

(No Model.)

R. GALBRAITH.

STOVE GRATE.

No. 254,765.

Patented Mar. 7, 1882.

Fig. 1.

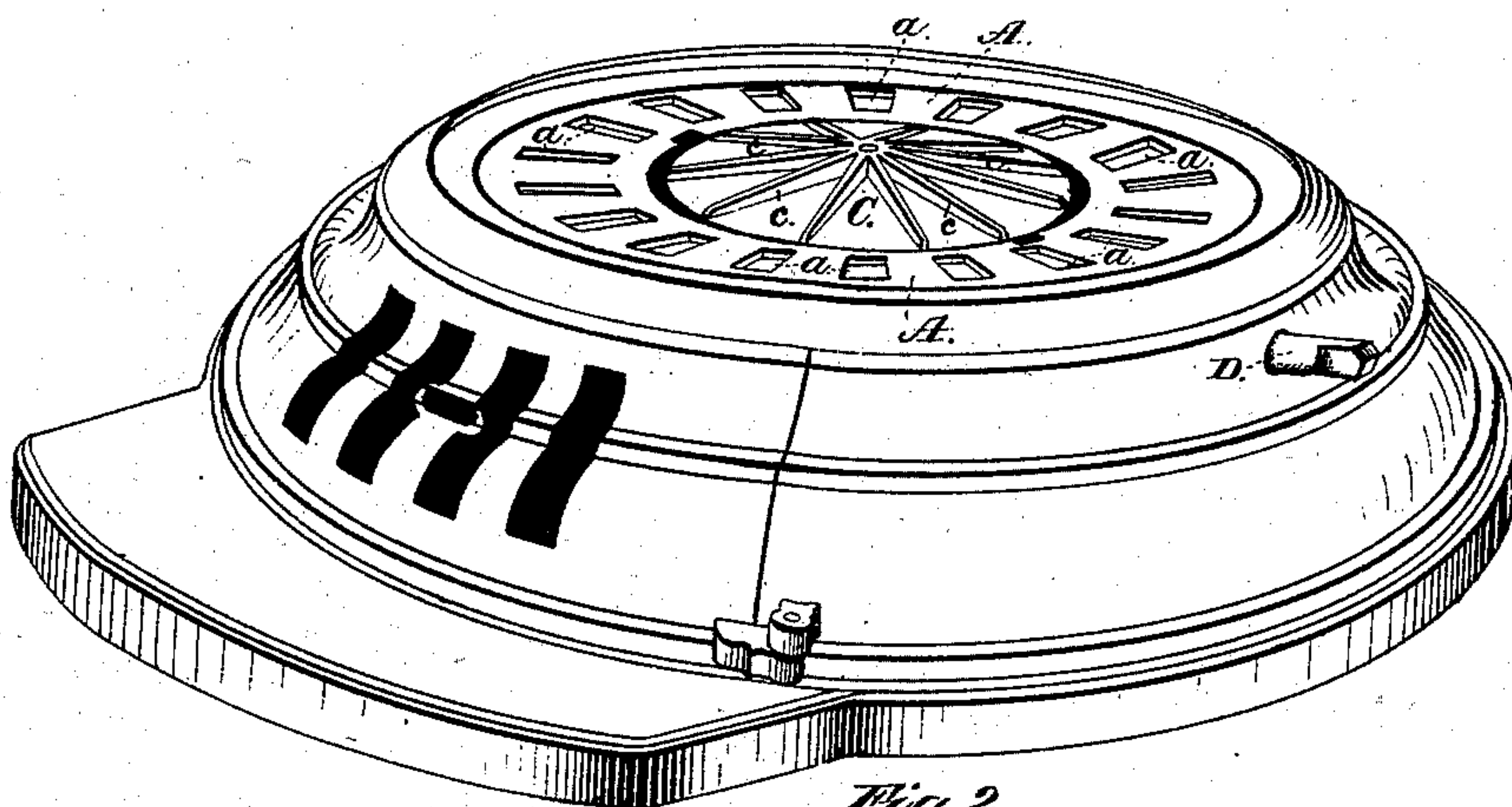


Fig. 2.

