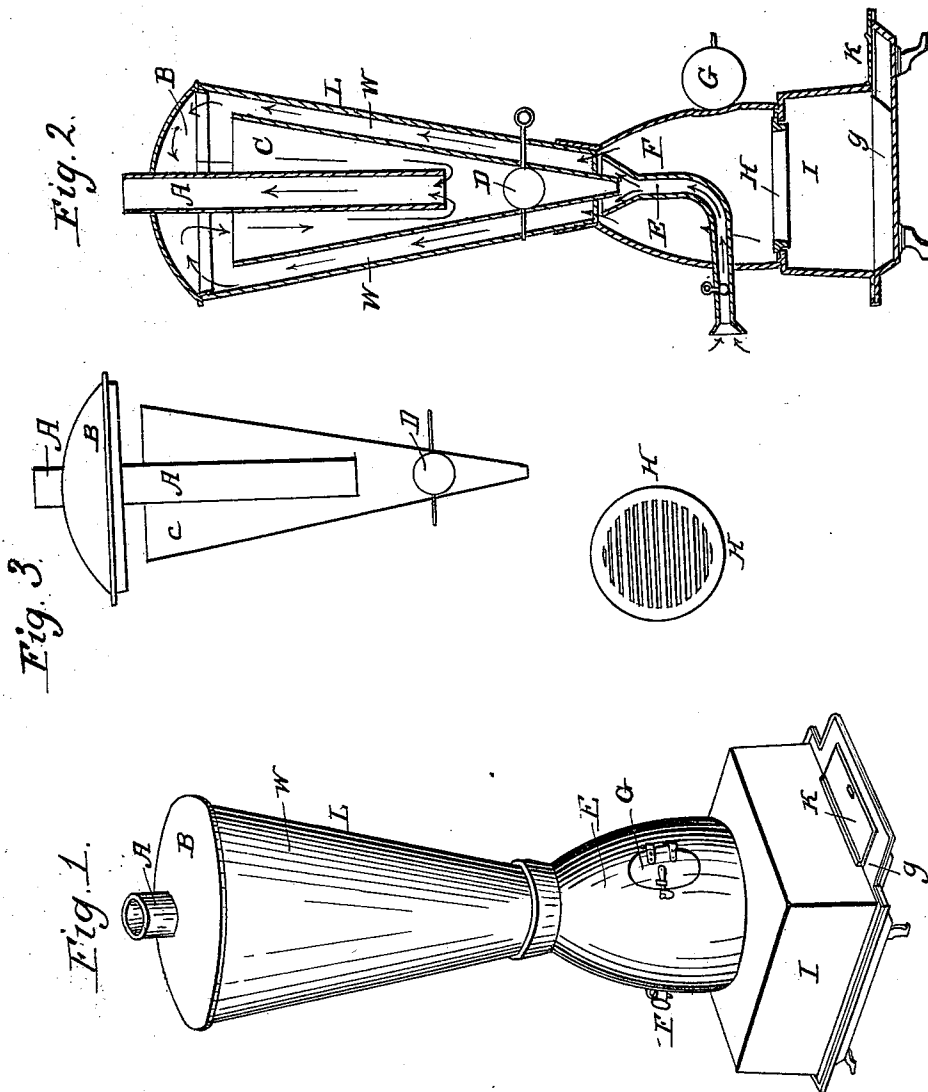


P. SWEENEY.

Stove.

No. 7,127.

Patented Feb. 26, 1850.



UNITED STATES PATENT OFFICE.

PETER SWEENEY, OF BUFFALO, NEW YORK.

STOVE.

Specification of Letters Patent No. 7,127, dated February 26, 1850.

To all whom it may concern:

Be it known that I, PETER SWEENEY, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful improvement in stoves for the purpose of consuming the smoke and gases generated therein by burning fuel in stoves, thereby giving an increased degree of heat; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the drawings hereunto annexed and forming part of this specification, in which—

Figure 1 is a perspective view, Fig. 2 a longitudinal sectional view and Fig. 3 a sectional view of the interior flues.

