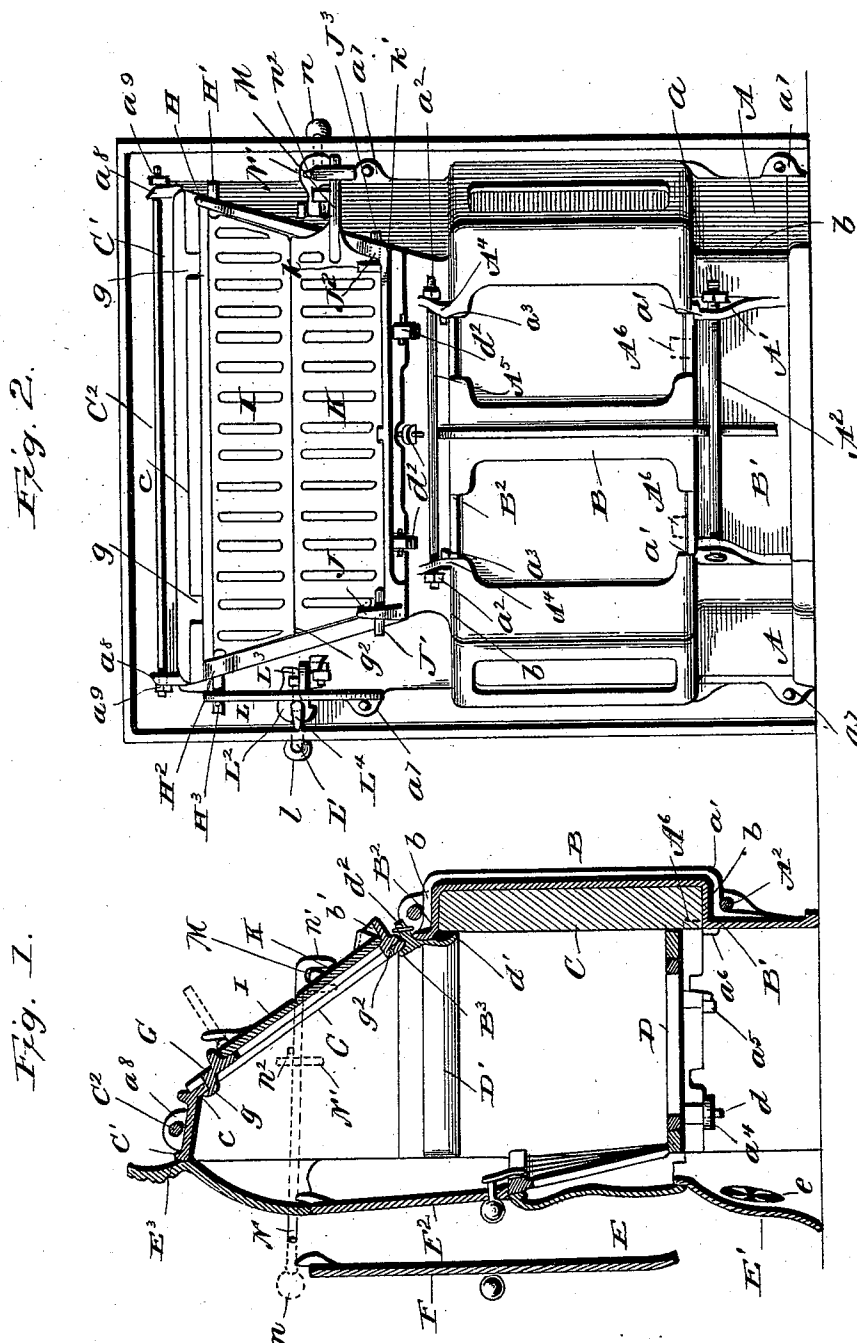


3 Sheets—Sheet 1.

FIREPLACE AND GRATE.

Patented Dec. 11, 1894.



Witnesses:
L. C. Hills.
E. A. Bond

Inventors:
Edward Scanlan,
Frederick W. Keifel, Jr.,
and John Lipp
by E. S. Locking
Attorneys.