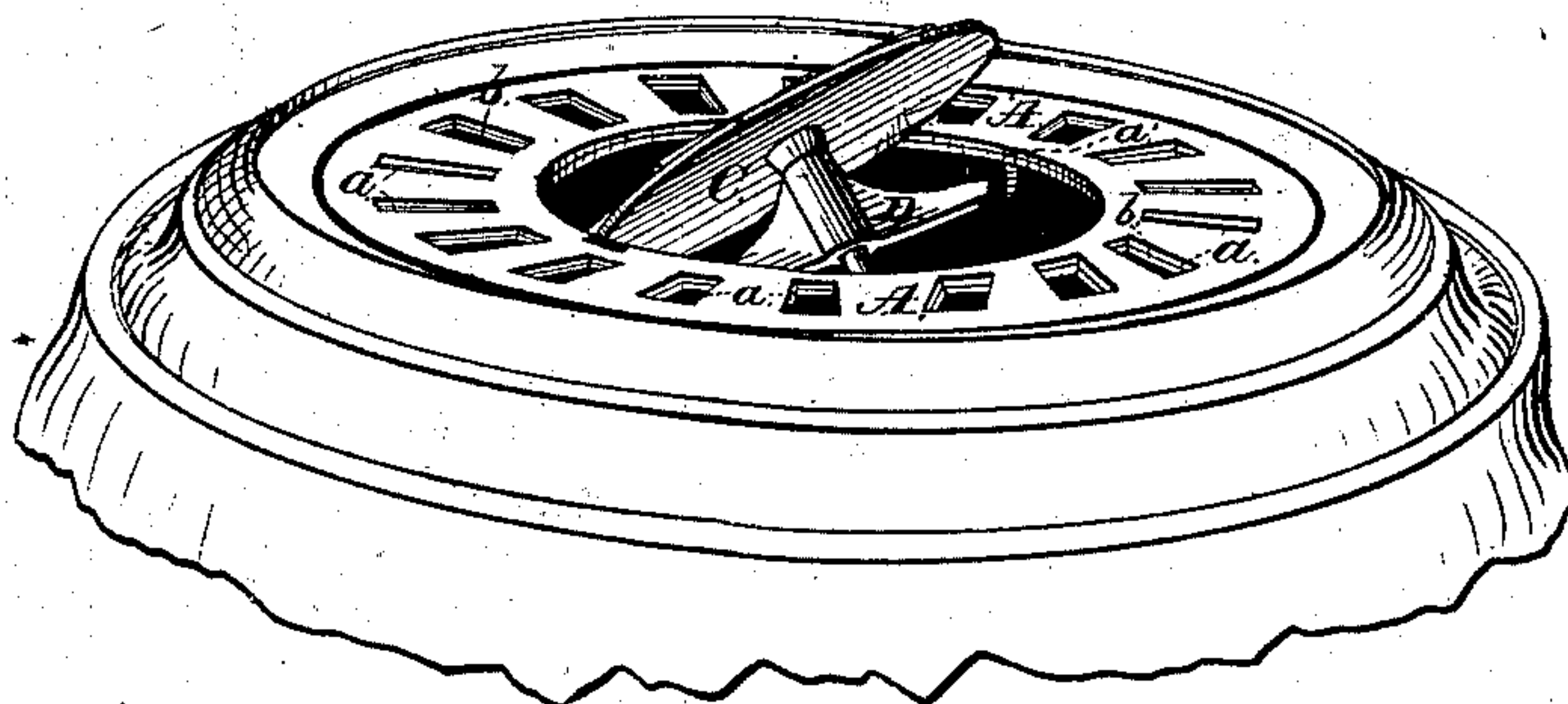
