P. O. JENKINS.

HEATING-STOVE.

No. 180,592. Patented Aug. 1, 1876.

Fig. 1.

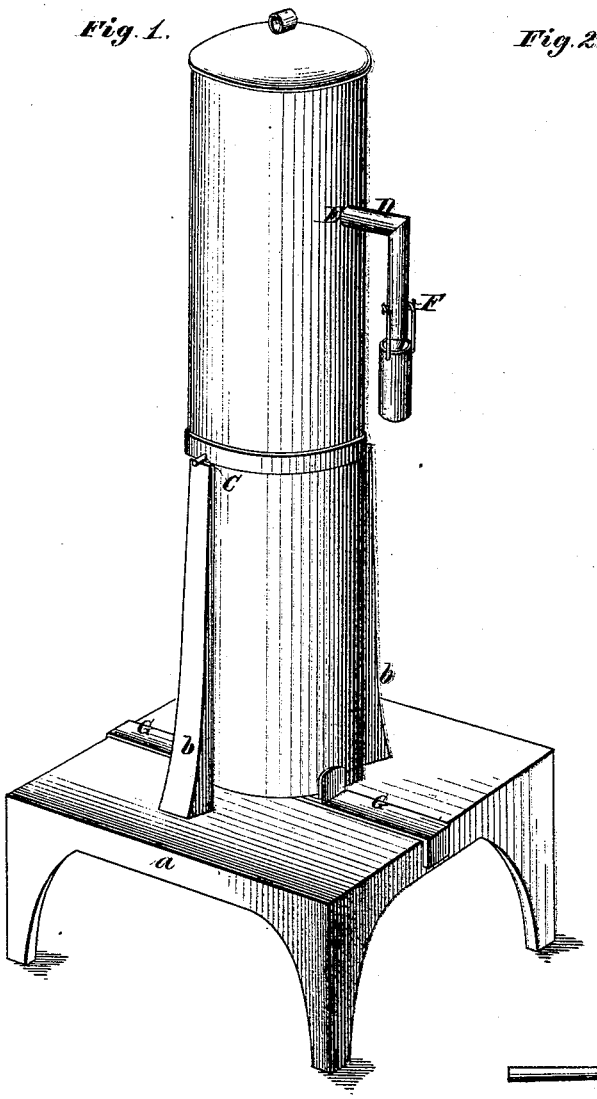


Fig. 2.

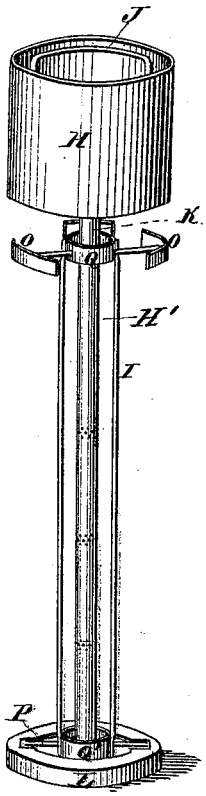
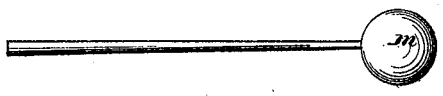


Fig. 3.



Witnesses.

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PHILIP O. JENKINS, OF GILMAN, ILLINOIS.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **180,592**, dated August 1, 1876; application filed June 28, 1876.

To all whom it may concern:

Be it known that I, PHILIP OSCAR JENKINS, of the town of Gilman, in the county of Iroquois, Illinois, have invented a Stove in which anhydrous lime can be utilized as a heating agent, which will be fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to furnish cheap, safe, and a competent heat for stoves, independent of a flue, whereby heat can be improvised in rooms or places where the ordinary modes of making it by combustion are impracticable. My chief object is to furnish heat for sleeping-apartments, bath-rooms, and foot-stoves, where flues for the outlet of smoke or other products of combustion are wanting, and where the healthiest form of heat is desirable.

In the perspective drawing, Figure 1, *a* represents a platform, made of wood or metal, (when of wood to be covered with roll-zinc.) *b b* represent two upright pieces, firmly inserted into the platform, and fastened by a screw-tap on its under side. On the top of these two upright pieces, which I may call "supporters," the cylinder of the stove is mounted by two pivots inserted in a band begirting it. These pivots are seen at C. This stove-cylinder, made of any suitable material, is made without any door, and without any draft arrangement, and is closed up at its bottom like a bucket. Its lid is without hinges, or their equivalent, for the greater convenience, it being made after the fashion and used as would be the lid of a tin bucket. The stove-cylinder is suspended a little above the platform, so that it may have no impediment to its being turned on its pivotal axis when so desired. D is a small pipe, which communicates with the interior of the stove at E. Attached to this pipe are two hooks to hold by a bail the small bucket F, into which the lower extremity of the pipe (open at its end) dips. The two strips G G, lying across the platform and under the stove-cylinder, and which are at their ends bent in opposite directions at right angles with their body, are made by a notch in them to lock together, and thus act as one piece, as seen in drawing, to hold the stove-cylinder in its place, except when otherwise desired, when they are easily removed.

