J. E. BAUM.

Grate.

No. 165,974. Patented July 27, 1875.

FIG. 1

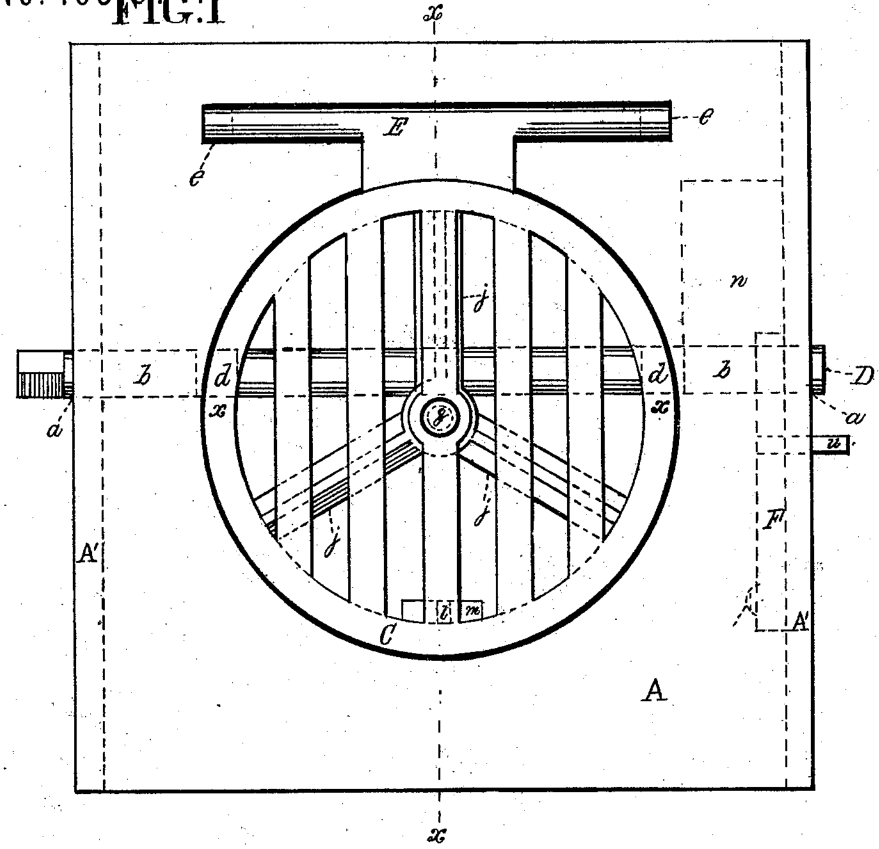
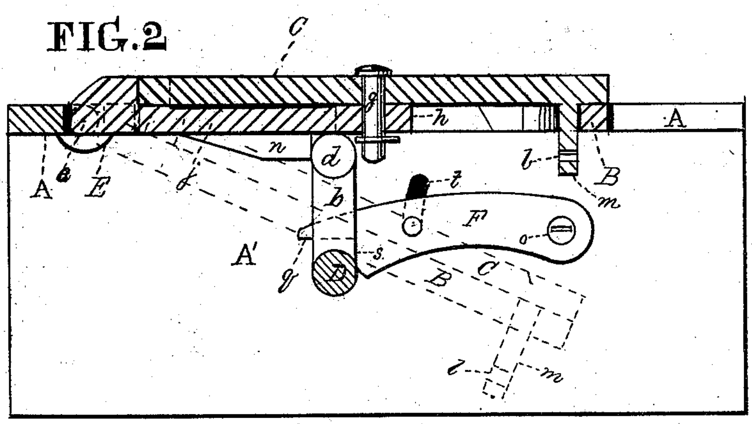


FIG. 2



Witnesses

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2 Sheets--Sheet 2.

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FIG. 3

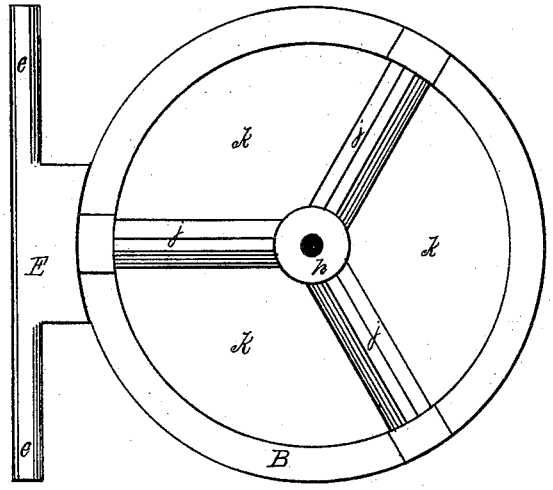
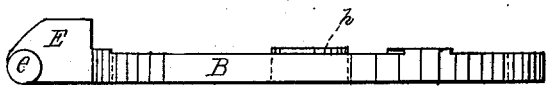


FIG. 4



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JOHN E. BAUM, OF FREELAND, PENNSYLVANIA.