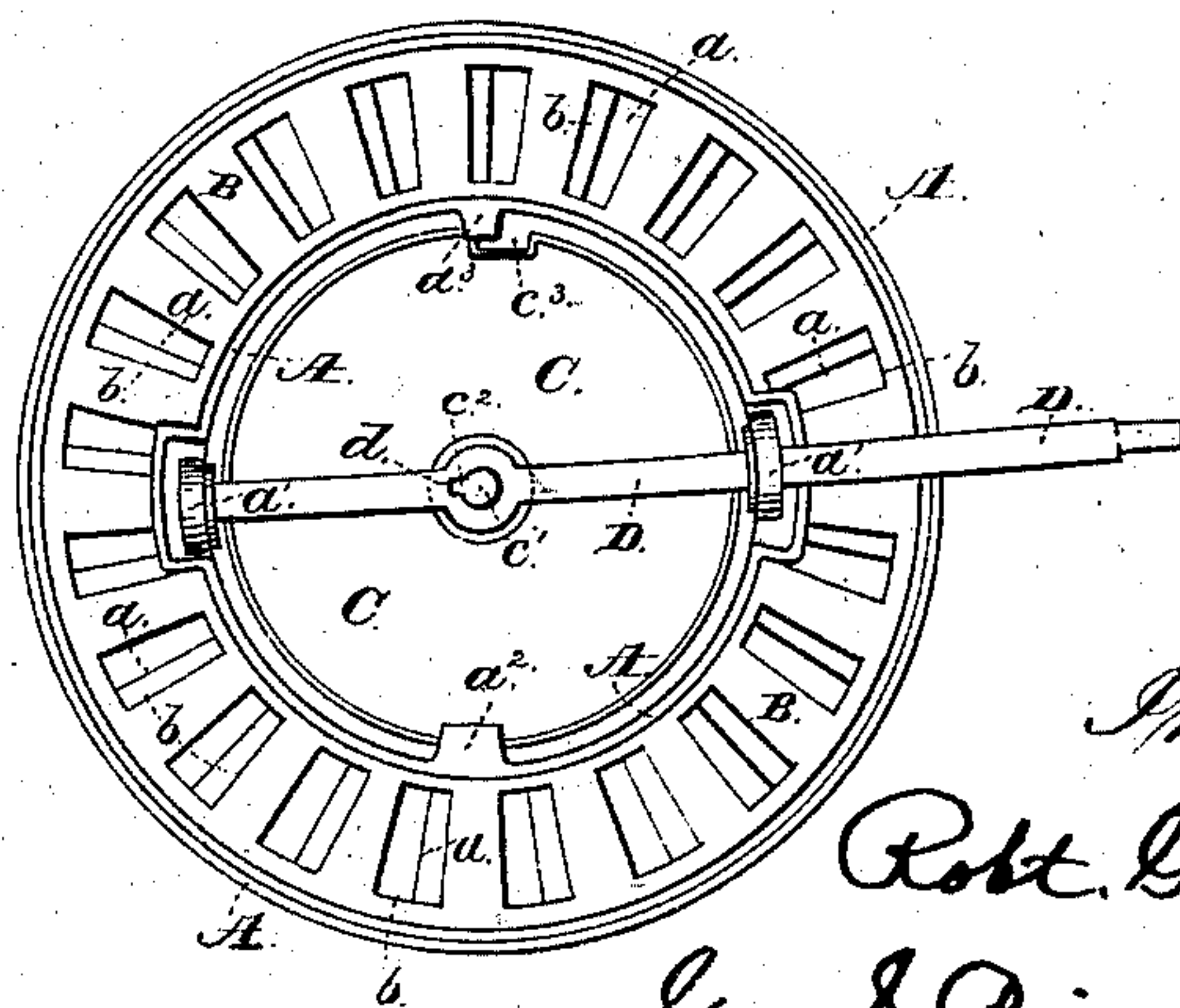


