

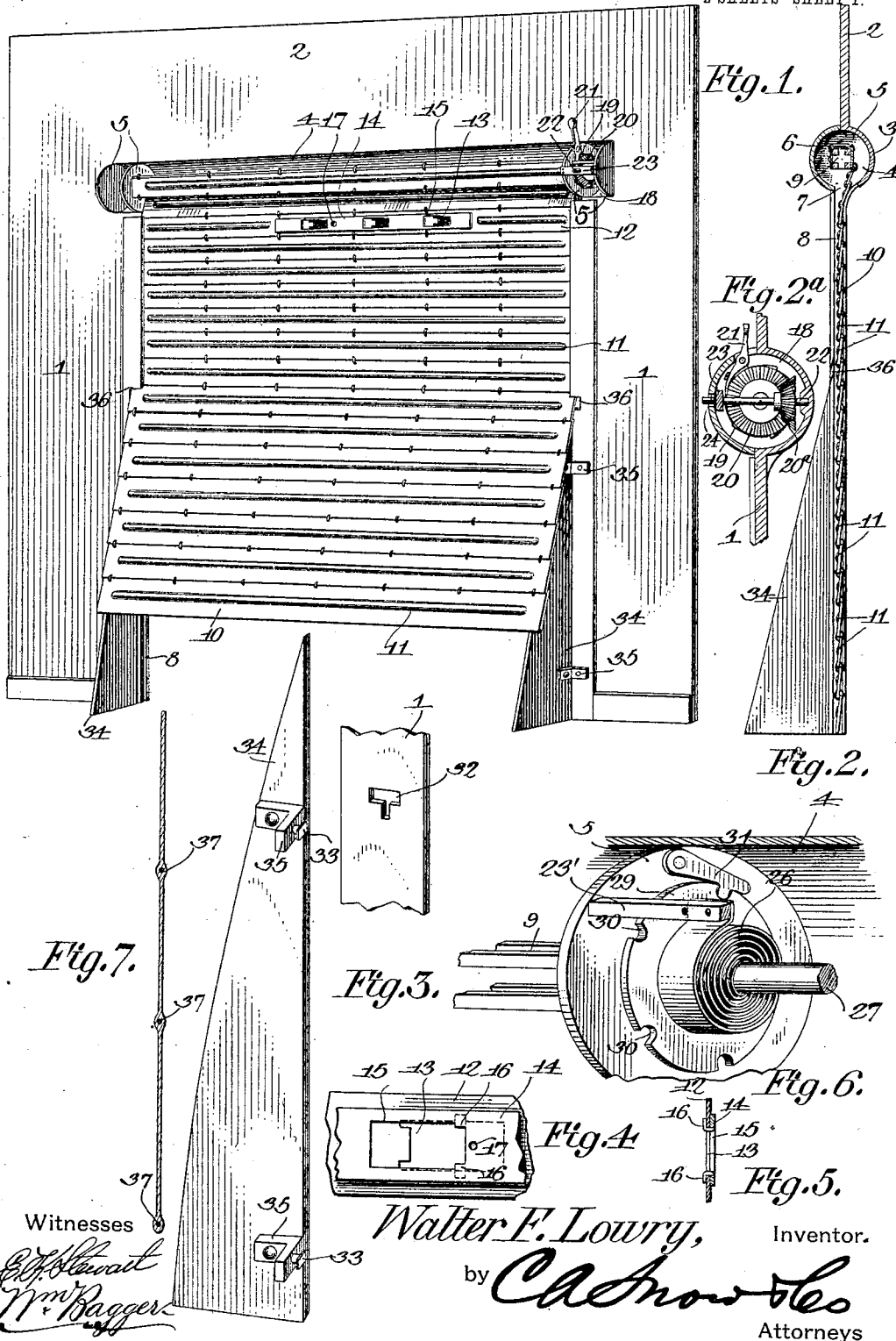
No. 813,505.

PATENTED FEB. 27, 1906.

W. F. LOWRY,
FIREPLACE AND GRATE BLOWER.

APPLICATION FILED MAY 24, 1905.

