

(No Model.)

W. McK. BURNS.

HEATING DRUM.

No. 385,499.

Patented July 3, 1888.

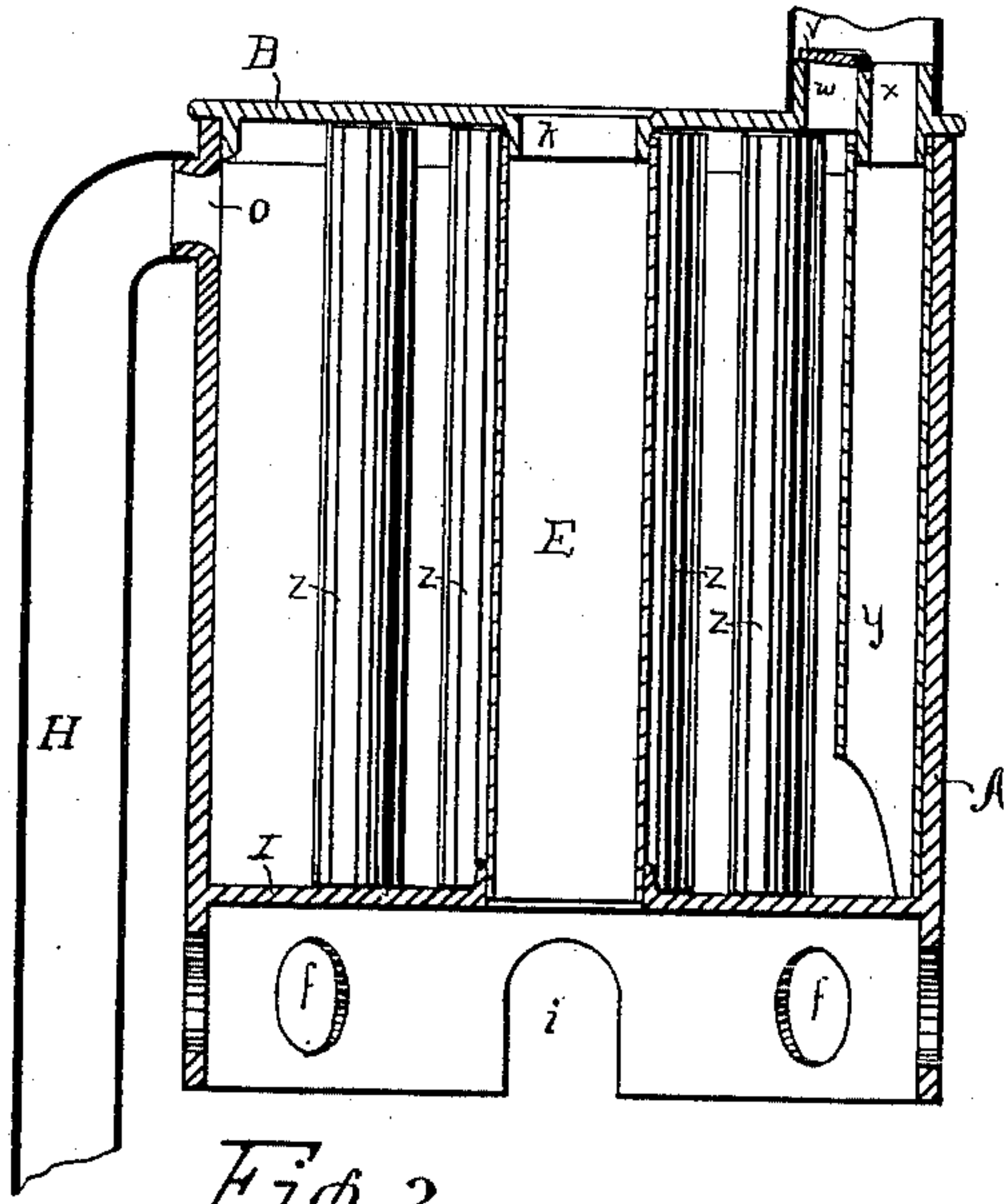


Fig. 2.

