L. A. KNOWLES.

AUTOMATIC HEATER.

APPLICATION FILED JULY 29, 1912.

1,067,989. Patented July 22, 1913.

Fig. 1.

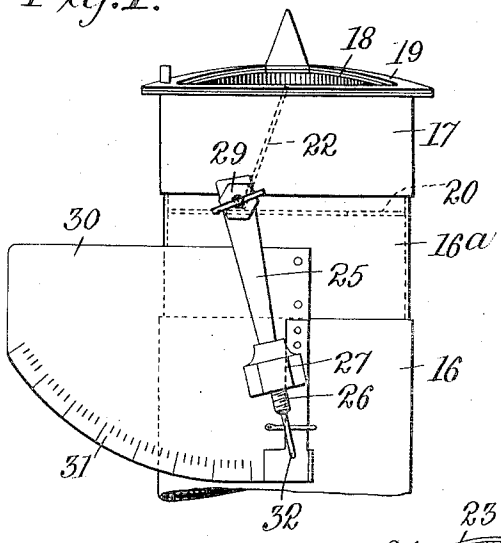


Fig. 2.

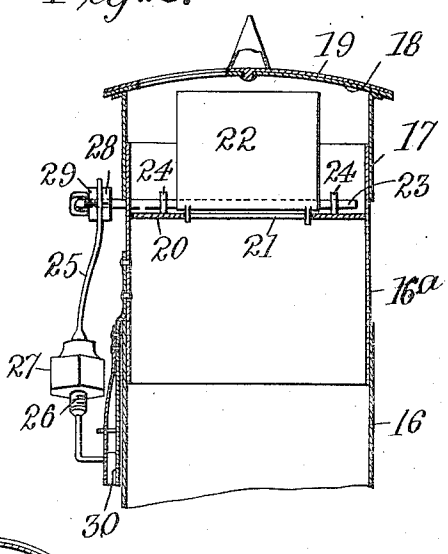
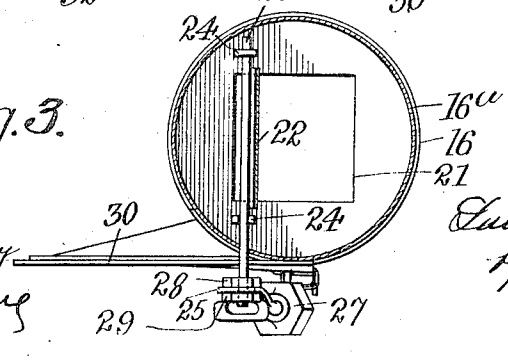


Fig. 3.



Witnesses

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LATHAM A. KNOWLES, OF VIENNA, ILLINOIS, ASSIGNOR OF ONE-HALF TO OTIS E. HARVICK, OF VIENNA, ILLINOIS.

AUTOMATIC HEATER.

1,067,989. Specification of Letters Patent. Patented July 22, 1913.

Application filed July 29, 1912. Serial No. 712,050.

To all whom it may concern:

Be it known that I, LATHAM A. KNOWLES, a citizen of the United States, residing at Vienna, in the county of Johnson and State of Illinois, have invented certain new and useful Improvements in Automatic Heaters, of which the following is a specification.

The present invention relates to stoves, and has for its purpose to provide a stove having an improved draft regulating means.

The invention has for its further purpose to provide a stove which is of simple design, neat in appearance, and which will be comparatively inexpensive to manufacture.

With these and other objects in view, the invention consists in the arrangement and combination of parts hereinafter claimed, and, while the invention is not restricted to the exact details shown and described, still, for the purpose of disclosure, reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which,

Figure 1 is a side elevational view of the draft regulator and associated parts; Fig. 2 is a central sectional view of the parts shown in Fig. 1; and Fig. 3 is a transverse sectional view thereof.

Referring to the construction in further detail the draft regulating means for the air intake pipe or flue 16 consists of a suitable cap 17 fitted over the upper end of said flue, and an apertured top on which is pivotally mounted a cover 19 likewise provided with an aperture for registering with the aperture in the top 18, and through the medium of said cover 19 the extent of opening in the aperture of the top 18, and the amount of air admitted into the flue 16 may be mechanically regulated.

The automatic regulation consists of a partition plate 20 on the flue section 16^a having an aperture 21 with which is associated a damper or valve 22. Said damper 22 is mounted on a shaft 23 that is, in turn, journaled in a pair of lugs 24 fixed on the upper surface of the partition plate 20. On its outer end, said shaft 23 (see Fig. 2) has secured thereon an arm or lever 25 whose free end 26 is screw-threaded and has adjustably mounted thereon a suitable weight 27. The connection between the arm 25 and the shaft 23 consists of a fixed nut 28 and a thumb nut 29 whereby the arm 25 and shaft 23 may be moved independently of each other to the end that the relative angular relation between the valve 22 and arm 25 may be changed. By this provision it will be readily seen that the weighted arm 25 may be set to hold the valve or damper 22 in different angular positions relatively to the opening through the partition plate 20, and thus control the draft therethrough.

The means for determining the position of the arm to set the valve 22 commensurate with the temperature in the room consists of a quadrant plate 30 having a graduated edge 31 which coöperates with a pointer 32 carried on the end of the arm 25.

In operation, the valve 22 and arm 25 are relatively positioned after the pointer has been set to the required mark in the graduations 31. The valve 22 is then in that position which will admit the amount of air desired. Should this draft be exceeded through any cause, it will act on the valve 22 and cause the same to close, or partially close, the opening 21 against the weight 27 on the arm 25, and, when this interruption of the draft has had its effect on the flame within the stove, said valve 22 will be restored to normal position through the action of the weighted arm, as will be readily understood.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts, without departing from the spirit of my invention, and therefore I do not wish to be limited to such features, except as may be required by the claim.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent, is:

In a draft regulating means the combination of a pipe; a plate secured transversely of and within the pipe and provided with an aperture; a shaft journaled on said plate and projecting through the pipe; a plate providing a valve mounted on said shaft and adapted to open and close said plate aperture; a nut fixed on the projecting end of said shaft; an arm loosely mounted on

said shaft and adjacent the nut; a nut adjustably mounted on said shaft adjacent said arm and adapted to secure the arm against the fixed nut in different set positions; a weight adjustably mounted on the arm to counter balance said plate valve; a plate providing a gage secured to the pipe; and a pointer carried by said arm adapted to coöperate with the gage plate for regulating the position of said valve.

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

LATHAM A. KNOWLES.

Witnesses:
I. H. Hook,
J. Elmer Rodden.