2 SHEETS--SHEET 1.

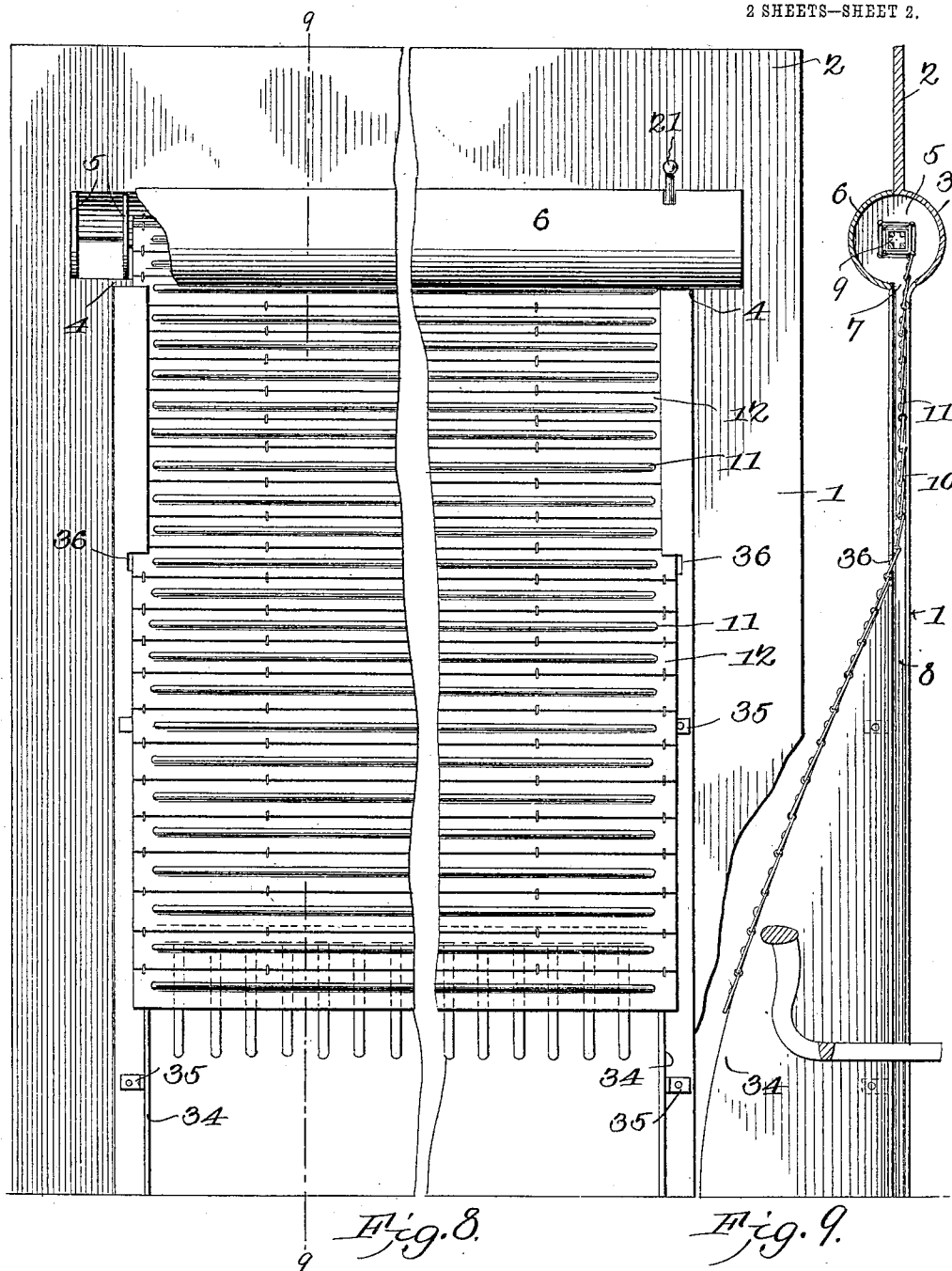


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Witnesses

Witnesses
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UNITED STATES PATENT OFFICE.

WALTER F. LOWRY, OF McMinnville, Tennessee.

FIREPLACE AND GRATE BLOWER.

No. 813,505.

Specification of Letters Patent.

Patented Feb. 27, 1906.

Application filed May 24, 1905. Serial No. 262,028.

To all whom it may concern:

Be it known that I, WALTER F. LOWRY, a citizen of the United States, residing at McMinnville, in the county of Warren and State of Tennessee, have invented a new and useful Fireplace and Grate Blower, of which the following is a specification.

