

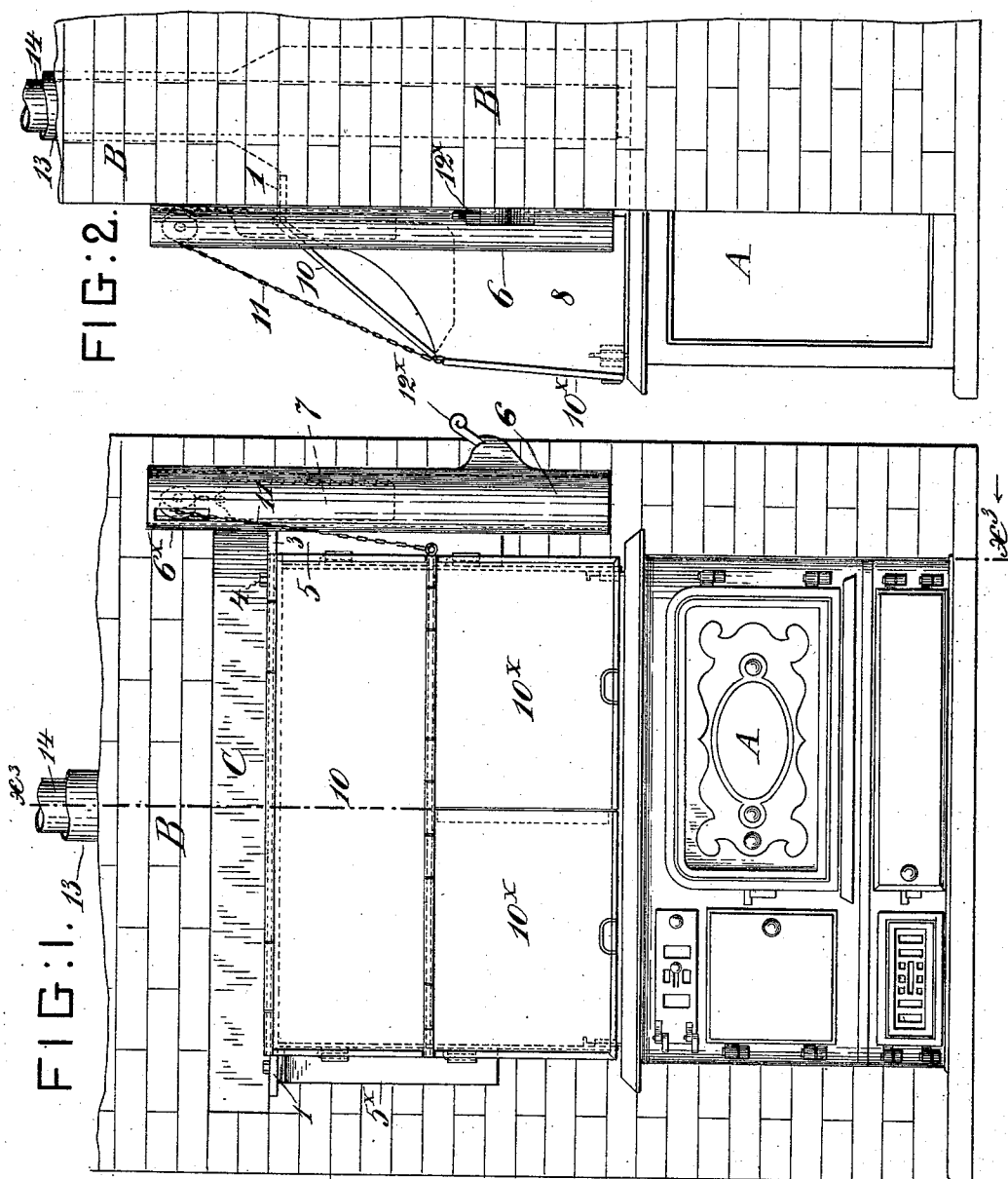
(No Model.)

2 Sheets—Sheet 1.

H. J. PHILLIPS.
RANGE SHIELD.

No. 572,715.

Patented Dec. 8, 1896.



