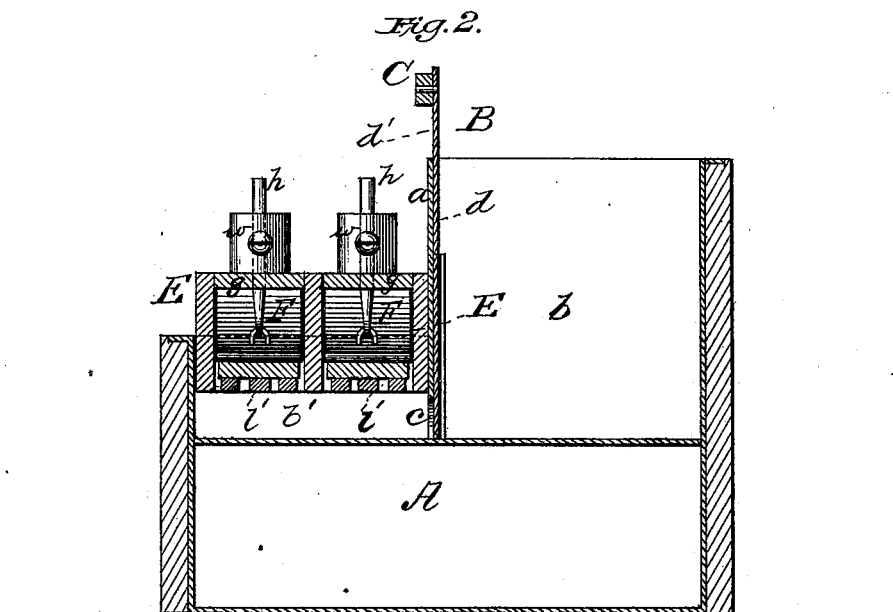
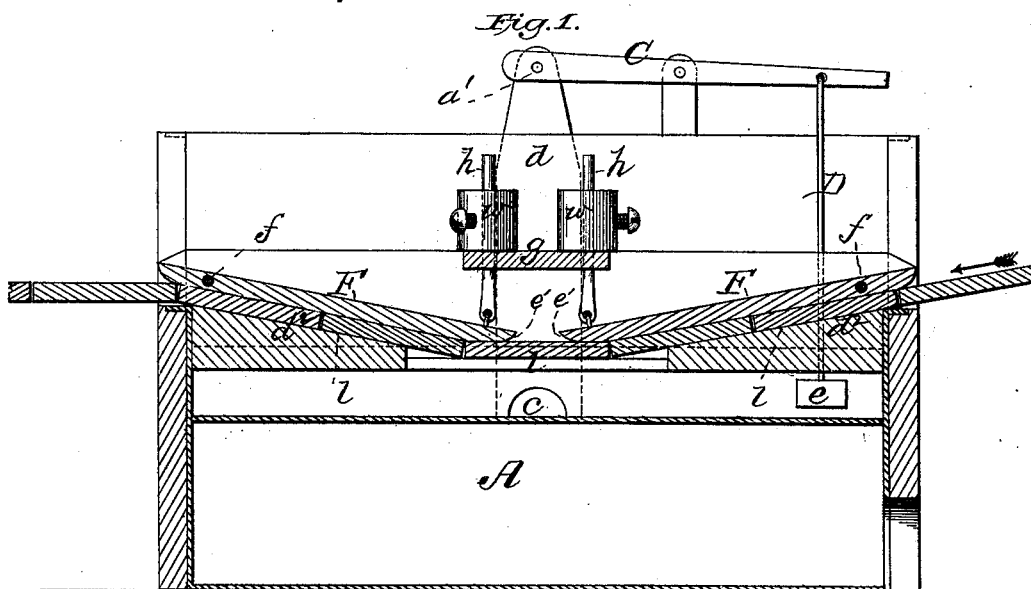


A. F. TEMPLE.
Machine for Coating Fire-Kindlers.

No. 214,968.

Patented April 29, 1879.



WITNESSES
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IMPROVEMENT IN MACHINES FOR COATING FIRE-KINDLERS.

Specification forming part of Letters Patent No. **214,968**, dated April 29, 1879; application filed March 12, 1879.

To all whom it may concern:

Be it known that I, ANSEL F. TEMPLE, of Montague, in the county of Muskegon and State of Michigan, have invented a new and valuable Improvement in Machines for Coating Fire-Kindlers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my machine, and Fig. 2 is a transverse section thereof.

This invention has relation to improvements in means for coating fire-kindlers with rosin or other inflammable substances; and the nature of the invention consists in combining, with a furnace and a partitioned vessel seated thereon, a valve in the partition-wall of said vessel, and a float in one of the said divisions actuating the valve, to open and close the communication between the said divisions automatically.

