(No Model.)

P. W. HURNDALL.

ADJUSTABLE FIRE DRAFT BLOWER AND SCREEN.

No. 592,114. Patented Oct. 19, 1897.

Fig. 1.

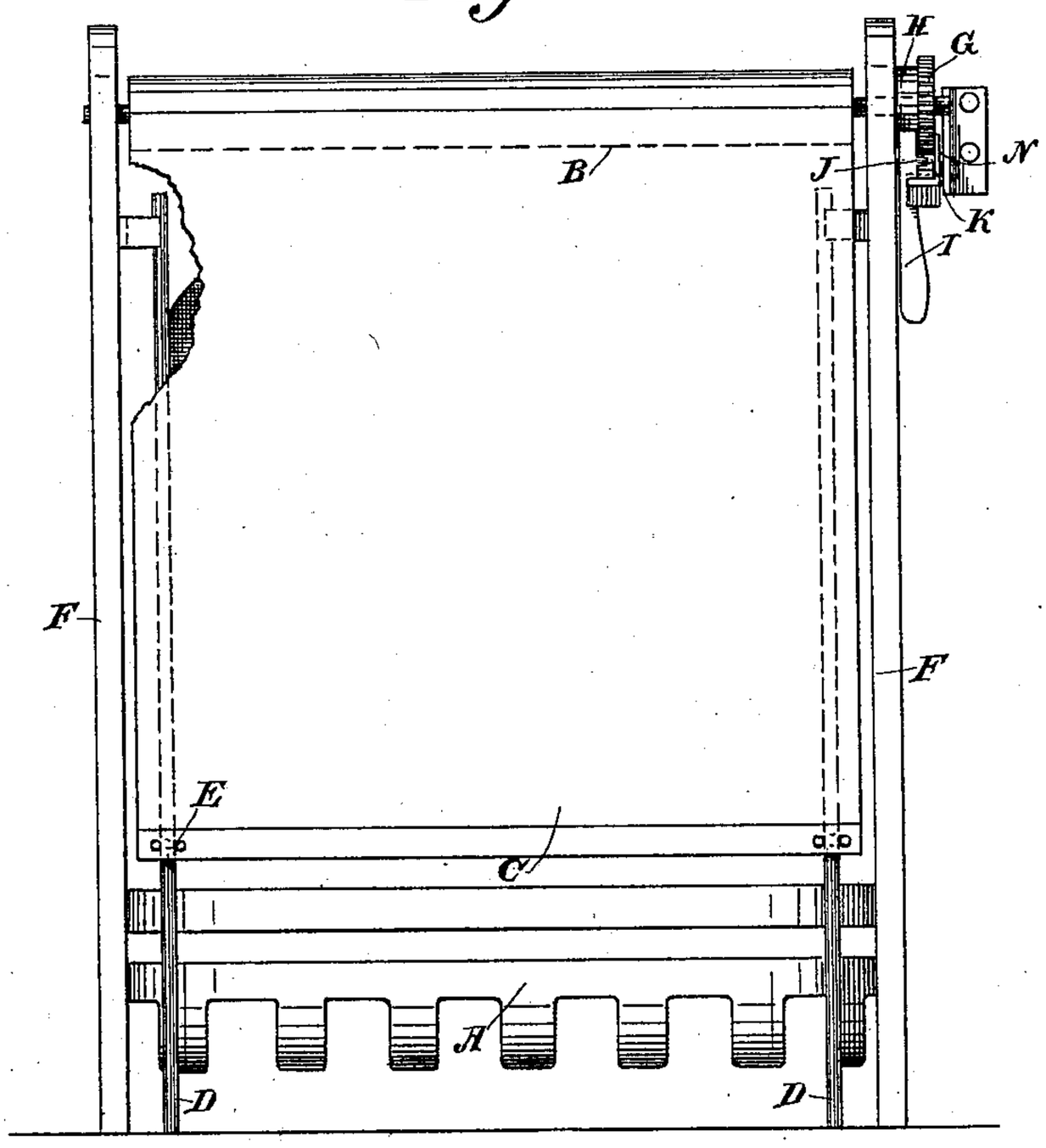
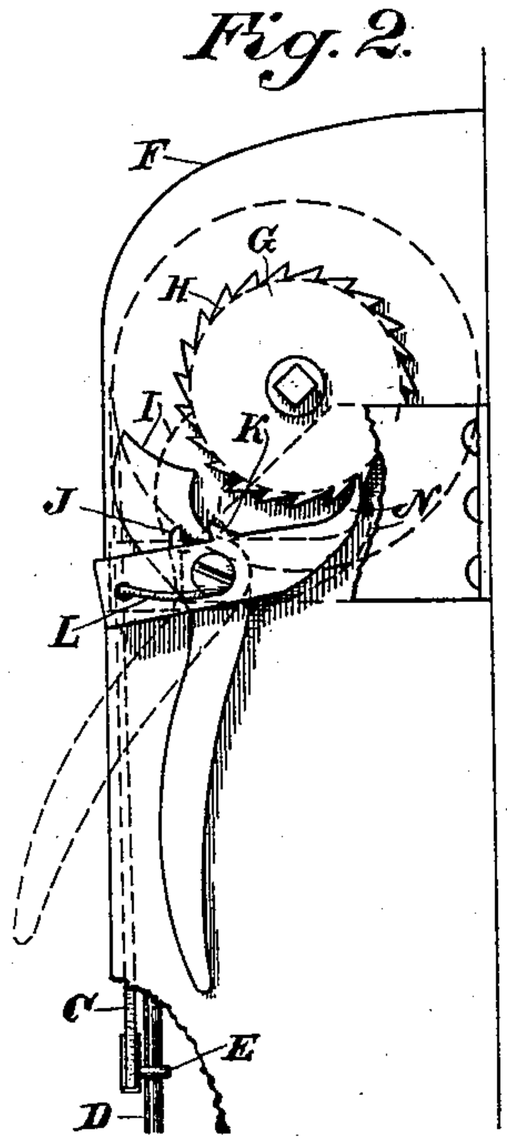


