(Model.) 2 Sheets—Sheet 1.

M. BRIGGS.

Apparatus for Coating Small Articles with Metal.

No. 230,857. **Patented Aug. 10, 1880.**

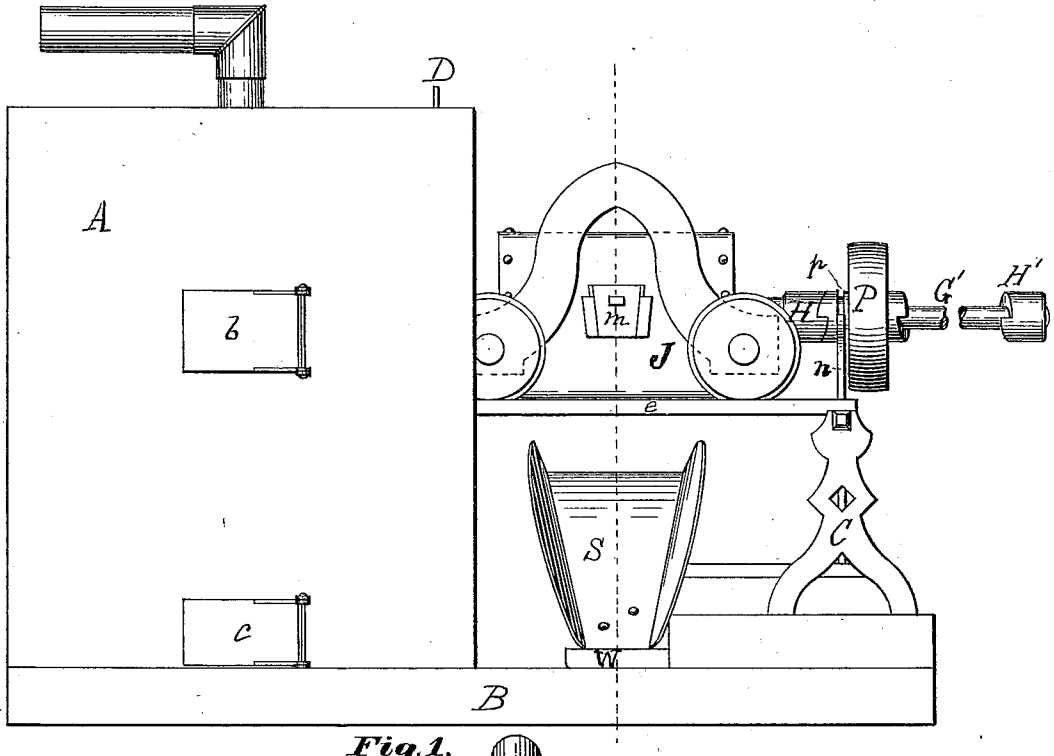


Fig. 1.

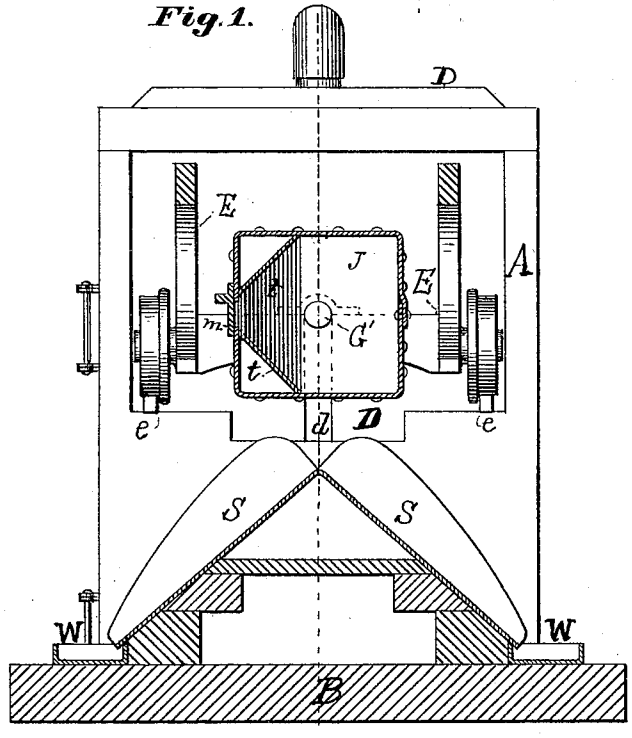


Fig. 2.

Witnesses:

W. W. Swan

D. P. Noble Jr.

Inventor:

Myrick Briggs

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

(Model.)

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M. BRIGGS.

Apparatus for Coating Small Articles with Metal.

