July 23, 1940. C. BURCH 2,208,893

SOOT BURNER

Filed Aug. 10, 1937

Fig. 1.

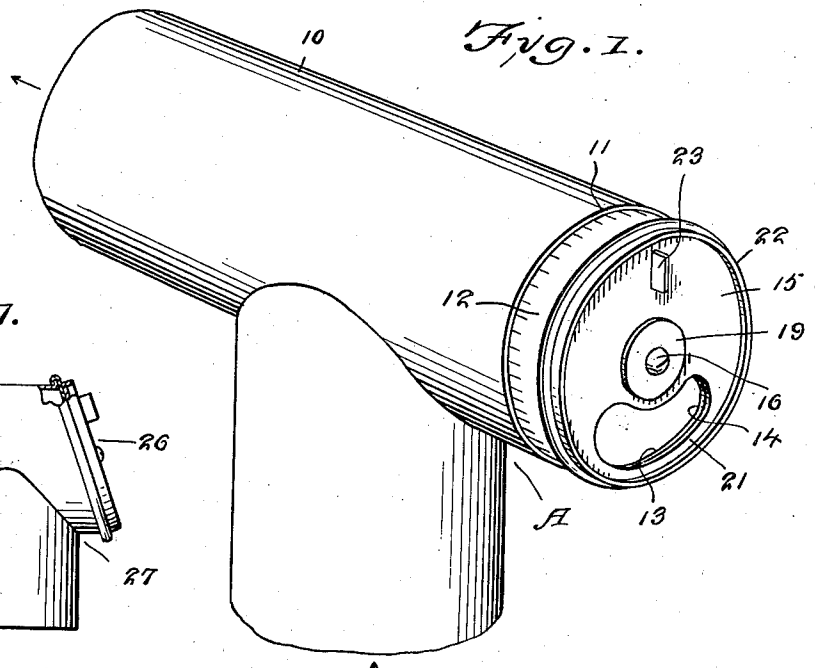


Fig. 7.

Fig. 2.

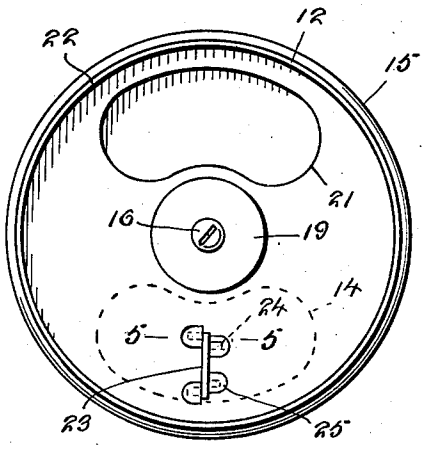


Fig. 3.

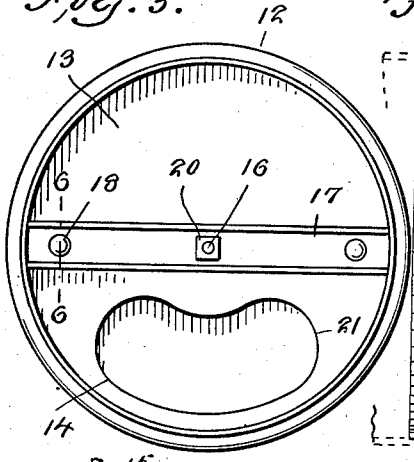


Fig. 4.

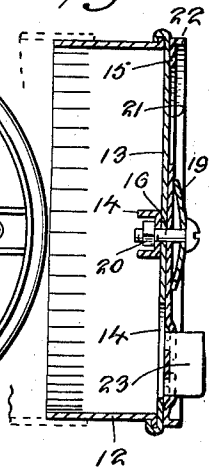


Fig. 5.

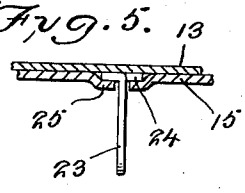
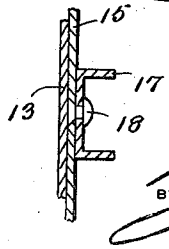


Fig. 6.



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Patented July 23, 1940 2,208,893

UNITED STATES PATENT OFFICE

2,208,893

SOOT BURNER

Charles Burch, Ashland, Wis.; Julia A. Burch administratrix of said Charles Burch, deceased

Application August 10, 1937, Serial No. 158,414

1 Claim. (Cl. 126—312)

The invention relates to a soot cleaning fixture for stove or furnace pipes or the like, and more especially to a soot burner.

