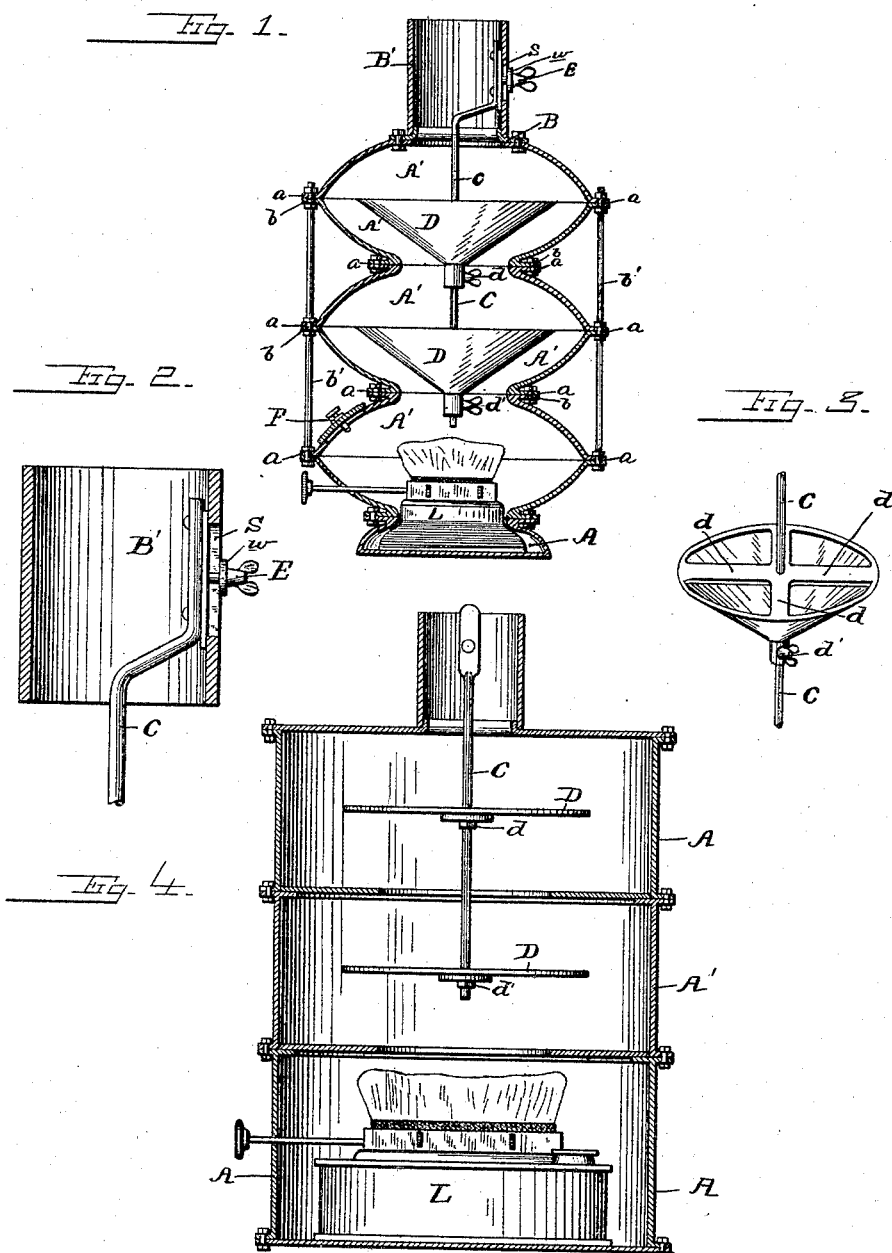


(No Model.)

A. T. ORTON.  
RADIATOR, STOVE, &c.

No. 489,874.

Patented Jan. 10, 1893.



Witnesses

Edward Hanson  
Geo W. Nichols

Inventor

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# UNITED STATES PATENT OFFICE.

ALLEN T. ORTON, OF BATTLE CREEK, MICHIGAN.

## RADIATOR, STOVE, &c.

SPECIFICATION forming part of Letters Patent No. 489,874, dated January 10, 1893.