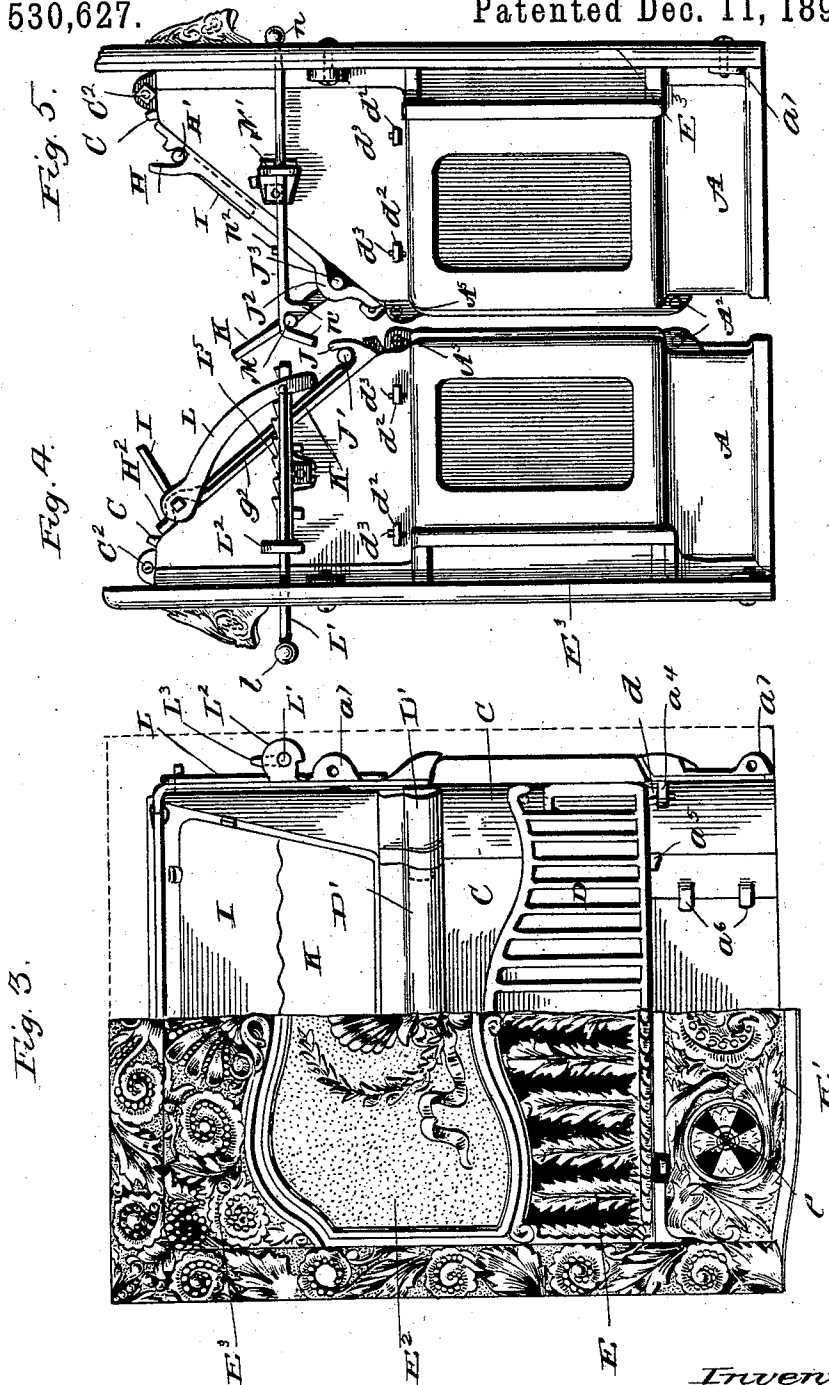
(No Model.)

3 Sheets—Sheet 2.

E. SCANLAN, F. W. KEIFEL, Jr. & J. ZIPP.
FIREPLACE AND GRATE.

No. 530,627.

Patented Dec. 11, 1894.



Witnesses:
L. C. Hills
E. A. Bond

Inventors:
Edward Scanlan,
Frederick W. Keifel, Jr.
and John Zipp.
by E. A. Stocking
Atty.

(No Model.)

