(No Model.)

T. J. THOMPSON, Jr.

SHAKING AND DUMPING GRATE.

No. 282,684. Patented Aug. 7, 1883.

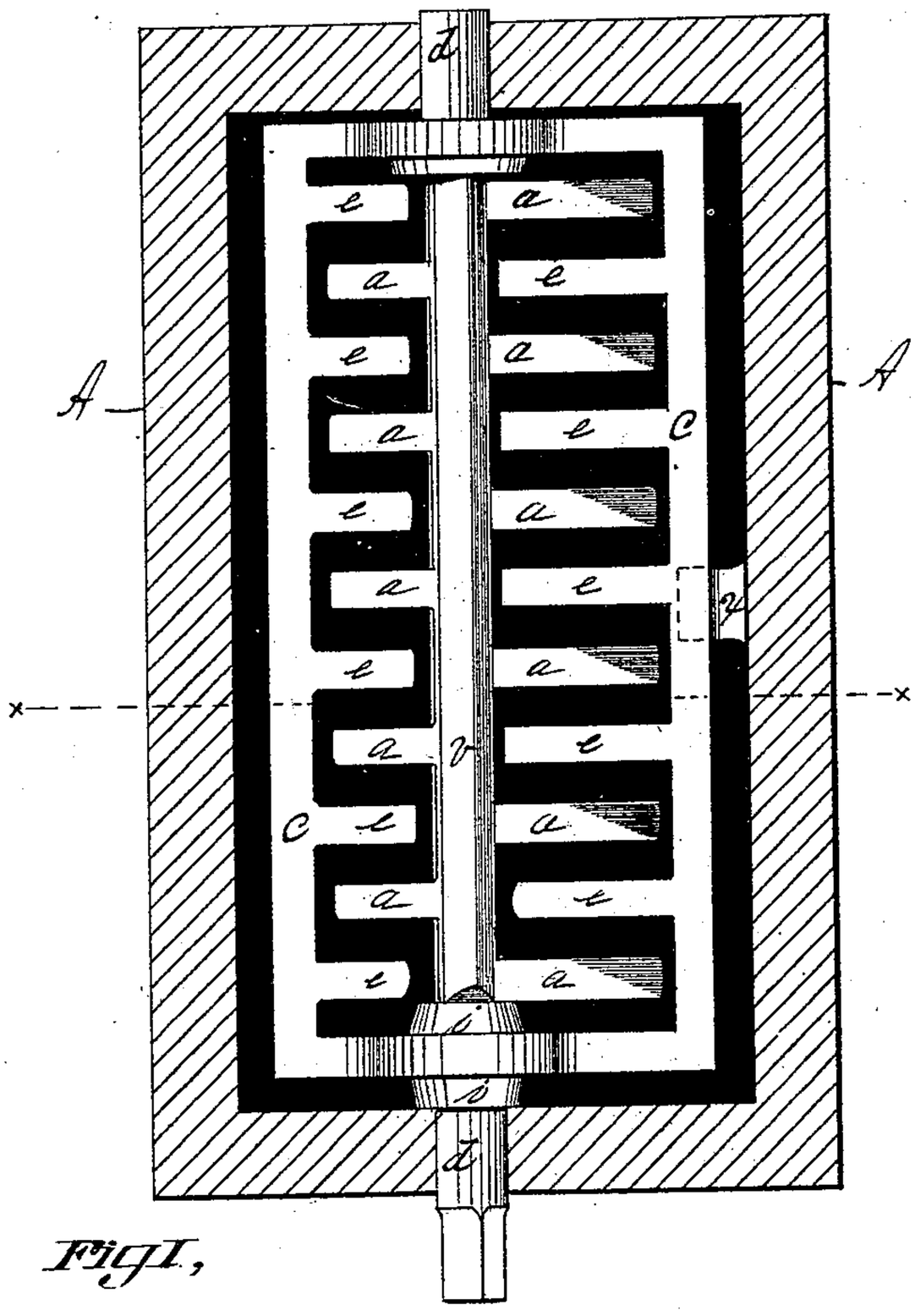

Fig I,

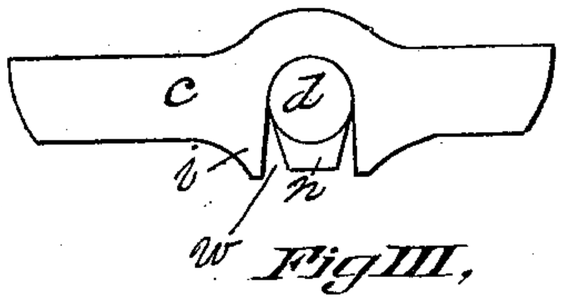

Fig III,

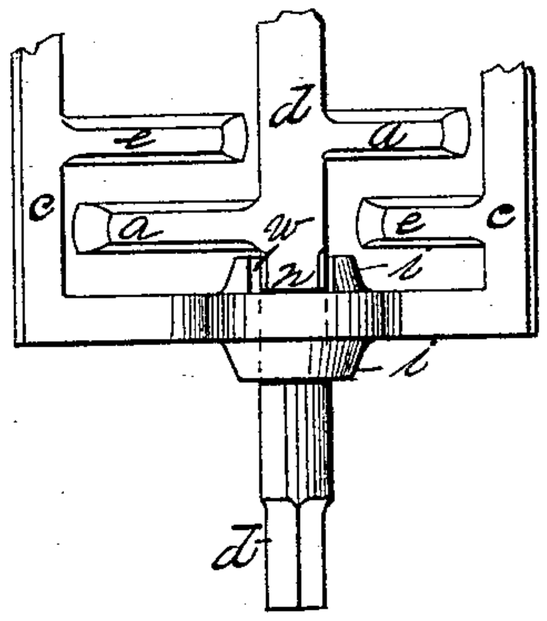

Fig IV,

