(No Model.)

P. G. TOEPFER.

MALT KILN.

No. 588,507. Patented Aug. 17, 1897.

Fig. 1.

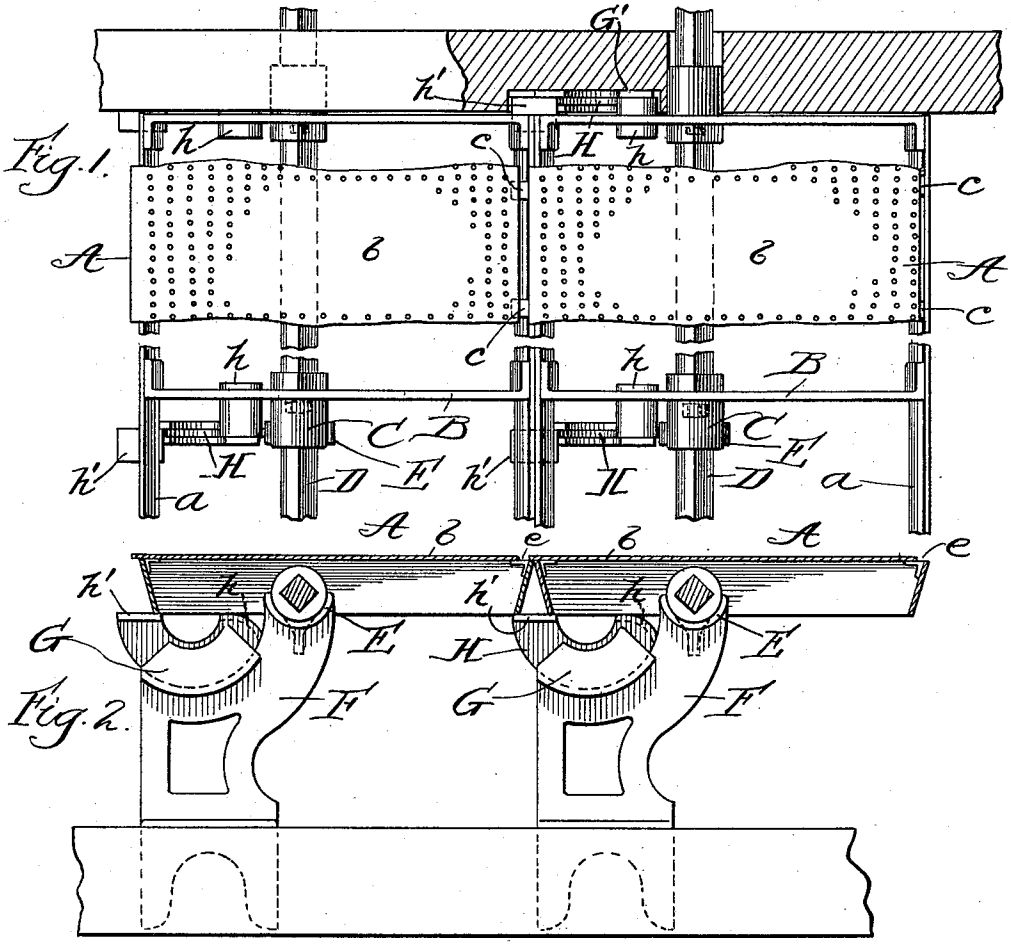


Fig. 2.

Fig. 3.

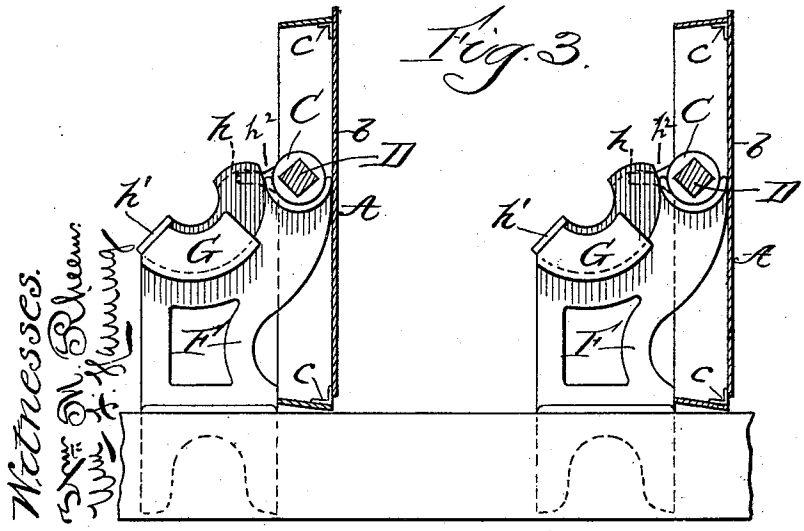
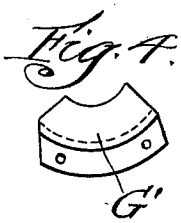


