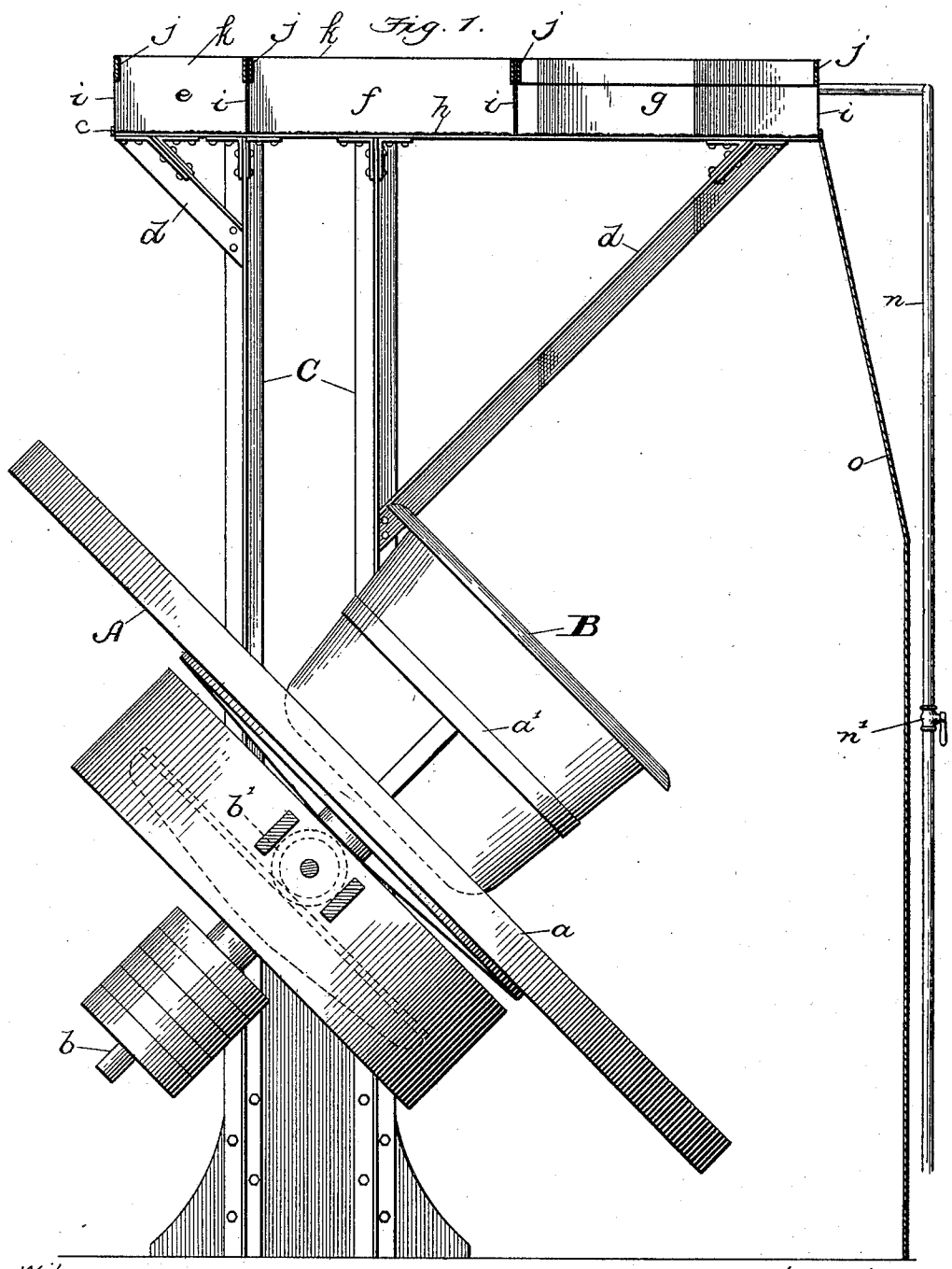
No. 707,490. Patented Aug. 19, 1902.

C. H. ZWERMANN.

ENAMEL SIFTING APPARATUS.

(Application filed May 13, 1902.)

(No Model.) 2 Sheets—Sheet 1.



Witnesses
H. J. Meyer Jr.
Frederick S. Stitt.

Inventor
Carl H. Zwermann
By Munn & Co.
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 2.