Fig. 2 represents a perspective view of the interior device of the stove. H is a bucket, fitting snugly into the top of the stove, and is intended to be of sufficient capacity to hold an amount of water necessary to slake the lime below it. This bucket has a stout bail or handle placed in the inside J, and is intended for lifting it from its place when desired. To its bottom is attached a small hollow cylinder, H′. This cylinder is open at its attachment or junction, where there is also a hole in the bottom of the bucket. This tube dips wedge-like into another hollow cylinder at K, which thus forms a continuous canal from the bucket to the bottom of this cylinder, which reaches to the bottom of the stove, where its bottom is closed to hold water. In the bottom of this bucket, and around the descending small cylinder, are numerous small holes, at proper intervals. I is a fender, of rods, designed to protect the small cylinder within it from immediate contact with the pieces of lime to be slaked. L is a ring, of iron or other metal, of sufficient thickness for strength, and of corresponding width. It is made to fit the bottom of the stove-cylinder, is elevated about one-half inch above it, and has a notch cut in the inside, so as to let down the fender through it by arms attached to its rim at P, and turning the fender. After these arms slip in and below the ring, the fender is turned to the left, and the arms attached to the rim are checked by pieces *p*, fastened on its under side. This arrangement keeps the fender in its place till desired to be taken out, when, by reversing the turning till the arms come back to the notches in the ring, it is easily removed. Q Q′ are rims, to which the rods composing the fender are attached. O O O are pieces or strips connected to the fender by three arm-pieces attached to the rim Q, and are intended to keep the fender and its inclosed small cylinder in their place in the center of the stove.

Fig. 3, *m* is a mallet, of about two and one-half inches diameter, and is made of solid india-rubber. A sack, which it is not deemed necessary to show in drawing, is made of close-textured goods, as oil-cloth, armed at its mouth with a stout india-rubber band, or a strip of leather with a buckle, to bring it tight and close around the top of the stove when

needed for removing the lime. It will be seen, in describing the mode of using the stove, that this is an important appendage.

Mode of using the invention: Having removed the top or lid of the stove, and displaced the bucket from within, pieces of lime, of convenient size for handling, are placed around the fender of rods until it contains about what would be one-third the amount it would hold, making allowance for the space taken up by the fender. Fill the small bucket attached to the pipe with cold water; replace the large bucket in the stove, pressing slightly, so as to secure its connection, by its short cylinder, with the cylinder below. Then pour in as much water, by weight, as will be one-third the weight of the lime into this bucket; place on the lid of the stove, and the work of slaking and the consequent evolution of heat begins, and will rapidly develop till it reaches its maximum height, which varies in the ratio of the amount of lime slaked, and the gradual and uniform mode of doing it. A stove of large capacity, in using my device, will develop a heat of near 1,000°. The mere pouring on of the water would not gain the amount of heat desired; but, as in my process, the water falling down in fine drops through the holes in the bucket, and then being forced in small sprinkles from the small holes in the cylinder connecting at right angles with it, the mass of the lime receives the water gradually in the center, while the top of the mass is slowly wet by the fine drippings or sprinkling from the bucket, and thus a uniform and gradual slaking secures its highest degree of heat. The steam which may be evolved and the gas (when present) are both received in the small bucket of water at the end of the pipe. The former becomes condensed and becomes water, and the latter is absorbed.

The stove being so constructed that its cylinder can be lifted off from its place on the upright supporters, as shown, more than one cylinder can be used when desired, one being removed for a fresh one freshly charged with lime. The plan, however, of emptying the lime by the use of the sack described is better. This is done by placing the india-rubber-banded mouth of the sack, or the leather and buckle arrangement, if preferred, and hugging the stove closely, you remove the hooks that confine the stove, and turn the stove upside down; then take the mallet *m*, Fig. 3, and give the stove a few slight taps, and the jar it gets will bring all the lime into the sack. The sack is then removed from the stove without getting any lime in the room.

I claim as my invention—

1. The combination of the platform *a b b* G G with the stove-cylinder, pivoted and adapted to operate substantially as shown and described.

2. The combination, with the body of the stove, of the pipe D and bucket F.

3. The combination, with the outer containing-cylinder, of the interior bucket H, perforated tube H′, and protecting-rods I.

PHILIP OSCAR JENKINS.

Witnesses:

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