The nature of my invention consists in dividing the interior of the upper part of the stove into three flues by means of partitions made of cast iron as is seen in letters W, C and A, in Fig. 2 of the drawings forming part of this specification, also in introducing a current of atmospheric air into the stove at the lower extremity of the flue W, W, in figure two of the drawing forming part of this specification, by means of a funnel shaped pipe. The partition, or wall of the flue W, W, in Fig. 2 of the drawing, forming part of this specification becomes heated to a temperature of about one thousand degrees Fahrenheit, by the action of an ordinary fire thereon; at the lower extremity of the flue W, W, in the drawings above mentioned, and at the upper extremity of the funnel shaped pipe E in the same drawings, a union is formed between the oxygen of the atmosphere and the hydrogen in the smoke and combustion is produced by the heat radiating from the partition between the flues W, and C, in the drawings above referred to, as the smoke and atmospheric air ascend through the flue W, W, in said drawings.

In the accompanying drawings J, is the ash pit, K is the hearth, I is a space under the grate, H is a grate upon which the fuel rests, separating it from the space beneath; G is the door, E is a pipe leading from the atmosphere on the back side of the stove, directly over the fire, for the purpose of furnishing a supply of the oxygen contained in the atmosphere and terminating at the lower extremity of the flue W, W, in the accompanying drawings; at the outer entrance of the pipe E in the accompanying drawings, is a valve for the purpose of regu-

lating and shutting off the supply of atmospheric air, when the fuel becomes charred by the action of the fire; W, W, represent the external or first section of the double return flue through which the gases generated by the fire and the atmospheric air pass, as indicated by the arrows in Fig. 2 in the accompanying drawings; B is the top of the stove; L is the outside of the stove the upper part of which is of the shape of an inverted cone; C is a flue for the passage of the gas to the escape flue A as indicated by the arrows in Fig. 2, A is a flue through which the gas escapes, as indicated by the arrows in Fig. 2. D, is a valve for the purpose of clearing the flue C, of the soot which may accumulate therein, at the lower extremity of flue C, is an aperture through which the soot may pass, and the valve is kept closed when the fire is burning to prevent the passage of the atmospheric air, from the pipe E, through the aperture at the lower extremity of the flue C.

The lower extremity of the flue C, becomes heated to the temperature of one thousand degrees Fahrenheit, being a temperature of two hundred degrees, higher than that at which combustion will be produced by a union of oxygen and hydrogen.

I have stated that the pipe E communicates with the open atmosphere at the back side of the stove, as I prefer that arrangement to others, but it is obvious that the same result may be effected by introducing the pipe at other parts of the stove substantially as above set forth. I have also stated that the upper part of the outside of the stove is of the shape of an inverted cone. I prefer that shape to any other as there will be a greater degree of heat evolved by such method of construction, but it is evident that the outside of the stove as well as the interior flues may be constructed in a perpendicular form and secure substantially the same result, as that by the method above described, although not so effectually.

It will be perceived by Fig. 2 in the accompanying drawings that I have caused the upper extremity of the pipe E, to be shaped like a funnel. I have adopted this method of constructing the same in order to narrow the space through which the smoke generated by the fire passes, that there may be a more perfect union between the oxygen of the atmosphere and the gases generated by the fire, as they ascend from the fire.

What I claim as my invention and desire to secure by Letters Patent is—

The arrangement of the flues W, C, and (A,) in the accompanying drawings in combination with the funnel shaped air pipe E, in Fig. 2 of the accompanying drawings, in such manner that a union will be formed between the oxygen of the atmosphere and the hydrogen of the smoke at the lower
10 extremity of the flue W, W, in the accompanying drawings, where the heat, caused by the

action of the fire on the partition between the flue W, W, and the flue C in the drawings and radiating from it will produce combustion of those gases as they ascend through the flue W, W, in the drawings accompanying this specification.

PETER SWEENEY.

Witnesses:

ALEX. W. HARVEY,
C. METZ, Jr.