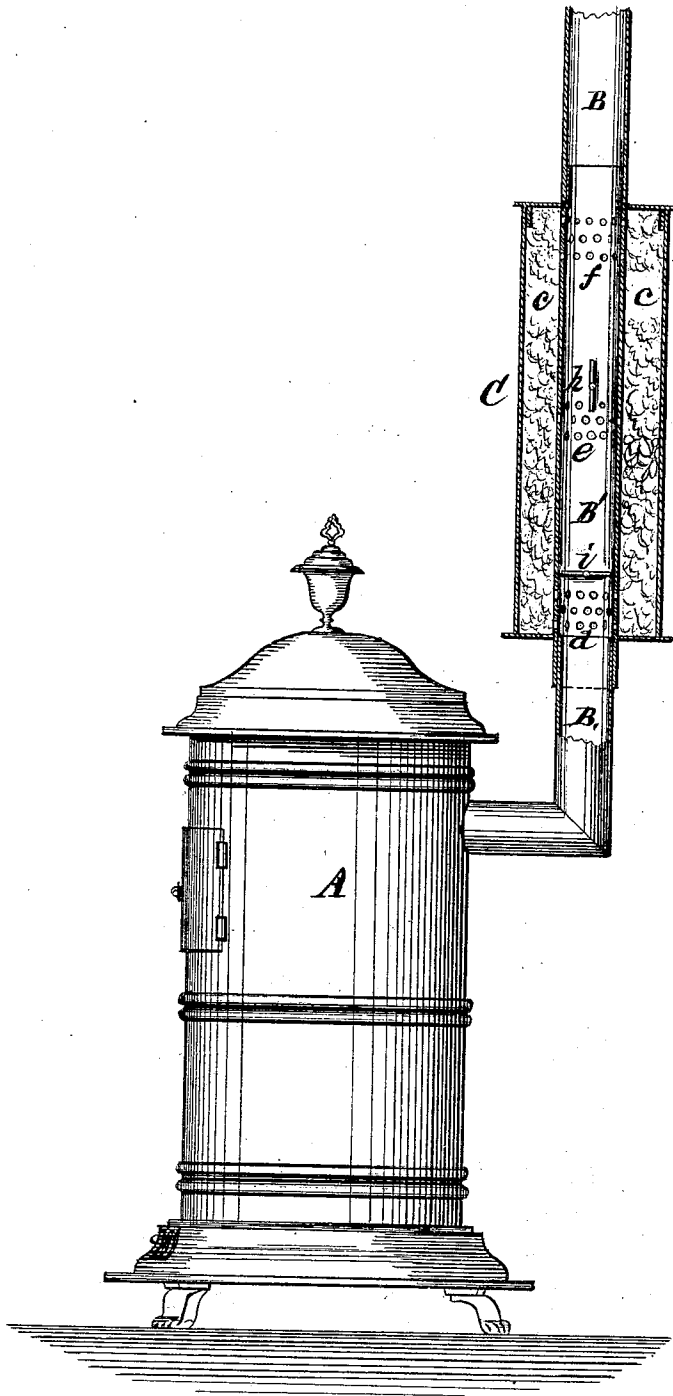


W. TWITCHELL.

Heating Drum.

No. 111,589.

Patented Feb. 7, 1871.



Witnesses.

Samuel D. Brown

J. R. Morley

Inventor.

W. Twitchell

United States Patent Office.

WILLARD TWITCHELL, OF SYRACUSE, NEW YORK.

Letters Patent No. 111,589, dated February 7, 1871.

IMPROVEMENT IN STOVE-DRUMS.

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, WILLARD TWITCHELL, of Syracuse, in the county of Onondaga and State of New York, have invented a new and improved Draught-Regulator for Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The drawing shows a perspective view of a stove with my improved attachment shown in section, in which—

A is the stove;

B is the pipe; and

C is the drum or draught-regulator.

The drum C is made with a center flue, B', which makes the stove-pipe B continuous when a direct draught is required. The said flue is perforated at *d*, *e*, and *f*, and is provided with two dampers, *h i*.

The chamber *c c* of the drum is filled with iron turnings or some similar cheap material that will pack loosely.

When a strong or direct draught is required both of the dampers *h i* are thrown open, but for a moderate draught the damper *i* is closed, and the gases pass through the perforations *d* into the drum, and passing through the filling *c c* to the perforations *e*, they again return to the flue and pipe B' B.

For mild weather, or for keeping fire over night, or at such time as a slow, smoldering fire is required, then both of the dampers *h i* are closed, and the escaping gases have to traverse the entire length of the drum, and through the loose filling contained therein, before returning to the pipe by the perforations *f*.

For a moderate draught either one of the dampers can be closed, as the effect is the same in either case if the other damper is left open.

By this method of regulating the draught the capability of stoves for retaining fire a long time without having to renew the fuel is greatly increased. They are affected little or none by high winds in their regularity of action; no skill is required for setting the dampers, and in no case can the draught be so completely shut off as to throw gases out into the room.

The openings *d e f* are each made of a series of perforations, which are numerous enough to allow a free passage for the gases, but are small enough to prevent the filling of the drum from working through into the flue or pipe B.

The regulator can be placed immediately in the rear of the stove, but by placing it above the stove, as shown, it can be applied readily to any stove by merely taking out a joint of pipe and substituting the drum.

The central perforations and damper *e h* can be dispensed with; I, however, consider the construction shown as preferable.

This device is in practical use otherwise than experimentally, and is liked by those who are using it.

Having thus described my invention,

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

An indirect conduit or chamber, *c*, filled with iron turnings or other suitable loose material, in connection with the direct draught B' B, dampers *h i*, and stove A, all constructed and operating substantially as and for the purpose specified.

The above specification of my invention signed by me this 30th day of December, 1870.

W. TWITCHELL.

Witnesses:

SAMUEL DE VEAU,
F. A. MORLEY.