Application filed March 29, 1892. Serial No. 427,421. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN T. ORTON, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Radiators, Stoves, &c.; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to prevent the concentration of the heat contained in the product of combustion toward the center of the stove flue or inclosing chamber, farthest from the outermost inner walls thereof, and my invention consists in the peculiar construction and arrangement of parts therein whereby a series of centrally perforated annular disks, reaching from the inside walls of said flue, or chamber, approximately toward the center thereof, co-act with a series of conical or other formed disks, or dampers, adjustably suspended by means of an adjustably secured rod, and direct the products of combustion, constantly by alternate deflections thereof, from the flue center; and forcibly deflects the same outwardly, so as to impinge against the inner surface of the stove, radiator, or flue wall; whereby the maximum heat is secured: at the same time that the adjustably held disks serve the purpose of draft regulators, without the intervention of the hitherto used ingress and egress registers and dampers for the latter specified purpose.

In the drawings, forming a part of this specification, and in which the letters of reference used designate like parts in the several views,—Figure 1. represents a central vertical section, clearly showing the stove, or fire box, the sectional flue radiator, and the location therein, of the series of adjustable deflectors. Figs. 2. and 3. are details, detached,—and Fig. 4 shows a plain form thereof.

Referring now more particularly to my preferred form as shown in Fig. 1.—A. represents the base, or fuel box, designed to contain the heat generator, which may be the "lamp" shown, or any one of the well known

wood, coal, oil, or other heat generators heretofore used.

A' represents a series of sectional dish-shaped plates, provided on their outermost edges with projecting flanges, or lugs, *a*, for fastening the plates together by means of bolts *b*, or the securing rods *b'*. In the preferred form of my invention shown in Fig. 1, six of these dish-shaped plates are used; the larger circumferential edges thereof placed together, so that every alternate plate A', is inverted, and when the completed disks are piled, one on top of another, the whole constitutes the three section radiator, stove, or drum, as appearing in said Fig. 1.

A fire box A. forms the base, within which, for the purpose of illustration, I have shown a lamp, L. while the top of the completed structure is surmounted by the collar plate B, for the reception of the smoke pipe B'.

C. represents an adjustably fixed vertical rod, depending from the inside wall of said pipe B', by a bend, or off-set, about equal to the half diameter of said pipe, so that said rod shall at all times maintain a central and vertical position within the radiator chamber, as seen.

The rod C. is adjustably secured to the side of the pipe B'. by means of a thumb nut E. threaded to a bolt fixed in the rod, and engaging within a vertical slot S, of said pipe. A washer *w*. may be employed for greater security against the escape of smoke at this point, if desired.

Suitably suspended within the series of chambers of the radiator, and adjustably fixed to the rod C, is a series of inverted cones D, which are provided on the top thereof, with cross braces *d*, having a central perforation, through which the said rod passes downward and through the conical point, where said rod and inverted cone are adjustably coupled by means of the bolt and thumb set-screw, *d'*.

As will be seen the individual dampers, or conical disks D, may be independently adjusted on the rod C, or the series of dampers may be at any time raised or lowered, whereby the draft of the stove may be regulated at will, at the same time that the product of combustion is alternately deflected from the radiator center and directed forcibly toward the outer surface thereof, and in such man-

ner that the same shall impinge against the same.

When wood or coal is used in this invention, a door, F, may be located at any convenient point, as is evident.

Hitherto I have shown and described my preferred form of disks, piled one above another, and forming restricted flues between; although I do not intend thereby to confine myself thereto, since flat dampers, engaging inwardly projecting plates, may be substituted, and partially accomplish the purpose in view, by simply adhering to the general plan particularly described, of adjustably controlling the draft by the means substantially hereinbefore described and illustrated.

Having thus fully illustrated and described my new heat generator, what I claim, and desire to secure by Letters-Patent of the United States is—

1. In a heater, the combination of a series of consecutive chambers, a flue pipe, a rod adjustably connected with said pipe, and a series of dampers adjustably secured on said rod, substantially as and for the purposes specified.

2. In a heater, the combination with a series of consecutive sectional dish-shaped plates, of a series of consecutive chambers, a flue pipe, a rod adjustably connected with said pipe, and a series of dampers adjustably secured on said rod, substantially as and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

ALLEN T. ORTON.

Witnesses:

GEO. F. NEALE,  
WILLIAM F. NEALE.