MORSE & LEWIS.

Stove.

No. 4,522. Patented May 16, 1846.

Fig. 1

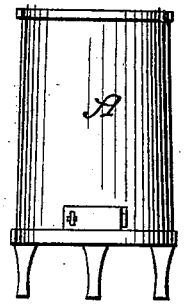


Fig. 2

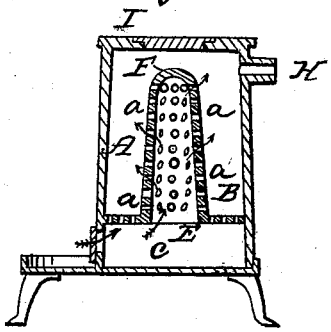


Fig. 3

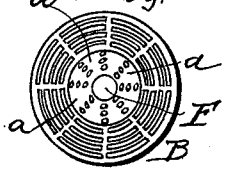
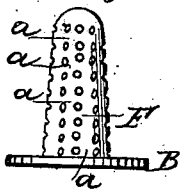


Fig. 4



UNITED STATES PATENT OFFICE.

LABAN MORSE AND WHITMAN T. LEWIS, OF ATHOL, MASSACHUSETTS.

STOVE FOR BURNING FINE FUEL.

Specification forming part of Letters Patent No. 4,522, dated May 16, 1846; Reissued July 18, 1848, No. 121.

To all whom it may concern:

Be it known that we, LABAN MORSE and WHITMAN T. LEWIS, of Athol, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Stoves, whereby the same are adapted to the burning of sawdust, tan, or various other combustible matters in a comminuted state; and we do hereby declare that the nature of our invention and the manner in which it operates are fully described and represented in the following specification and accompanying drawing and letters, figures, and references thereof.

Of the said drawings, Figure 1 represents a front elevation of our improved stove; Fig. 2 is a central vertical and longitudinal section of it. Fig. 3 denotes a top view and Fig. 4 a side view of the air distributer, to be hereinafter explained.

The body (A, Figs. 1, 2) of the stove, is a plain hollow cylinder or frustum of a cone, having a grate B, an ash pit C, an air entrance, an exit flue or passage H, and a supply door I, disposed within it like the plain "cylinder stoves" in common use, with the exception that the grate B, has a circular or other proper shaped opening E, formed vertically through its middle part, and made to communicate with the air distributer F, placed over it and upon the grate as seen in the drawings. The said air distributer may be a hollow cone, conic frustum, cylinder, pyramid, or pyramidal frustum, made of soap stone, cast iron, or any other suitable material. It is arranged within the central part of the body of the stove and upon the fire grate, and so as to extend up into the stove, as seen in Fig. 2. The whole of the sides of the said distributer are to be perforated with a great number of holes or orifices, as seen at *a*, *a*, &c., each of the said holes constituting a passage for air from the central part of the distributer into the body of the stove, as denoted by the arrows.

When the stove is to be charged with sawdust, tan or other fine fuel, the same is to be thrown into it so as to entirely or partially surround the air distributer, and to fill as high as the bottom of the discharge flue H, the space existing between the distributer and the sides of the stove. On setting fire to the fuel on its top surface air will pass from the central part of the distributer through the holes *a*, *a*, nearest to the flame or burning fuel and supply it with oxygen. The fire will shortly extend downward through the entire mass, and, as it descends will be supplied with air through the holes *a*, *a*, each of which will throw a jet of air in a lateral direction through the fuel. By means of the said air distributer, we are enabled, with the greatest ease to burn saw dust, tan or other fine or various combustible matters of like character, and which could not readily be burnt to advantage in a common stove or fireplace. In saw mills, tanneries and various other places where such fuel is to be had, and where it has been customary to resort to other kinds of combustible matters to generate heat, our improvement may be used with great advantage.

What we claim as our invention, is—

The air distributer F, as arranged, constructed and combined with the stove and used substantially in the manner and for the purpose as hereinabove specified.

In testimony whereof, we have hereto set our signatures this thirty-first day of December, A. D., 1845.

LABAN MORSE.
WHITMAN T. LEWIS.

Witnesses:
WM. H. WILLIAMS,
JOHN H. WILLIAMS.

[FIRST PRINTED 1914.]