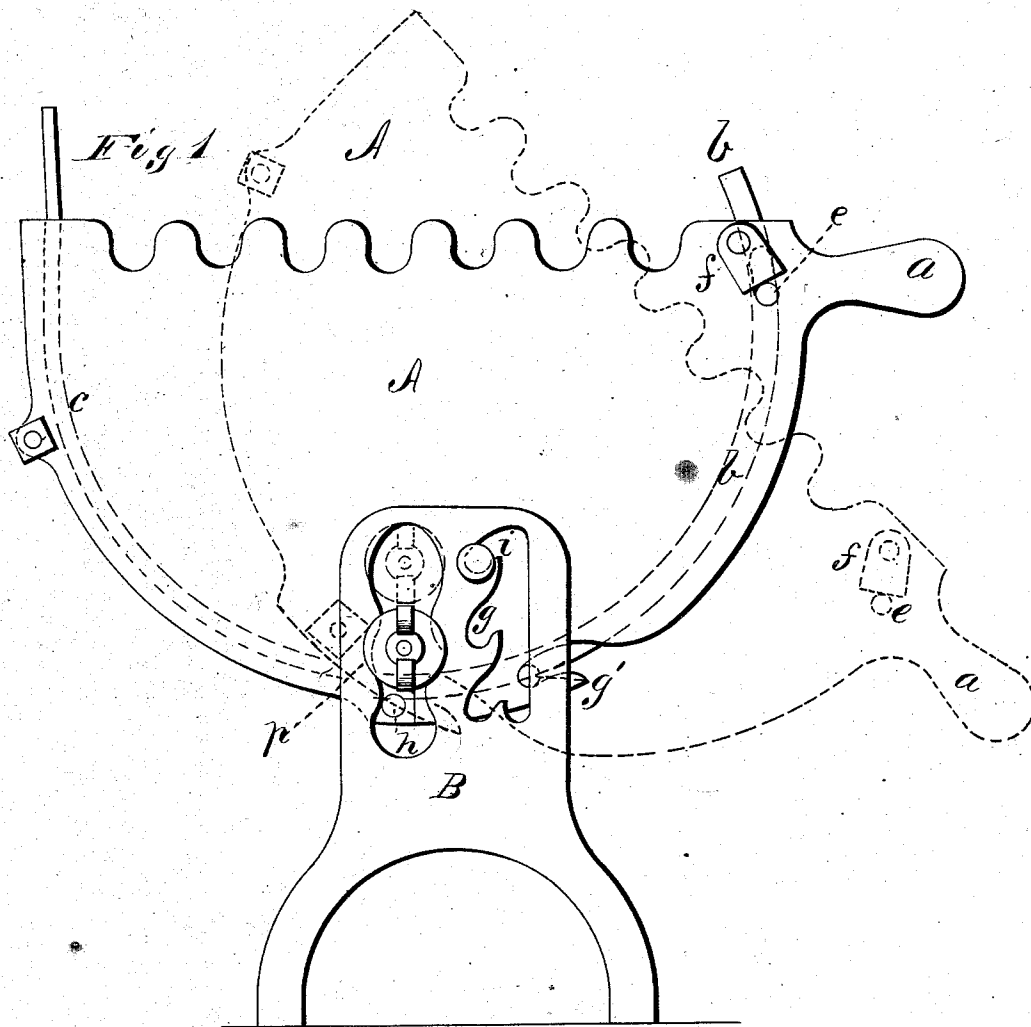


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Grates.

No. 158,556.

