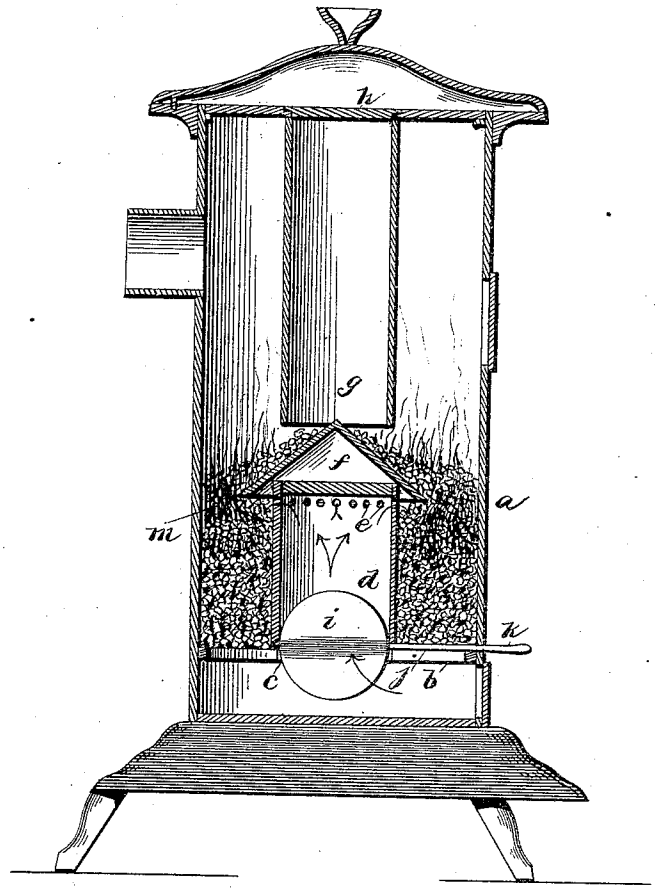
(No Model.)

E. B. WOOLSTON.

HEATER.

No. 429,672. Patented June 10, 1890.



Witnesses
John Smirie
James T. DuBois

Inventor
Elijah B. Woolston
per R. H. Dougherty
his atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ELIJAH B. WOOLSTON, OF MARLTON, NEW JERSEY.

HEATER.

SPECIFICATION forming part of Letters Patent No. 429,672, dated June 10, 1890.

Application filed October 11, 1889. Serial No. 326,742. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH B. WOOLSTON, a citizen of the United States, residing at Marlton, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Heaters; and I do hereby 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.

My invention relates to a central-draft heating-stove such as shown and described in my former patent, No. 412,317, dated October 8, 1889; and it has for its object the more thorough and complete combustion of fuel.

With these ends in view my invention consists in the peculiar features and combinations of parts more fully described hereinafter, and pointed out in the claim.

In the accompanying drawings, the reference-letter *a* denotes the main body portion of any ordinary heating-stove, furnace, or similar heater, and *b* a horizontal grate located within it. This grate is provided with a central opening *c*, surrounded by a vertical cylinder *d*, having its upper portion provided with openings *e*. A conical or similarly-shaped deflector *f* is placed over the upper end of the cylinder to deflect the fuel around the central cylinder. This cap also acts as a shield to keep the fuel in the feeder *g* from becoming overheated by the incoming air, which otherwise might pass directly up into the feeder. The feeder is located directly above the air-cylinder *d*, which has its upper end closed by the top *h*, so that the air is made to pass out laterally through the openings. Now in this arrangement it will be seen that the air within the central cylinder becomes highly heated by the surrounding fuel, thereby creating a strong draft and supplying such a large amount of oxygen that the fuel becomes thoroughly heated and perfectly consumed. The inflowing air passes out through the perforations in a lateral direction and enters the fuel within the fire-pot *m* at a point beneath the overhanging edges of the cap, as shown by arrows.

The supply of air to the central chamber is regulated by means of the damper *i*, which commands the lower end of the cylinder, and is operated by a laterally-extending rod *j*, having a handle *k* upon its outer extremity.

It is evident that many slight changes which might suggest themselves to a skilled mechanic could be resorted to without departing from the spirit and scope of my invention; hence I do not limit myself to the exact construction shown; but,

Having thus described my device, what I claim as new, and desire to secure by Letters Patent, is—

The combination, in a stove or similar device, of a fire-pot provided with a grate having a central opening, a cylinder arranged in coincidence with the opening and having a series of perforations around its upper portion, a cap or deflector placed over its upper end and having its lower portion extending over the vertical sides of said cylinder, and a rotary damper commanding the lower end of the cylinder, all arranged in the manner and for the purpose substantially as described.

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

ELIJAH B. WOOLSTON.

Witnesses:
F. P. DAVIS,
R. G. DUBOIS.