

J. E. BAUM.

Drop-Grate for Cooking-Ranges.

No. 164,670.

Patented June 22, 1875.

FIG. 4.

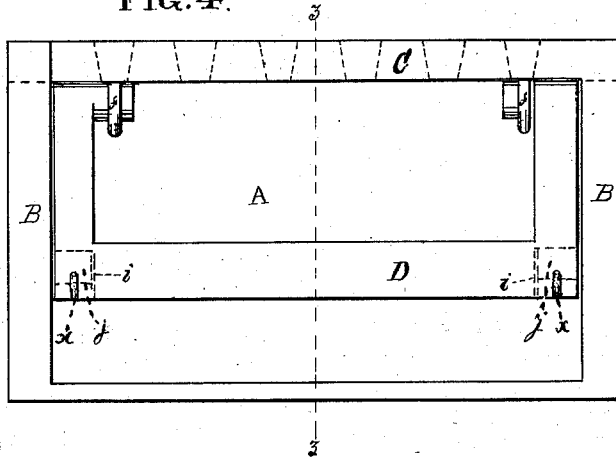
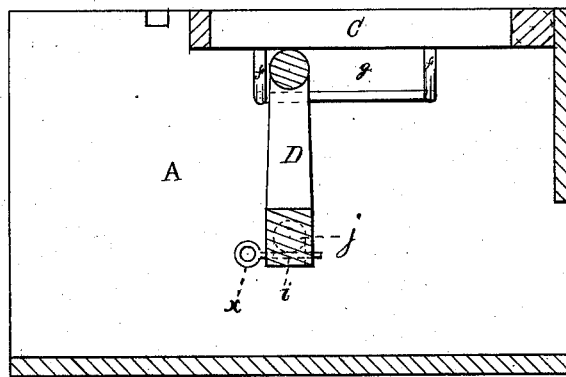


FIG. 5.



Witnesses.

Thomas J. Dewey.

George C. Betzel

Inventor

John E. Baum
Stephen W. Wick Attorney

UNITED STATES PATENT OFFICE.

JOHN E. BAUM, OF FREELAND, PENNSYLVANIA.

IMPROVEMENT IN DROP-GRATES FOR COOKING-RANGES.

Specification forming part of Letters Patent No. 164,670, dated June 22, 1875; application filed

April 3, 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-Grates for Cooking-Ranges, &c., of which the following is a specification:

My invention consists of a peculiarly-constructed crank, in combination with the grate, having yokes connected therewith, and with the recessed sides of a range, furnace, stove, or heater, &c., for dropping the same to remove the coal, ashes, slate, &c., therefrom, and elevating said grate to its horizontal position, and holding it in that position, as hereinafter described.

In the accompanying drawings, Figure 1 is a plan view of the fire-place A of a range with my improvements. Fig. 2 is a front view of the same. Fig. 3 is a cross-section at the line *xx* of Fig. 1. Fig. 4 is a front view of a fire-place, A, having a modified form of the bar, which is provided with recesses *ee* at its ends, which rest upon pins *dd*, which project from the side plate of the fire-place A. There are pins *dd* beneath the journals to prevent the bar being lifted off of them. Fig. 5 is a cross-section of the same, at the line *zz* of Fig. 4.

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

A, Figs. 1, 2, and 3, represents the fire-place of a range, constructed in the usual manner, with the exception of certain parts of the plates B B and the bottom grate C, for connecting the crank-bar or frame D. The crank-bar has journals *aa*, which have bearings in the side plates B B, and segmental elbows *bb* inside of its journals, which are situated in the recesses *cc* of the side plates B B. Projecting from the segmental elbows *bb*, and in the same plane and parallel with the bar D, are crank-pins *dd*, upon which the grate C rests at its front edge—the rear edge resting in the recesses *cc* in the upper edge of the side plates B B. When the grate C is in its horizontal position, as seen in full lines, the front edges of the segmental elbows *bb* rest against the front edges of the recesses *cc*, as shown in full lines in Fig. 3; but when the bar is turned backward for the descent of the grate, the rear edges of the elbows rest

against the rear edges of the recesses, as shown by dotted lines. In order to give positive downward movement of the grate C, and prevent its being lifted off when the grate is raked, it is provided with yokes *ff* on its bottom side, which form slots or openings *gg* for the connection of the crank-pins. These yokes may be formed of wire or rods, and their upturned edges cast in the grate or riveted, or they may be formed in the casting itself. One of the journals *c* may be of sufficient length to project outside of the side plate with which it is connected, to receive a handle for oscillating the crank-bar; or, instead thereof, a wrench may be used to fit the bar itself. For convenience in connecting the crank-bar D with the side plates B B, or removing it therefrom, one of the plates may be made in two pieces, the outer piece *h*, which has bearings for the journals, being connected by means of pins or bolts, or in any other convenient manner.

The object of having the elbows *bb* of the crank-bar D in recesses of the side plates B B is to have them out of the way, and to prevent cinders or small pieces of slate or coal working in between them and the side plates. The object of having crank-pins *dd* projecting from the elbows *bb* to receive the grate, as shown in the drawings, instead of a bar clear across beneath the grate, is to give free room for the use of a poker for cleaning the grate.

In Figs. 4 and 5 the crank-bar D has journal-bearings *ii* in its under edge, which fit the pins *jj*, that project from the side plates B B, and upon which the bar oscillates for letting down and elevating the grate C. The object of this mode of the modification of the bar is to facilitate the connection of the latter with the grate and fire-place.

Instead of having a yoke, *f*, at each end of the grate, a single yoke may be used for the connection of the crank-bar, if desired, the yoke being at one end, or some convenient place in the middle portion of the bar.

The device may be simplified under certain conditions by having simply a crank-bar with elbows to sustain the grate, the pins being omitted.

I have merely represented the crank-bar in connection with a fire-place of a cooking-

range by way of illustration; yet it is designed for drop fire-grates for any other purpose.

I claim as my invention—

1. The combination of the crank-bar D, (shown in Figs. 2, 3, 4, and 5,) having elbows or stops *b b* and pins *d d*, with the grate C, substantially as and for the purpose set forth.

2. The side plates B B, having recesses *e e*, in combination with the elbows *b b* of the crank-bar D, whereby the elbows are out of

the way, and the jamming of coal or cinders between them and the side plates is avoided, substantially as set forth.

3. The yokes *f*, forming slots or openings *g*, in combination with the crank-bar D, substantially in the manner and for the purpose set forth.

JNO. E. BAUM.

Witnesses:

THOMAS J. BEWLEY,
STEPHEN USTICK.