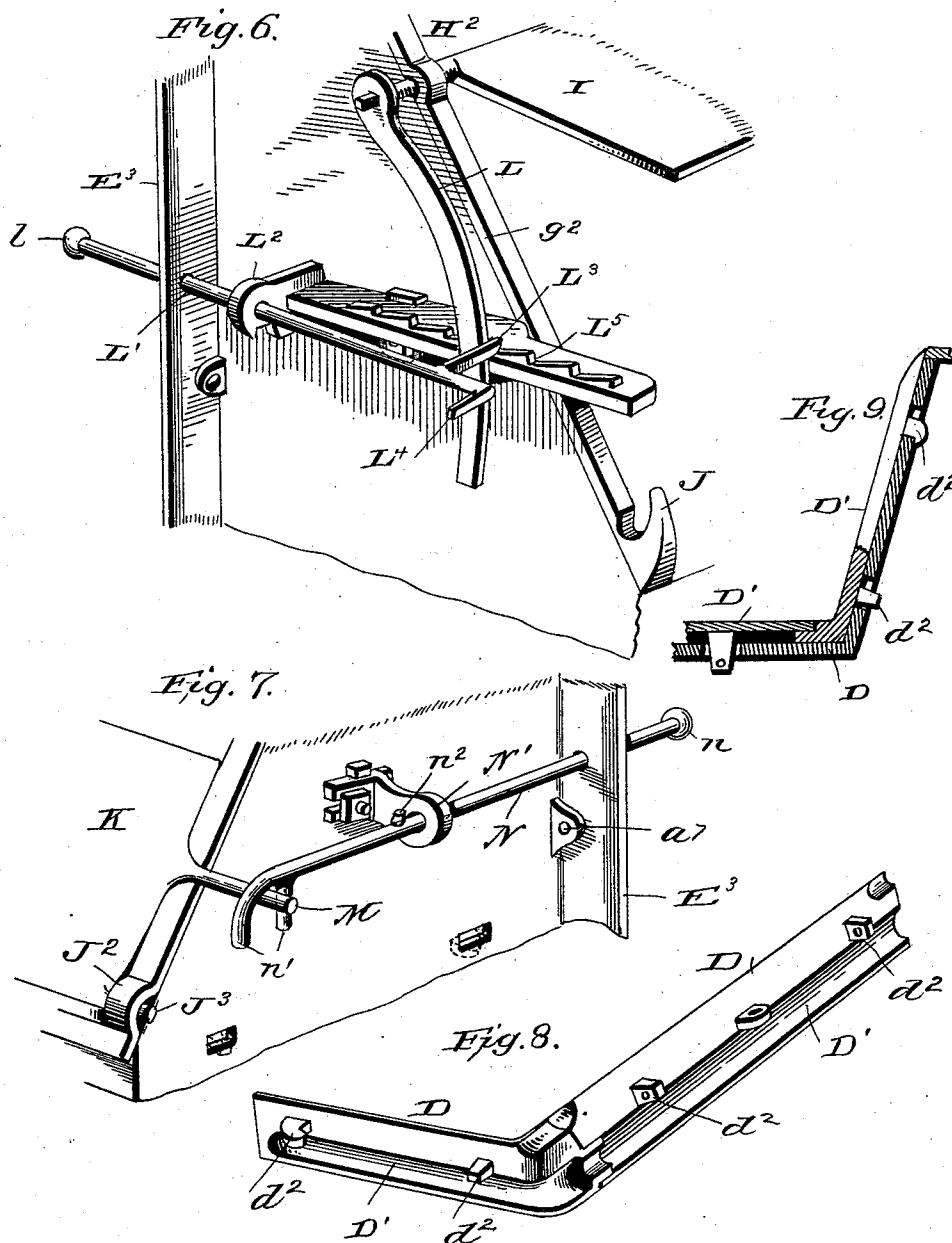
3 Sheets—Sheet 3.

E. SCANLAN, F. W. KEIFEL, Jr. & J. ZIPP.

FIREPLACE AND GRATE.

No. 530,627.

Patented Dec. 11, 1894.



Witnesses:

L. C. Mills.
E. A. Bond

Inventors

Edward Scanlan,
Frederick W. Keifel, Jr.
John Zipp.
by E. B. Stocking
Att'y

UNITED STATES PATENT OFFICE.

EDWARD SCANLAN AND FREDERICK W. KEIFEL, JR., OF LOUISVILLE,
KENTUCKY, AND JOHN ZIPP, OF NEW ALBANY, INDIANA.

FIREPLACE AND GRATE.

SPECIFICATION forming part of Letters Patent No. 530,627, dated December 11, 1894.

Application filed June 21, 1894. Serial No. 515,310. (No model.)

