

A. A. SPECHT.
DRAFT REGULATING DEVICE.
APPLICATION FILED DEC. 11, 1909.

955,007.

Patented Apr. 12, 1910.

Fig. 1.

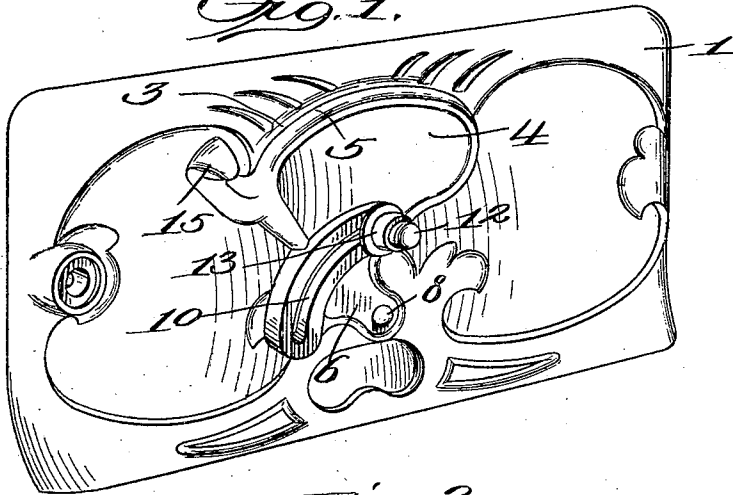


Fig. 2.

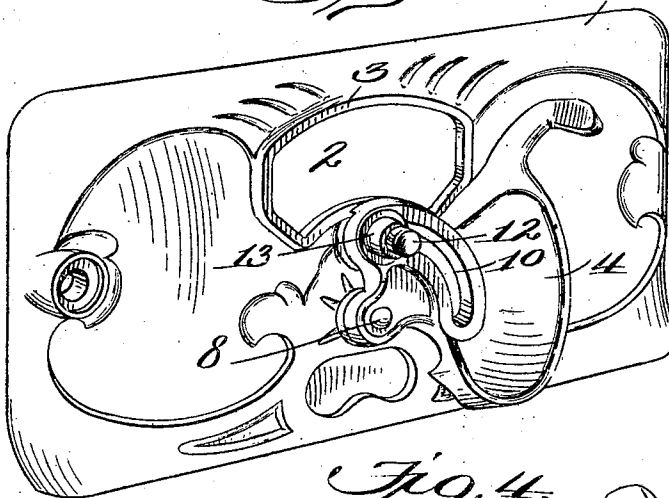


Fig. 4.

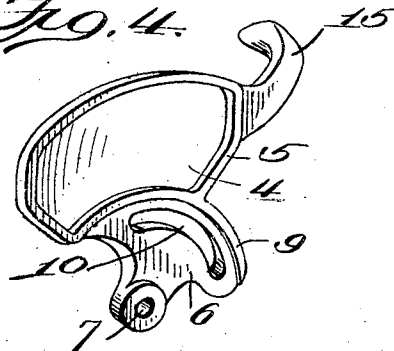
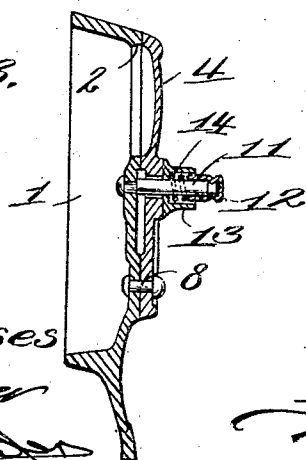


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

ADOLPH A. SPECHT, OF QUINCY, ILLINOIS, ASSIGNOR TO GEM CITY STOVE MFG. CO.,
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DRAFT-REGULATING DEVICE.

955,007.

Specification of Letters Patent.

Patented Apr. 12, 1910.

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To all whom it may concern:

Be it known that I, ADOLPH A. SPECHT, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented new and useful Improvements in Draft-Regulating Devices, of which the following is a specification.

This invention relates to new and useful improvements in draft regulating devices for stoves and furnaces and has more particular reference to a device which may be advantageously employed as an adjunct of a stove or furnace door and when employed in the latter connection, provides for an opening that serves the two-fold purpose of a draft opening and an opening to accommodate the shaker bar of the grate.

The object of the invention is an arrangement which shall be exceedingly simple and compendious in construction and in which the degree of draft may be regulated with absolute accuracy, owing to the provision, inherent in the construction of the device, for a practically air-tight engagement of the adjusting slide against the face circumjacent to the opening of the part to which said slide is secured.

An embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view showing the application of the device to a furnace door with the part hereinafter referred to as a "slide" in its closed position; Fig. 2 is a similar view with the slide in its open position; Fig. 3 is a central vertical section through the door and slide, the latter being in its closed position; and Fig. 4 is a detail perspective view of the slide *per se*.

Similar characters of reference designate corresponding parts throughout the several views.

The part of which the present device is an adjunct, in this instance a furnace door, is designated by the numeral 1 and is provided with a suitably arranged draft opening 2 which is circumscribed by an outstanding rib, as 3, which has, for a purpose to be later explained, a machined face. The opening 2 is primarily a draft opening but in the application of the invention disclosed, it has the additional characteristic of accommodating the shaker bar of the grate.

The efficient size of the opening 2 is regulated by the part which is for convenience

termed a "slide" and is designated by the numeral 4. The slide 4 has a working portion which conforms in shape to the opening 2 and which has on its inner face a rib, as 5, coextensive with the rib 3 and having its face which bears against the rib 3 machined. Owing to the machined character of the faces 5 and 3, it will be apparent that when these faces are in contact, a practically air-tight fit is provided for and a feature of the present invention is the provision of means whereby these faces will at all times be in contact. The slide 4 has a depending lug, as 6. At the lower end of the lug 6 an opening, as 7, is provided to receive a pivot pin, as 8, which is carried upon the door 1. Above the opening 7, the lug 6 is provided with a lateral arcuate extension, as 9, in which is formed an arcuate slot 10. The door 1 is provided directly below the opening 2 with a horizontal post, as 11, which projects through the slot 10 and which carries on its projecting end a head, as 12. A collar, as 13, slidably surrounds the post 11 and bears against the face of the lug 6. Between the base of the collar 13 and the end of the head 12, an expansive coil spring, as 14, is interposed. This spring forces the collar 13 into bearing engagement with the face of the lug 6.

By virtue of the foregoing construction it will be observed that the slide cannot possibly have any loose play which would detract from a practically air-tight bearing engagement thereof against the face of the part to which it is secured, since the slide is held against said part at two points, viz., at the pivot 8 and at the post 11. In the latter case, the spring 14 provides for a yieldable compensating effect and while firmly holding the slide in proper relation, admits of the adjustable movement thereof. As soon as movement of the slide is stopped, the spring 11 holds the slide in the position to which it has been moved and effects the practically air-tight bearing engagement thereof above referred to. The slide 4 has at one side thereof a finger piece, as 15, which provides for the ready manual movement of said slide when the necessity for such movement arises.

The device is compendious since it involves only one movable part; the slide has an air-tight fit against the part to which it is secured owing to the provision of the ribs

3 and 5 with their machined faces and the two-point connection thereof to the door 1 provides always for the contacting relation of said ribs; it is moreover held in any position to which it may be moved and movable from any position without the manipulation of any adjusting parts, owing to the compensating effect of the spring, and consequently the degree of the draft may be regulated with minute accuracy; owing to the fact that the device embodies only one movable part, it is self-contained and may therefore be assembled and dismantled without in any way modifying or being concerned with the construction of the rest of the stove or furnace; and the slide may be so shaped and proportioned as to have intrinsically small dimensions and as to have its slot and apertured lug wholly at one side of its imperforate working portion so as not to impair the operation of the latter.

In the appended claims the part to which the slide is secured has been referred to as a furnace door merely for the sake of convenience. Such reference cannot place any limitation upon the applicability of the device to such parts of the stove or furnace as may be found desirable.

Having fully described my invention, I claim:

1. The combination with a furnace door having a draft opening and a rib circumjacent to the draft opening and having a machined face, of a slide having an imperforate working portion provided on its inner face with a rib coextensive with the first-named rib and also having a machined face to bear against the first-named machined

face, said slide having a finger-piece rigidly secured thereto whereby its working portion may be directly moved across the opening and having at one side of its imperforate working portion an extended lug, the latter being provided with an opening, a pivot pin carried by the door and passed through the opening in the lug and spring means located at one side of the pivot pin and bearing constantly on the lug to cause the said working portion to bear constantly against the circumjacent rib.

2. The combination with a furnace door having an opening and a rib circumjacent to the opening and having a machined face, of a slide having an imperforate working portion provided on its inner face with a rib coextensive with the first-named rib and also having a machined face to bear against the first-named machined face, said slide having at one side of its imperforate working portion an extended lug, the latter being provided at its lower end with an opening and above the opening with an arcuate slot, a pivot pin carried by the door and passed through the opening in the lug, a post carried by the door and passed through the slot, a collar surrounding the post and a spring arranged at the projecting end of the post to cause the collar to bear against the face of the lug.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ADOLPH A. SPECHT.

Witnesses:

GERHARD G. ARENDS,
HENRY DAMHORST.