It also consists in combining, with a furnace and a liquefying-vessel seated thereon, a descending and ascending trough or troughs dipping into and communicating with said vessel.

It also consists in combining, with a furnace and a liquefying-vessel seated thereon, a trough or troughs dipping into and communicating with said vessel, and pressure-plates vibrating in the said troughs, substantially as hereinafter more fully described.

In the annexed drawings, the letter A designates a furnace of any suitable construction, having erected thereon a metallic vessel, B, in which are liquefied the inflammable substances used as a coating for fire-kindlers, to increase their combustibility. This vessel is divided longitudinally by a wall, *a*, into two divisions, *b* *b'*, communicating with each other only through an orifice, *c*, near or at the bottom of the wall *a*. The orifice *c* is closed by a sliding door, *d*, flexibly connected to a vertically-vibrating lever, C, as shown at *a'*. This lever is fulcrumed in an upright, *d'*, erected on wall *a*, and carries suspended from one end the valve *d*. Suspended by a rigid rod, D, from its other end is a float, *e*, in chamber *b'*.

The rosin or other material used as an inflammable coating is thrown in chamber *b*, and as it liquefies is delivered through opening *c* to the chamber *b'*. As it rises in the latter the float also rises, and, through the medium of the rod D and lever C, actuates the slide to close the orifice *c*. As the rosin in chamber *b'* is consumed the float falls and the slide is raised, thus allowing a fresh supply to flow thereinto. These operations are all automatic.

E E indicate metallic troughs, arranged side by side, and provided with a double-inclined bottom, *d''*, dipping at their lowest point into the liquid substance in chamber *b'*. At their lowest portion the bottoms of these troughs are slotted or numerously perforated, to allow the melted inflammable substance to flow through into them.

F indicates pressure-plates, vibrating vertically on a bolt, *f*, at each end of the troughs, and extending down into the troughs to within a short distance of each other. The contiguous ends of these plates are beveled, as shown at *e'*, Fig. 1, as are also their outer ends.

Extending across the troughs at their middle portions are the bridges *g*, which serve not only as lateral braces, but also as guides to the endwise-movable rods *h*, which, being connected at their lower ends to the pressure-plates, pass up through the said bridges, and move up and down endwise as the said plates rise and fall.

In order to secure adequate pressure for the plates, weights *w* are applied upon the rods *h* above the bridges.

The operation is as follows, it being premised that the kindler is of rectangular form, and of such dimensions as to pass readily between the side walls of the troughs, and between the inclines *l* of their bottoms and the pressure-plates E aforesaid, and of equal or less length than the slotted or perforated lower parts, *l'*, of the said troughs: The kindlers are fed continuously into the troughs under the pressure-plates from the direction indicated by the arrow, and upon reaching the bottom of the first incline their front ends are entirely submerged in the liquid, and kindling-points formed thereon completely coated. They then pass successively along the horizontal slotted portion

7' aforesaid, when their entire bottoms and part of their sides are coated, and, passing up the other incline, their remaining ends are likewise coated. They then pass out of the apparatus and are carried off by suitable means.

The plates E E serve to prevent the kindlers from floating on the melted rosin, and the second incline to conduct any surplus of the coating substance back to the bottom of the troughs.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for coating fire-kindlers with an inflammable substance, the combination, with a furnace, A, a vessel, B, erected thereon, and a dividing-wall, *a*, provided with orifice *c* in said vessel, of a slide-valve, *d*, closing said orifice, a lever, C, a rod, D, and a float, *e*, the whole arranged and operating as set forth.

2. The combination, with a furnace and a divided vessel seated thereon, of a valve in the division-wall of said vessel, and a float in one of said divisions actuating said valve to open and close an opening in the said wall, substantially as specified.

3. In a machine for coating fire-kindlers with an inflammable material, the combination, with a furnace and a liquefying-vessel seated thereon, of a trough or troughs descending into said vessel and ascending therefrom, and communicating at its bottom with said vessel, substantially as specified.

4. The combination, with a furnace, a liquefying-vessel seated thereon, and an ascending and descending trough or troughs dipping into said vessel and communicating therewith, of weighted pressure-plates vibrating in the said troughs, substantially as specified.

5. The combination, with a furnace and a liquefying-vessel seated thereon, of a trough or troughs dipping into and communicating with said vessel, and pressure-plates vibrating in the said trough or troughs, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANSEL F. TEMPLE.

Witnesses:

WALTER C. MASI,
GEO. C. POULTON.