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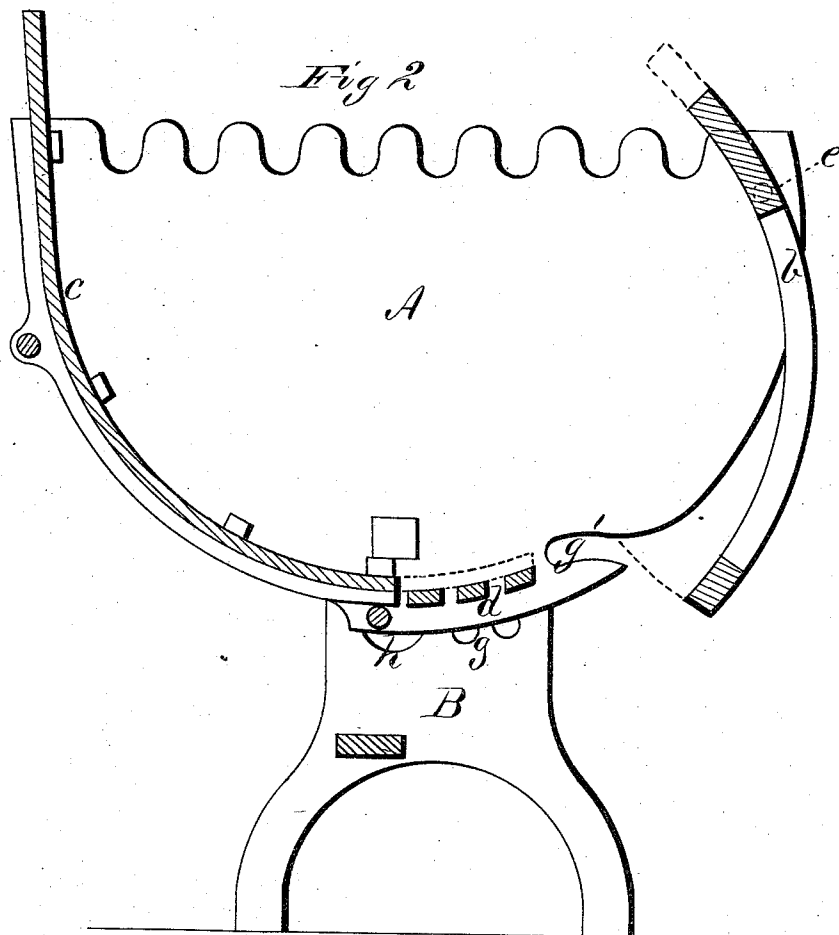
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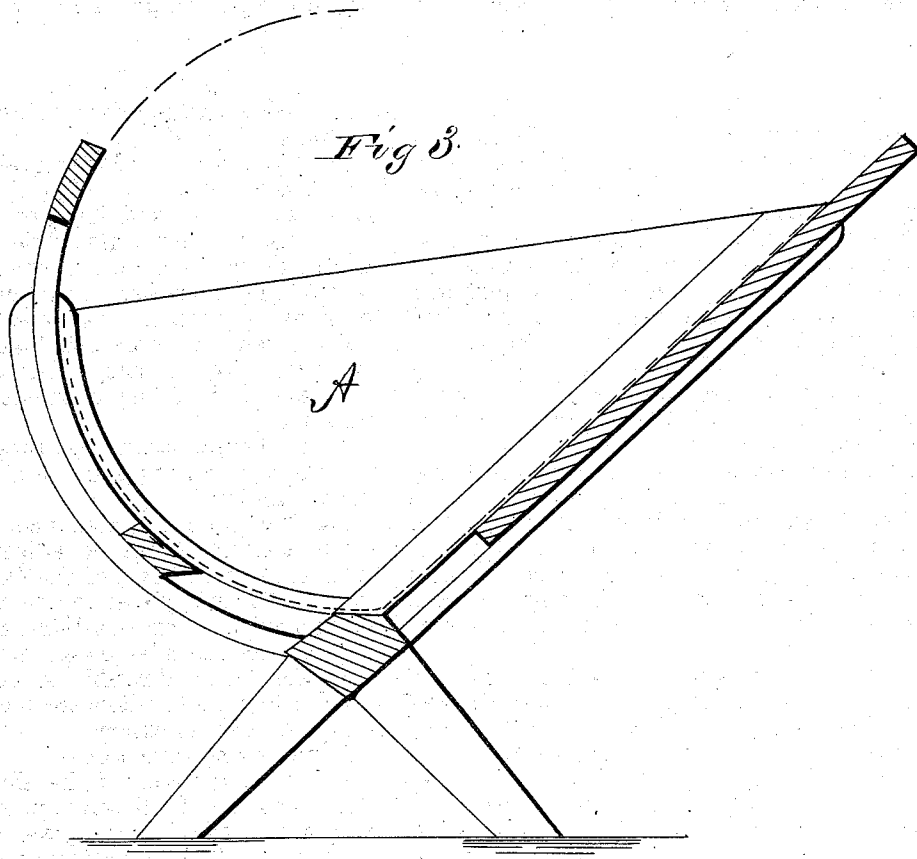
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# UNITED STATES PATENT OFFICE.