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MALT-KILN.

SPECIFICATION forming part of Letters Patent No. 588,507, dated August 17, 1897.

Application filed January 18, 1897. Serial No. 619,524. (No model.)

To all whom it may concern:

Be it known that I, PETER G. TOEPFER, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Malt-Kilns, of which the following is a specification.

My invention relates to dumping-trays for malt-kilns, and will be fully described hereinafter.

In the drawings, Figure 1 is a broken plan of a portion of a kiln-floor. Fig. 2 is a cross-section of the same. Fig. 3 is a cross-section that shows the trays dumped. Fig. 4 is a detail.

A are the trays, which consist each of a frame *a*, that is covered by a perforated floor *b*. This floor is about the width of the frame, but projects over its edge on one side, while it falls short on the other edge, so that the projecting edge of the floor on one side can rest upon the frame of its neighbor and be flush with the floor on the neighboring frame. The floor is secured to the frame by angle-pieces *c*, and on the short side a space *e* is left between the edges of the two floors, which serves as an air-passage.

At intervals the sides of the tray-frames are connected with each other by castings B, which are formed with hubs C, which hubs receive the operating-shaft D and also form journals for the tray to turn on in bearings E of brackets F. These brackets are supported by suitable girders that extend from one side to the other of the kiln-room, and each is formed with a semicircular pocket G, which is located to one side and below the bearings in the brackets, and this pocket is to receive a rocker H, which is of crescent shape and is formed with oppositely-pointed flanges *h h'*.

Each bracket F carries one of these rockers and each tray-journal is formed with a lug h^2 on its under side for engagement with the adjacent flange *h* of the rocker.

The pockets C are of sufficient depth to retain the rockers and permit them to rock freely without falling out, so that in putting the parts together the rockers are merely dropped into the pockets and then the trays put in place, as in patent to W. Toepfer, No. 226,890, granted April 27, 1880, when the adjacent edges of each pair of trays will rest upon a flange *h'* of one of the rockers, while the adjacent casting B will rest on the flange *h* of the same rocker, and thus the flange *h'* will by pressure on the adjacent sides of the frames from below clamp them together, so that the floors of the two trays will be absolutely flush with each other, as shown in Fig. 2.

In the end walls of the kilns I merely use a pocket-bracket, such as shown at G', Fig. 4.

The operation of my device is as simple as it is effective. When the trays are in position to receive the malt, the pressure of the cross-castings on the flanges *h* of the rockers throws their front ends up under the two adjacent tray-frames and thus clamps the edges evenly together, when the operating-shafts are locked, as in the W. Toepfer patent above referred to, but when the shafts are released then as the tray farthest to one side falls its lugs, engaging the flanges *h'* of the rockers, draw the flanges *h'* down and thus relieve the next tray. The trays are preferably hung out of center.

What I claim is—

1. The combination in a kiln of a dumping-tray having hubbed castings that form part of the frame, supporting-brackets and flanged rockers carried by said brackets and connections on the hubs of the trays for operating said rockers to cause them to release said trays, substantially as described.

2. A tray for malt-kilns having a floor that projects beyond the tray-frame on one side and does not reach the frame on the other side, substantially as described.

3. The combination in a malt-kiln of a series of trays the floor of each tray projecting over the edge of the tray-frame on one side and falling short on the other in combination with connections operated by each tray to lock its neighbor to it, substantially as described.

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Witnesses:
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