L. F. BETTS.

TINMEN'S FURNACE.

No. 169,673. Patented Nov. 9, 1875.

FIG. I.

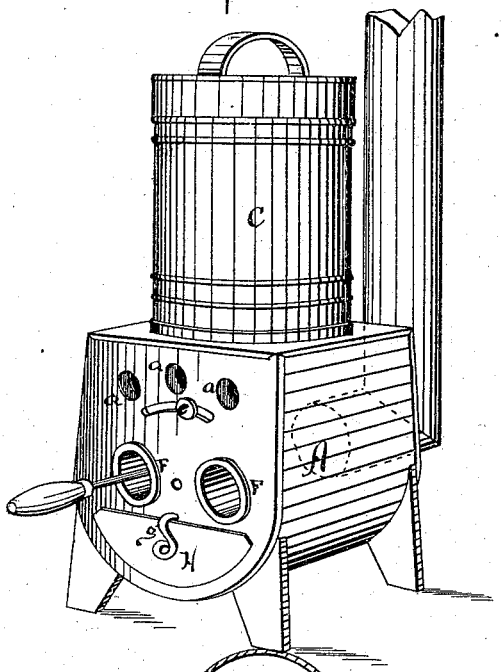

FIG. IV.

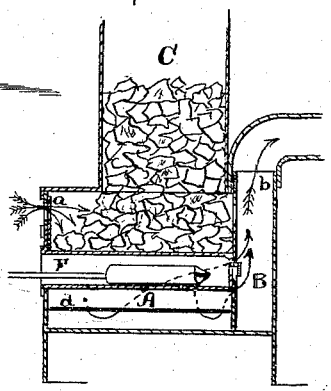

FIG. III.

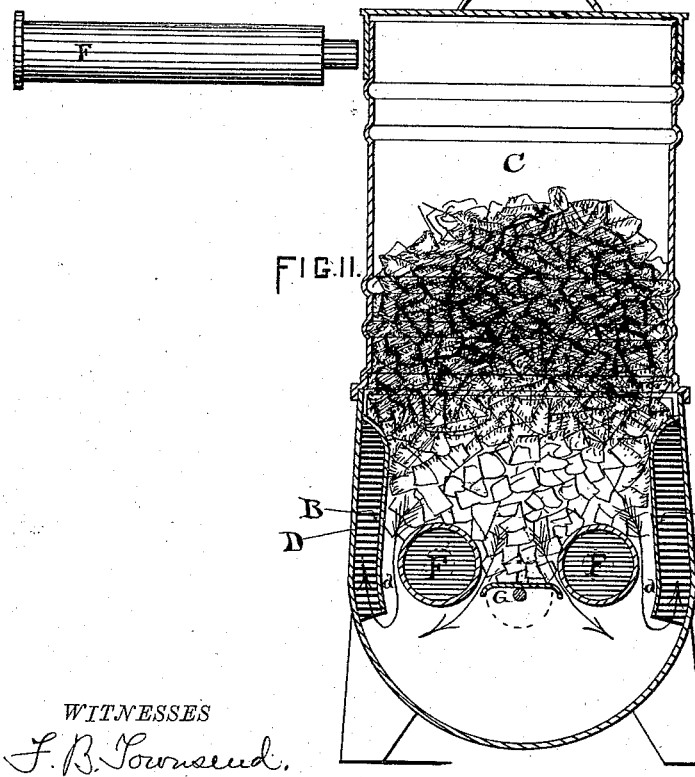

FIG. II.

WITNESSES

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LEWIS F. BETTS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN TINMEN'S FURNACES.

Specification forming part of Letters Patent No. **169,673**, dated November 9, 1875; application filed September 28, 1875.

To all whom it may concern:

Be it known that I, LEWIS F. BETTS, of Chicago, Illinois, have invented a Tinman's Furnace, of which the following is a specification:

This invention relates to furnaces for heating soldering-irons; and it consists in providing a tinman's furnace with a magazine and hollow or tubular bars upon which the fuel may rest, said bars forming receptacles or ovens within which the soldering-irons may be heated, and a downward draft through that portion of the fuel which is below the magazine.

That others may fully understand my invention, I will particularly describe it, having reference to the accompanying drawings, wherein—

Figure 1 is a perspective view of my furnace; Fig. 2, a transverse sectional elevation of the same. Fig. 3 shows one of the oven-bars detached. Fig. 4 is a longitudinal section of the furnace.

A is the furnace-box, with the flue B partitioned off at its back, and furnished with a pipe-collar, *b*, to secure a funnel-pipe, which may be connected with some adjacent chimney, if convenient or desired. At the top of the furnace A there is a cylinder, C, with a tight-fitting cover. The cylinder C is the magazine, and may be filled with fuel. The furnace A extends front and back of the magazine, so that a space will exist between the top of the furnace and the fuel, as the latter falls down in a conical pile upon the grate, and in the front opposite this space the draft-inlets *a a* are located, so that the draft is admitted above the fuel on the grate, passes downward through the same, and escapes under the curtains *d*, through the side flues D, and into the rear flue B. A slide, *e*, or some other suitable device, controls the draft, or shuts it off altogether, if desired. The fuel rests mainly upon the two tubes F F, which are closed at their rear ends and open through the front of the furnace. The tubes are of sufficient internal diameter to receive the soldering-irons. They may be rotated from time, to expose the furnace uniformly to the effects of the flame, and thereby increase their durability. Between the tubes F F there is a flat bar, G, also pivoted at its front and rear ends, and provided with a crank or handle, *g*, by which said bar may be rocked or shaken, for the purpose of dislodging the cinders and ashes which may have accumulated upon it and upon the tubes F. A door, H, permits the removal of ashes, &c., from below the tubes.

It will be perceived that by my invention a comparatively small quantity of fuel, automatically renewed, may be spread upon the ovens or heating-tubes, and the products of combustion, flame, &c., will be carried downward and around said tubes, so that on all sides they will be exposed to the heat, instead of encountering the cold air on one side, as would be the case if the draft were from the bottom upward.

Having described my invention, what I claim as new is—

1. A tinman's furnace, provided with a fuel-magazine, and with draft-inlets at or near its base, but above the fuel on the grate, and a smoke-outlet below the grate to produce a downward draft through the fuel, combined with open-end tubes to receive the soldering-irons and heat the same without contact with the burning fuel.

2. A tinman's furnace, A, provided with the tubes or ovens F to receive the soldering-irons, located at the bottom to support the fuel, combined with air-inlets at the top, and escape-flues D below said tubes and at the sides, substantially as described, so that the flame passes around the exposed surfaces of said ovens, and heats them uniformly, as set forth.

3. A tinman's furnace, A, provided with the tubes or ovens F, at the bottom of the fuel, to support the same, combined with the shaking-plate G, between said tubes, as set forth.

4. The cylindrical tube or oven F, constructed with a flange extending laterally around its open end, and an axial stud at its closed end, substantially as specified, so that it may be readily inserted or removed, securely held in place, and rotated as often as may be required to expose fresh surfaces to the action of the burning fuel.

LEWIS F. BETTS.

Attest:

H. P. STEWART,

J. T. LECKLIDER.