O. CLARKE.

Magazine Stove.

No. 100,982. Patented March 22, 1870.

Fig. 1

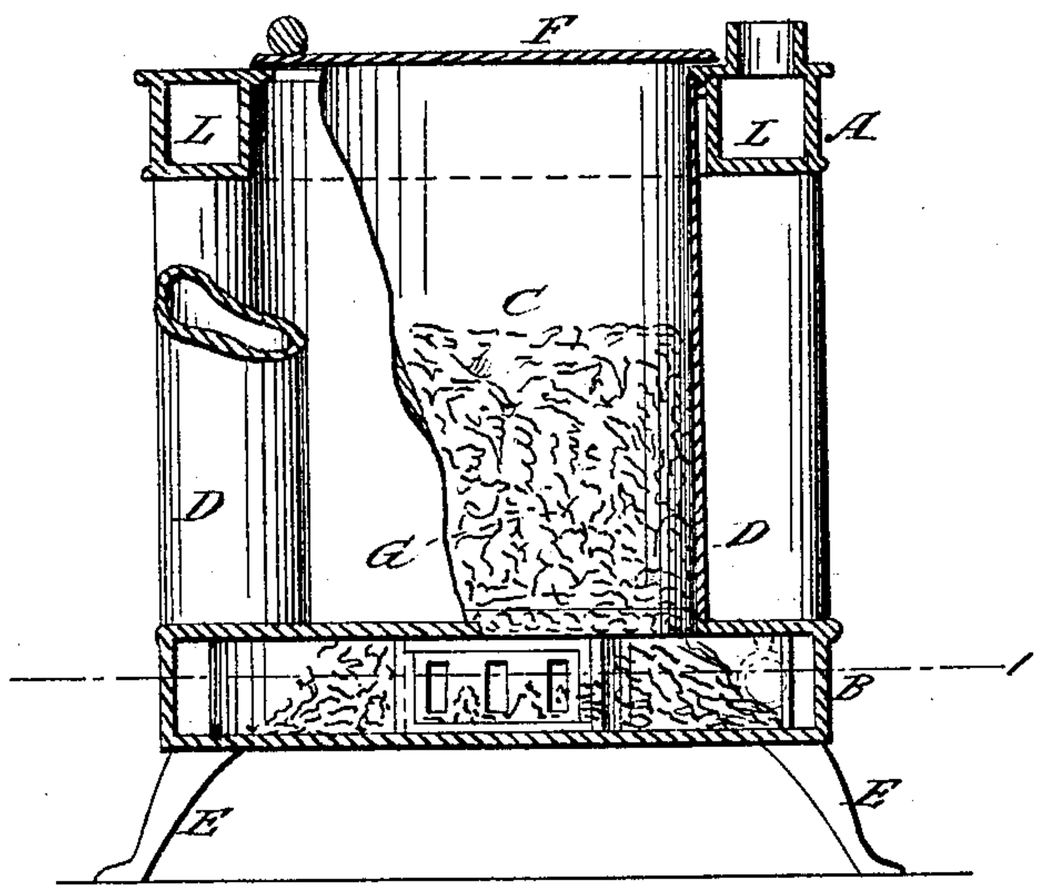
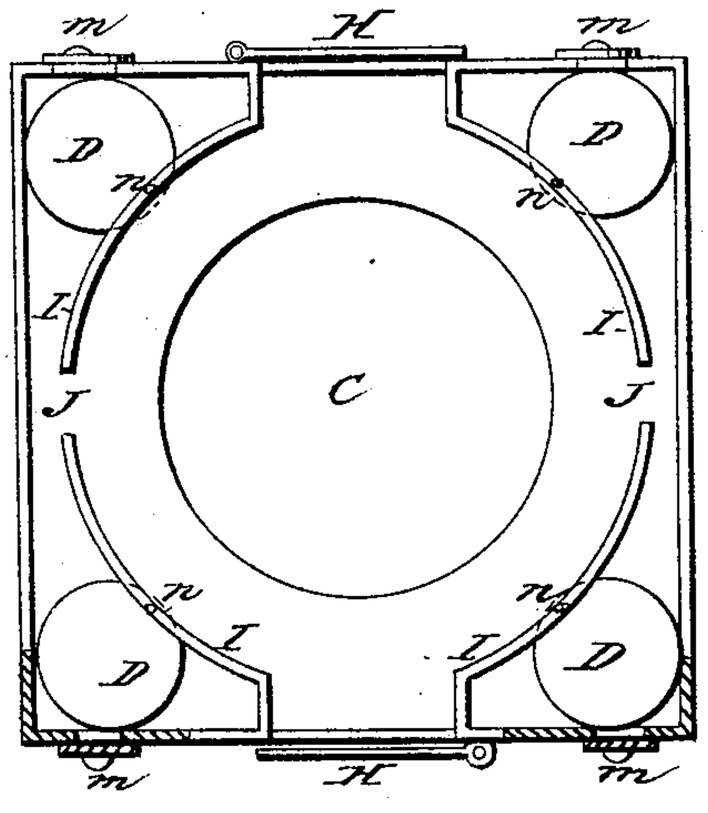