To all whom it may concern:

Be it known that we, EDWARD SCANLAN and FREDERICK W. KEIFEL, Jr., residing at Louisville, in the county of Jefferson and State of Kentucky, and JOHN ZIPP, residing at New Albany, in the county of Floyd and State of Indiana, citizens of the United States, have invented certain new and useful Improvements in Fireplaces and Grates, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in fireplaces and grates and it has for its objects among others, to provide simple and efficient means for operating the upper and lower dampers and for holding the same in their adjusted positions, the operating rods therefor being slidably mounted so that after use, they may be pushed in out of the way. The end of the lever or rod which operates the upper damper is rounded so as to drop the lever on the pintle of the damper to allow the damper to close by its own weight. The upper damper is pivoted at its upper edge so as to be lifted to open the same and thus acts to direct the smoke from the front to the rear and up the chimney so that the smoke and soot cannot escape into the room, avoiding the necessity of filling in or building up at the top of the grate.

It has for a further object to provide an improved means for holding the lining in place, the base of the lining being held by a lug and the lining borders or clamping pieces at the top being self-locking. The roof is provided with lugs adapted to engage under a cross piece to admit the body of the workman through the opening to fill in the back. The central portion of the back is formed independent of the other portions so as to allow for the necessary expansion and contraction. The roof, the frame and all the parts are detachably and securely held together and in position by three lateral bolts. The upper cross-piece is trough-shaped to hold mortar when it is built up at the top.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon form a part of the same, and in which—

Figure 1 is a substantially central, vertical section from front to rear. Fig. 2 is a rear view. Fig. 3 is a front elevation with one half of the front piece broken away. Fig. 4 is an end view. Fig. 5 is a similar view looking at the opposite end. Fig. 6 is a detail in perspective showing the right hand damper operating mechanism. Fig. 7 is a perspective detail of the opposite end. Fig. 8 is a perspective detail of the border clamps. Fig. 9 is a sectional detail showing the manner of securing such clamps.

Like letters of reference refer to like parts in all the figures of the drawings.

Referring now to the details of the drawings by letter A designates the side pieces which, at their adjacent rear edges are formed with the apertured lugs A' to receive the connecting bolt A² provided with the nut a. These lugs are shouldered as shown at a' in Fig. 2 to support a lateral portion of the back and at the higher point the adjacent edges of these side pieces are formed with lugs A⁴ which are apertured to receive the connecting bolt A⁵ provided with the nuts a². These lugs are formed with the inwardly-extending flanges a³ as seen best in Fig. 2 which receive beneath them the upper lateral portion of the back.

B is the back formed independently of the side pieces and offset as shown at b at points near the top and bottom as shown in Figs. 1 and 2 being provided with the rearwardly-extending lateral portion B' resting upon the shoulder a' of the side pieces and near its upper end with a rearwardly-extending horizontal portion B² which is engaged beneath the flanges a³ of the lugs A⁴. Above this lateral portion the back is formed with an inclined portion B³ having openings for the passage of lugs on the lining clamps or borders, one of such openings b' being seen in Fig. 1 and in Fig. 2 the lugs of the said borders are shown projecting through the opening. This back is placed in position between the side pieces and the whole secured together by the bolts A² and A⁵ as seen best in Fig. 2.

The base portions of the side and back pieces are formed with upwardly-extending lugs A^6 as indicated by dotted lines in Figs. 1 and 2 which engage in corresponding apertures in the lower edges of the portions c of the lining brick. The end pieces are formed with lateral offsets and near their front edges are provided with apertured lugs a^4 to receive the pintles d projecting from the grate D and with other lugs a^5 to the rear upon which the rear edge of the grate is designed to rest. The base portion of the end-pieces are further provided with the lugs a^6 as seen best in Fig. 3 against which the base portion of the back rests and by which displacement thereof is prevented. The front edges of the end pieces are formed near the top and bottom with the lugs a^7 as seen best in Figs. 2 and 3 to receive the screws or other means which are employed to retain the ornamental front portions in place. The back being independent of the side pieces and connected thereto in the manner described is free to expand or contract without danger of breaking or of distorting any of the other parts.

The upper end of the inclined portions of the side pieces are provided with lugs a^8 and these portions are connected by the cross-piece C' which is trough-shaped in cross-section as seen best in Fig. 1 to hold mortar if required, in building up the top. A rod C^2 passed through the openings in the lug a^8 and provided with nuts a^9 serves to bind these parts together as shown.