WITNESSES:

J. W. Winman
Peter A. Ross

INVENTOR:

Henry J. Phillips

By *Henry Connors*
Attorney

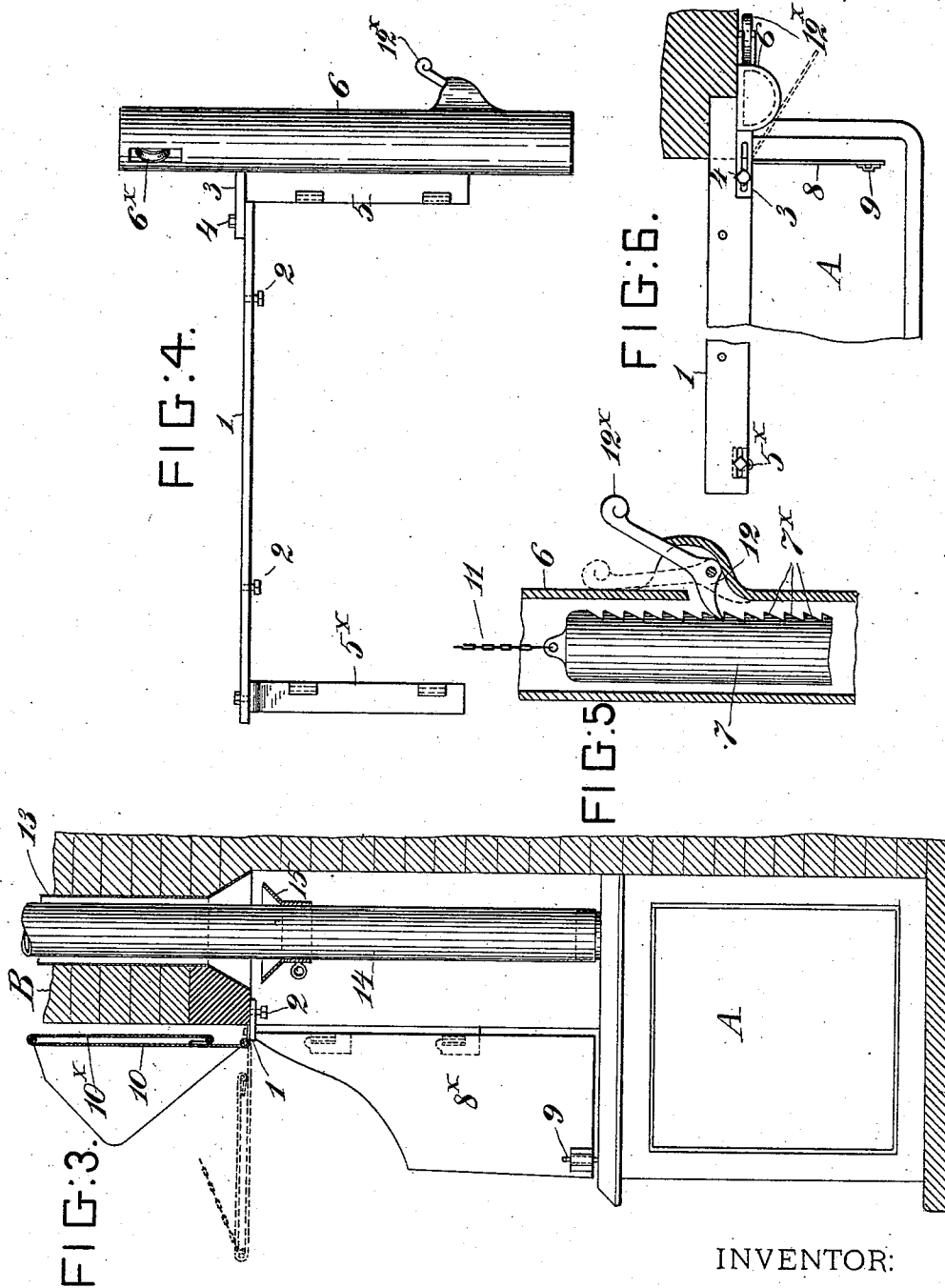
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RANGE SHIELD.

