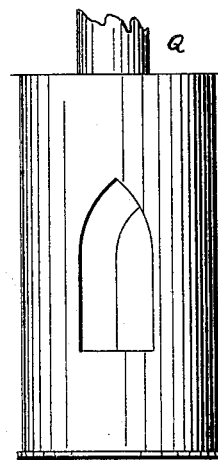
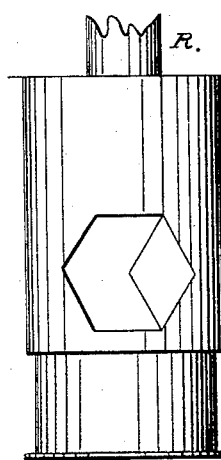
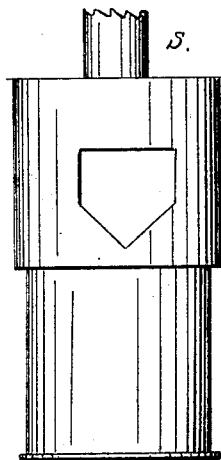
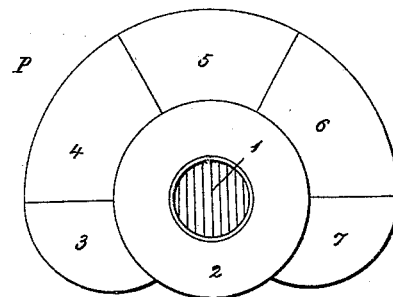
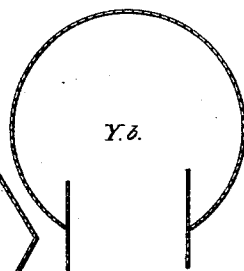
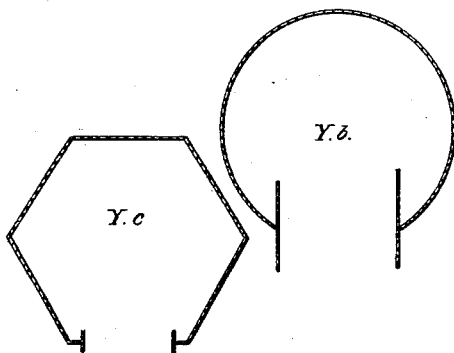
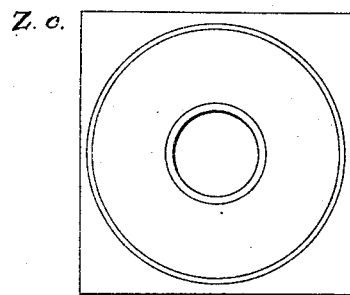
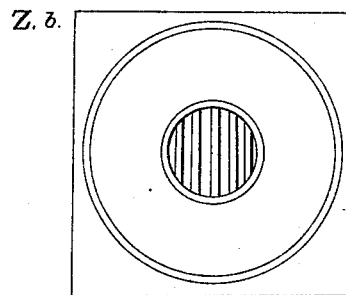


T. M. JONES.  
Heating Stove.

2 Sheets—Sheet 1.

No. 2,218.

Patented Aug. 11, 1841.