The invention relates to blowers for grates and fireplaces; and it may be described as an improvement upon the device of this class for which Letters Patent of the United States No. 717,231 were granted to myself on the 30th day of December, 1902.

The device shown in the aforesaid patent includes a fireplace-frame upon which is mounted a roller carrying a flexible curtain composed of metallic slats, which said curtain is adapted to be drawn down over the opening of the fireplace, so as to exclude air from the upper portion in order to regulate the draft. In many fireplaces the grate or fire-basket protrudes beyond the frame; and the object of my present invention is to provide means whereby the flexible curtain may be guided in an outward direction, so as to clear such protruding grate or fire-basket and to enable the curtain constituting the blower to be adjusted in such a manner or in such a position that the most satisfactory results may be obtained.

Another object of this invention is to reinforce the individual slats of the flexible curtain without adding to the weight of the same.

Another object is to improve the construction of the fireplace-frame, so as to form a portion of the casing for the flexible curtain, thus presenting a neater appearance and reducing the cost of manufacture.

Still another object of the invention is to provide the flexible curtain with a ventilating-slide of simple and appropriate construction.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which re-

course may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a perspective view illustrative of the invention, the lid being removed. Fig. 2 is a vertical sectional view. Fig. 2^a is a sectional detail view. Fig. 3 is a perspective view of one of the auxiliary guiding devices, showing also a portion of the fireplace-frame having a slot with which the guiding device may be detachably connected. Figs. 4 and 5 are detail views illustrating the construction of the damper-slide. Fig. 6 is a perspective detail view, partly in section, illustrating a modified construction of the curtain-roller. Fig. 7 is a sectional detail view illustrating a modified construction of the curtain especially adapted for summer use. Fig. 8 is a front view enlarged with parts broken away. Fig. 9 is a vertical sectional view taken on the plane indicated by the line 9 9 in Fig. 8.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The fireplace-frame includes uprights or side members 1 1 and a top piece 2, connecting the same, said top piece being provided at its lower edge with an approximately semicircular flange 3, formed upon the rear side thereof and constituting a groove which extends beyond the inner edges of the uprights, which are offset or recessed, as indicated at 4. Upon the flange 3 are formed or mounted spacing members 5 5, two at each end, said spacing members being approximately circular in shape, so as to form lugs projecting upon the front side of the frame and serving to sustain in position an approximately semicircular lid 6, which may be secured upon said lugs by screws or other fastening devices, said lid coöperating with the flange 3 to form an approximately circular casing having in its under side an opening or slot 7, which is disposed nearly in the vertical plane of the uprights or side members 1 1. The latter are provided at their inner edges with grooves 8.

The inner spacing members 5 5 afford bearings for an appropriately-constructed drum 9, which is preferably square in cross-section and upon which may be wound the curtain 10, which is composed of a plurality of metallic strips or slats overlapping one another and linked together, as in my former patent above referred to, said slats or strips

being, moreover, of gradually-increasing width, so that they may be properly wound upon the drum, as will be readily understood. In this case, however, the individual strips or slats are grooved or corrugated, as shown at 11, in order to prevent them from bending readily, said grooves or corrugations terminating near the ends of the individual slats, which are left uncrimped in order that they may be guided more readily in the narrow grooves 8, provided for their reception. One of the slats 12 near the top of the curtain is provided with ventilating-openings 13 and with a slide or damper 14, having openings 15, corresponding with the openings 13 and provided at their inner edges with lugs 16, which may be bent around the edges of the openings 13 in the slat or strip 12, with which the damper is thus slidably connected without materially increasing the thickness and preventing the curtain from being rolled smoothly upon the drum. The damper-strip 14 is provided with no handle, which would necessarily obstruct the rolling of the curtain, but it is provided with an aperture 17, which is in constant registry with the underlying solid portion of the slat, and through which a pointed instrument, such as a nail or an awl, may be inserted to move the damper to the desired position. It is obvious that any desired number of the curtain-slats may be provided with dampers of the character indicated. It will also be seen that the slat thus provided is not corrugated throughout its length, but that the corrugated portion terminates at a distance from the ends of the damper sufficient to prevent interference with the operation of the latter.

