

No. 879,909.

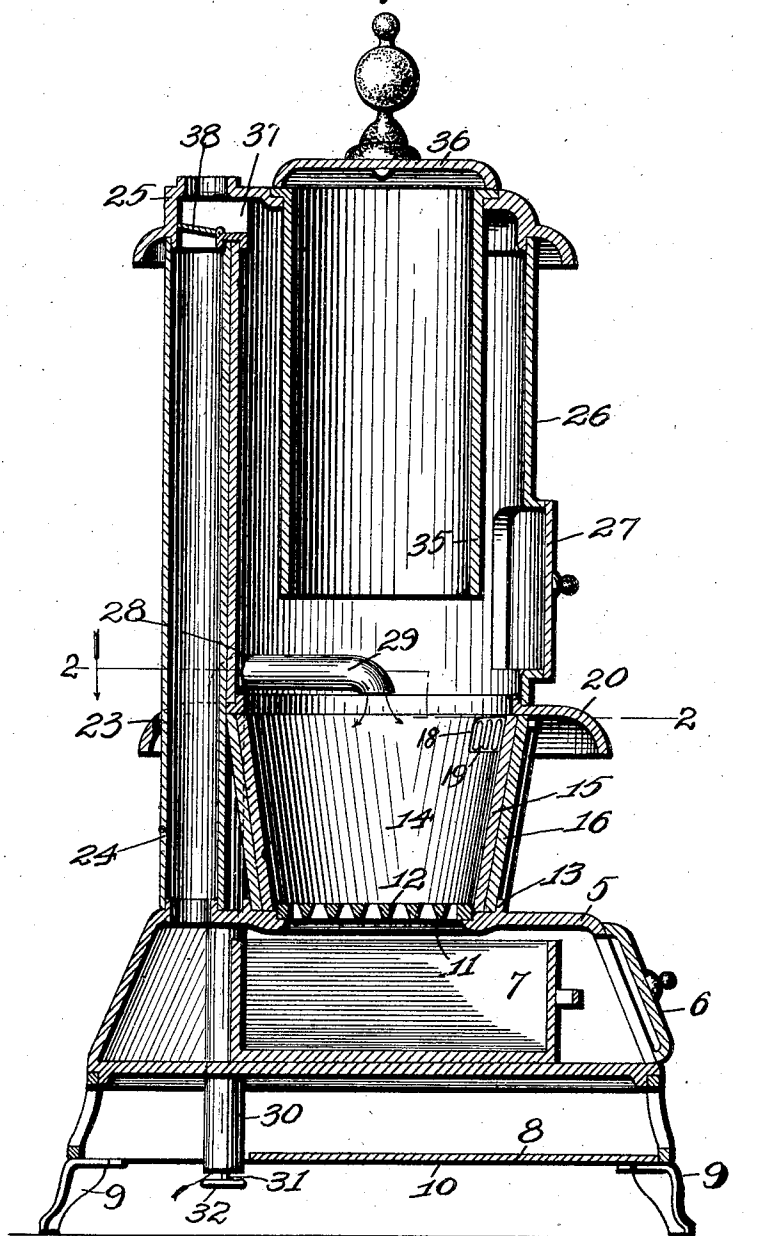
PATENTED FEB. 25, 1908.

W. RUBE.
STOVE.

APPLICATION FILED AUG. 12, 1907.

2 SHEETS—SHEET 1.

Fig. 1



WITNESSES
H. B. Stein
E. L. Liss.

INVENTOR
William Rube
by Hopkins & Eck's attys.

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2 SHEETS--SHEET 2.