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WITNESSES:

L. W. Whiman
Peter A. Ross

INVENTOR:

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UNITED STATES PATENT OFFICE.

HENRY J. PHILLIPS, OF CRANFORD, NEW JERSEY.

RANGE-SHIELD.

SPECIFICATION forming part of Letters Patent No. 572,715, dated December 8, 1896.

Application filed February 11, 1896. Serial No. 578,844. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. PHILLIPS, a citizen of the United States, residing at Cranford, Union county, New Jersey, have invented certain new and useful Improvements in Range-Shields, of which the following is a specification.

This invention relates to devices known as "range-shields," and which are designed to prevent the escape of smoke and empyreumatic odors from the cooking into the room.

The present invention has for its object a simple and effective upwardly-folding screen or shield, counterbalanced and adapted to be held at any desired elevation.

The invention will be fully described and explained hereinafter with the aid of the accompanying drawings, and its novel features carefully defined in the claims.

In the said drawings, which illustrate an embodiment of the invention, Figure 1 is a front elevation showing the folding shield closed. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical section in the plane indicated by line x^3 in Fig. 1, but showing the shield open. Fig. 4 is a front view of the shield-supporting bar and attached devices detached. Fig. 5 is a sectional view of the counterweight-casing, showing on a larger scale than the principal views the weight and stop-detent. Fig. 6 is a fragmentary plan view showing the supporting-bar and a part of the range in plan. The flaps of the shield are omitted.

The drawings show the invention applied to an ordinary range A, set in a recess in the breast B. The ordinary construction of such a breast provides a recess wide enough to receive the range, said recess being of the proper depth and extending high enough above the top plate of the range to afford ample room for cooking purposes. At the top of the recess is usually placed a stone or metal lintel C.

In carrying out my invention I employ a metal supporting-bar 1, which extends across the recess close under the lintel C and finds a support in the brickwork at its ends. Preferably this bar will be of such thickness—say from three-eighths to half an inch—that when the mortar is removed at the joint in the brickwork the bar may be pushed into place from

the front, and when in place it will be secured by means of a screw or screws 2, Fig. 3, which screw up through the bar 1 and bear on the under side or face of the lintel C. The bar 1 may be about three inches wide and when set be allowed to project from the face of the breast about one inch.

Secured adjustably to one end of the bar 1 is a bracket 3, slotted and held in place by a screw 4, which passes through the slot and screws down into the top of the bar. The bracket 3 rests on the projecting part of the end of the bar and has formed integrally with it a hinge-plate 5 and a casing 6 for the counterweight 7. The plate 5 and casing 6 apply themselves to the front of the breast B at the side of the range-recess, as seen in Fig. 6, when the bar 1 is in place. At the other end of the bar 1 is secured a hinge-plate 5^x, similar to the plate 5, but there need be only one casing for a weight.

The shield proper will be made of thin sheet metal, so as to be as light as possible consistent with stiffness, and it will be preferably of stiffened sheet-steel. The end plates 8 and 8^x will be alike and may have substantially the form seen in Fig. 2. Each is hinged at its rear edge to the hinge-plate at that side and is adapted to be turned out on its hinges, as indicated in dotted lines in Fig. 6. When the end plate is turned to its normal position, as seen in full lines in Figs. 2, 3, and 6, it will be held in position by some device for securing it to the top of the range. This may be a small bolt 9 on the end plate, adapted to enter a slight depression or socket in the top plate of the range; or if the bolt has a strong spring such socket may be omitted and the friction due to the pressure of the bolt on said top plate may serve. I do not limit myself to any specific form of fastening for the end plate.

The main or folding part of the shield consists of two flaps or plates 10 and 10^x, of thin sheet metal, the former hinged to the bar 1, so as to fold down to an inclined position, (seen in Fig. 2,) and the latter hinged to the lower edge of the flap 10, so as to occupy a more nearly vertical position when closed or folded down. This lower flap 10^x will be divided into two sections, by preference, at about its middle, so that either section may

be folded up independently of the other. In opening the screen the lower flap is folded upwardly on the upper flap, and then the two flaps may be folded up to the position seen in Fig. 3.

