

(No Model.)

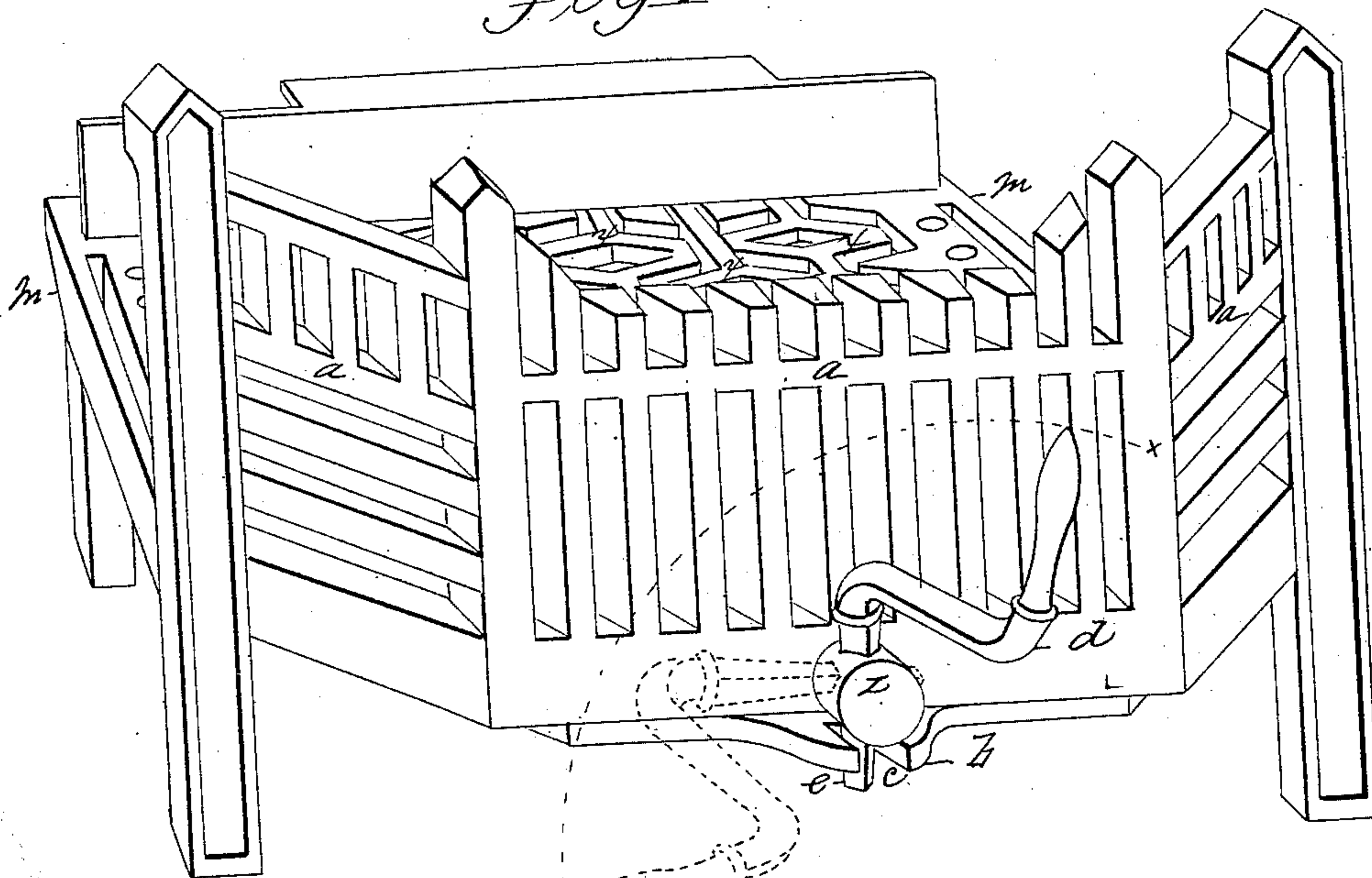
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SHAKING AND DUMPING GRATE.