Fig. 2.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE FIRE-DRAFT BLOWER AND SCREEN.

SPECIFICATION forming part of Letters Patent No. 592,114, dated October 19, 1897.

Application filed May 21, 1897. Serial No. 637,539. (No model.)

To all whom it may concern:

Be it known that I, PERCY W. HURNDALL, a citizen of England, residing in the city and county of San Francisco, State of California, have invented an Improvement in Adjustable Fire-Draft Blowers and Screens; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device for the controlling of the draft of fires and grates and to act as a screen therefor.

It consists in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a front view of a grate with my screen attached to it. Fig. 2 is a side view of the device to operate the screen.

A represents a grate, of any usual or suitable construction, adapted for the burning of fuel.

In my device I have shown a spring-actuated roller B, journaled transversely at some suitable point above the grate or fireplace and having a screen C adapted to roll upon this roller. This screen may be made of thin plates of metal flexibly connected together and of such width that they will coil and uncoil upon the roller, or the screen may be made of asbestos, or any suitable fire-resisting fabric or material.

Upon each side of the grate are vertical posts D, and the lower edge of the screen has slides E, adapted to move up and down upon the guide-posts and retain the lower edge of the screen in position with relation to the grate. This screen when drawn down to the bottom, leaving a small opening beneath, forms a blower or draft device to direct the air through the fuel in the grate, and when the fuel is properly ignited the screen may be raised so as to expose the fire and to cut off the direct draft through the bottom of the grate, leaving only the ordinary natural draft, or, if preferred, a portion of the screen may be journaled below and so arranged as to be raised from below, thus cutting off the bottom draft entirely, and it may be made to serve as a screen to prevent the heat from being projected into the room to a greater degree than is desired. In the present case I have shown the roller-shaft projecting through the sides of its journal-supports F, and having upon the outer end a ratchet-wheel G and a disk H.

I is a lever fulcrumed in line with the disk H, the end having the end adjacent to the disk concaved, so that it may form contact with and press upon the disk. Upon the side of this part of the lever is a pawl N, pivoted upon the same shaft or axis with the lever. The lever has a pin J projecting from its side and adapted to engage a projection K, formed upon the pawl, so that when the lower end of the lever is drawn backwardly the part above the fulcrum-pin is pressed inwardly, so that the inner end may contact with the disk, while the pin engaging the stop on the pawl turns the pawl about its fulcrum and disengages the inner end from the ratchet-wheel. This leaves the spring-actuated roller-shaft, upon which the screen is coiled, free to move and the screen will be coiled up automatically. The inner end of the lever may be pressed against the disk with any desired force to regulate the speed with which the screen moves or stop it altogether, and when the lever is released a spring L, acting upon the pawl, forces its point into contact with the ratchet and this arrests the movement of the screen.

The screen may be ornamented with colors which will resist the action of the heat, or formed in any suitable or desired manner to make it attractive in appearance.

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

1. In a screen and draft-blower for grates and fireplaces, the combination with a spring-actuated roller and a curtain, of a means for holding the curtain and controlling the coiling of the same, consisting of a ratchet-wheel on the axis of the roller, a pawl to engage said wheel and a fulcrumed brake-lever to control the roller, said lever provided with means for engaging and releasing the pawl from its engagement with the ratchet-wheel simultaneously with the application of the brake.

2. The combination with a spring-actuated roller and its curtain, of a means for controlling the coiling of the curtain consisting of a pawl-and-ratchet mechanism and a brake-lever having a part to retard the rotation of

the roller and having a second part to engage and release the pawl from its ratchet, whereby the locking devices are released by the brake-lever simultaneously with the application of the brake to the roller.

3. A flexible non-inflammable screen and a spring-actuated roller upon which it is coiled, in combination with a pawl-and-ratchet mechanism whereby the screen is held at any desired point, a lever fulcrumed concentrically with the pawl having a pin projecting therefrom, a spur upon the pawl with which the lever-pin engages when the lever is moved about its fulcrum whereby the pawl is disengaged from the ratchet, a disk fixed upon the roller-shaft by the side of the ratchet-wheel and adapted to be engaged by the inner end of the actuating-lever when the pawl is disengaged whereby the movement of the screen is controlled.

In witness whereof I have hereunto set my hand.

PERCY W. HURNDALL.

Witnesses:
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