The spaces between the pairs of spacing members 5 5 form compartments in which drum-operating mechanism may be located, it being understood that usually only one of the compartments will be thus occupied, but that the operating mechanism may be located either at the right or the left side of the device. Under the construction illustrated in Fig. 1 the end of the drum-shaft which projects into the compartment 18 carries a ratchet-wheel 19 and a bevel-gear 20, the ratchet-wheel being engaged by a pawl 21, which is pivoted upon one of the spacing members 5, so as to prevent the curtain from unrolling by gravity after it has been wound. The bevel-gear 20 is to be in mesh with a small bevel-pinion, as 20^a, upon the inner end of a shaft 22, having a bearing in a cross-piece 23, connecting the members 5 5, the outer end of said shaft being squared for the reception of a crank or operating handle, whereby it may be manipulated to rotate the drum and to wind the curtain upon the latter. The lid 6 is to be provided with an aperture, through which the shaft 22 may be accessible, such aperture being indicated at 24.

In place of the drum-winding mechanism just described a spring-actuated drum may be substituted, as illustrated in Fig. 6 of the drawings. The end of the drum-carrying shaft 27 which extends between the spacing members 5 5 may have attached thereto one end of a spring 26 of ordinary spiral form, the other end of said spring being attached to a cross-piece, here designated 23', and said spring being so arranged as to be wound by the rotation of the drum when the curtain is lowered. The drum-carrying shaft is provided with a disk 29, the periphery of which has a plurality of notches or indentations 30, adapted to be engaged by a suitably-supported pawl 31, whereby it may be retained at various adjustments.

The side members or uprights of the fireplace-frame are provided with suitably-disposed T-shaped slots 32 near their inner edges adapted for the reception of T-shaped lugs 33 upon the auxiliary guide members 34, which have been shown as consisting of flat metallic plates of approximately right-angled triangular shape tapering to acute angles at their upper ends and provided with laterally-extending brackets 35, carrying the T-shaped lugs, although the latter may within the scope of the invention be formed directly upon the inner edges of the triangular plates, the brackets serving merely to afford extended bearing-surfaces. These auxiliary guides are of suitable size and shape, so that when mounted in position they will project beyond the plane of the grate or fire-basket, as will be readily understood, and the outer edges of said plates in place of being straight may be appropriately curved, so that the curtain may be guided over said edges without being in contact with the grate. The side members 1 are provided in their inner edges with notches 36, extending though the front walls of the grooves 8, said notches being formed obliquely, as will be clearly seen in Fig. 2, and disposed in registry with the upper ends of the guides 34 when the latter are placed in position. It will be readily seen that when the curtain is lowered it may be guided through the slots 36 and over the edges of the members 34, as clearly shown in Fig. 1, so as to avoid contact with a grate or fire-basket when used. In cases where the grate or fire-basket does not protrude beyond the fireplace-frame the auxiliary guide members may be detached, and the curtain may then be guided entirely through the grooves 8 to the lower edges of the latter.

In Fig. 7 has been illustrated a modified construction of the curtain, the latter being composed of flexible material, such as a textile including or formed of asbestos or other fire-resisting material, the same being provided with transverse strips 37 of metallic wire. This curtain may also be used as a summer curtain, in which event it does not

require to be made of fire-resisting material, but may be of oil-cloth or of any desired textile material reinforced by the transverse wires 37.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. It is simple, durable, easily adjusted and manipulated, and efficient for the purposes for which it is designed.

Having thus described the invention, what is claimed is—

1. A fireplace-blower consisting of a curtain composed of a plurality of flexibly-connected slats one of said slats being provided with apertures, and an apertured damper connected slidably with said slat and having a perforation in constant registry with the underlying portion of the slat.

2. A fireplace-frame having side members grooved in their inner edges and provided with slots in their front sides communicating with said grooves, a drum supported for rotation upon the frame, a curtain connected with said drum and guidable in the grooves

of the side members and through the slots of the latter, and auxiliary guide members supported upon the side members of the frame.

3. A fireplace-frame, a blower-curtain guidable in grooves in the side members of the frame and through slots in the latter, and auxiliary guide members consisting of approximately triangular plates connected with the side members of the frame and terminating in acute angles adjacent to the slots in the latter.

4. A fireplace-frame, a blower-curtain guidable in grooves upon the inner sides of the side members of the frame and through slots in the latter, auxiliary triangular guide members having laterally-extending bearing-brackets, and T-shaped lugs upon said brackets adapted to engage T-shaped slots in the side members of the frame.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WALTER F. LOWRY.

Witnesses:

S. S. SANDERS,

FRANK MADDOX.