Fig. 2

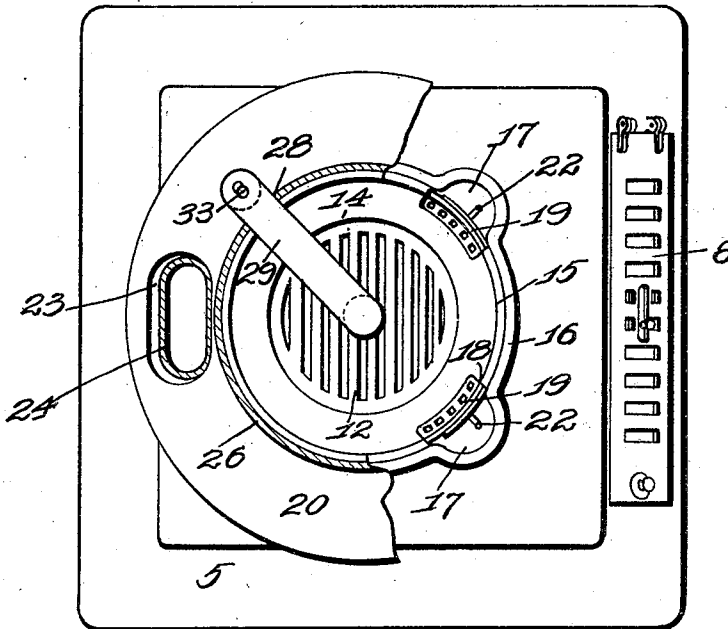


Fig. 3

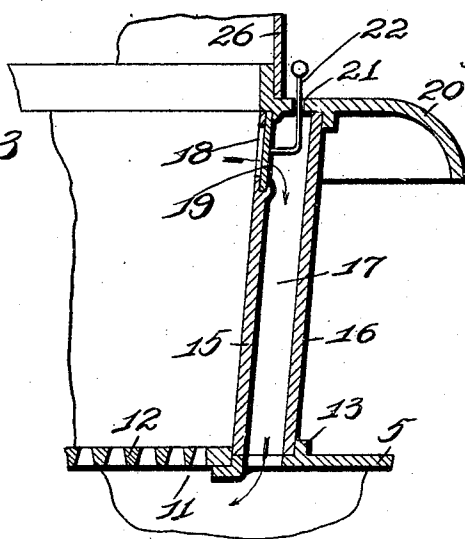
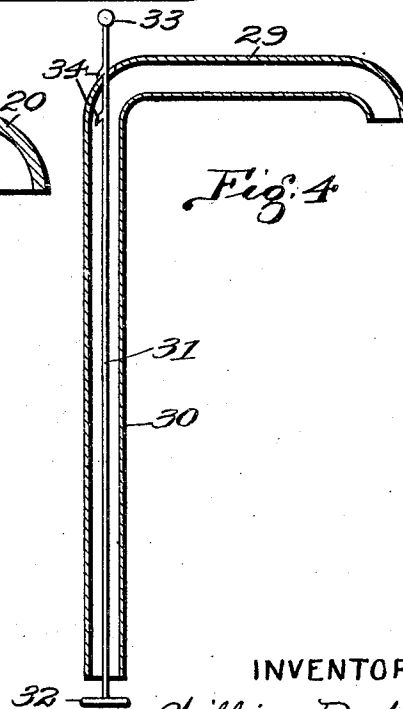


Fig. 4



WITNESSES
H. C. Stein
E. L. Leis

INVENTOR
William Rube
by Hopkins & Everts attys.

UNITED STATES PATENT OFFICE.

WILLIAM RUBE, OF O'FALLON, ILLINOIS.

STOVE.

No. 879,909.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed August 12, 1907. Serial No. 388,187.

To all whom it may concern:

Be it known that I, WILLIAM RUBE, a citizen of the United States, and resident of O'Fallon, Illinois, have invented certain new and useful Improvements in Stoves, of which the following is a specification.

This invention relates to improvements in stoves and consists in the novel arrangement, construction and combination of parts as will be fully hereinafter described and claimed.

The object of my invention is to construct a stove having a fire box provided with flues to permit a down draft to pass under the grate and out through a flue to the chimney.

A further object of my invention is to provide a fresh air pipe to distribute the air centrally upon the top of the fire within the fire box to assist in burning the smoke, gases and particles of combustion, and flues provided on the fire box to provide the proper draft, permitting it to pass downwardly to the fire box so as not to overheat the magazine in the upper portion of the stove.

A further object in connection with the fire box, fresh air flue and the flues provided on the fire box, is to add an auxiliary base of grill work to permit the heat to pass outwardly on all four sides and yet prevent the floor from becoming overheated by the excessive heat passing through the ash pit.

In the drawings: Figure 1 is a central vertical sectional view of my complete invention. Fig. 2 is a horizontal sectional view with parts broken away taken on the line 2—2 of Fig. 1 and viewing the same in the direction indicated by the arrow. Fig. 3 is an enlarged detail sectional view of a portion of the fire box showing one of the flues made use of in carrying out my invention. Fig. 4 is a detail central sectional view of the fresh air distributing pipe made use of in connection with my invention.

In the construction of my invention I provide a base "5" having a door "6" in which is formed a slide damper of the usual construction, the said base acting as an ash pit and in the same is placed an ash pan "7." The said base "5" is mounted upon an auxiliary base "8", the sides thereof being skeleton in form or provided with openings for the passage and circulation of heat and air. The said base "8" is mounted upon the usual stove legs "9." In the bottom of the auxiliary base I place a shield "10" which extends across the greater portion of the base, and the object of the same is to deflect the

heat generating from the ash pit from contacting with the floor.

The upper portion of the base "5" is provided with an opening "11" in which is placed a grate "12" and around the opening and formed integral with the top of the base is a flange "13" which supports and retains in position the fire box "14".