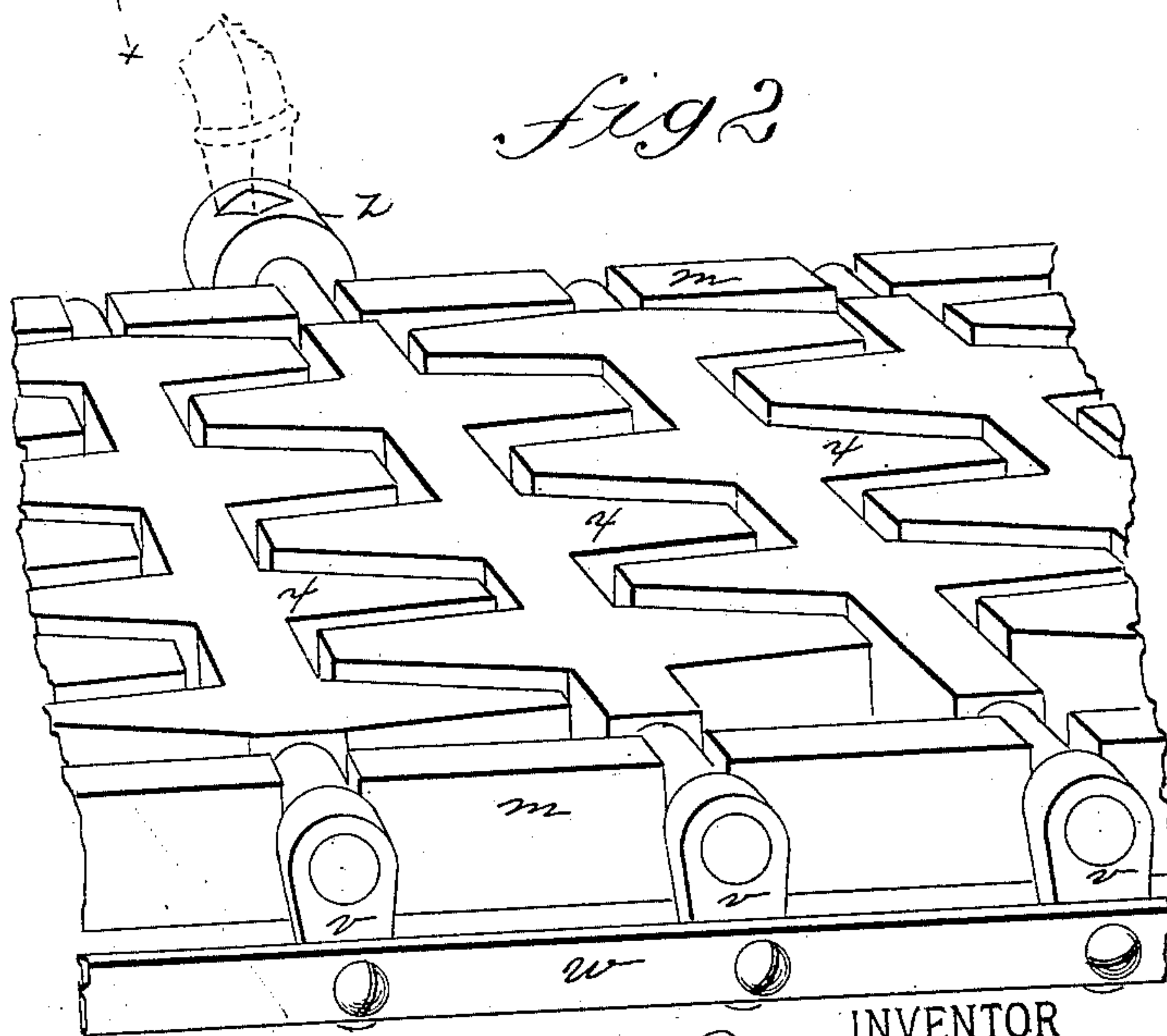
Patented May 19, 1885.

No. 318,013.

