(No Model.)

M. LOGAN.

DRAIN FOR STALLS.

No. 428,848. Patented May 27, 1890.

Fig. 1.

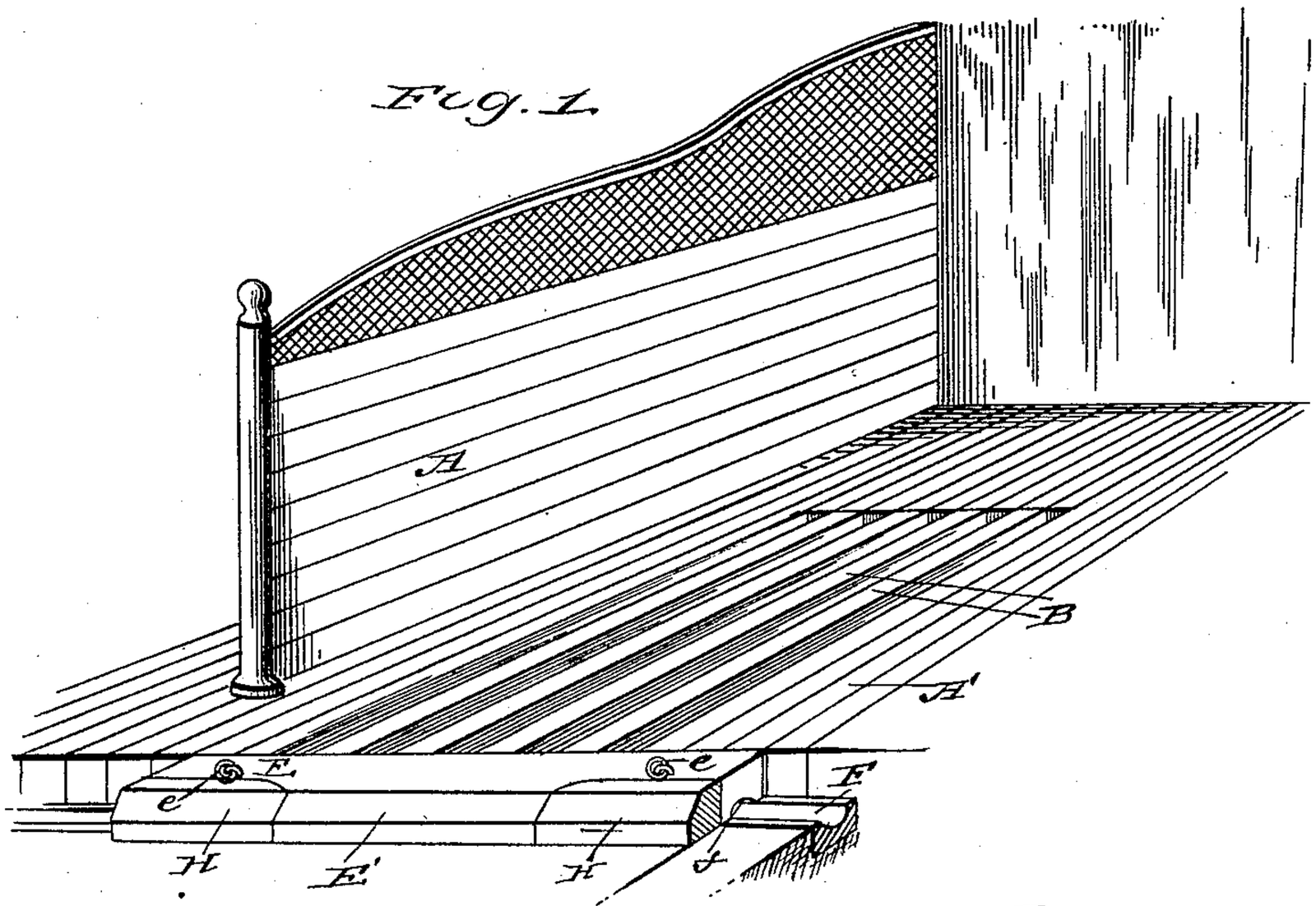


Fig. 2.

