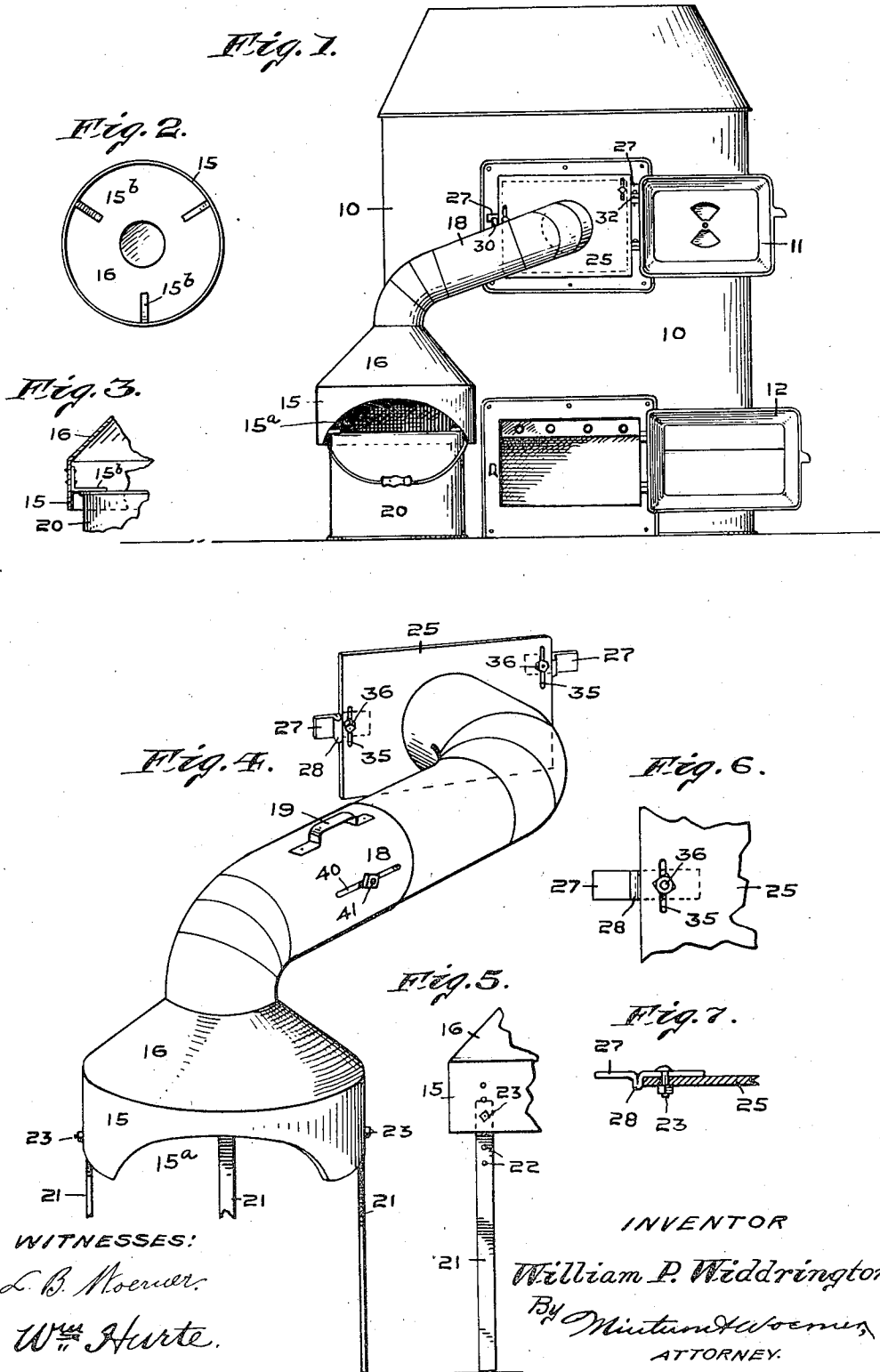


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ASH DUST GATHERER AND CONVEYER.
APPLICATION FILED FEB. 13, 1915.

1,166,506.

Patented Jan. 4, 1916.



UNITED STATES PATENT OFFICE.

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ASH-DUST GATHERER AND CONVEYER.

1,166,506.

Specification of Letters Patent.

Patented Jan. 4, 1916.

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To all whom it may concern:

Be it known that I, WILLIAM P. WIDDRINGTON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Ash-Dust Gatherers and Conveyers, of which the following is a specification.

Waste products of combustion, commonly known as ashes, when agitated cause large volumes of minute particles thereof to rise in the form of dust, so that the removal of such products of combustion from the ash-pits of furnaces and boilers used for domestic heating purposes is always disagreeable to the person performing the task.

The object of the present invention is to provide a device which can readily be placed into position in connecting the receptacle, for receiving the waste products of combustion, with the feed opening of the furnace or boiler, thereby gathering the dust arising from the open top of the receiving receptacle and convey and discharge same into the fire-pot, the travel of the dust through the conveyer-pipe being accelerated by the induced draft of the chimney.

A further object of the invention is to provide a portable device for gathering and conveying dust arising from agitated waste products of combustion, from the receptacle for receiving such waste products, back to the fire-pot, which will be cheap to manufacture and efficient in its operation.

