(No Model.)

C. T. BENEDICT.

DEVICE FOR DISCHARGING ASHES AND CINDERS FROM COAL STOVES.

No. 422,904. Patented Mar. 11, 1890.

Fig. 1.

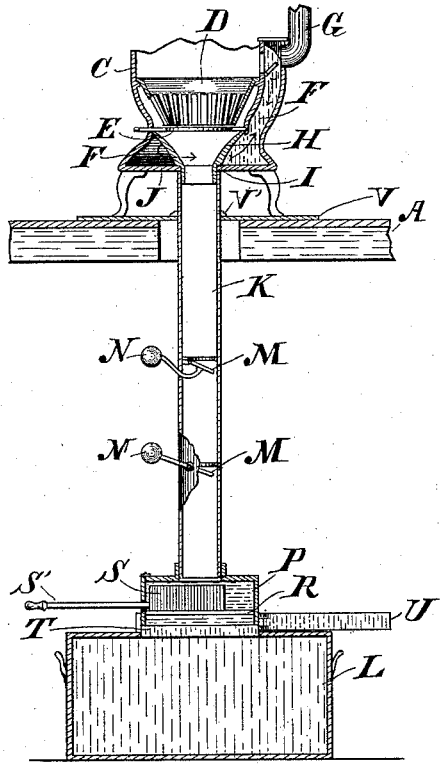


Fig. 2.

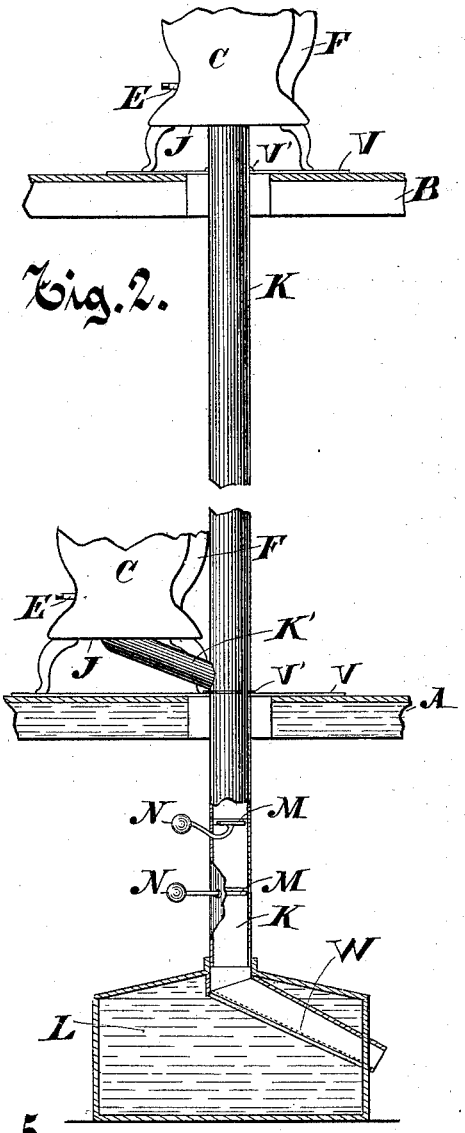


Fig. 3.

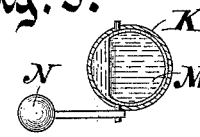


Fig. 4.

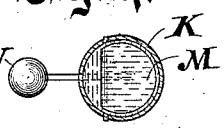
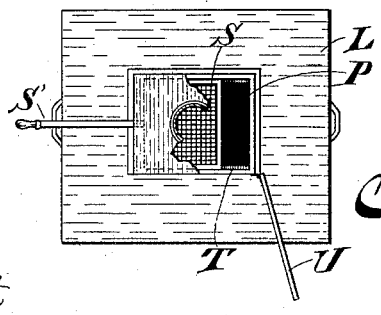


Fig. 5.



Witnesses.

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Anna Faust

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UNITED STATES PATENT OFFICE.

CURTIS T. BENEDICT, OF MILWAUKEE, WISCONSIN.

DEVICE FOR DISCHARGING ASHES AND CINDERS FROM COAL-STOVES.

SPECIFICATION forming part of Letters Patent No. 422,904, dated March 11, 1890.

Application filed December 5, 1887. Serial No. 256,976. (No model.)

To all whom it may concern:

Be it known that I, CURTIS T. BENEDICT, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Devices for Discharging Ashes and Cinders from Coal-Stoves; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This newly-invented device is intended and adapted especially for use with that class of coal-stoves having an interior fire-pot at or near the base of the stove, particularly heating-stoves such as are commonly known as "base-heaters," and also "direct-draft stoves."

In the drawings, Figure 1 is a central vertical section of the lower part of a base-heating coal-stove with my newly-invented device in connection therewith. Fig. 2 is a modified form of my device adapted to be used in connection with a stove on the first floor, and also with another stove on the second floor. Figs. 3 and 4 are each a form of damper or gate used in my device. Fig. 5 is a top view of the cover of the ash-receptacle and of the sifter in connection therewith.

The same letters refer to like parts in all the views.