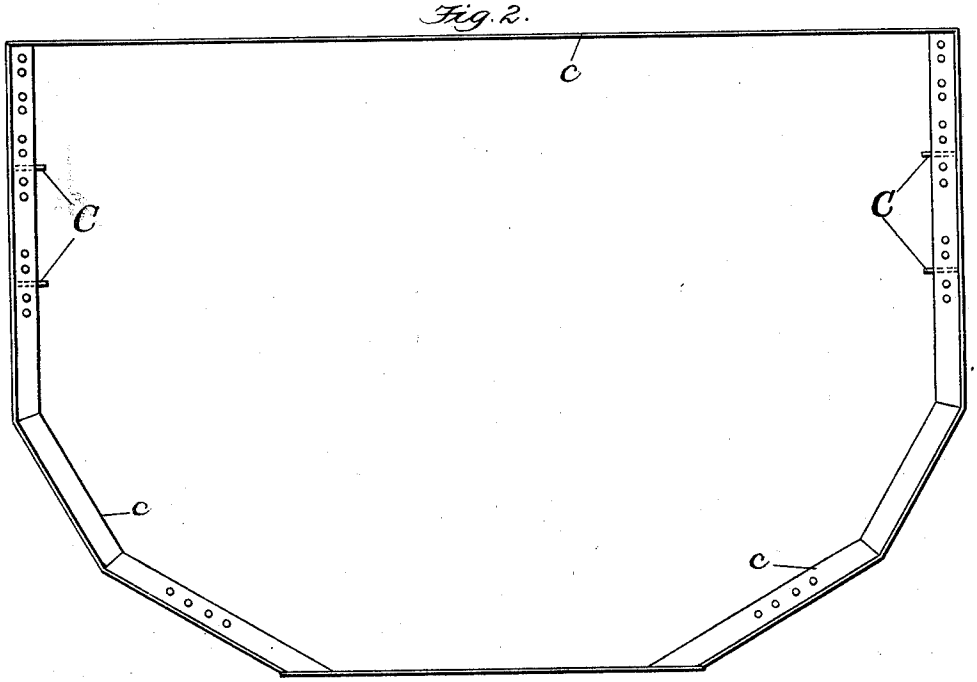
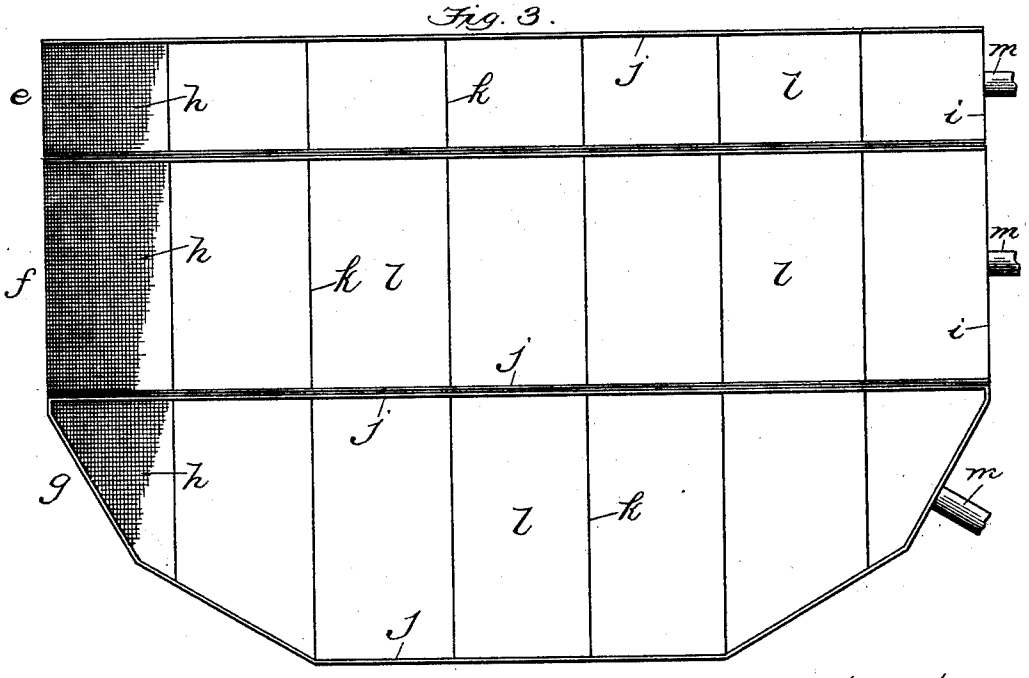


Fig. 3.



Witnesses
W. J. Meyer, Jr.
Frederick S. Stitt.

Inventor
Carl H. Zwermann
By Mann & Co.
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CARL H. ZWERMANN, OF BALTIMORE, MARYLAND.

ENAMEL-SIFTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 707,490, dated August 19, 1902.

Application filed May 13, 1902. Serial No. 107,132. (No model.)

To all whom it may concern:

Be it known that I, CARL H. ZWERMANN, a subject of the Emperor of Germany, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Enamel-Sifting Apparatus, of which the following is a specification.