I accomplish the objects of the invention by means of the construction illustrated in the accompanying drawings, forming a part hereof, in which—

Figure 1 is a front elevation of a common type of portable furnaces, showing my invention in operative position. Fig. 2 is an underside plan view of the hood of the device. Fig. 3 is a fragmentary sectional view of the hood, showing the means for supporting the hood in operative position. Fig. 4 is a perspective view of the device shown in Fig. 1, except that suitable supporting legs are added. Fig. 5 is a fragmentary detail in elevation showing the adjustability of the hood supporting legs. Fig. 6 is a fragmentary detail view of the adjustable bracket for supporting the discharge end of the conveyer-pipe. Fig. 7 is a cross section of the construction shown in Fig. 6.

Referring to the drawings, 10 represents

an ordinary furnace of the portable type in common use for domestic heating purposes, and is provided with the usual door 11 for sealing the feed-opening and the door 12 for sealing the opening leading into the ash-pit.

The dust gathering and conveying device comprises a hood 15 having a conically shaped top 16 and a central opening which communicates with the conveyer-pipe 18 leading to and discharging into the feed-opening of the furnace 10. The hood 15 is preferably round in cross section to correspond to the bucket or other receptacle 20 employed to receive the waste products of combustion as removed from the ash-pit of the furnace or boiler. The diameter of the hood 15 is in excess of the receptacle 20 so that the former will slip down over the latter and inclose the open top of said receptacle. The front portion of the hood 15 is cut away to provide an opening 15^a, for admitting a shovel or similar tool employed in discharging the waste products of combustion into said receptacle 20. The distance the hood 15 is allowed to telescope down over the receptacle is limited by providing a number of horizontally disposed arms 15^b which are secured to and arranged at convenient points around the inner periphery of said hood. The arms 15^b extend radially a sufficient distance to engage the upper edges of receptacles of different diameters, thereby permitting a large variety of household utensils to be employed, if necessary. The conveyer-pipe 18 is provided with a handle 19 so as to enable the device to be readily carried and placed into operative position. The discharge end of the conveyer-pipe 18 carries the closure-plate 25 which seals the opening leading into the fire-pot when the device is in operation. The closure-plate 25 also forms a support for the discharge end of the conveyer-pipe, and to prevent accidental displacement of said closure-plate 25 when the device is in operation I provide suitable brackets 27, one bracket being usually secured to each vertical edge of said plate 25. These brackets are adjustably mounted upon the plate 25 by means of the slots 35 and bolts 36 to enable the brackets to be brought into registration with the lug 30 that acts as the keeper for the door-latch and the lug 32 forming part of the hinge for the door 11, since it is desirable to employ these lugs for hanging and support-

ing the plate 25. The adjustability of the brackets 27 will permit them to be moved to suit the location of the lugs 30 and 32, the location varying with the different styles and makes of furnaces and boilers. The brackets 27, if desired, may be bent at the middle, as shown in Fig. 7, to provide the transverse shoulder 28 to bear against the adjacent edge of the closure-plate 25 and prevent the brackets from turning upon the bolts 36.

Examining Fig. 4 it will be noted that the hood 15 is provided with suitable legs 21, usually three in number, which are arranged at convenient points around the inner periphery of said hood. It may be found desirable to support the hood upon legs instead upon the receptacle, and in order to enable the hood 15 to be adjusted toward or away from the ground, to accommodate receptacles of different heights, the legs 21 are adjustably secured to the hood by means of the holes 22 in the legs 21 and the bolts 23. The working distance of the device may be increased or decreased as occasion therefor arises by telescoping the two sections of the conveyer-pipe 18. In this instance, one section of the pipe will be provided with a slot 40 and the other carrying a bolt 41 which extends through said slot and by means of the nut on the bolt the two sections may be securely held together when adjusted. The lengthening and shortening of the conveyer-pipe 18 may be desirable where surrounding structural difficulties are to be overcome.

While I have described my said invention with more or less minuteness as regards details of construction and arrangement and as being embodied in certain precise forms, I do not desire to be limited thereto unduly or any more than is pointed out in the claims. On the contrary, I contemplate all proper changes in form, construction and arrangement, the omission of immaterial ele-

ments, and the substitution of equivalents as circumstances may suggest or necessity render expedient.

I claim—

1. In a device for gathering and conveying ash dust, the combination, with a heating apparatus provided with a feed opening, of a receptacle for receiving the burnt products of combustion, a hood adapted to fit down over the open end of said receptacle and supported by the latter, said hood being provided with an entrance opening, a closure-plate for closing said feed opening in the apparatus, plate supporting brackets extending laterally beyond the side edges of said plate, means for adjustably securing said brackets to said plate, and a pipe communicating with said hood and discharging through said closure-plate into said heating apparatus.

2. In a device for gathering and conveying ash dust, the combination, with a heating apparatus provided with a feed opening, of a receptacle for receiving the burnt products of combustion, a hood adapted to fit down over the open end of said receptacle and supported by the latter, a closure-plate for closing said feed opening in the apparatus, plate supporting brackets extending laterally beyond the side edges of said plate, means for adjustably securing said brackets to said plate, means for positively holding said brackets at right angles to said plate, and a pipe communicating with said hood and discharging through said closure-plate into said heating apparatus.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this 6th day of February, A. D. one thousand nine hundred and fifteen.

WILLIAM P. WIDDRINGTON. [L. S.]

Witnesses:

F. W. WOERNER,
J. A. MINTURN.