

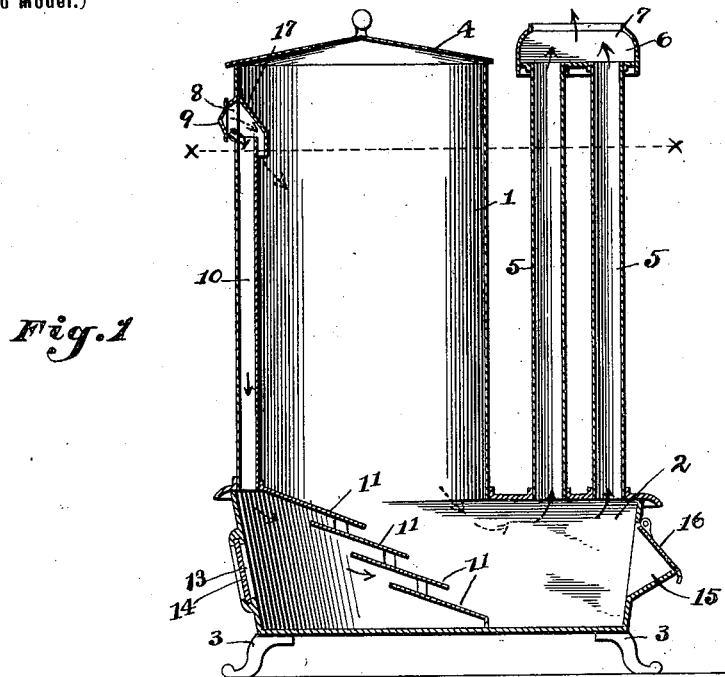
**No. 649,154.**

**Patented May 8, 1900.**

**B. F. BAUGHMAN.**  
**STOVE FOR BURNING SAWDUST.**

(Application filed Jan. 8, 1900.)

(No Model.)



**WITNESSES :**

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# UNITED STATES PATENT OFFICE.

BENJAMIN F. BAUGHMAN, OF WEST MANSFIELD, OHIO.

## STOVE FOR BURNING SAWDUST.

SPECIFICATION forming part of Letters Patent No. 649,154, dated May 8, 1900.

Application filed January 6, 1900. Serial No. 551. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN F. BAUGHMAN, a citizen of the United States, residing at West Mansfield, in the county of Logan and State of Ohio, have invented a certain new and useful Improvement in Stoves for Burning Sawdust, of which the following is a specification.

My invention relates to the improvement of sawdust-consuming stoves; and the objects of my invention are to provide an improved construction of stove particularly adapted for burning sawdust, to provide a stove of this class of such construction and arrangement as to insure a desirable radiation of heat, and to produce other improvements the details of construction of which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of my improved stove, and Fig. 2 is a sectional view on line *x x* of Fig. 1.

Similar numerals refer to similar parts throughout both views.

In carrying out my invention I employ a vertical casing or drum 1, which is preferably of the cylindrical form shown, although it is obvious that the same may be of other form in cross-section, if desired. The lower portion of the drum or cylinder 1 communicates with the upper side and rear portion of an oblong or box-like base 2, which is supported by suitable legs 3. As indicated at 4, the cylindrical body 1 is provided with a detachable cover-plate or cap. From the forwardly-extending portion of the base-chamber 2 rise parallel rows of radiating-pipes 5, the upper ends of which communicate with the under side of a horizontal box 6, with the upper side opening 7 of which may be connected a suitable stove-pipe. In the upper portion and rear side of the cylinder or drum 1 I provide an opening 8, which is regulated by a suitable form of damper 9. Extending downward from the lower portion of the opening 8 and adjacent to the rear wall of the drum 1 is a vertical flue 10, the latter leading into the upper side and rear end portion of the base-chamber 2. 11 represents the grate-bar, which con-

sists of inclined parallel plates arranged, as shown, in steps or to project one beyond the other. These grate-bar plates are connected at suitable points, preferably adjacent to their ends, by separating-lugs 12, and the lower plate 11 preferably has its forward edge, which is within the forward portion of the base-chamber 2, bearing upon the floor or bottom of said base-chamber. The rear wall of the base-chamber 2 is provided with an opening 13, which is controlled by a suitable damper 14, while the forward side or wall of the base-chamber 2 is provided with a mouth projection 15, which is adapted to be closed by a hinged lid 16.

Over the upper end of the flue 10 I provide a hood 17, which is of such size as to cause its lower end to surround the upper end of the flue 10 at a distance from the latter.

In utilizing my improved stove the sawdust to be burned is discharged into the drum 1 and upon the grate-bars 11 through the upper end of said drum, and being ignited within the base-chamber 2 it is obvious that the smoke and products of combustion will follow the direction of the full-line arrows in Fig. 1, passing upward through the heat-radiating and smoke-conducting pipes 5 into the box 6 and thence out through the smoke-pipe connected with said box. It will be seen that when sufficient sawdust has been introduced into the drum and onto the grate-bars to practically close the lower end of the drum the air which enters the opening 8 will follow the direction of the full-line arrows in Fig. 1, pass downward through the flue 10, and thence through the rear portion of the base-chamber 2, and through the grate-bars to the burning sawdust. It will be observed, however, that when the sawdust contained within the stove becomes sufficiently consumed to provide a communication therethrough between the drum 1 and forward portion of the base 2 the air which enters the opening 8 may, following the direction of the dotted-line arrows, pass downward through the lower end of the hood 17 and thence through the drum and base-chamber to the flues or pipes 5. It is evident that the damper-controlled opening 13 may be employed for the double purposes of sup-

plying a current of air to the burning sawdust and of admitting an instrument to be used for cleaning the grate-bars.

From the construction above described it will be seen that my improved stove is of such construction as to particularly adapt the same to the burning of such material as sawdust, and that the construction of grate-bars herein described is such as to be especially adapted as a burning-support for fuel of this class.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a stove for burning sawdust, the combination with a vertical casing 1 having a detachable top plate and a horizontal base-chamber 2 having smoke-outlets in its forward portion, of a grate-bar frame supported diagonally below the casing 1 and within the chamber 2, said grate-bar frame consisting of connected inclined and parallel plates ar-

ranged one above the other in steps as described, said stove being provided with inlet air-openings, substantially as specified.

2. In a stove for burning sawdust, the combination with a vertical casing 1, a horizontal base-chamber communicating therewith and having a forwardly-extending portion, a damper-controlled inlet 8 in the upper portion of said casing 1, a flue leading from said opening 8 to the rear portion of the chamber 2, a hood loosely surrounding the upper end portion of said flue and outlet-pipes rising from the forward extension of said base-chamber, of a grate-bar frame arranged diagonally within the base-chamber and beneath the casing 1, said grate-bar frame consisting of parallel plates arranged in steps as described, substantially as specified.

BENJAMIN F. BAUGHMAN.

In presence of—

C. C. SHEPHERD,  
A. L. PHELPS.