IMPROVEMENT IN GRATES.

Specification forming part of Letters Patent No. **165,974**, dated July 27, 1875; application filed July 6, 1875.

To all whom it may concern:

Be it known that I, JOHN E. BAUM, of Freeland, in the county of Montgomery and State of Pennsylvania, have invented an Improvement in Drop Circular Grates, of which the following is a specification:

My invention mainly consists of a drop, of circular or other suitable form, for supporting a circular grate, which is pivoted to its upper side in such a manner as to admit of its free oscillation in the shaking process. The drop has a bar at its rear side whose ends rest in suitable bearings to hold the drop in its horizontal position, and to admit of its front edge being lowered and raised for lowering and raising the front edge of the grate. The invention further consists in the combination of a crank, like that shown in my patent for Drop-Grates, dated June 22, 1875, for holding it in its elevated position, and lowering and raising it, as hereinafter described. It also consists of a locking-bar, in combination with the crank, for securing the drop in its elevated position.

In the accompanying drawings, Figure 1 is a plan view of my improvement in combination with the ash-pit. Fig. 2 is a vertical section at the line *x x* of Fig. 1. Fig. 3 is a plan view of the circular drop B. Fig. 4 is an edge view of the same.

Like letters of reference in all the figures indicate the same parts.

A is the horizontal plate of the ash-pit, and A′ A′ side plates of the same. B is a drop, which supports the grate C. It is represented of circular form, but may be of any other convenient form. D is a crank—made like the crank shown in my patent for drop-grates dated June 22, 1875—having journals *a a*, elbows *b b*, and pins *d d*, which project from the elbows toward the center. The drop B, which is shown in detail in Figs. 3 and 4, has a bar, E, at its rear side, whose pivotal ends *e e* rest in bearings *f f* of the plate A. The drop at opposite sides, at *x x*, rests upon the pins *d d* of the crank, as shown in Figs. 1 and 2, when the crank is in its usual position for holding the grate C in its horizontal position. If desired, the pins *d d* may be omitted by making the elbows *b b* of the crank wide enough to catch under the rim of the drop. The grate lies on the drop B, and is connected therewith by means of the pivot *g*. In order to have but little obstruction to the passage of ashes from the grate, the rim of the drop is connected with the hub *h* with but few bars, *j*. In the present case but three are represented. One of the spaces *k* between the bars is in front to admit of the grate being oscillated for shaking it, one end of a bar or rod being placed in the hole *l* of the lug *m*, which projects downward from the front part of the grate. The crank D is lowered into the position shown by dotted lines in Fig. 2. When the drop is brought to its lowest position (represented by dotted lines) it rests upon the crank, but when it is to be returned to its elevated position the crank D is turned into its perpendicular position, (represented by full lines,) one of its elbows *b* resting against the stop *n* on the lower side of the horizontal plate A of the ash-pit. F is a locking-bar hung on the pin *o*, which projects from the side A′ of the ash-pit. The rear end of the bar is elevated out of the way of the crank to admit of its being turned down; but when the crank is being elevated the rear end of said bar rests upon the bar of the crank, and falls by its own weight; and when the crank is brought to its vertical position its shoulder *s* catches in front of the crank, bearing sufficiently hard against it to hold the elbow *b* against the stop *n*, above described, whereby the vertical position of the crank is maintained, and the drop B is held securely in its elevated position for the support of the grate.

The locking-bar has a lip, *q*, which rests upon the crank-bar when in its lower position.

Projecting from the bar F through the slot *t* of the side A′ of the ash-pit is a pin, *u*, for elevating the bar. If desired, the pin may be omitted and the locking-bar manipulated from the inside of the ash-pit.

I claim as my invention—

1. The drop B, having pivots *e e*, which rest in suitable bearings, in combination with the circular grate C, having a pivot, *g*, for holding it in its central position, and to admit of its oscillation in the shaking operation, substantially as set forth.

2. The combination of the crank D, having elbows *b b*, with the drop B, for holding the front edge of the latter in its elevated position, and lowering and raising the same, substantially as set forth.

3. The combination of the locking-bar F, crank D, and drop B, whereby to hold the latter in its elevated position, substantially as set forth.

JOHN E. BAUM.

Witnesses:
THOMAS J. BEWLEY,
STEPHEN USTICK.