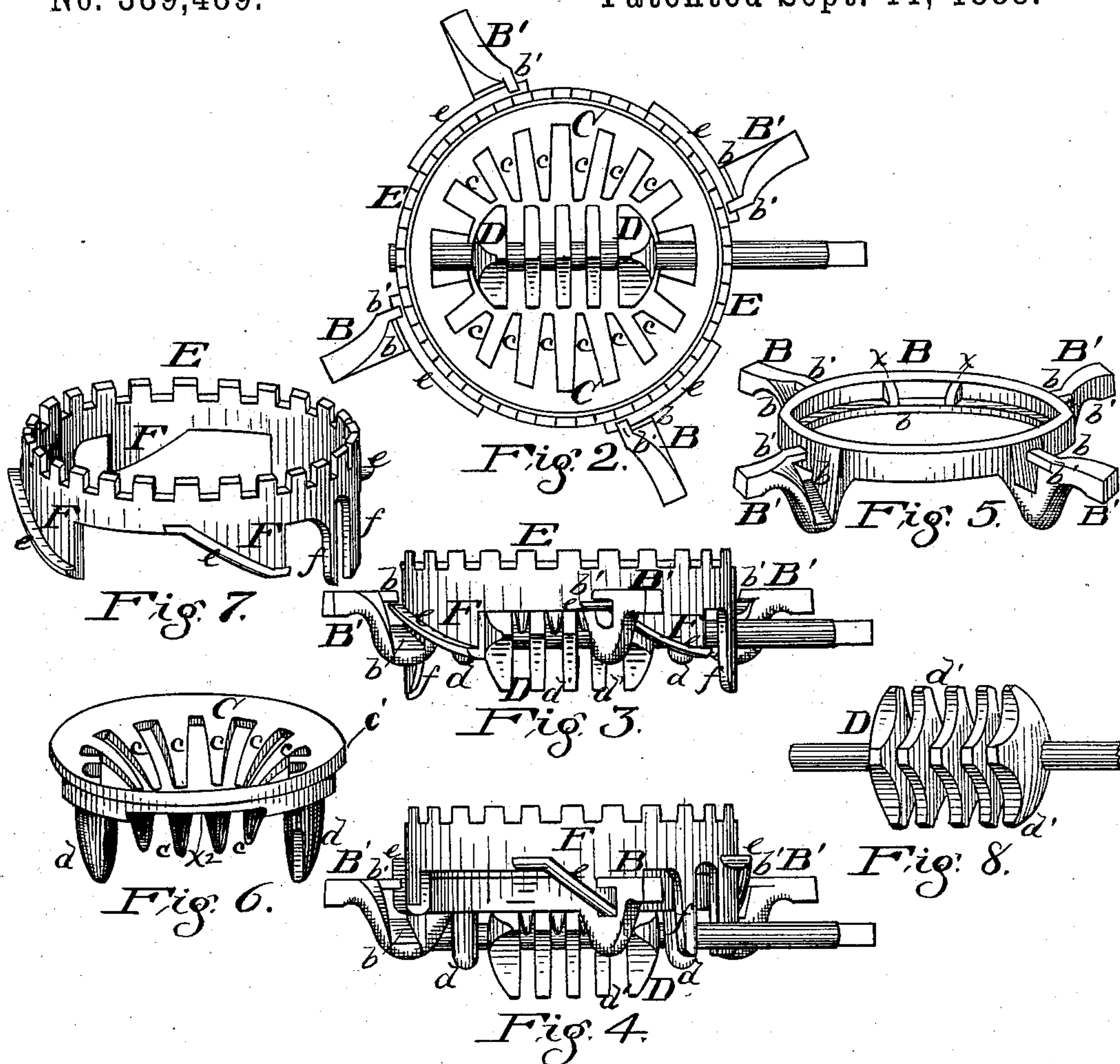


(No Model.)

W. WICKE.
GRATE.

No. 389,489.