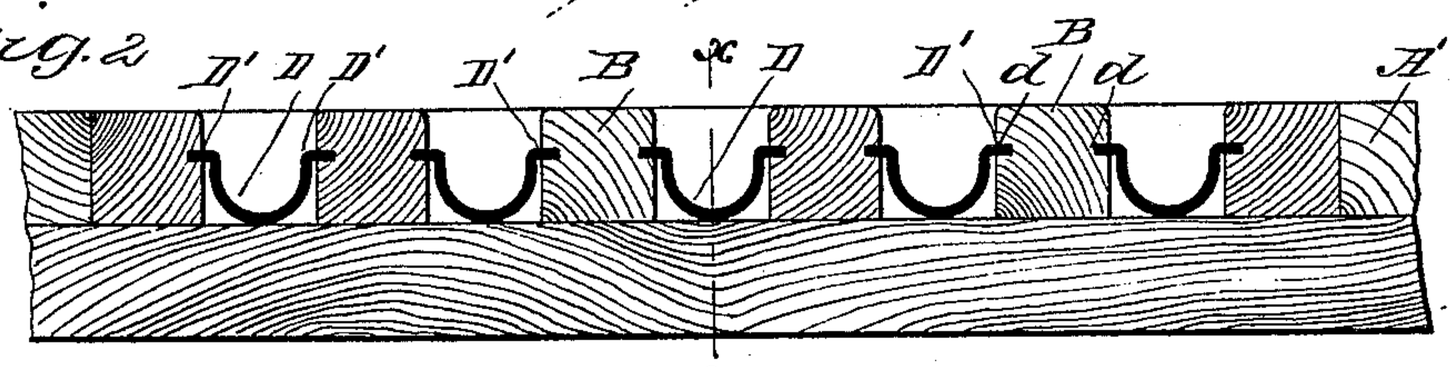


Fig. 3.

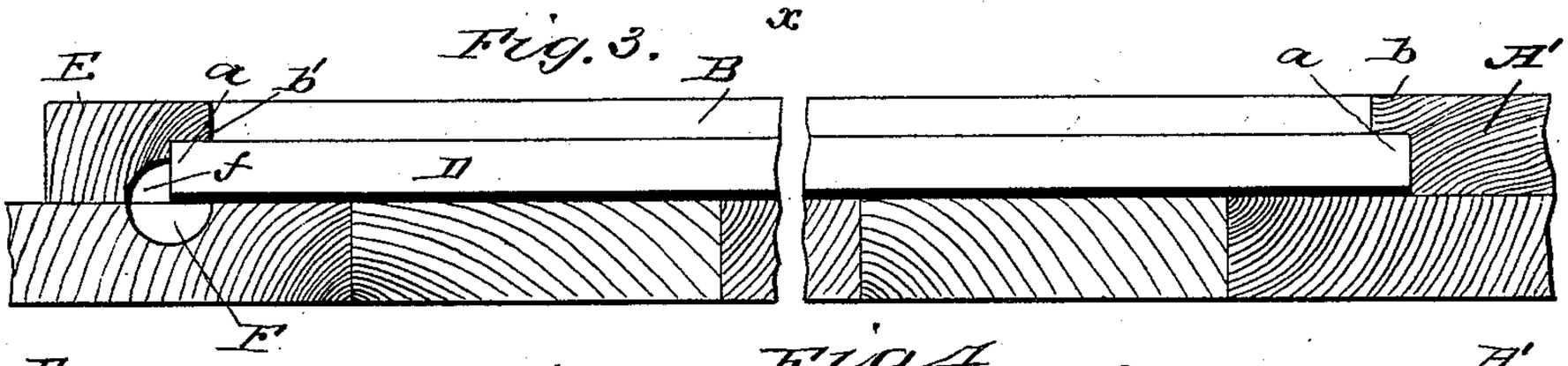
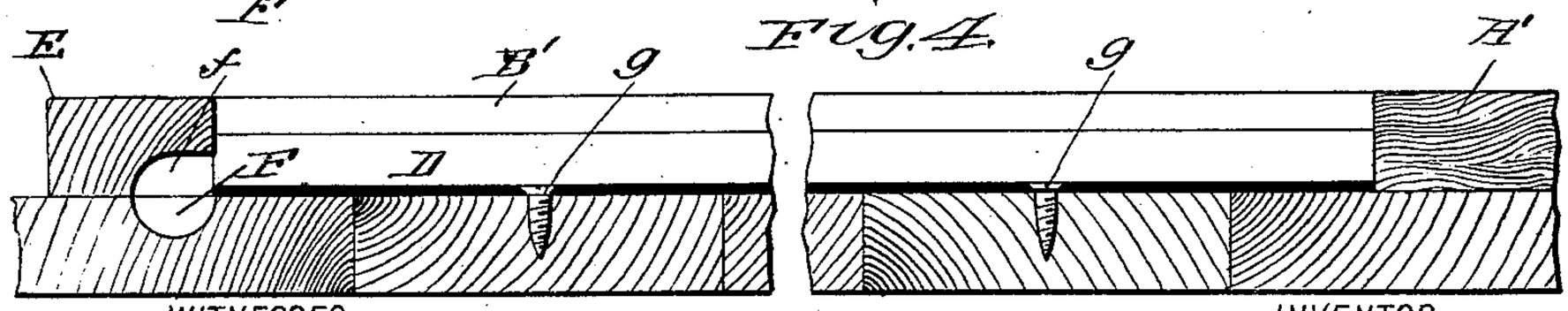


Fig. 4.