The primary object of the invention is the provision of a burner of this character, wherein the same when incorporated in a furnace or stove pipe will enable the easy removal of soot therefrom without the necessity of taking the pipe down.

Another object of the invention is the provision of a burner of this character, wherein it has the advantages of keeping dust down, acting as a fuel saver, and eliminates the starting of a stove or furnace pipe fire, there being a good draught at all times within the furnace or stove and without leakage of fuel coal gases within a room or enclosure.

A further object of the invention is the provision of a burner of this character, wherein soot present within a furnace or stove pipe can be conveniently lighted for the burning of the same without liability of fire in an enclosure or room having the pipe installed therein and also acts as a regulator for draft.

A still further object of the invention is the provision of a burner of this character, which is simple in construction, thoroughly reliable and efficient in operation, strong, durable, readily and easily installed, functioning as an elbow for a furnace or stove pipe, and inexpensive to manufacture and install.

With these and other objects in view the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which discloses the preferred and modified embodiments of the invention, and pointed out in the claim hereunto appended.

In the accompanying drawing:

Figure 1 is a perspective view of the soot burner constructed in accordance with the invention.

Figure 2 is a front end view thereof.

Figure 3 is a rear end view of the same.

Figure 4 is a vertical cross sectional view through the front end.

Figure 5 is a sectional view on the line 5—5 of Figure 2.

Figure 6 is a sectional view on the line 6—6 of Figure 3.

Figure 7 is a side view of a modification.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, particularly Figures 1 to 6 inclusive, A designates generally a pipe T section which when in a furnace or stove pipe effects an elbow therein as is usual. The cross head 10 of this T section A at its front or foremost open end 11 has frictionally telescoped therein a circular cap or cover 12 which at its flat disk-like face portion 13 is provided with an elongated arcuate shaped opening or slot 14 forming an inlet through the said cap or cover.

Turnable on the portion 13 is a circular shutter or closure member 15, being rotatable on an axle forming bolt 16, which latter is passed centrally through the portion 13 and is made fast in a U-shaped reinforcing bar 17 lying crosswise interiorily of the cap or cover 12 against the inner face of the portion 13 thereof. This bar 17 is riveted or otherwise made fast in place as at 18. The bolt is fitted with a concavo-convexed friction washer 19 and is held engaged in the bar 17 by a nut 20. This washer acts upon the shutter or closure member 15 holding it in adjusted position. The shutter or closure member 15 is provided with an opening or slot 21 to be brought into and out of register with the opening or slot 14 in the portion 13 and being of a similar size thereto.

The shutter or closure member 15 is provided with a marginal strengthening flange 22, which is outturned therefrom. This shutter or closure member 15 carries a finger engaging ear or piece 23 which has laterally disposed reversely bent attaching nibs 24 socketed in outwardly struck keeper protuberences 25 formed from the shutter or closure member 15 eccentric to its axis of movement for adjustment thereof.

The cap or cover 12 is releasably held telescoped into the front open end 11 of the section A and is susceptible of a snug frictional fitting therewith.

In Figure 7 of the drawing there is shown a slight modification of the invention, wherein the disk-like frontal face portion 26 of the cap or cover 27 is forwardly inclined in contradistinction to a perpendicular disposition as is the disk-like portion 13 of the preferred embodiment of the invention.

In the use of the burner the shutter or closure member 15 is adjusted to have the openings or slots 14 and 21 register with each other and an igniter is passed therethrough for the lighting of soot within the stove or furnace pipe (not shown) with which the burner is associated. In this manner the soot present within the said pipe will be burned to eliminate the same therefrom.

When the soot has been burned thoroughly from the pipe the shutter or closure member 15 can be utilized as a regulator for draft through the pipe and also can function as a fuel saver. To clear the pipe of soot by the use of the burner hereinbefore set forth it avoids the necessity of the taking down of the furnace or stove pipe for this purpose.

What is claimed is:

A burner of the kind described, comprising a T-shaped pipe positioned for presenting a substantially horizontal portion open at opposite ends, a cover provided with a nipple telescopically joined with said portion at one open end thereof, said cover having an opening, a bar at the inner face of the cover and fixed thereto with the ends of the bar abutting the nipple, a disk-like shutter at the outer face of the cover and having a slot for register with the opening in said cover, and a nut carrying bolt engaged centrally in the bar, cover and shutter and having a springy washer active against said shutter.

CHARLES BURCH.