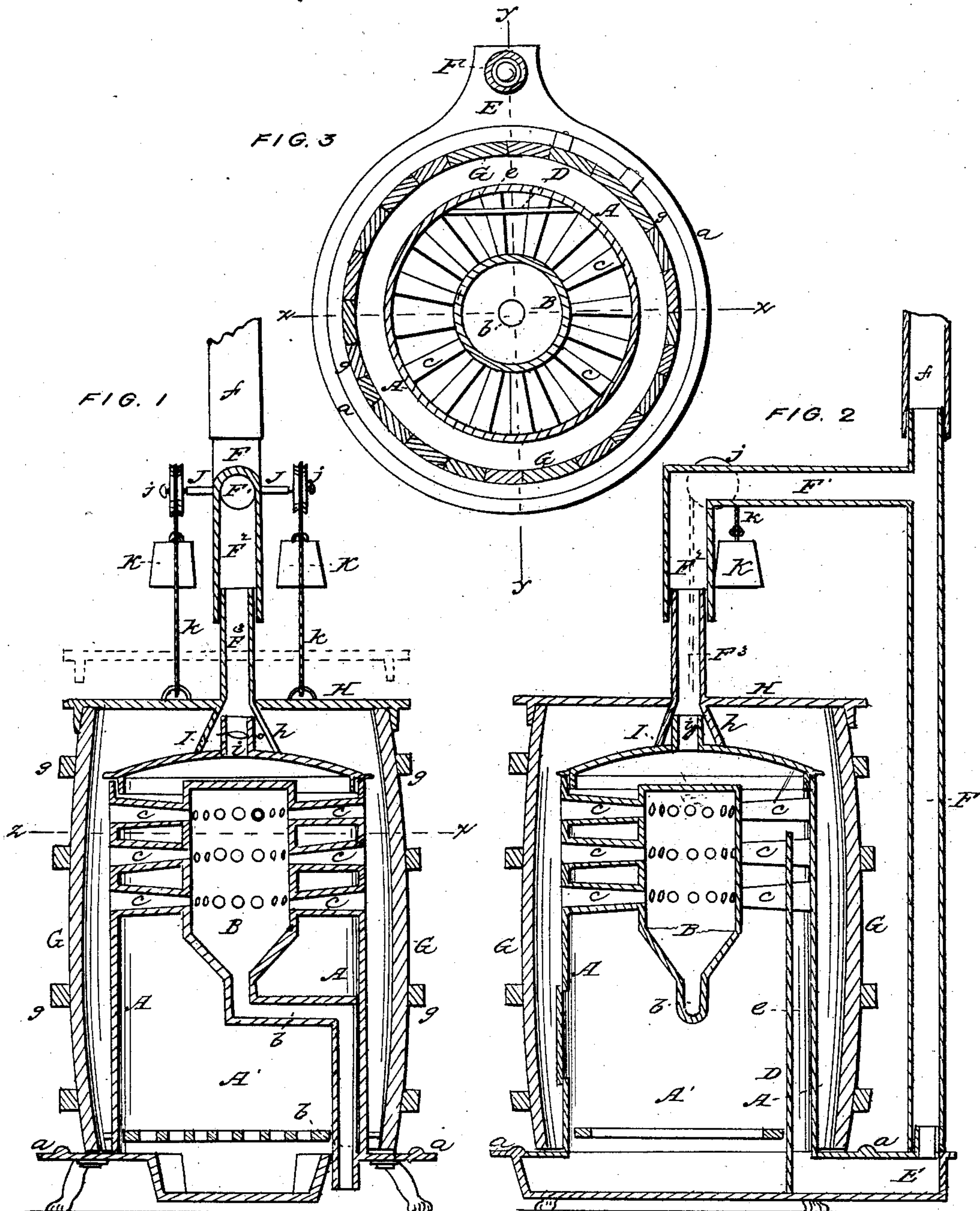


W. B. GEDDIS.

Barrel Heater.

No. 62,540.

Patented March 5, 1867.



WITNESSES:

J. A. Davis.
A. D. Davis

INVENTOR:

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Atty.

United States Patent Office.

WILLIAM B. GEDDIS, OF ROCHESTER, NEW YORK.

Letters Patent No. 62,540, dated March 5, 1867.

IMPROVED CRESSET OR BARREL HEATER.

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, WILLIAM B. GEDDIS, of Rochester, in the county of Monroe, and State of New York, have invented certain new and useful improvements in Cressets or Barrel Heaters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a vertical transverse section, taken in the line *x x*, fig. 3.

Figure 2 is a vertical longitudinal section, taken in the line *y y*, fig. 3.

Figure 3 is a horizontal section taken in the line *z z*, fig. 1.

Like letters of reference indicate corresponding parts in all the figures.