JAMES W. WILLIAMS, OF CHARLOTTESVILLE, VIRGINIA.

## IMPROVEMENT IN GRATES.

Specification forming part of Letters Patent No. **158,556**, dated January 5, 1875; application filed December 11, 1874.

*To all whom it may concern:*

Be it known that I, JAMES W. WILLIAMS, of Charlottesville, State of Virginia, have invented a Grate for Fuel, of which the following is a specification:

The object of my invention is to improve the present style of "basket coal-grates," by adjustable means, as well as for dumping purposes; and to this end the grate can be raised or lowered to regulate the draft, according to the depth of the fire-place, and, by turning the grate on its axes, to regulate the deflecting heat, &c., all by means to be hereinafter described.

In the drawings, Figure 1 is a side elevation of my improved basket-grate for fuel, the dotted lines showing it in an inclined position to increase the quantity of deflected heat, as also in shaking it, for both of which purposes the handles *a* are used; and the shape of these can be varied at pleasure without departing from the nature of my invention.

*A* is the basket-grate. *b* is the front tilting or pivoted dumping-plate with bars; *c* the back or sliding plate, which can be slid down or raised up, the sliding down being for the purpose of covering the horizontal bottom bars *d*, (see Fig. 2,) to regulate bottom draft. *b* oscillates on trunnions *e*, by means of which to open it for dumping purposes; and, when closed, it is held in position at the top by a button, *f*, bearing against *e*, while at the bottom projecting lugs rest in grooves *g'* in the side plates. *B* are standards or supporting-legs on which the grate rests. They are slotted, each having two slots, *g* and *h*, the former having rests for supporting-trunnions *i*, attached to sides of grate. These rests are to regulate the height of the basket, which is held in any desirable position by means of a binding screw-nut, *p*, on a rod or projection passing through slot *h*; but this slot may be dispensed with, and the screw-nut put on projecting trunnions *i*. By means of the handles

*a* the basket can be raised or lowered, as well as shaken or tilted.

In Fig. 2, the horizontal grate-bars *d* are shown in section. The dotted lines over them show back plate *c* slid down over them to cut off or regulate the draft, while the front tilting-bar grate *b* is shown in its open position for dumping purposes. *c* can also be raised for dumping purposes, if deemed necessary.

The several parts are held together by bars, screw-rods, &c., so that, if desirable, the basket-grate can be taken apart easily for transportation.

For particular safety the grate can be tilted at night, or at any time, into a so-called "horizontal position."

Fig. 3, Sheet 3, represents a modification of my invention. It has no adjustability save the sliding up or down of the front and back plates. The side plates can be made removable or fixed, and horizontal strengthening-bars may connect the side plates, either fixed or removable. It will readily be seen by this figure the dumping facilities are doubled, though not considered necessary.

I claim as my invention—

1. The combination of the slotted toothed legs *B* and the thumb-screw *p*, with the basket-grate *A*, enabling the grate to be raised, lowered, or tilted, as and for the purpose specified.

2. The curved sliding back plate *c*, in combination with the side plates of basket-grate *A*, and its bottom bars *d*, for purposes herein described.

3. The dumping axial bar-grate *b*, in combination with the slotted side plates of basket *A*, and locking-button *p*, as and for the purpose set forth.

JAMES W. WILLIAMS.

Witnesses:

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