Fig. 3.



Witnesses.

Gas. E. Hutchinson.
D. P. Cowl

Inventor.

Robt. Galbraith, by
Geo. S. Prindle, his Att'y

UNITED STATES PATENT OFFICE.

ROBERT GALBRAITH, OF TROY, NEW YORK, ASSIGNOR TO THE N. S. VEDDER
PATTERN WORKS, BASCOM, GALBRAITH & CO., OF SAME PLACE.

STOVE-GRATE.

SPECIFICATION forming part of Letters Patent No. 254,765, dated March 7, 1882.

Application filed November 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GALBRAITH, of Troy, in the county of Rensselaer, and in the State of New York, have invented certain new and useful Improvements in Stove-Grates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved grate in place within the base-section of a stove, its dumping center being arranged horizontally and its register portion closed. Fig. 2 is a like view of the same with its central portion turned to position to dump the fire and its register portion opened, and Fig. 3 is a plan view of the lower side of said grate.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to increase the efficiency of stove-grates and to enable the combustion of fuel to be more easily and certainly controlled, to which end it consists broadly in a stove-grate composed of a dumping central portion surrounded by a register-section capable of such manipulation as to cause its air-openings to be closed when desired, substantially as and for the purpose hereinafter specified.

In the annexed drawings, A represents a flat ring, which has such diameter as to adapt it to the stove to which it is to be applied, and is provided at suitable points with air-openings *a*, that have any desired size or shape.

The ring A rests upon and is supported by a second ring, B, which corresponds therewith in size and shape, and is provided with a series of openings, *b*, that correspond in size, shape, and relative position to the openings *a*, so that by a partial rotation of said ring A said openings *a* and *b* may be caused to coincide and to permit air to pass upward through the said rings; or they may be each placed opposite to a solid portion of the other ring, and said rings thus made practically solid.

The circular opening at the centers of the rings A and B contains a correspondingly-shaped plate, C, which is preferably provided upon its upper face with a series of radial ribs, *c*, and at its lower side has an axial stud, *c'*,

that extends downward through a bar, D, which bar is supported horizontally within bearings *a'*, that are provided upon the lower side of said spring A, and is capable of rotation, so as to turn said plate to or near a vertical plane, as seen in Fig. 2, such operation being commonly known as "dumping," whereby the coal or ashes resting upon a grate may be caused to pass into the ash-pit. A stop-lug, *a''*, extending inward from said ring A, forms a bearing for and upon which rests the rear edge of said plate C when the latter is turned to a horizontal position.

When the grate thus described is placed in position within a stove the lower ring, B, is prevented from rotation by any suitable means, and one end of the bar D is extended through a horizontally-elongated opening in the side of the base, and is adapted to receive a handle, by which it may be moved laterally or partially rotated.

The stud *c'* is provided with a lug, *c''*, which projects laterally into a corresponding recess, *d*, in said bar D, by which means the plate C is caused to vibrate in a horizontal plane by and with said bar D and ring A.

Projecting radially inward from the ring A, opposite to the lug *a''*, is a lug, *a'''*, which extends beneath and forms a bearing to prevent the plate C from turning from a horizontal plane. In order that said plate may, when desired, be so turned and the contents of the fire-pot be dumped, a notch, *c'''*, is provided within one edge of said plate C, which, when caused to coincide with said lugs *a'''*, will permit the corresponding edge of said plate to be freely turned downward. Said notch is so arranged with relation to said lug as to coincide therewith only when the apertures *a* and *b* are opposite each other and the register portion of the grate is open.

When a fire is kindled in a stove provided with this grate the register portion is opened, so as to permit air to pass freely upward to the fuel, after which said part should be partially or entirely closed, as may be necessary, in order to insure the desired rapidity of combustion, such operation being performed by the lateral movement of the projecting end of the bar D.

When it is desired to remove such refuse from the fuel as will not pass through the openings in the register-section of the grate the central or dumping section is turned by the
5 partial rotation of the bar in the usual manner.

The grate described affords means whereby the combustion of fuel within a stove may be perfectly controlled and kept at any point between the extremes, and at the same time permits of as easy and thorough a removal of
10 refuse-matter from the fuel-chamber as could be secured by use of any of the open grates.

Having thus fully set forth the nature and

merits of my invention, what I claim as new is—

Broadly, a stove-grate composed of a dumping central portion surrounded by a register-section capable of such manipulation as to cause its air-openings to be closed when desired, substantially as and for the purpose specified. 15 20

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of October, 1881.

Witnesses: ROBT. GALBRAITH.
AUSTIN F. PARK,
CHESTER BASCOM.