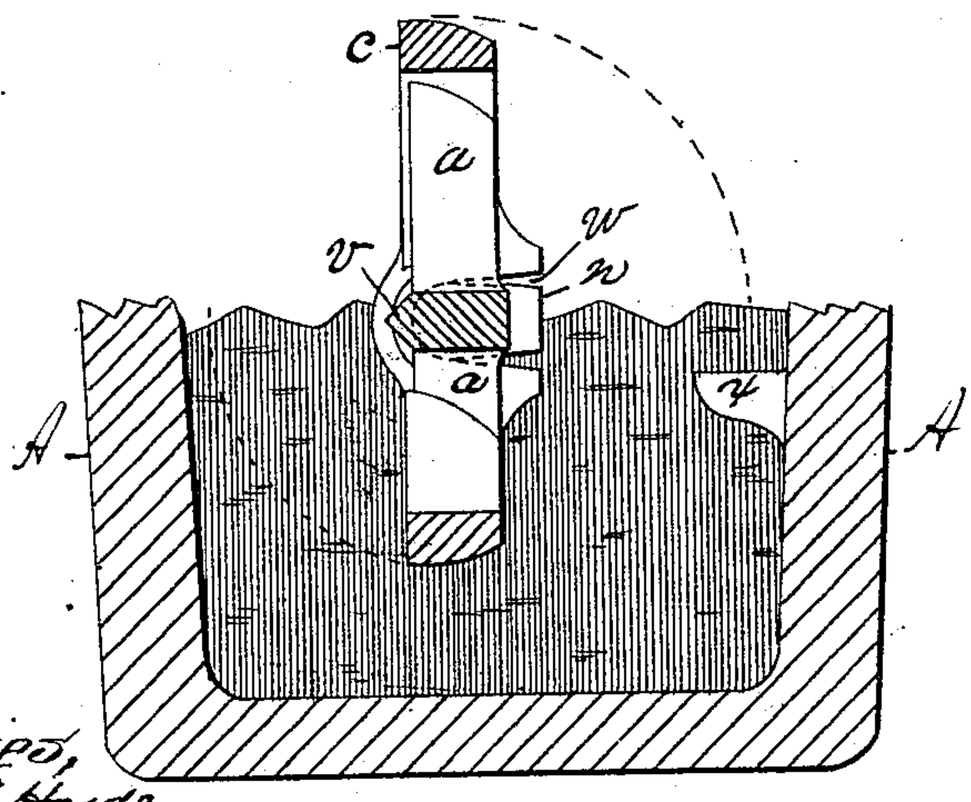

Fig II,

Witnesses,
F. F. Hyde
Wm H Chapin.

Inventor;
Thomas J Thompson Jr
by Henry A Chapin Atty

UNITED STATES PATENT OFFICE.

THOMAS J. THOMPSON, JR., OF CHICOPEE, MASSACHUSETTS.

SHAKING AND DUMPING GRATE.