The fire box "14" is composed of two tapering cylindrical sections "15" and "16." The section "15" forming the inner wall is of such material as to withstand the excessive heat of the fire, and the outer section which is located around the inner section is provided with grooves "17" which act as flues or circulating passages between the inner and outer sections. At the upper end of the inner section and at the point where the flues are located are provided openings "18" in which is mounted a sliding damper "19" preferably constructed of the ordinary slide damper type, and through this opening is permitted to pass and circulate the heat to be conveyed downwardly and under the grate.

Upon the top of the fire box and communicating with the upper edge of both sections forming the fire box is located a flanged ring "20". In the ring just above the flues formed in the fire box are provided elongated slots "21" through which project damper rods "22" by which the slide dampers "19" are operated. The flanged ring "20" is also provided with an elongated opening "23" through which is passed the smoke flue "24", the lower end of said flue communicating with the ash pit and the upper end supported to the top casting.

Upon the flanged ring "20" is mounted the stove casing or shell "26", and upon the top of said casing or shell is supported the top casting "25." In the front of the stove casing or shell is provided a stove door "27" and through said shell and near the smoke flue is provided an opening "28" through which is passed the horizontal member "29" of the fresh air pipe "30." The vertical member of the fresh air pipe is passed downwardly through an opening formed in the flanged ring "20" through the ash pit, and its lowest end projecting slightly below the shield "10", the inner end of the horizontal member being located centrally above the fire box and so arranged as to distribute fresh air over the fire to assist in burning all particles of combustion.

Through the vertical section of the fresh air pipe "30" is passed a rod "31", the lower end provided with a damper "32" the upper end with a handle "33" and a pair of teeth "34" by which the rod can be held in raised or lowered position to retain the damper in an open or closed position.

The top casting "25" is properly recessed to support a magazine "35" which is only used when burning anthracite coal, but the said magazine can be easily and readily removed from the stove when soft coal is to be used. On the top of the casting "25" is placed the ordinary cover "36" of any ornamental design.

In the top casting "25" and at right angles to the smoke flue "24" is provided an opening "37" which permits circulation between the chimney and the casing or shell. In the top casting "25" is pivotally mounted a damper "38" so arranged as to close and open communication between the chimney and the casing or shell, or the chimney and the smoke flue "24."

The operation of my invention is as follows: In the first instance, when building a fire in my improved stove, I open the damper "38" by placing it in the position as shown in Fig. 1. The damper "32" in the fresh air pipe is closed; the dampers "19" in the fire box are closed, and the damper located in the door of the ash pit is opened. The material within the fire box is then ignited and the draft is direct from the fire box upwardly through the opening "37" to the chimney. When the fire has been properly ignited the damper in the door of the ash pit is closed; the damper "38" in the top casting placed in reversed position; closing the opening "37", and the damper "32" in the fresh air pipe is open so as to permit the fresh air to circulate upwardly through the pipe and over the fire box. The dampers in the flues of the fire box are also open, permitting the draft to circulate downwardly, not through the grate, but through the flues formed between the sections of the fire box and permitting the heat to pass through the ash pit and upwardly through the smoke flue "24" out through the chimney. By this construction there is supplied sufficient fresh air from the bottom, delivered above the fire box to mix with the particles of combustion and burn all particles thereof thus causing a more steady and excessive heat and prevent the grate bars from melting or burning out.

By means of the flues formed in the fire

box the grates are preserved and a better result is accomplished.

Having fully described my invention, what I claim is:

1. A stove of the class described comprising a fire box of two sections; a base; an auxiliary base; flues formed in the fire box between the two sections; dampers located in the upper ends of the flues and a fresh air supply pipe for conveying fresh air from the bottom of the stove to the top of the fire box, substantially as specified.

2. A stove of the class described comprising a base; an auxiliary base; a fire box; flues formed in the fire box extending from the top of the fire box down to the base; dampers located in the upper ends of said flues; a stove casing mounted upon the fire box; a smoke flue communicating with the base and with the top of the stove, and a fresh air pipe for supplying fresh air upon the top of the fire box, collecting the air from below the auxiliary base, and a damper located in the fresh air pipe for regulating the circulation of the air, substantially as specified.

3. A stove of the class described comprising a stove casing; a fire box located beneath the stove casing, said fire box composed of two sections; a pair of flues formed in the fire box between the two sections extending from the top of said fire box down to the base; slide dampers located in the upper end of the inner section of the fire box to control the circulation between the fire box and the flues; a base supporting the fire box, said base acting as the ash pit; an auxiliary base supporting the first mentioned base besides, said auxiliary base being in skeleton form; a fresh air pipe extending horizontally into the stove casing and located above the fire box, said fresh air pipe also bent downwardly and extending through the bases for collecting air from beneath the auxiliary base and delivering it upon the fire within the fire box; a shield partially extending across the bottom of the auxiliary base to deflect the heat; and a damper located in the air pipe for regulating the circulation of air, substantially as specified.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

WILLIAM RUBE.

Witnesses:

ALFRED A. EICKS,
WALTER C. STEIN.