S. SMITH.

Heating-Stoves.

No. 135,449. Patented Feb. 4, 1873.

Fig. 1.

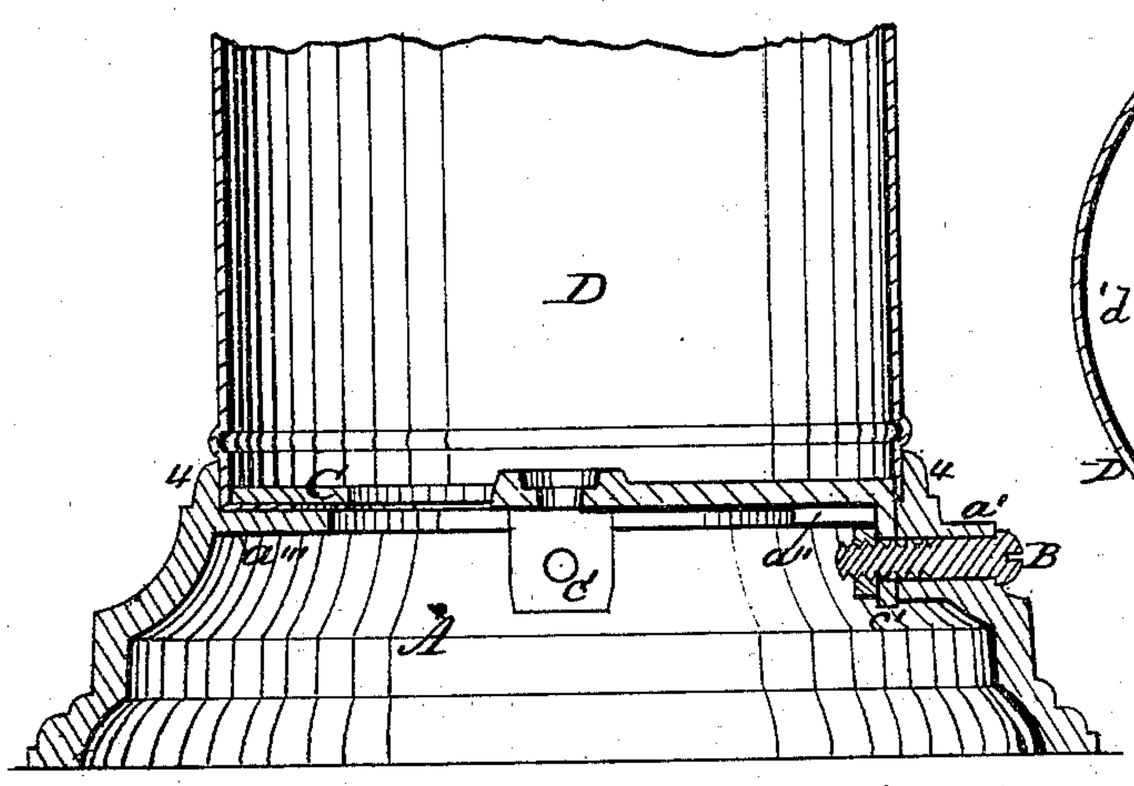


Fig. 2.