In order that the flaps may be counterbalanced and held, if desired, in a partially-folded position, as indicated by dotted lines in Fig. 3, a counterweight 7 and a detent device are employed. In the upper end of the weight-casing 6 is mounted a sheave 6^x, over which runs a chain or flexible connector 11, one end of which is secured to the lower corner of the upper flap 10, and the other end to the weight 7 in the casing. This weight will be nearly sufficient to balance the folded flaps, and to prevent the latter from falling when projecting outward at right angles, or nearly so, to the front of the breast B a detent device is provided, as illustrated in Fig. 5. In the side of the weight are formed teeth and notches 7^x, which may be made to engage with a pivoted pawl 12, mounted in the side of the casing, as clearly shown. This pawl has a handle 12^x, by which it may be operated, and when this handle is turned to the position seen in dotted lines in Fig. 5 the pawl will be out of engagement with the teeth on the weight and the latter may move both up and down freely; but when the handle is turned down, so as to rest in the position seen in full lines in Fig. 5, the weight may descend, but it cannot ascend until the pawl is shifted.

The object in mounting the hinge-plates 5 5^x adjustably on the bar 1 is to adapt them to openings in the breast B, which vary a little in width.

In order to increase the draft in the pipe of the range and at the same time to provide a passage for the escape of gases, smoke, &c., from the cooking, the flue in the chimney is coned or flared at its lower end, Fig. 3, and lined with a cylindrical metal tube 13 a little larger than the smoke-pipe 14 of the range, and the latter pipe is extended up into said tube for a considerable distance, as clearly shown in Fig. 3. The effect of this construction is to lead the hot air up around the smoke-pipe, thus keeping it hot and enhancing the draft therein. Of course the hot gases from the top of the range will also flow up through the annular space thus provided about the pipe. The degree of draft up the tube 13 may be regulated by a sliding cone or damper 15, mounted adjustably on the pipe 14. It will be understood that the purpose in this use of the tube 13—which will by preference extend a little farther up the flue than the pipe 14—is not alone to lead off the foul smoke from the range, but to enhance the draft of

the range or stove. The usual means employed for carrying off the gases, &c., from about a range tends to interfere with the draft in the range where the same chimney-flue is employed for both.

Having thus described my invention, I claim—

1. The combination with a chimney-breast having a lintel across the recess therein, of the supporting-bar 1, mounted at its ends in recesses under the lintel, the screw 2 driven up through the bar 1 and bearing on the lower face of the lintel, and the folding flaps of the shield hinged to said bar 1, substantially as set forth.

2. In a range-shield, the supporting-bar 1, set in the chimney-breast, the hinge-plates 5 and 5^x, secured adjustably to the same, and the casing 6, also secured to said bar 1, in combination with the end plates 8 and 8^x, hinged to the respective hinge-plates, fastening devices for said end plates, the flaps hinged together and to the said bar 1, the counterweight in the casing 6, and the connector which couples said weight to the flaps, substantially as set forth.

3. In a range-shield, the combination with a supporting-bar for the flaps of the shield and the said flaps hinged together and to the said bar, of the casing for the counterweight mounted on the chimney-breast and provided with a pawl-detent 12, the weight 7 in said casing and provided with teeth adapted to be engaged by said pawl when the latter is set in operative position, and the flexible connector connecting said weight with the flaps, substantially as set forth.

4. In a range-shield, the combination with the bar 1, the hinge-plate 5, having a slotted bracket 3 and screw 4, whereby it is adjustably secured to the end of the bar 1, the said bracket and screw, the casing 6 formed integrally with the said hinge-plate and bracket 5, and the hinge-plate 5^x secured to the other end of the bar 1, of the folding plates of the shield hinged to said bar and hinge-plates, substantially as shown, and the counterweight and chain.

5. The combination with the range and its pipe 14, the flared tube 13, in the flue and loosely embracing the pipe 14 therein, of the sliding damper, 15, on the pipe and adapted to close the lower end of said tube, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY J. PHILLIPS.

Witnesses:

HENRY CONNETT,
PETER A. ROSS.