

(No Model.)

D. J. LANDERS.
DRAINER FLOOR AND TILE THEREFOR.

No. 572,762.

Patented Dec. 8, 1896.

Fig. 1.

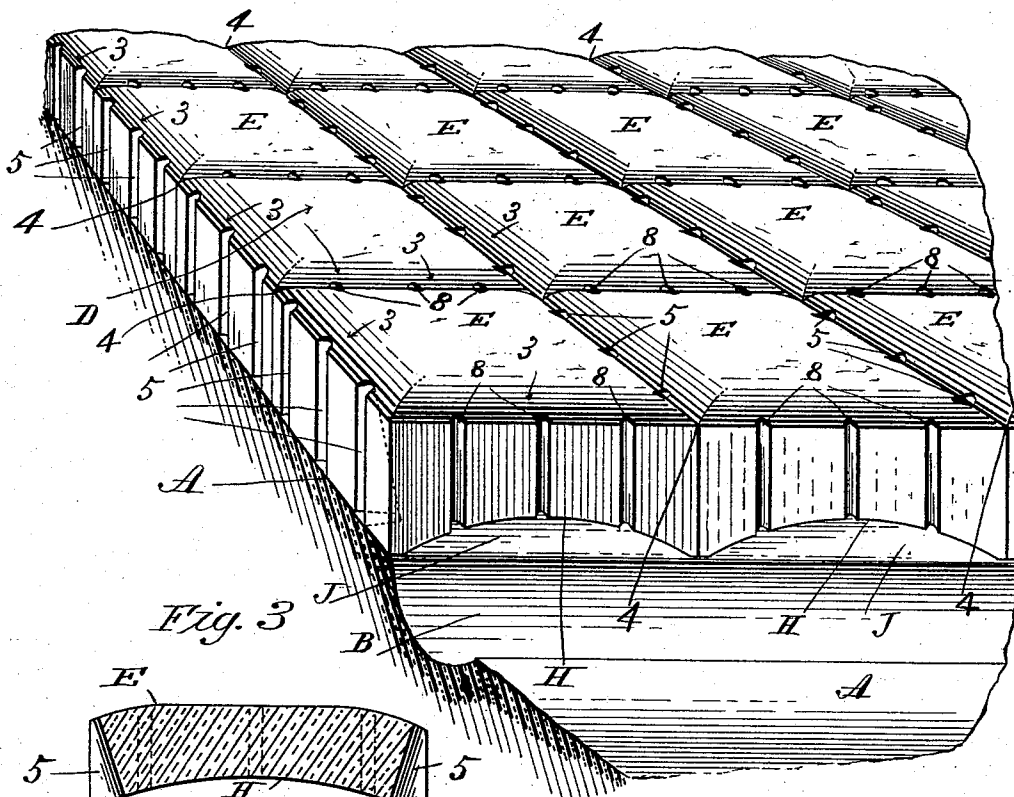


Fig. 3.

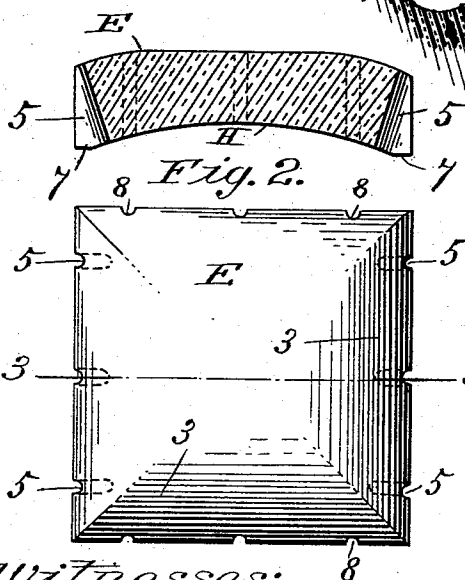
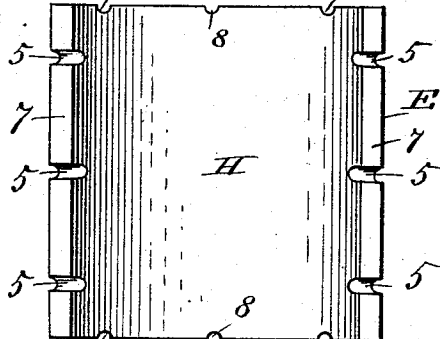


Fig. 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

DENNIS J. LANDERS, OF HOLYOKE, MASSACHUSETTS.