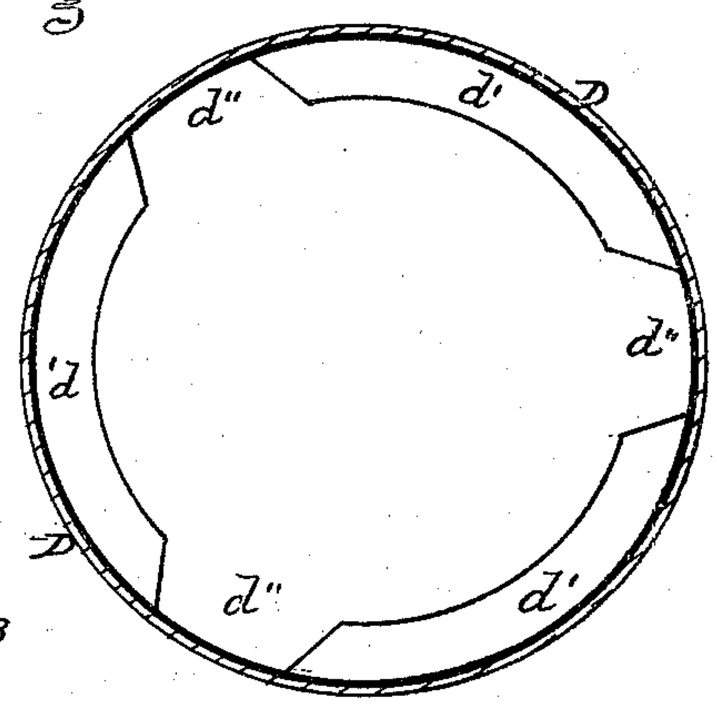


Fig. 3.

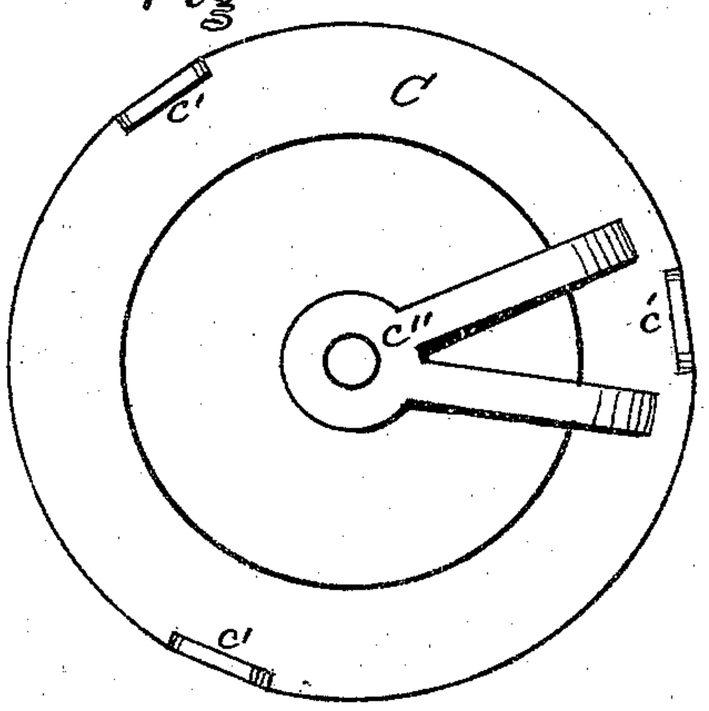
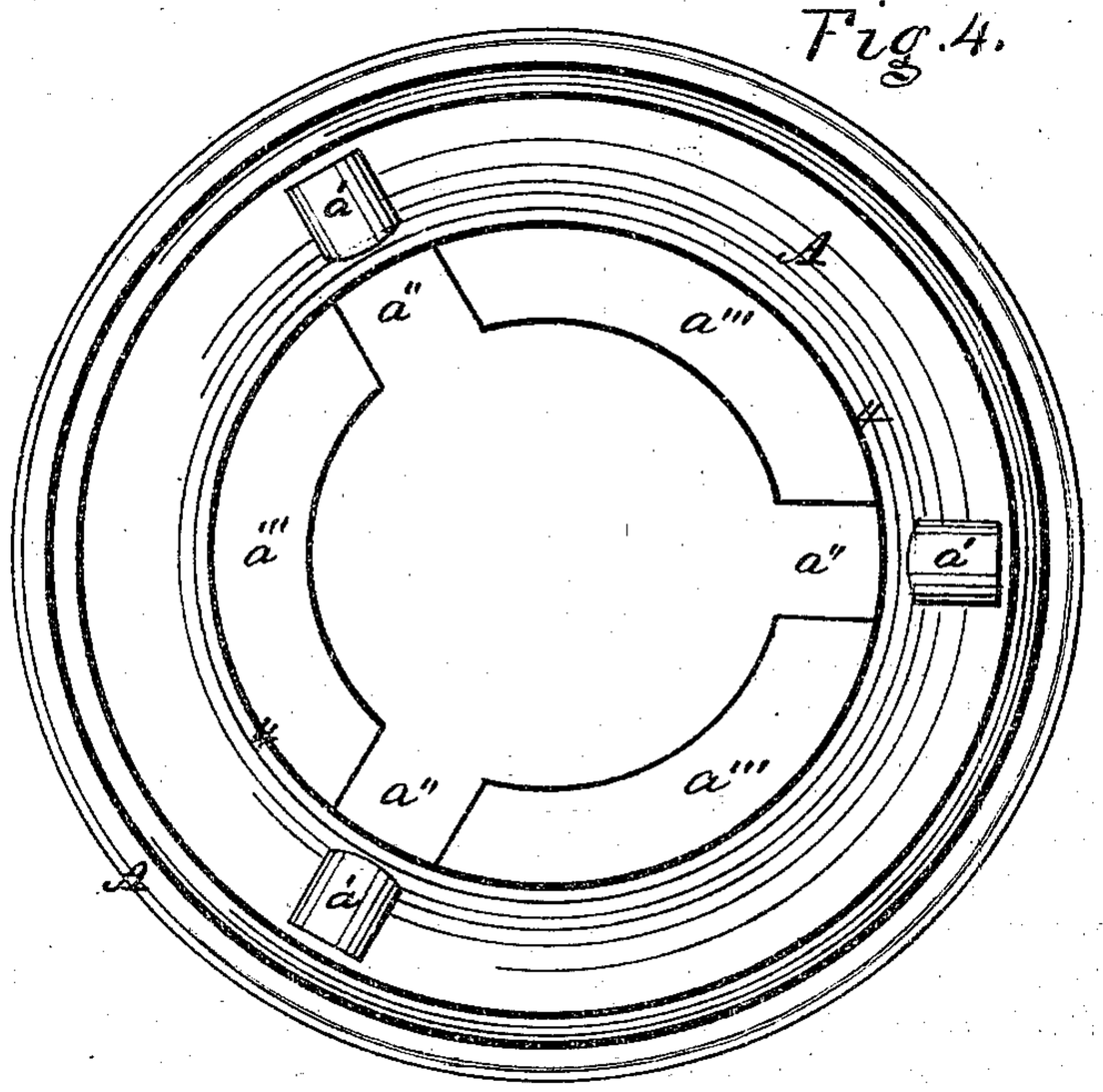