This invention relates to new and useful improvements in cressets or barrel heaters for coopers' use, and the invention consists in a cylindrical cresset stove, the upper part of which is provided with an air-heating chamber and flues to increase the heating power of the upper portion of the stove, so that it shall give out a degree of heat by hot air to equalize, or nearly so, the radiation from the lower portion, which holds the fire, and thereby heat the barrel uniformly from top to bottom; the said heating chamber taking in air through a supply pipe or pipes which run down within the fire-chamber and pass out through the bottom of the stove, where they terminate, and discharges their heated air to the upper part of the barrel, through a series of pipes or flues radiating horizontally from the said heating chamber; the barrel being evenly and rapidly heated thereby, without being burned, and without any smoke coming in contact with it. The invention also consists in an improved adjustable stove-pipe connection for the top of the stove, combined with a barrel cap or cover, the whole operating in such a manner that the stove-pipe connection is made with the stove and the cover placed over the barrel, or *vice versa*, by a single operation and with the greatest facility, as hereinafter explained.

A A, in the accompanying drawings, indicates a cylindrical cresset stove, having an air-heating chamber, B, located in its upper portion. This chamber is supplied with cold air from beneath the stove by a pipe or pipes, *b b*, fig. 1, which runs down through the fire-chamber A¹, and terminates below the stove. The chamber B discharges the heated air against the inner upper parts of the barrel G, by means of conical tubes or flues *c c c*. The rear part of the stove has a vertical partition, D, figs. 2 and 3, forming a downward flue for taking the smoke from the top of the stove, when the pipe E F *f*, fig. 2, is in use. F is a vertical stove pipe, having a branch pipe or elbow, F¹ F², to give a direct draught, and is arranged to turn freely in a fixed pipe, *f*, at its upper end, and on part E of the stove, fig. 2, so that the branch pipe F¹ F² may form a crane and be swung from side to side, to remove the cover from over the furnace, as hereafter described. The hanging part F² of this pipe has resting in it an adjustable connecting section pipe, F³, which slides vertically up and down, and the said section F³ has a barrel cover, H, attached, and its lower end has a flaring termination, *h*. The sliding pipe F³ and cover H are suspended so as to make a part of the branch pipe F¹ F², by means of cords, *k k*, fig. 1, and counterbalance weights, K K, the cords passing over pulleys, *j j*, on the arms J J, projecting from pipe F¹, and by means of which the cover H and pipe F³ are moved easily up or down, and remain in any position in which they are placed, and may then be swung around like a crane. The stove A has a short pipe, I, at its top, in which is a damper, *i*, figs. 1 and 2. G is the barrel, and *g g* the truss hoops.

The operation is as follows: A fire is lighted in the chamber A¹ and the barrel shell G placed over the stove, resting on the ledge or projecting base *a a* of the stove; the damper *i* is then opened, and the branch pipe is swung over the barrel, and the cover H depressed until it rests upon the upper end of the barrel; and the pipes F³, *h*, and I, make a connection. The smoke now passes directly through the branch pipe into the main pipe or chimney, *f*, but when the branch pipe is disconnected and the damper *i* closed, then it passes to the chimney indirectly, by the way of the channel *c c* E and pipe F. The fire being in the lower portion A¹ of the stove, the tendency is to give that part of the barrel the greatest portion of heat from radiation; but this tendency is counteracted by the employment of the heating chamber B and flues *c c*, whereby the upper part of the stove has its heating surface greatly increased, and air flowing up through the pipe or pipes *b b*, passes out of the flues *c c c* in a highly heated state, and the heating power of the lower portion of the stove is thereby balanced, and the barrel heated uniformly from top to bottom. This method of distributing the heat evenly to

the barrel may be used with only the smoke pipe *e E F f*, or with the adjustable pipe *F³ F² F¹ f* only; however, I consider the use of both of these pipes as more convenient and preferable, since, when the barrel is being inserted or removed, the direct draught may be closed and the smoke not trouble the operator. The weight of the cover *H* and pipe *F³* is so evenly balanced by the weights *K K*, that they remain in a depressed or elevated position without any fastening, and are readily moved up or down. By these means I produce a barrel heater which is easily operated, and does its work in a neat and efficient manner. It will be observed that there is the greatest facility of inserting and removing the barrel by the raising of the cover *H*, and at the same time no obstruction is made to the draught.

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

1. The cresset stove *A*, having an air-chamber *B*, flues *e e*, and supply pipe or pipes *b b*, for giving the sides of the stove a uniform heating power, in connection with a single smoke pipe *I F³ F² F¹ f* or *e E F f*, or both, substantially as and for the purpose herein set forth.

2. In connection with the stove *A*, the barrel cover *H*, and adjustable pipe *F³*, constructed in one piece, and making suitable connection with the section *I* and pipe *F²*, substantially as and for the purpose herein specified.

3. The stove *A B b e e*, pipes *E F F¹ F² F³ f*, cover *H*, and counterbalances *K K*, all constructed and arranged substantially in the manner and for the purpose set forth.

4. The construction and arrangement of the pipe *F F¹ F²* and *F³* in such a manner as to perform the double office of a smoke pipe and crane, as herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WM. B. GEDDIS.

Witnesses:

J. A. DAVIS,

FRED. A. HATCH.