D' are the clamps or border pieces that hold the upper edges of the lining section in place. They are formed with lugs d' which overlap and conceal the upper edges of the lining sections and also with lugs d^2 which project through openings in the back and end pieces as seen in Figs. 1, 2, 4 and 5 which lugs are apertured to receive the locking pins d^3 after they have been passed through the openings in the back and end pieces. These border pieces or clamps are self-locking as shown in Figs. 8 and 9 so that when all are in position they will be there retained even if the locking pins are broken. The grate is provided with an ornamental front E and beneath this is an ornamental base E' having one or more draft doors or registers e .

E^2 is a removable ornamental blower or shield and E^3 is the upper ornamental portion of the front frame piece which is secured in position by screws engaging in the lugs a^7 as shown.

F in Fig. 1, designates a removable summer front which may be as ornamental as desired.

G represents the roof piece or frame which is mounted removably upon the inclined rear faces of the end pieces. It is provided at its upper edge with the inclined or under-set lugs g as seen best in Fig. 1 which engage under the inclined flange c of the trough shaped upper cross piece as shown best in Fig. 1. The flange at the lower end of this roof-piece is provided with openings to receive the lugs of

the border pieces as seen best in Fig. 2. When the stop pins or keys of the lugs of these border pieces are removed the roof piece may be removed by tilting its lower end upward until the lugs at the upper end thereof are disengaged from under the inclined flange of the upper cross piece. This roof piece or frame is formed near its upper edge at the left hand side with an open hook or bearing H in which is mounted for rotation the pintle H' of the upper damper I while at the other end this roof or frame piece is formed with a loop or bearing H^2 for the other pintle H^3 of said upper damper, these pintles being arranged at the upper edge of the damper as shown so that the latter when closed assumes such position by gravity and when opened it serves to direct the smoke from the front toward the rear and prevents its escape into the room thereby preventing down drafts in the chimney. It also avoids the necessity of filling in or building up at the top of the grate. The roof piece is formed with inwardly-extending flanges g^2 upon which the dampers rest when in their closed position. The roof piece is formed at the right hand end with an open hook or lug J forming a bearing for the pintle J' of the lower damper K while at the opposite end is a bearing J^2 for the other pintle J^3 of said damper as shown best in Figs. 2, 4 and 5, the pintles of the lower damper being arranged at the lower edge thereof as shown. This damper is removable from the inside by simply opening the upper damper and placing the hand through the opening and lifting the pintles of the lower damper out of their bearings.

Secured to the right hand pintle of the upper damper is a curved lever L which is of sufficient length to be engaged by an arm on the push rod L' , which is mounted to slide through a guide L^2 and through an opening in the front frame. The outer end of this rod is provided with an ornamental operating knob or handle l as seen in Fig. 4 and at its rear end is provided with a lateral arm L^3 which is rounded upon its rear face as seen best in Fig. 2 which is arranged in the path of the curved lever L as shown and at the rear end it is provided with an oppositely-extending lug or projection L^4 as seen in Fig. 2. To the outer face of the end piece is secured a rack bar L^5 with which the arm L^3 on the push rod is designed to engage to hold the upper damper in any desired position. When not in use this push rod is designed to be pushed in where it will be out of the way. When it is desired to operate the damper the rod is partially rotated so as to bring the arm or lug L^3 into a vertical position as shown in Fig. 3 in which position it is brought forward as far as it can be moved when, by rotating the rod toward the end piece, the arm or lug L^3 will be engaged in front of the curved lever L when by pushing the rod inward the arm or lug L^3 may be engaged with any notch or tooth of the rack bar and the upper dam-