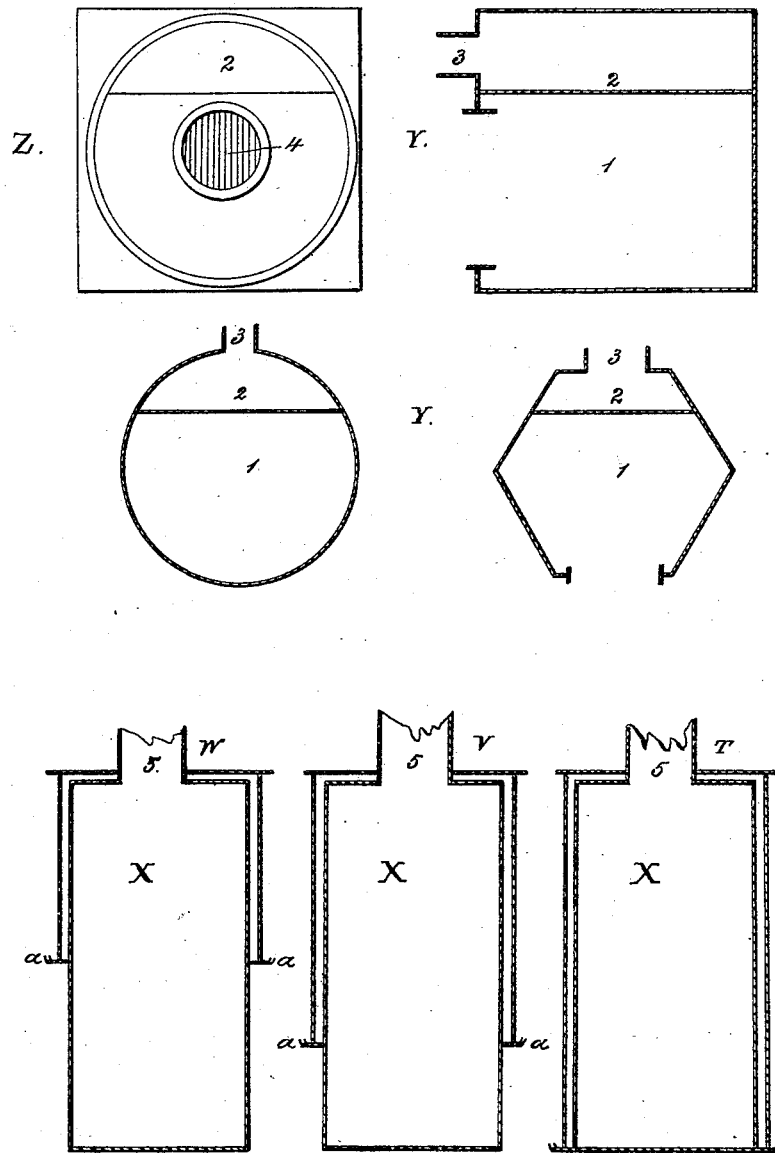


T. M. JONES.

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Patented Aug. 11, 1841.



# UNITED STATES PATENT OFFICE.

THOMAS M. JONES, OF BOSTON, MASSACHUSETTS.

## AIR-TIGHT STOVE.

Specification of Letters Patent No. 2,218, dated August 11, 1841.

*To all whom it may concern:*

Be it known that I, THOMAS MORTON JONES, of the city of Boston and State of Massachusetts, have invented new and useful Improvements in Stoves; and I do hereby declare that the following is a full and exact description.

The part of the stove which contains the fuel may be made of metal or of refractory stone or fire clay. The form of the lower part of it may be varied at pleasure so that care be taken to adjust it accurately to the stand which supports it but as the cylindrical form is one of the most convenient and useful I proceed to describe my improvements on stoves of that shape from which description stoves which have any other shape required may *mutatis mutandis* be readily understood and manufactured.

A model of my stove is deposited at the Patent Office. It is made of sheet iron tinned and any one skilled in the art of working in iron or tin may by using the same materials and increasing the dimensions of the model make a cheap working stove containing the improvements which I claim and which I proceed to describe.

Figure X is a vertical section through the center of the vessel containing the fuel and having a pipe in its top to carry off the gases of combustion. The bottom of the vessel must be adjusted on the stand over the fire bars. Zb is a plan of the stand with fire bars in the middle of it. In the side of the vessel an aperture is made varying in its size and shape according to the greater or less surface of fuel that it may be wished to expose occasionally to the open air and to see during its combustion. Around this vessel and under the aperture there is a ring or bracket fastened. Upon the inner vessel is placed a covering having any suitable plane or curve surface or forming if preferred a section of such surface which covering in order to avoid unnecessary repetitions I shall describe as a circular case open at the bottom whose lower edge rests in the ring or bracket and whose top may be of any desired shape and pierced so as to pass over the pipe 5 which is in the top of the inner vessel X. In the side of this outermost case an aperture should be made suitable in size and shape to the aperture in the side of the inner vessel and so that it may be placed when wanted exactly opposite to it. The aperture in the side of the outermost case may be

ornamented by varying its outline in any way or by covering portions of it with open fancy work.

Fig. W is a vertical section of the outer covering having half the height of the inner vessel X and resting upon the ring or bracket a, a. Figure V is a vertical section of the outer covering having three fourths of the height or length of the inner vessel X and resting upon the ring or bracket a, a.