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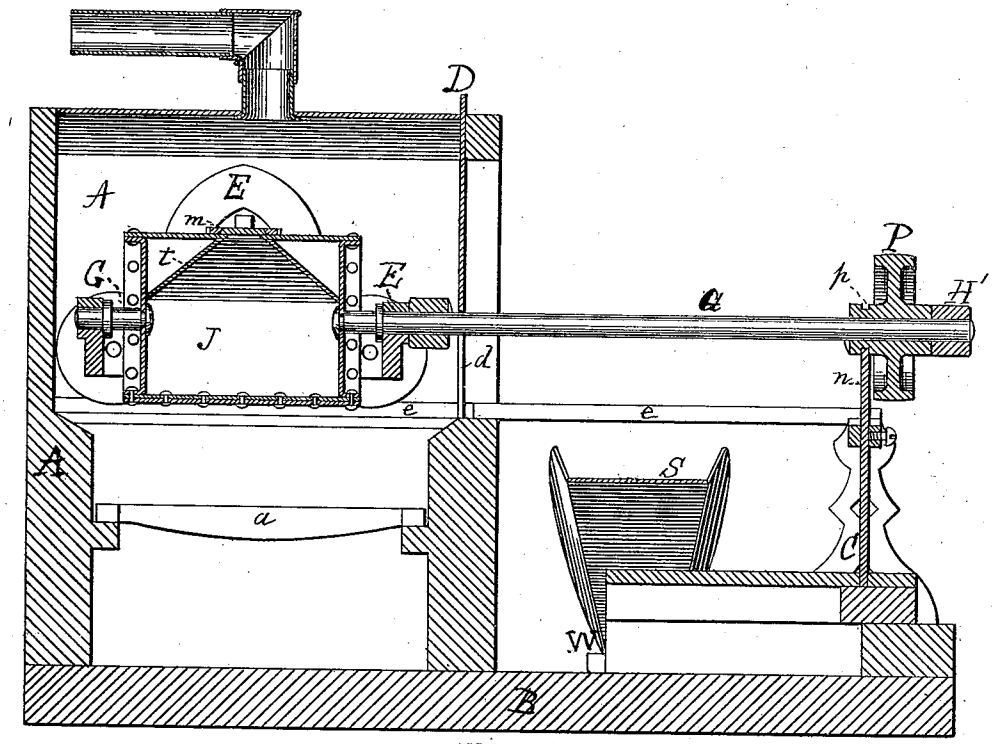


Fig. 3.

Witnesses:

W. W. Swan

W. P. Preble Jr.

Inventor:

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UNITED STATES PATENT OFFICE.

MYRICK BRIGGS, OF SOUTH ABINGTON, MASSACHUSETTS.

APPARATUS FOR COATING SMALL ARTICLES WITH METAL.

SPECIFICATION forming part of Letters Patent No. 230,857, dated August 10, 1880.

Application filed May 3, 1880. (Model.)

To all whom it may concern:

Be it known that I, MYRICK BRIGGS, of South Abington, in the State of Massachusetts, have invented an Improvement in Apparatus for Coating Tacks and Similar Articles with Tin, Lead, or Zinc, of which the following is a specification.

The invention consists in providing the immersion-pot with a funnel-shaped lining on one side, whereby the discharge of the articles coated is greatly facilitated, owing both to the shape of the inner lining and to the retention of heat due to its presence.

It consists, further, in certain details of construction whereby the immersion-pot is conveniently handled.

In the drawings, Figure 1 is a side elevation of my improved apparatus. Fig. 2 is a sectional elevation on line *x x* of Fig. 1, and Fig. 3 is a longitudinal sectional elevation.

A is a furnace built upon a bed, B. *a* is one of the grate-bars; *b*, the fire-door; *c*, the ash-pit door; D, a hanging door, moved up and down in grooves (not shown) by a windlass. (Not shown.) The door D is provided with a perpendicular slot, *d*, as shown in Fig. 3, and also, though partly in dotted lines, in Fig. 2.

C is a frame supporting the rails *e e* of a car-track. E is a truck carrying the immersion-pot J. This pot is rectangular in shape and made of boiler-iron, the ends being riveted within the quadrangular tube, as shown. It is hung upon two shafts, G G′, rigidly secured to the ends at the middle, and having bearings in the frame of the truck, as shown. The shaft G′ is much longer than the shaft G, and has firmly keyed to it two glands, H H′.

P is a double clutch, consisting of a band-pulley revolving freely upon shaft G, and having projections on either side to engage at times either with gland H or gland H′. The clutch P has a groove, *p*, upon its hub, into which projects an arm, *n*, from the frame C to keep the clutch in a constant position.

The immersion-pot J has a sliding gate, *m*, and within it there is rigidly secured to the side in which the gate is placed a funnel-shaped lining, *t*, whose smaller opening coincides with the passage-way to which the gate belongs.

S is a double slide, down either face of which the tinned articles ride to the cold-water receivers W when discharged from the immersion-pot.

The operation is as follows: The immersion-pot J having been charged in the usual manner with the tin or other mixture and the articles to be coated, and its opening having been closed by the gate *m*, the truck bearing the immersion-pot is run into the furnace, in which there is sufficient fire, and the door D lowered, the slot *d* in the door permitting it to pass down upon both sides of the shaft G′. The clutch P is all the time in motion, and the gland H′ locking with one of its projecting faces when the immersion-pot is in its proper place within the furnace, motion is thereby communicated to the shaft G′, and the immersion-pot revolved until the articles are sufficiently coated. The truck is then drawn out of the furnace, the shaft G′ having a free longitudinal movement through the revolving clutch P to allow this to be done, and the gland H′ becoming disengaged from the clutch the revolution of the immersion-pot ceases. The gate *m* is now removed and the truck run still farther back, when, the gland H becoming locked with the clutch, the immersion-pot is again revolved and discharges a part of its load at each revolution when the face containing the aperture is at the bottom. The coated articles falling upon the slide S roll down by their own weight to one or the other of the reservoirs W. The presence of the metallic funnel-shaped lining within the immersion-pot keeps the pot hot and the coating mixture in such condition that the articles coated do not stick together for a much longer time than when such articles are coated in a simple oscillating pot, and the shape of the lining permits the discharge of an entire load.

I claim—

1. The revolving immersion-pot J, having a gate and provided with a funnel-shaped lining at one side whose smaller opening coincides with the gateway, substantially as described, for the purpose specified.

2. An immersion-pot, a suitable furnace, and means for running the pot into and out from the furnace, in combination with the apparatus described for revolving the pot either within or without the furnace, consisting of the shafts G and G′, with their bearings, clutch P, and glands H H′.

MYRICK BRIGGS.

Witnesses:
W. W. SWAN,
CHAS. H. SWAN.