Fig. 4.



WITNESSES:

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INVENTOR:

Samuel Smith

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

SAMUEL SMITH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **135,449**, dated February 4, 1873.

To all whom it may concern:

Be it known that I, SAMUEL SMITH, of the city of Philadelphia, in the State of Pennsylvania, have invented certain Improvements in Heating-Stoves, of which the following is a specification:

My invention relates to the stoves for heating or warming, in which a cylindrical body of sheet metal is adjustably secured to a cast-iron base; and my invention consists in the combination of an annular plate having lugs projecting from its under side, with the inner flange which supports the fire-bricks in the cast-iron base of the stoves in common use, in such a manner that the said annular plate will clamp between it and the said inner flange of the base, a flange turned inward to a right-angle with the sides of the sheet-metal body of the stove, when the said annular plate is held firmly down by nutted screw-bolts inserted through suitable holes in the sides of the cast-iron base, into the lugs (of the annular plate) which pass down through the flange on the inner side of the base, the object of this part of my invention being to dispense with the ornamented external ring heretofore used and permanently fixed to the lower end of sheet-metal body, (an instance of which is shown in the patent granted to me, No. 55,728, dated June 19, 1866,) for the purpose of affording a better means of attaching the said body to the base, and thus lessening the original cost and facilitating the operation of connecting the two parts together in first setting up the stove for the market, and subsequently, should any of the lugs or other fastening portions be accidentally broken off, because the cost of my present inner "annular plate" is much less, and also much more readily attached and detached at any time. Another part of my invention consists in the combination of the supporting-arm of the grate of the stove (when the said grate is intended to be oscillated on its center) with the said inner annular plate, the object of this part of my invention being to lessen the cost in case the said "grate-supporting arm" should become broken off at any time in use, in that the said plate and arm are cast in one piece, and is readily changeable, and therefore a new base will not be necessary as heretofore, (to restore the central support for the grate,) but only the annular plate, the cost of which will be comparatively trifling and it can be more readily applied.