This invention relates to the art of enameling metal articles, such as bath-tubs and the like, which are held on an enameling-table in a white-hot condition and have the pulverulent frit or vitreous enamel sifted over their surfaces and are then baked to glaze the enamel. It has been the general practice in enameling articles such as above described to manipulate the article—for instance, a bath-tub—on a rotatable and tiltable enameling-table, while a workman, necessarily a skilled man, operates a hand-sifter above the white-hot tub to distribute the enamel over the surface thereof; and it is the object of my invention to provide an improved sifting apparatus that may be operated by mechanism under the control of the same man that manipulates the enameling-table or of any unskilled workman and which will distribute the enamel more evenly than is possible with the old hand-sifters.

The accompanying drawings illustrate an embodiment of the invention as applied to an enameling-table of special construction, although it is to be understood that said table *per se* forms no part of the present invention, which is equally applicable to enameling-tables of any preferred construction.

In the drawings, Figure 1 is a side elevation, with parts in section, of an enameling-table provided with the improved sifting apparatus of my invention. Fig. 2 is a top plan view of the supporting-frame for the sifting-boxes. Fig. 3 is a top plan view of the said boxes.

The enameling-table A (illustrated in Fig. 1) is circular in shape and is provided with a marginal upwardly-extending flange *a* and with two brackets *a'* to partially embrace the article, such as the tub B, supported on said table. Only one of said brackets is shown. The said table A is mounted between two pairs of upright standards C, of which only one pair is shown, and is tiltable in a vertical plane and also rotatable about its center as an axis. The mechanism for accomplishing the movements of the table includes principally a tilting and rotatable counterweighted shaft *b*, on which the table is supported, and bevel-gears *b'*, all under the hand control of a workman and which it is not deemed necessary to show nor describe in detail. The two pairs of standards C, which are preferably of T-iron construction, as shown, rise above the table A, and on their upper ends is bolted a frame *c*, composed partly of angle-iron, as shown in Fig. 2, and held rigid by means of braces *d*, secured thereto and to the standards, as shown in Fig. 1. The said frame *c* is intended to support, without the necessity of permanent connection, a plurality of elongated sifting-boxes—in this instance three in number and designated *e*, *f*, and *g*—which boxes fit within the angle-iron bars of the frame, and each of said boxes comprises a bottom *h*, of woven wire or similar foraminous material, sheet-metal vertical sides *i*, which are reinforced by strengthening-bands *j*, of thicker metal than the sides, and transverse partitions *k*, which divide each box into a plural number of compartments *l*. The said three boxes *e*, *f*, and *g* lie side by side within their supporting-frame *c*, but are entirely free from connection with each other. The said sifting-boxes are intended to contain the enamel that is to be sifted therethrough onto the bath-tub B or similar article, and in order to effect this sifting action I have provided suitable means for jarring said boxes, said means in this instance comprising three pneumatic hammers *m*, one secured to each screen and each connected to a fluid-pressure-supply pipe *n*, provided with a governing-cock *n'*. Each box, therefore, may be jarred independently of the others. Accordingly in general practice the white-hot bath-tub is placed on the enameling-table A, first in a horizontal position, and two of the sifting-boxes *e* and *f* are jarred to sift the enamel on the rim and bottom of the tub, while the other box *g* remains inoperative. The table A is then tilted until the tub assumes an inclined position, and then all three of the boxes, or as many as are directly above the tub, are jarred and the tub is turned slowly around to distribute the enamel evenly over the inner surface of the sides, ends, and rim

of the tub. The arrangement of transverse partitions *k*, dividing the boxes into a plural number of compartments, prevents the enamel from collecting at one end of the boxes by reason of the repeated jarring at the other end of the same.

In order to prevent the enamel from being deflected by a draft, a casing *o* is preferably provided, which casing may extend across one side and the two ends of the apparatus.

While the accompanying drawings and foregoing description disclose pneumatic hammers for jarring the sifting-boxes, it is to be understood that various other means may be employed for this purpose.

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

1. An enameling apparatus, comprising a tiltable and rotatable table to support the article to be enameled; a plurality of sifting-boxes adapted to contain enamel and mounted above said table and each box free from direct connection with the other boxes; and independent jarring means for each box, as set forth.

2. An enameling apparatus, comprising a tiltable and rotatable table for the support of the article to be enameled; standards rising above said table; a frame supported on said standards; a plurality of sifting-boxes mounted in said frame and free from direct connection with each other; and an independent jarring device for each of said boxes, as set forth.

3. An enameling apparatus, comprising a support for the article to be enameled; a frame above said support; a plurality of sifting-boxes mounted in said frame and free from direct connection with each other; and an independent jarring device for each of said boxes, as set forth.

4. An enameling apparatus, comprising a support for the article to be enameled; standards rising above said support; a frame of angle material supported on said standards; a plurality of stationary sifting-boxes mounted and supported within said frame, said boxes being contiguous to each other, but free from direct connection with each other; and an independent jarring device for each of said boxes as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

CARL H. ZWERMANN.

Witnesses:

CHARLES L. VIETSCH,

FREDERICK S. STITT.