SPECIFICATION forming part of Letters Patent No. 282,684, dated August 7, 1883.

Application filed February 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. THOMPSON, Jr., a citizen of the United States, residing at Chicopee, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Shaking and Dumping Grates, of which the following is a specification.

This invention relates to stove-grates, and to that class thereof designated as "shaking and dumping" grates; and it consists of a grate-frame having grate-bars which project inwardly on its opposite sides adapted to be hung on and be turned by a rocking grate-bar shaft having bars thereon projecting between said bars on said frame, said rocking shaft being located to one side of the center of said frame and hung in the stove-base, and arranged to be capable of a rocking movement within said frame, and of serving to turn the latter for the purpose of dumping it within said base.

In the drawings forming part of this specification, Figure 1 is a plan view, partly in section, of a stove-base having therein a shaking and dumping grate constructed according to my invention. Fig. 2 is a section through line *x x*, Fig. 1, showing the grate turned as in the act of dumping. Fig. 3 is an end elevation of the grate. Fig. 4 is a plan view of a section of the grate, showing the under side thereof.

In the drawings, A indicates the base of a stove. *c* is the grate-frame. *e e*, &c., are grate-bars on frame *c*. *d* is the rocking shaft. *a a*, &c., are grate-bars on shaft *d*. *v* is a double-inclined upper side on said shaft. *x* is a stop-block on base A. *n* is a stop-block on shaft *d*.

The base A is provided with bearings at each end for the rocking shaft *d*, and on one wall of its interior with the stop-block *x*, so located that when the grate-frame *c* lies in a level position, as in Fig. 1, one side thereof will rest on said block.

The grate-frame *c* is of such dimensions as will permit it to be swung in said base from the position shown in Fig. 1 to that shown in Fig. 2 and back again, and is provided with the inwardly-projecting bars *e*, of different lengths, and with a hub, *i*, at one end, having a part of its under side provided with an opening, *w*, having inclined sides, as shown in Fig. 3. Said hub *i* provides a bearing at one end of frame *c* and one side of the center thereof, in which shaft *d* may have a rocking motion while said frame rests thereon, and a half-round bearing is provided on the under side of the opposite end of frame *c* for the said shaft.

The grate-bar shaft *d* has one end squared to provide for the use therewith of the usual shaker, and with a stop-block, *n*, on its under side, and located between the inclined sides of opening *w* in the hub *i* on frame *c*. Bars *a* project from each side of shaft *d* and occupy a position between said bars *e* on frame *c*, and said shaft is provided on its upper side with double-inclined sides *v* in the form of an inverted V.

The operation of my improvements is as follows: The position of the grate parts, when in use, is that shown in Fig. 1, wherein one side of frame *c* lies on the block *x*, whereby the grate is supported in that position. It will be observed that the area of the grate between the axis of shaft *d* and the side of the grate next to block *x* is greater than that on the opposite side of said shaft. Thus when the grate is covered with coal it will be caused to be firmly held down against said block, so that it will rest comparatively immovable when the shaking devices are operated.

When a shaker is applied to shaft *d* to rock it, said shaft is rocked in its bearings in the base A, and under frame *c*, the latter not being moved except at the will of the operator. The stop-block *n* on said shaft, when the latter is rocked simply to shake the ashes from the grate, oscillates between the inclined walls of the opening *w* in hub *i*, and indicates to the operator how far said rocking motion may be continued each way without disturbing the grate-frame *c*; but when the latter is to be dumped said shaft is turned to lift or turn said frame to the position shown in Fig. 2. The double-inclined sides *v* on the upper side of shaft *d* serve to cause the ashes and cinders to slide off each side when said shaft is rocked in shaking out the ashes.

What I claim as my invention is—

1. The within-described improved shaking and dumping grate, consisting of the shaft *d*, provided with the stop *n* and the bars *a*, of unequal length, and the frame *c*, provided with the hub *i*, having the opening *w* therein, and

hung on said shaft to one side of its center, and provided with the bars *e*, of unequal length, substantially as set forth.

2. The base A, having the block *x* therein, the shaft *d*, hung in said base, and having the block *n* and the bars *a* thereon, the frame *c*, having the hub *i*, provided with the opening *w*, and with the bars *e*, and hung on said shaft to one side of its center, combined and operating substantially as set forth.

THOMAS J. THOMPSON, JR.

Witnesses:

WM. H. CHAPIN,

R. F. HYDE.