Fig. 2



Witnesses:

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ORLANDO CLARKE, OF ROCKFORD, ILLINOIS.

Letters Patent No. 100,982, *dated March* 22, 1870.

BASE-BURNING STOVE, FOR SHAVINGS AND OTHER LIGHT FUEL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ORLANDO CLARKE, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Stoves for Burning Shavings and Fine Fuel; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to a new and useful improvement in stoves for heating purposes, more specially designed for shops where shavings, saw-dust, and other light and fine fuel is used, but which is adapted for any ordinary kinds of fuel, and which stove may be used for other purposes than simply heating, with slight modifications; and

The invention consists in the construction and arrangement of the parts as herein more fully described.

In the accompanying drawing—

Figure 1 represents a sectional elevation of the stove, showing the interior arrangement.

Figure 2 is a bottom view in cross-section of the lower section or fire-box of the stove, showing the lower flues.

Similar letters of reference indicate corresponding parts.

This stove consists in an upper flue section, A, and a lower flue section or base, B, connected together by the central cylinder or fuel-magazine C, and by four (more or less) vertical tubular flues D.

In this example of my invention, the sections are shown square, and the flues D are placed at the four angles.

The stove is elevated on legs E, as seen in fig. 1.

F represents a cover on the upper section A, which closes over the top of the magazine C. The fuel is introduced into the magazine by removing this cover.

G represents the fuel.

H represents doors (one or more may be used) in the lower section through which air is admitted, and by means of which the ashes is removed from the fire-box.

The fuel rests on the bottom plate of the section B in a conical form, as represented, and it is ignited at the base through one or both of the doors H.

As the fuel consumes it settles down in the magazine and operates similar to the ordinary base-burning coal stove in this respect, but without any grate being necessary.

The products of combustion pass through between the partition plates I at the points J J, and find their way into the flues D, and through them into the upper section A, from whence it escapes into the chimney K.

Heat will be radiated from the inner side of the upper section flue L, and from each of its other sides as well as from all the parts of the lower section B.

Air being freely admitted through the slide dampers in the doors the cone of fuel in the fire-box or section B will be constantly surrounded by flame.

The current of air admitted through the dampers will create a draught sufficiently strong through the narrow spaces J J to carry off the light ashes of the fuel cone, and thus a new surface will be constantly presented for the fire to act upon, the heat of which will be constantly radiated from the extended surface which we have referred to, thus furnishing a most efficient method for warming shops and consuming and utilizing the heat from all descriptions of refuse fuel as well as from all other kinds of fuel.

I propose, if I find it advisable, to divert the heat and products of combustion from the course indicated so as to carry it into any water-heating or cooking apparatus which I may desire to connect with the stove, the main object being to apply the base-burning principle to other purposes than simply heating.

In the present arrangement, *m* represents apertures (with suitable covers) for giving access to the angles of the lower section for cleaning them of ashes, soot, &c.

n represents rods extending through the flues D, for holding the sections A and B together.

To allow of this arrangement the bottom plate of A and the top plate of B are made to project over the ends of the flue, so as to receive the rod, as seen in the drawing.

Having thus described my invention,

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

1. The sections A and B, magazine C, and flues D, arranged, combined, and operating substantially as and for the purposes herein shown and described.

2. The arrangement of the partition I, by which the flow of the products of combustion is directed, substantially as shown and described.

3. The combination of the section or base B, (containing the partition I,) with the pipes or flues D, and the flue L in the section A, arranged substantially as described.

4. The vertical radiating flues D, (more or less in number) in combination with the magazine of a base-burning stove arranged to operate without a grate. substantially as described.

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Witnesses:

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