Figure 1 is a vertical diametrical section of a cylindrical stove having a sheet-metal body and cast-iron base embodying my present invention. Fig. 2 is a horizontal section, showing the inwardly-turned flange of the lower end of the sheet-iron body. Fig. 3 is a plan view of the under side of the annular clamping-plate and its arm for supporting the usual oscillatory grate. Fig. 4 is a plan view, showing the upper side of the cast-iron base with its recesses for the lugs of the annular plate, and its bosses for the reception of the fastening-screw bolts.

The base A is cast in any of the ornamental forms that may be desired, with bosses a' a' a' on its exterior surface for the reception, in horizontal holes through them, respectively, of the screw-bolts B, and also with a recess, a'', (corresponding with each of the bosses a' in position,) made in the flange a''', which heretofore supported the fire-bricks directly up on its upper surface. The annular plate C with its lugs c' c' c' and the grate-supporting arm c'' are all cast in one piece, and so as to fit loosely upon the flange a''' of the base A with the said lugs projecting down through the recesses a'' a'' a'' sufficiently far to allow the screw-bolts B to pass freely through a hole made for the purpose in each. The lower end of the sheet-metal body D is bent or flanged inward, d' d' d', leaving recesses d'' d'' d'' corresponding in positions with the recesses a'' a'' a'' in the flange a''' of the base A, the exterior diameter of the said sheet-metal body D being such as to easily allow it to fit accurately down upon the flange a''' within the molding-bead 4 of the top of the base A.

In adjusting and securing firmly together the several parts, the flanged end of the body D is placed on the flange a''' of the base A with its recesses d'' d'' d'' directly over the recesses a'' a'' a'', respectively, of the base; the annular plate C is then placed upon the flange d' of the body D with its lugs c' c' c' projecting down through the respective recesses d'' of the body and a'' of the base; the screw-bolts B are then inserted through the respective holes in the bosses a' of the base, and the holes in the lugs c' of the annular plate, and

a screw-nut applied and screwed up firmly against the several lugs, thus firmly securing the base A and body D together.

It will be readily seen that, by the described mode of adjustably securing the sheet-metal body and cast-iron base of the stove together by means of the clamping annular plate C with its arm c'' for supporting the grate, the usual exterior ornamental ring heretofore used is dispensed with; that the original cost of the said plate C is much less than said exterior ring, and greatly facilitates the operation of securing the body and base of the stove together in the first place, and in repairing afterward, should the grate-supporting arm c'' or any one of the lugs c' become accidentally broken off; while the cost of the plate C with its lugs and arm will be much less than the old exterior ornamental ring for securing the body and base of the stove together.

I claim as my invention—

1. The annular plate C with its lugs c' and nutted screw-bolts B or their equivalent fastenings, in combination with the flange a''' of the base A for the purpose of adjustably securing the sheet-metal body D to the cast-iron base A of a stove, substantially in the manner and for the objects hereinbefore set forth.

2. In combination with the annular plate C the grate-supporting arm c'', substantially as and for the purpose hereinbefore described and set forth.

SAMUEL SMITH.

Witnesses:
BENJ. MORISON,
WM. H. MORISON.