Patented Sept. 11, 1888.



Witness,
Geo. B. Tibbitts
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Fig. 1.

Inventor,
Wilhelm Wicke.
By Geo. W. Tibbitts Atty.

UNITED STATES PATENT OFFICE.

WILHELM WICKE, OF CLEVELAND, OHIO.

GRATE.

SPECIFICATION forming part of Letters Patent No. 389,489, dated September 11, 1888.

Application filed December 28, 1887. Serial No. 259,275. (No model.)

To all whom it may concern:

Be it known that I, WILHELM WICKE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Grates for Stoves, Ranges, Heaters, &c., of which the following is a specification.

My invention relates to fire-grates for stoves and all classes of heaters; and it consists in the peculiar construction and arrangement of the several parts comprising the device, as hereinafter fully described and pointed out in the claim and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section showing my improved grate in connection with a fire-pot. Fig. 2 is a top or plan view of my new grate. Fig. 3 is a side elevation of the same. Fig. 4 is also a side elevation showing the clearing-ring raised. Fig. 5 is a detached view of the grate and clearing-ring supporting spider-frame. Fig. 6 is a detached view of the shaking-grate ring. Fig. 7 is a detached view of the clearing-ring. Fig. 8 is a detached view of the rotary dumper.

A is a fire-pot of the ordinary form and construction, and is contained in any of well-known outer casings, A'.

B is a ring, which I provide with peculiarly-constructed arms B', by which said ring is supported on a ring or ledge, A'', attached to the inside of the said casing A'. The said arms are made with a recess, b, having an inclined bottom, and with a finger, b', projecting over said recess. The ring B also has an inside annular flange, b''.

C is a circular grate having inwardly-projecting prongs c c, and has an annular flange, c', on its outer upper edge, by which it is supported on the flange or ledge b'', and upon which it rides whenever the grate is shaken sidewise. x x are stops in the ring B, over which a space, x², cut away in the bottom of the grate-ring C, fits, the purpose of which is to limit the movements of the grate in shaking.

Depending from the grate C are two open lugs, d d, forming bearings for the shaft of a rotary dumping center grate, D, which consists of a shaft having four pronged arms, d', which makes a four-sided grate, any one of which sides may be uppermost.

E is what I call a "clearing ring," which sets over and surrounds the grate C. It has downward projections F F, having inclined bottoms. These projections set in the recesses b in the arms B', and said ring E rides therein when the grate is shaken, which movement carries the ring up the incline and thereby raises the ring at the same time that the shaking is done. On the inclined edges of said projections F is provided a flange, e, which passes under the fingers b', the purpose of which is to prevent the ring from being lifted or thrown out of the guides or ways. At two sides of the said ring E are downwardly-projecting prongs or fingers f f, which straddle the shaft of dumper D, the purpose of which is to carry the ring E with the grate when the same is shaken.

From the foregoing it will be seen that the operations of this improvement are that by shaking the grate the said clearing-ring E is turned with the grate, and at the same time is raised, which carries it up just inside of the lower edge of the fire-pot, and that thereby the ashes are loosened and cleared away from the circumference of the grate, and that by rotating the dumper D back and forth a few times the grate is readily cleared of ashes and clinkers.

In the construction of these grates I contemplate making some modifications. I do not therefore wish to be confined to the exact construction shown.

Having described my invention, I claim—

In a furnace or stove, the ring B, provided with the arms B', having recesses b, fingers b', flange b'', and stops x, in combination with a casing having a ledge on which said ring rests, the grate C, and the clearing ring E, setting over and surrounding the grate C, and provided with the downward projections F, adapted to set in the said recesses b in arms B' of ring B, inclined flanges e, adapted to pass under the fingers b' of ring B, and rotating dumper D, the said ring E being also provided with fingers f, which straddle the shaft of said dumper, substantially as and for the purpose described.

WILHELM WICKE.

Witnesses:

GEO. W. TIBBITTS,
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