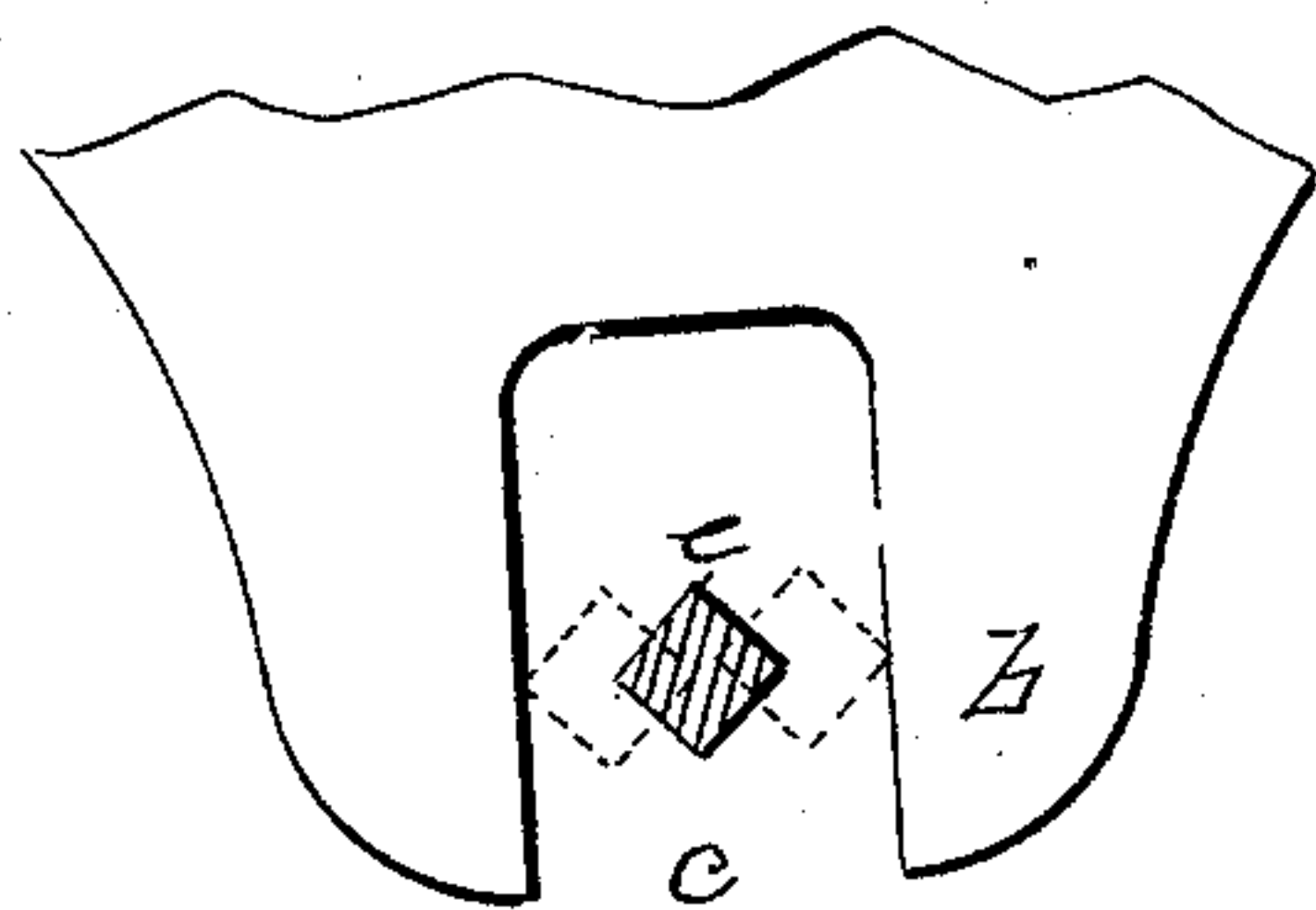
*fig 1*



*fig 2*



*fig 3*



WITNESSES:

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INVENTOR

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# UNITED STATES PATENT OFFICE.

PETER MILLER, OF CLEVELAND, OHIO.

## SHAKING AND DUMPING GRATE.

SPECIFICATION forming part of Letters Patent No. 318,013, dated May 19, 1885.

Application filed December 8, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, PETER MILLER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Shaking and Dumping Grates, of which the following is a specification.

This invention relates to improvements in shaking and dumping fire-place grates, the object being to provide improved means combining the grate construction and the handle or shaking-bar, whereby, without other devices, the grate may be shaken without being accidentally dumped, and have the grate-bars turned for dumping by simply changing slightly the position of the shaking-bar.

In the drawings forming part of this specification, Figure 1 illustrates a grate constructed according to my invention. Fig. 2 is a plan view of a portion of the grate bars and frame. Fig. 3 is a detail view.

In the drawings, *m* is the frame, having recesses in its upper edge in which the necks of the grate-bars *x* rest and turn. Each of said grate-bars, excepting the central one, is provided with simple cylindrical necks or bearings, one at each end; but the said central one has a head, *z*, thereon on its front end, located outside the grate frame and front *a*, through which, transversely, is formed a rectangular-shaped hole to receive the shank *e* of the shaker-bar *d*.

The rear ends of the grate-bars *x* are each provided with a crank-arm, *v*, and the latter are connected by the bar *w*, each of the cranks having a pivotal connection with the bar, as shown, so that the bars have a common rocking motion.

Under the front edge of the frame *m* is fixed a plate, *b*, extending forward under the head *z* of said central grate-bar, and said plate is provided with a slot, *c*, running in a line with the grate-bar; or it may have a circular or other shaped perforation through it.

The operation of my improvements is as follows:

It will be seen by reference to Fig. 1 that the shank *e* of the shaker-bar *d* is of sufficient length to extend through the head *z* of the central grate-bar and into or through the slot *c* in plate *b*; and also, by reference to Fig. 3, that the slot *c* is of sufficient width to allow of a vibratory movement of the lower end of shank *e* within the slot, the dotted lines in said figure showing the alternate positions of the shank. Therefore, when the grate-bars *x* are to be rocked simply for shaking the ashes down, the shank *e* is dropped low enough into slot *c* to strike its sides when the bar *d* is swung from side to side, allowing to the grate-bars a fixed amount of vibratory movement sufficient for shaking only; but when it is desirable to turn over the grate-bars for dumping the bar *d* is lifted a little to draw the shank *e* out from slot *c*, and the bar *d* may then be swung to one side, as shown by the dotted lines in Fig. 1, whereby the dumping is effected.

The construction of the grate herein shown and described, embodying the perforated plate *b* and the shank of the shaking-bar *d*, adapted to engage or not with said plate, obviates the use of many more complicated stop devices heretofore employed for preventing grate-bars from being turned too far when shaking out the ashes.

What I claim as my invention is—

In a shaking and dumping grate, the combination, with the frame *m*, the grate-bars *x*, having crank-connections whereby they have a rocking movement common to all, of the perforated head *z* on one of the grate-bars, the perforated plate *b*, located under said head, and the shaking-bar *d*, having the shank *e*, of sufficient length to pass through the head *z* and the plate *b*, substantially as set forth.

PETER MILLER.

Witnesses:

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CHARLES SULLIVAN.