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DRAIN FOR STALLS.

SPECIFICATION forming part of Letters Patent No. 428,848, dated May 27, 1890.

Application filed February 24, 1890. Serial No. 341,547. (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 improvements in drains for stalls; and the object of my invention is to provide a neat, simple, and convenient drain that can be easily applied, that will thoroughly drain the stall, that will not easily become clogged and foul, and that can be easily cleaned when clogged.

To this end my invention consists in certain features of construction and combinations of parts, that will be hereinafter fully described, and specifically 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 perspective view of the drain as applied to a stall. Fig. 2 is a vertical cross-section of the same; Fig. 3, a longitudinal section of the same on the line *x x* of Fig. 2, and Fig. 4 a modified form of the same in longitudinal section.

The central portion of the floor A′ of the stall A is provided with rectangular slats B, which extend nearly the length of the stall-floor, and are so laid that there will be a space between each slat sufficiently wide for the urine from the animal to flow between the slats, but not wide enough for the foot of the animal to be caught therein. These slats are made preferably of wood. They are of the same thickness as the stall-floor, so that the tops of the slats will be flush with the top of the floor, and are provided at each end with a projecting tenon *a*, one of which fits within a corresponding mortise *b* of the floor A′, and the other is engaged by a corresponding shoulder *b′* of the locking-bar E, which holds the rear ends of the slats and covers the main stable-drain, as described below, so that the slats B will be held securely in place and can be removed at will. The floor A′ of the stall is given sufficient pitch for the liquids between the slats to flow to the rear of the stall.

Between each of the slats is a U-shaped metal drain D, which extends the entire length of the slats. The bottom of the drain D rests upon the stable-floor below the slats B, and its upper edges are bent outwardly to form lateral flanges D′, which fit in longitudinal grooves *d* in the sides of the slats B, and the drains D are thus held securely in place. The slats B and drains D extend rearwardly above the drain F, which passes the rear of the stalls at right angles with the same in the usual manner, so that the liquids flowing through the drains D will pass into the main drain F and off to some suitable receptacle.

Attached to the stable-floor, just back of the drain F, and parallel therewith, is a cleat H, which is cut away at the part opposite the slats B of each stall, so that when the locking-bar is removed the drains may be easily cleaned.

Between the cleat H and the stall-floor A′ is held the locking-bar E, which is of the same thickness as the stall-floor A′ and slats B, so that the top of the bar will be flush with the stall-floor. The bar E extends across the rear end of the stall and fits closely between the cleat H and the stall-floor, thus covering the drain F.

The bar is provided with rings *e*, by which it may be lifted and removed, with a rearwardly-extending tongue E′, which fits into the gap in the cleat H behind the slats B, and with a longitudinal rabbet *f* upon the under side which corresponds to the shape of the drain F, over which it extends, so that the drain will not be easily clogged, and is also provided near the center with the shoulder *b′*, which rests upon the rear tenons *a* of the slats B and holds the slats in position. It will thus be seen that the slats B and drains D will be securely fastened, and that they may be easily removed, while the bar E will also effectually prevent the droppings from the animal and the bedding in the stall from being introduced into the drain F and closing the same.

In Fig. 4 I have shown the slats B′ without the end tenons *a*, and in this case the ends of the slats will abut with the stall-floor and with the locking-bar E. Otherwise they are similar in shape to the slats B, already de-

scribed, and when the drains D are used in connection with the slats B′ they are attached to the stable-floor by means of screws *g*, which pass through suitable holes in the bottom of the drains and hold the same in place.

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

1. In a drain for stalls, the combination, with the slats B, drains D, cross-drain F, and cleat H, of the locking-bar E, adapted to fit between the cleat H and slats B, so as to cover the drain F, and having a suitable shoulder to engage the ends of the slats B and hold the same in position, substantially as described.

2. A drain for stalls, consisting, essentially, of U-shaped drains placed between longitudinal slats in the stall-floor, to which they may be attached, said drains connecting with a cross-drain in the rear of the stalls, and a locking-bar adapted to cover said cross-drain and hold the longitudinal slats and drains in position, substantially as described.

3. In a drain for stalls, the combination, with the longitudinal slats of the stall-floor, having suitable drains between the slats and a cross-drain in the rear of the stalls to receive the liquid from the longitudinal drains, of cleats fixed in the rear of and parallel with the cross-drain, and a locking-bar adapted to fit between the cleats and the slats of the stall-floor, so as to cover the cross-drain and hold the slats in position, substantially as described.

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Witnesses:
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