

United States Patent Office.

S. W. GIBBS, OF ALBANY, NEW YORK.

Letters Patent No. 79,650, dated July 7, 1868.

IMPROVEMENT IN BASE-BURNING STOVES.

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, S. W. GIBBS, of Albany, in the county of Albany, and State of New York, have invented a new and useful Improvement in Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to produce a self-feeding base-burning stove for heating purposes, of such formation as will allow a free escape for the gases generated, and which shall allow of a free supply of fresh air to the fuel at the base of the feeder; and the invention consists in placing a coal-reservoir or feeding-cylinder in the stove, which shall extend from the top of the stove downward, in an inclined position to the back of the stove, and rest on the top of the fire-pot, and in perforating the same, and in the provision made for supplying the fuel with air, as will be hereinafter more fully described.

Figure 1 represents a sectional elevation of the stove through the line *x x* of fig. 2, showing the fuel-reservoir and its position in the stove.

Figure 2 is a cross-section of fig. 1 through the line *y y*.

Similar letters of reference indicate corresponding parts.

A represents the drum or combustion-chamber of the stove.

B is the fire-box or pot.

C is the flue.

D is the coal-reservoir.

Aside from the coal-reservoir or feeder, the stove does not differ materially from other stoves of this class.

The combustion of the coal takes place mainly in the fire-box, but the coal or fuel is introduced at the top of the stove into the reservoir D, from whence it is discharged, and in which it settles down as fast as it is consumed in the fire-box.

E represents holes, with which the back part of the feeder or reservoir is perforated.

The gas which rises in the feeder or reservoir through the coal will escape through these perforations into the drum or combustion-chamber A, where they will come in contact with the heated products of combustion, and be consumed in whole or in part, or escape into the flue through the horizontal pipe *f*, thus preventing the possibility of an explosion of confined gases, an occurrence not unfrequent in stoves of similar construction.

For the purpose of protecting the lower end of the feeder, and also for the purpose of supplying air to the burning fuel at the base of the feeder, and consuming the gases, I surround the feeder with a circular perforated tube, G.

This tube is in communication with the atmosphere through the apertures *i i* at each end, as seen in fig. 2.

By arranging the feeder in this manner, the fire is relieved from the weight of the coal, and consequently combustion is more easy than it would be if the coal were pressed down in a compact mass.

The feeder may be placed more inclined, if desired, by bringing the top to or near the front of the stove.

The advantages of this arrangement are many, and must be obvious to all.

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

1. In combination with a stove, the reservoir or feeder D, constructed and arranged substantially as described for the purposes set forth.

2. The circular tube G, in combination with the feeder D, arranged substantially as and for the purposes described.

S. W. GIBBS.

Witnesses:

H. H. GIBBS,

GEO. W. HOBBS, Jr.