E. MOREWOOD & J. H. ROGERS.

APPARATUS FOR COATING METAL PLATES.

No. 171,688. Patented Jan. 4, 1876.

FIG. 1.

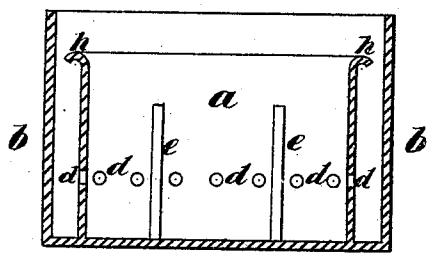


FIG. 2.

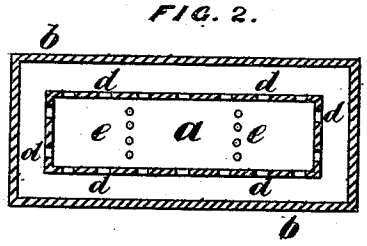


FIG. 3.

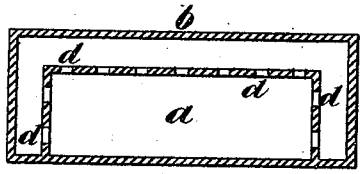
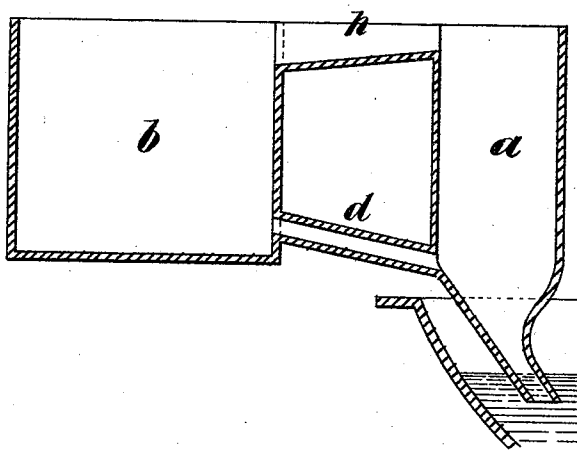


FIG. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

EDMUND MOREWOOD, OF LLANELLY, AND JOHN H. ROGERS, OF LLANGENNECH PARK, NEAR LLANELLY, GREAT BRITAIN.

IMPROVEMENT IN APPARATUS FOR COATING METAL PLATES.

Specification forming part of Letters Patent No. **171,688**, dated January 4, 1876; application filed December 6, 1875.

CASE B.

To all whom it may concern:

Be it known that we, EDMUND MOREWOOD, of Llanelly, and JOHN HENRY ROGERS, of Llangennech Park, near Llanelly, both in the county of Carmarthen, Great Britain, have invented an Improvement in Coating Metals; and the following is declared to be a full and correct description of the same.

Our invention relates to means for righting or putting into proper condition the oil, grease, or fatty matter which has become frothy or porous, and thereby unsuitable, and which is especially used in the process of coating plates or other pieces of iron with tin or terne, such plates being coated with such oil, grease, or fatty matters in order that they may more readily receive the subsequent coating with tin or terne metal.

We make use of a flux-box in which there is a constant circulation of the flux, so that the flux which becomes frothy or porous is run or drawn off and then returned to the flux-box in a more solid non-porous condition.

In the drawing, Figure 1 is a vertical section of our improved flux-box, and Fig. 2 is a sectional plan of the same. Figs. 3 and 4 are views of modifications thereof.

a is the flux-box, of the desired size and shape, and this is surrounded by a vessel, *b*, Figs. 1 and 2, which rises higher than the box *a;* and there is a space between the two extending all around, as in Fig. 2, or at three sides only, as in Fig. 3. *d* are holes in the lower part of the box *a*, opening into the vessel *b*. The wet black clean plates are introduced into the inner box or vessel *a*, between the pins *e*, in order to be heated and greased by the flux contained therein preparatory to their being passed into the bath of melted coating metal. The froth arising from the boiling grease flows over the top *h* of the inner vessel *a* into the outer or overflow cistern *b*, and, after righting itself and becoming more heavy and solid, flows back through the holes *d* into the inner vessel *a*, provided the column of solid grease in the settling device is heavier than the column of frothy grease in the flux-box. In the vertical section, Fig. 4, the vessels *a* and *b*, instead of being one within the other, are placed side by side and connected at top and bottom by pipes *h d*. The operation is precisely the same as that before described, the frothy and porous grease overflowing, by the pipe *h*, into the vessel *b*, where it rights itself and re-enters the vessel *a*, by the pipe *d*, in a more solid and non-frothy condition; or the frothy grease might overflow into a large gutter or pipe of any suitable size and form, instead of a special settling-vessel.

We do not claim a settling-vessel, *b*, in combination with mechanical means or appliances for producing an artificial circulation of the fluid; but

We claim as our invention—

The flux-pot *a*, overflow *h*, settling-vessel *b*, or equivalent device, and return-opening *d*, so as to produce an automatic circulation of the flux, substantially as and for the purposes set forth.

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