Fig. T is a vertical section of the outer covering having as great height or length as the inner vessel X. From the inspection of Figs. W V and T which are vertical sections and S R and Q which are perspective drawings of the external appearance of the stoves of which W V and T are vertical sections through the center it will be at once obvious that the length or height of the outer covering as well as the form and size of the aperture may be made like its external appearance to vary according to the taste of those who may construct the stove. In Fig. S the external and internal apertures are entirely open—in R the external hexagonal aperture partly covers the internal one and in Q a higher inner aperture of another form is also represented as partly closed. A third or fourth partial or entire covering or any greater number may be inter or super posed and may be passed or not over the pipe 5 at the top of the internal vessel X with or without a ring or bracket to support the bottom edge but for ordinary purposes one inner and one outer vessel will be sufficient without interposing a third plane or curve surface. As the distance between the inner vessel X and the outer covering may be modified at pleasure the outer one may if wanted be made of glass or china or of metallic and other substances with their surfaces highly japanned or enameled in one or more colors.

Cylinders placed within each other and resting on a grooved bottom plate or box so that the innermost may serve as a chamber of combustion and for the escape of the products thereof I do not claim, nor do I claim the admission of external air by a tube regulated by a valve beneath the fire chamber with a contrivance for regulating the supply of hot air by means of openings in the external cylinder to be closed at pleasure by means of an inner cylinder or sliding plate. The difference between my stoves and those of the common construction is that

mine are not cylinders and could not be made to act if they were cylinders; they have no tube regulated by a valve beneath the fire chamber for the admission of external air and no contrivance for regulating the supply of hot air by means of openings in the external cylinder to be closed at pleasure by means of an inner cylinder or sliding plate. When my stoves are of a cylindrical form which as before stated is one of the most convenient and useful care must be taken not to allow the side or height of the cylinder to be unbroken and continuous, for unless an aperture be made in the side of the vessel which contains the fuel and a corresponding aperture made in the side of the revolving cases which covers the stationary case containing the fuel my stoves could not be made to act. The stoves must not be cylinders nor hollow prisms of uniform and continuous sides. Whatever be their form their sides must be broken or interrupted as my stoves can receive their charge of fuel only through those lateral apertures. Tubes regulated by a valve beneath the fire chamber for the admission of external air are not required in constructing my stoves which are supplied with air from below the fire bars in the usual manner and which may have the due supply of air regulated by any of the dampers above or below the fire bars commonly employed in stoves for that purpose. No contrivance for regulating the supply of hot air by means of openings in the external cylinder or any other means is necessary in constructing my stoves nor as already stated is any claimed. What I claim as my invention is—

A stove without doors having an internal vessel with a lateral opening for the admission of fuel connected with a movable or revolving external cage that covers the whole or any required portion of the internal vessel, which external case has a lateral aperture corresponding to that of the inner vessel and is so adjustable that as it revolves more or less it may shut off either the whole or none or any part of the lateral opening of the internal vessel.

I now beg leave to add some details and recommendations respecting the stoves which though not necessary to any one skilled in the art of stove making may be useful to others. Where grooves are used in the bottom plate they should be about

an inch deep and it will be found convenient to make the fire bars movable. Z<sup>b</sup> is a grooved bottom plate with the fire bars in its center and Z<sup>c</sup> is a drawing of a similar bottom plate in which the fire bars are removed. By making the fire bars movable the facility of clearing the stoves is much increased though the same effect might be produced if it be wished to have the fire bars stationary by making small holes in the lower part of the sides of the vessel containing the fuel and by various other ways too obvious to need further description. The bottom plate may rest upon two or more common bricks or if preferred upon a hollow box of any desired form, circular as shown in plan Y<sup>b</sup> or hexagonal as shown in plan Y<sup>c</sup>. An ascending smoke flue will be found more desirable than a descending flue but if a descending flue be preferred and hollow boxes be used to support the bottom plate the plate if square may be left open at 2 as shown in plan Z in which the fire bars are numbered 4. Y are plans of square circular and hexagonal hollow boxes in which 1 shows the place under the fire bars divided off from 2 the smoke passage leading to 3 the escape pipe into the chimney. If the stoves be used for culinary purposes the form of the bottom plate may be varied ad infinitum according to the taste or caprice of others. Bars divided like the drawing P will be found to answer sufficiently well for all ordinary purposes.

Drawing S shows a stove in which the pentagonal apertures of the external case and inner chamber are both uncovered. Through these apertures the stove is charged with fuel; they are left open when a slow combustion is required; shut completely when intense heat is wanted and closed more or less according to the rapidity with which it is wished to consume the fuel. When the apertures are hexagonal and of about eight inches diameter in stoves of two feet high and 12 or 14 inches wide it will be found in practice that a very steady combustion will be maintained if the hexagonal apertures be closed over each other so as to have the diamond opening shown in the drawing of a stove marked R.

T. MORTON JONES.

Witnesses:

JABEZ MORRIS,  
WM. R. PALMER.