In the drawings, A represents the first or grade floor of a building, and B represents the second or chamber floor of the same building. The shell C of the stove supports a fire-pot D, at the bottom of which is the horizontal grate E, and beneath and behind the fire-pot is a duct or passage F for the smoke and gases leading up into the smoke-pipe G. These features are such as pertain to the stoves now in common use. Below the fire-pot and grate I provide an upwardly-opening funnel-shaped ash-receiver H. The upper end of this ash-receiver is as wide as or wider than the bottom of the fire-pot, and is preferably as large as and is made to fit closely within the shell C, making a tight joint therewith, so that no ashes can pass out between the shell and the top of the receiver H, and that all the ashes and cinders as they escape from the fire-pot through the grate E fall into the ash-receiver H. For convenience of support of the receiver H it may be provided with a shoulder I, adapted to rest on the bottom J of the stove. The receiver H at its lower end passes downwardly centrally through the bottom J of the stove and opens downwardly into the descending ash-flue conveniently formed by a pipe K. This pipe K is fitted to and makes a tight joint with the lower end of the ash-receiver H and passes downwardly through the floor A to the ash-receptacle L. In this flue, and preferably below the floor A, are two dampers or gates M, made as nearly air-tight as consistent with ordinary workmanship, which dampers are located at a distance apart, and are intended and adapted to prevent a draft of air upwardly into the stove, as both of them are not open at the same time, and also to check and control the downward passage of the ashes and cinders. As a convenient form of such damper a hinged gate opening downwardly, provided with a counterpoise N, is best adapted for the purpose.

As it is sometimes desirable to separate the ashes from the partly-burned coal, I provide a sifting-chamber P at the lower end of the flue, either forming a part of or secured to the pipe K, provided with flanges or ways R, on which a sifter S is supported and may be reciprocated, the sifter S being provided with a handle S', for the purpose of its manipulation.

An ash-receptacle L is provided, which may be a permanent ash-pit, such as is shown in Fig. 2, or, preferably, a removable box such as is shown in Fig. 1, and when it is a removable box it is provided with an upwardly-projecting top or collar T, provided with a swinging door U, adapted to close one side of the collar, which side of the collar is otherwise open to permit the passage of the walls of the chamber P therethrough laterally, the collar T being of such size as to admit and fit neatly to the walls of chamber P. By this construction a sufficiently close connection between the chamber P and receptacle L is made to avoid the escape of ashes therethrough in ordinary use, while when the door U is open the receptacle L may be readily removed laterally from beneath the chamber P, for removing the ashes therefrom.

On the floor beneath the stove is a zinc V, provided with an aperture, through which the

pipe K passes, about which pipe on the zinc may be placed a collar V′, if desired, for making a tighter joint.

When the stove from which ashes are to be discharged is located in the second story of the building, the ash-flue may be extended up through the first story into the second story, as shown in Fig. 2, and if at the same time there is a stove in the first story from which it is desired to discharge the ashes into the common flue a branch pipe K′ may be constructed from the bottom of the ash-receiver H to the principal flue for that purpose.

The ashes may be separated from the half-burned coal and cinders to some extent by constructing the lower end of the pipe K within the pit L on a lateral and downward angle, and constructing the bottom part of this inclined portion of the flue in the form of a sieve W, or otherwise making apertures for the ashes to fall through while the cinders and half-burned coal are carried out and discharged through its open end.

It will be understood that in using this device the ashes and cinders, as they are discharged from the fire-pot through the grate, will fall upon the upper damper M, and when desired, the upper damper being opened, the ashes will fall through upon the lower damper M, and when the lower damper M is opened the ashes will fall upon the sieve, so that by using two dampers, only one of which is open at the same time, the possibility of any upward current of air into the stove will be obviated.

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

1. An ash-discharging device consisting of a funnel-shaped receiver located in the bottom of a stove, and a dust-tight pipe or flue leading from the receiver downwardly into a room below that in which the stove is located, in combination with two automatic dampers located in the flue at a distance apart, the dampers being hinged to open severally downwardly, being each provided with a counterpoise, whereby it is adapted to close automatically but yieldingly under considerable weight, substantially as described.

2. In an ash-discharging device, the combination, with a pipe or flue leading directly from the base of a stove into a room below, of a sifting-chamber located at the lower end of the flue in the room below the stove, a reciprocating sieve therein, and a removable ash-receptacle thereunder, substantially as described.

3. In an ash-discharging device, the combination, with a pipe or flue leading directly from the stove to a room below, of a sifting-chamber in which the flue terminates, and a removable receptacle located below the sifting-chamber, which receptacle is provided with a collar or top of suitable size to receive the sifting-chamber therein, and having a door closing an aperture in the side thereof adapted to permit the sifting-chamber to pass laterally therethrough, substantially as described.

4. An ash-discharging device consisting of a main pipe leading directly from the base of a stove in the second story of a building to a room below the first story, and a branch pipe leading downwardly from the bottom of a stove in the first story into the main pipe, in combination with two automatic counterpoised dampers hinged at a distance apart in the main pipe below the first story of the building, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CURTIS T. BENEDICT.

Witnesses:
C. H. KEENEY,
JAS. B. ERWIN.