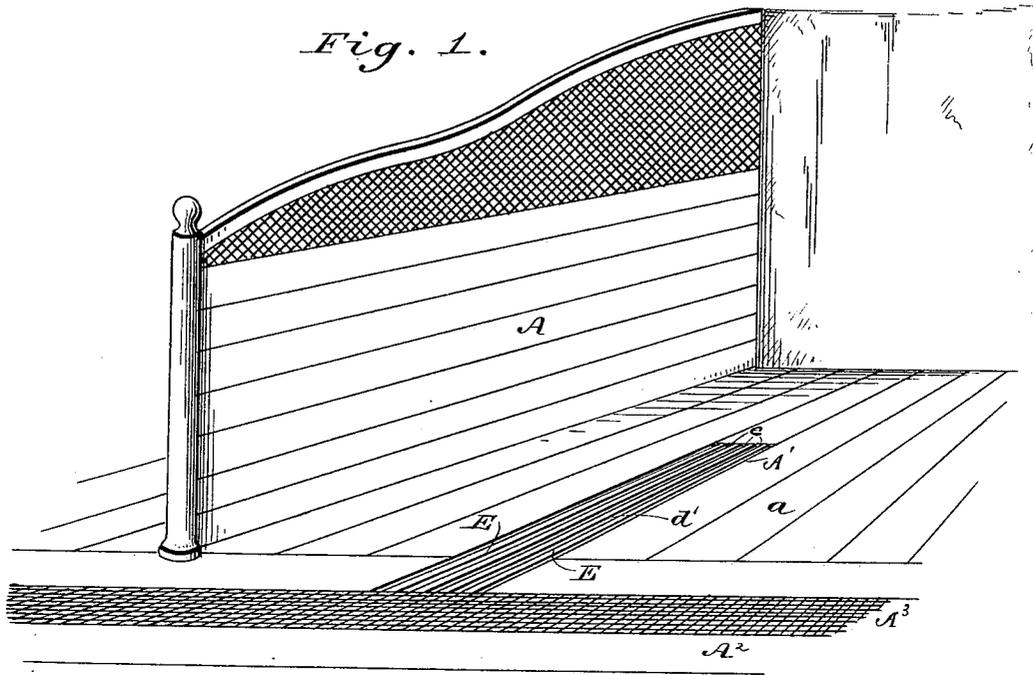


(No Model.)

M. LOGAN.
DRAIN FOR STALLS.

No. 386,997.

Patented July 31, 1888.



WITNESSES:
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UNITED STATES PATENT OFFICE.

MARTIN LOGAN, OF NEW YORK, N. Y.

DRAIN FOR STALLS.

SPECIFICATION forming part of Letters Patent No. 386,997, dated July 31, 1888.

Application filed May 22, 1888. Serial No. 274,051. (No model.)

To all whom it may concern:

Be it known that I, MARTIN LOGAN, of the city, county, and State of New York, have invented a new and Improved Drain for Stalls, of which the following is a full, clear, and exact description.

My invention relates to an improvement in drains for stalls, and has for its object to provide a drain which will be thoroughly effective in operation and wherein the drain may be expeditiously and conveniently cleaned and detached from the stall; and the further object of the invention is to provide a drain not injurious to the feet of the stock.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial perspective view of a stall having the drain applied. Fig. 2 is a front elevation of the drain. Fig. 3 is a longitudinal section on line *xx* of Fig. 2.

In carrying out the invention the floor *a* of the stall *A* is provided with a rectangular recess, *A'*, extending downward to the main floor *A²* of the stable or structure and outward to the general drain *A³*, as best shown in Figs. 1 and 2.

The drain consists of a body, *B*, preferably constructed of metal cast or forged adapted to the contour of the recess *A'*. The said body is provided with longitudinal side flanges, *b*, and upon the bottom a series of preferably circular projections or lugs, *b'*, are formed, adapted to enter similar apertures in the bottom wall of the recess *A'*, as best shown in Figs. 2 and 3. The side flanges, *b*, are purposed to protect the side wall of the said recess *A'*.

Upon the upper face of the body *B* a series of spaced longitudinal ribs, *d*, are formed, the contiguous faces of which are inclined downward in opposite directions, whereby a series of essentially dovetail grooves are obtained, the outer faces of the said ribs being so shaped as to produce a series of longitudinal essentially *U*-shaped gutters, *d'*, intervening the several dovetail grooves aforesaid.

The drain further consists of a series of slats, *E*, constructed of softer material than iron—for instance, wood—the said slats being provided with inclined sides adapted to the contour of the dovetail grooves, in which they are slid and firmly yet detachably held, as best shown in Fig. 2.

The slats *E* are preferably of such height as that when placed in position the upper surface will be in the same plane with the floor of the stall. In order to more effectively retain the slats in position, each slat is provided at the base upon opposite sides with a longitudinal under-cut, *d²*, whereby the tread of the slats is made to overhang the upper face of the ribs and constitute a lock, as best shown in Fig. 2.

The slats extend from end to end of the body, but the *U*-shaped grooves *d'* are stopped near the rear or inner end and made to terminate in a lug or projection, *e*, as best shown in Figs. 1 and 3, the object being to prevent any fluid passing down the gutters coming in contact with the rear wall of the recess, in which the drain is located. If, in practice, it is found desirable, a flange extending from side to side of the body may be substituted for the lugs.

Upon the inner face of the several ribs at their forward or outer ends horizontal lugs *h* are cast or otherwise produced, the object being to provide a stop for the outer ends of the slats, the same being inserted at the inner end of the body. By this means should the animal "paw" the slats they cannot be forced from their position.

It will be observed that the entire drain may be readily lifted out from the stall, and that by reason of the peculiar shape of the gutter the same may be readily kept clean when the drain is in position. It is also obvious that the wooden slats, which afford a yielding surface for the feet, if injured by wear may be conveniently and expeditiously removed and replaced at any time.

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

1. A drain for stalls, consisting of a metal body having the projections *b'* on its under face, essentially *U*-shaped gutters and dove-

tail grooves produced alternately in its upper face, and lugs *h*, formed at the outer ends of said dovetail grooves, and slats of a softer material held in said dovetail grooves, substantially as shown and described.

5 2. In a drain for stalls, the combination, with a metal body having projections upon the under face and longitudinal essentially U-shaped gutters and dovetail grooves alter-
10 nately produced in its upper face, of slats of a softer material detachably held in said dovetail grooves, substantially as and for the purpose specified.

3. In a drain for stalls, the combination, with a metal body having projections on its 15 under face, longitudinal essentially U-shaped gutters and dovetail grooves alternately produced in its upper face, and a flange at one extremity of said gutters, of slats of a softer material detachably held in said dovetail 20 grooves, substantially as and for the purpose specified.

MARTIN LOGAN.

Witnesses:

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