per will be held in its adjusted position. When it is desired to close the damper the push rod may be rotated away from the end piece when the lever will pass between the same and the edge of the rack bar and the damper will fall to its closed position by gravity or the rod may be pushed back far enough to disengage it from the ratchet or rack bar, then allow the rod to slide out until the damper is closed when by simply turning the push rod until it is disengaged from the lever L, the rod is pushed into its place. The projection or arm L⁴ serves to limit the rotation of the push rod and is a guide to the operator in his manipulation of the push rod. The lower damper is provided with a lug *k* adapted to engage the lugs *k'* on the lower portion of the roof plate or frame to limit the downward movement of said damper. This damper is provided at one end at a point near its center, with a lateral rod or arm M which is adapted to be engaged by the push rod N which is slidingly mounted in a guide N' on the end piece of the frame and through an opening in the ornamental front frame and at its outer end is provided with a knob or handle *n* by which it may be manipulated. The inner end of this push rod is provided with an open loop *n'* adapted to engage over the arm M on the damper as seen in Figs. 1, 2 and 4, and is provided further with a lug *n*² adapted to engage the guide N' to limit the outward movement of the push rod as shown best in Fig. 1 in dotted lines. This lower damper is mounted to move inward beyond a perpendicular and is operated by engaging the loop in the push rod over the rod M and pushing or pulling the said push rod to open or close the damper. The push rod is rotatably mounted so that it may be turned to engage or disengage its looped end with the rod M on the damper and after opening or closing the damper the rod may be rotated so as to disengage the loop from the damper rod and the push-rod pushed in out of the way. Usually, however, the loop will be engaged with the rod on the damper when the damper is open. When the damper is closed and the push rod in its innermost position and it is desired to open the damper the push rod is pulled out until its lug *n*² engages the guide N' when the operator knows that it is in position so that when rotated its loop will engage the rod on the damper and the latter may be opened by pushing inward upon the push rod.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed is—

1. The combination with the frame and the lining, of the self-locking lining border clamps having lugs and overlapping adjacent ends, substantially as specified.

2. The combination with the end pieces having oppositely-disposed offsets with flanges, of a separable back-piece offset at the top and

bottom and having lateral portions engaging said flanges, substantially as specified.

3. The combination with the end-pieces having lugs with flanges, of an independent back-piece offset at the top and bottom and having lateral portions engaging said flanges, and bolts passed through said lugs and having nuts to bind the back and end pieces together, substantially as specified.

4. The combination with the end and back-pieces and the upper trough shaped connecting piece with inclined rear portion, of a removable roof-piece having under-turned lugs to engage said inclined portion, substantially as specified.

5. The combination with the frame and its upper cross piece, of an upper inclined damper mounted to open upward and having one pintle extended to engage its operating means whereby it serves to direct the smoke from the front to the rear, thereby preventing down drafts in the chimney substantially as specified.

6. The combination with the frame and the roof-piece of a damper having one of its pintles extended to be engaged by its operating means and pivotally-mounted at the upper end of the roof piece to open upward whereby it serves to direct the smoke from the front to the rear and prevent its escape into the room, substantially as specified.

7. The combination with the frame and roof-piece, of an upper damper mounted to open upward and the lower damper mounted to open rearward and provided with a stop lug, said dampers having oppositely extended pintles to be engaged by their operating means substantially as specified.

8. The combination with the frame and the dampers in its inclined portion and having extended pintles, of slidable push rods mounted at opposite ends for operating the dampers, substantially as specified.

9. The combination with a pivoted damper having one of its pintles extended for the engagement of its operating means, of a push rod slidingly and rotatably mounted to operate said damper, substantially as specified.

10. The combination with a damper, mounted to open upward and having one of its pintles extended for the engagement of its operating means, of a push rod mounted for sliding and rotatable movement and disconnected from the damper but constructed to operate it, as set forth.

11. The combination with a pivoted damper having one of its pintles extended for the engagement of its operating means, of a push rod mounted for sliding and rotary movement and having a lateral portion to engage means connected with the damper, substantially as specified.

12. The combination with a pivoted damper having one of its pintles extended for the engagement of its operating means, of a push rod mounted for sliding and rotary movement

and having a lateral arm, and a curved lever connected with the pintle of the damper to be actuated by said arm, substantially as specified.

5 13. The combination with a pivoted damper, of a push rod mounted for sliding and rotary movement and having a lateral arm, a curved lever on the pintle of the damper, and a rack bar for engaging said lateral arm, substantially as specified.

10 14. The combination with a pivoted damper, of a push rod mounted for sliding and rotary movement and having a lateral arm and an oppositely-disposed stop, and a rack bar for engaging said lateral arm, substantially as specified.

15 15. The combination with a damper mounted to move upward to open, of a push rod mounted for sliding and rotary movements
20 and provided with a lateral arm having

rounded under face, a curved lever connected with the pintle of the damper and a rack bar engaging said lateral arm, substantially as specified.

16. The combination with a pivoted damper, having one of its pintles extended for the engagement of its operating means, of a push-rod mounted for sliding and rotary movement and provided at its inner end with means for engaging a part moving with the
25 damper, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD SCANLAN.
FREDERICK W. KEIFEL, JR.
JOHN ZIPP.

Witnesses:

SAML. L. NOCK,
JOHN O'KEEFE.