DRAINER-FLOOR AND TILE THEREFOR.

SPECIFICATION forming part of Letters Patent No. 572,762, dated December 8, 1896.

Application filed August 31, 1896. Serial No. 604,353. (No model.)

To all whom it may concern:

Be it known that I, DENNIS J. LANDERS, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Drainer-Floors and Tiles Therefor, of which the following is a specification.

This invention relates to paper-stock drainers for paper-mills and analogous places, the object being to provide a floor for said drainers of improved construction whereby the outflow of the liquid from said stock and drainers is caused to be rapid and thorough, and consequently the stock is brought more quickly to a state fitting it for subsequent operations; and the invention consists in the peculiar construction of the floor-tiles and in a floor constructed therefrom, all as herein-
after fully described, and more particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of a portion of a floor-base and of a drainer-floor applied thereto formed from tiles constructed according to my invention. Fig. 2 is a top plan view of one of the tiles forming said floor. Fig. 3 is a section of one of said tiles on line 3 3, Fig. 2. Fig. 4 is a bottom plan view of the tile shown in Fig. 2 and of those composing said floor shown in Fig. 1.

In the drawings, A indicates the usual floor-base of a paper-stock drainer of a paper-mill of the common cement construction. Said drainer is ordinarily located under the floor of the room in which the stock-grinding engines are located, so that the ground stock and liquor contained in the tub of the engine can be discharged quickly into said drainer. A trough B, one or more, is formed in said base A for conducting the liquor off, which filters through the drainer-floor D. The tiles E composing said drainer-floor each are constructed as follows: Said tiles are preferably molded from a clay mixture substantially like that employed in making brick, care being taken to prevent the presence therein of hard substances which in burning or vitrifying would cause fractures in the tile and impair their strength. Said tiles are preferably made in the general form illustrated in the drawings. The face surface of the tile is

made with curved borders 3, which constitute, when the tiles are assembled in the drainer-floor form, as in Fig. 1, grooves or channels 4 in said floor, extending at right angles thereacross and intersecting each other, as shown. Said channels 4 serve to direct the flow of said liquor into and through a series of vertical liquor-passages 5 between said tiles to the base A, as below described. Said passages 5 in the borders of the tile preferably increase gradually in depth from the edge face of the tile inwardly from the upper to the lower end thereof, and at the latter point any two of said passages in separate tiles being opposite to each other form, unitedly, an outlet-opening at the bottom of the tile of oblong form with circular ends, thereby providing ample clearance for any substance passing therethrough from the drainer. The passages 8 in the ends of the tile are of like form to said passages 5. The under side of said tile, as shown in Figs. 1, 2, and 4, is of arched form, as at H, whereby under a row or rows of said tiles, as arranged in Fig. 1 in floor order, a continuous liquor-conduit J is formed, which communicates with said trough B in the floor-base A.

The under side of each tile E has flat narrow borders 7, oppositely arranged at the bases of the said arch, which constitute the bearing-points of the tile upon said base A. Said passages 5 in the borders of the tile have a lateral depth at their lower ends, that is, from the edges of the tile inwardly, exceeding the width of said bases 7, whereby a free communication between said passages and the interior of each of said arched conduits J is formed when the floor-tiles are placed edge to edge, and consequently there exists no impediment to a free flowage of said liquor from the surface of the drainer-floor into said channel or drain B in the said floor-base A. Said tiles E composing said floor are laid loosely side by side, as shown, preferably without cementing, so that in case any one becomes broken a substitute tile may be conveniently applied to the floor.

What I claim as my invention is—

1. A tile for stock-drainer floors having an arched base, oppositely-arranged flat borders at the bases of said arch, and liquor-passages in the borders of said tile forming

100

free conduits between the upper and lower sides of said tile, the area of said conduits increasing from the top downward, and having an opening in the borders of said arch greater than the width of said borders and communicating with said arched base, substantially as described.

2. A stock-drainer floor consisting of a suitable base having a trough therein, several rows of floor-tiles laid end to end on said base, having interengaging borders, on the upper edges of which are curves inclining downwardly, thereby forming a series of intersect-

ing channels 4, on said floor, an arched liquor-conduit under each row of tiles communicating with said trough, and liquor-passages between said tiles communicating with said channels and conduit, the area of said passages increasing from the top downward and having an opening in the borders of said arch greater than the width of said borders, substantially as described.

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