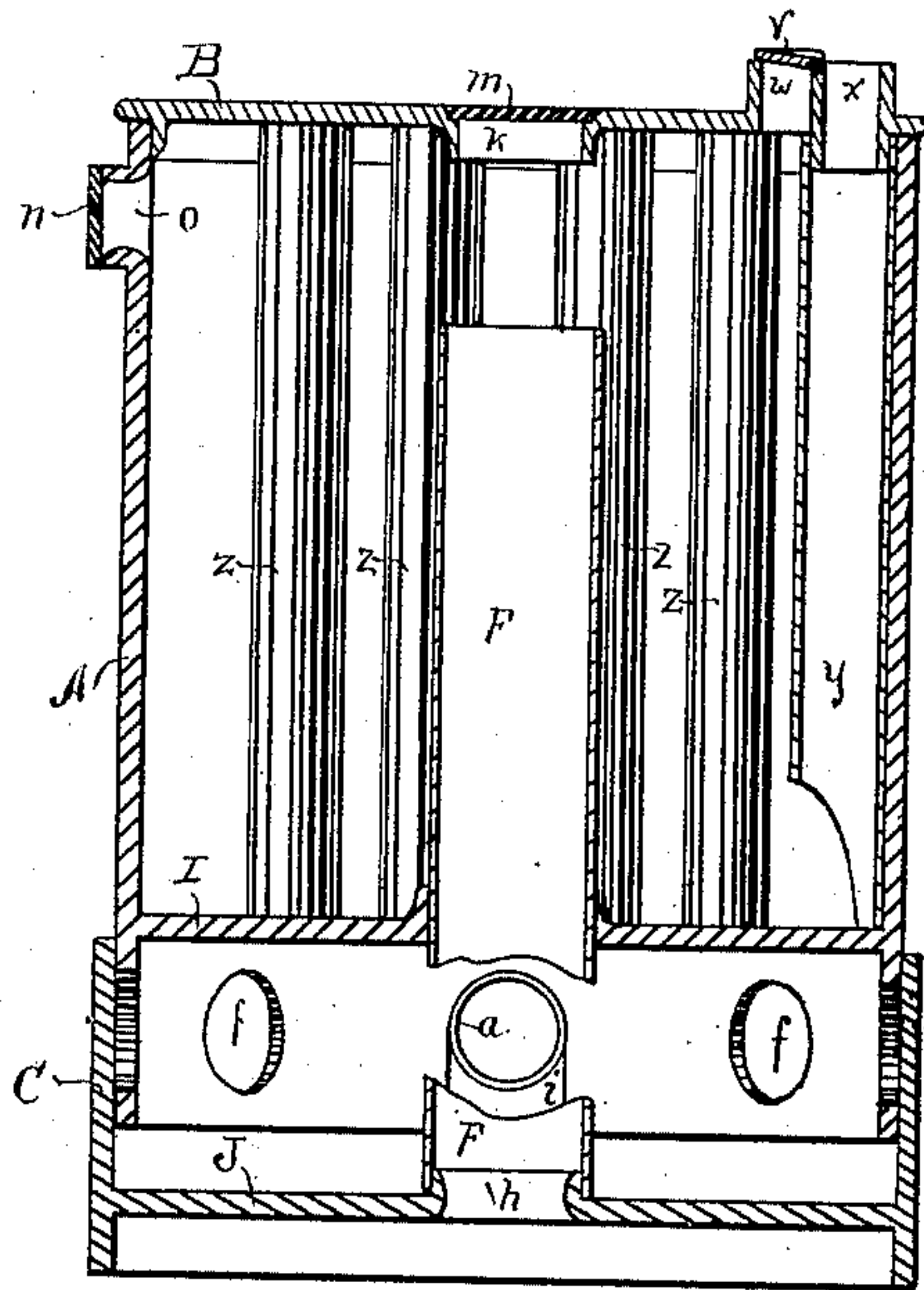


Fig. 3.

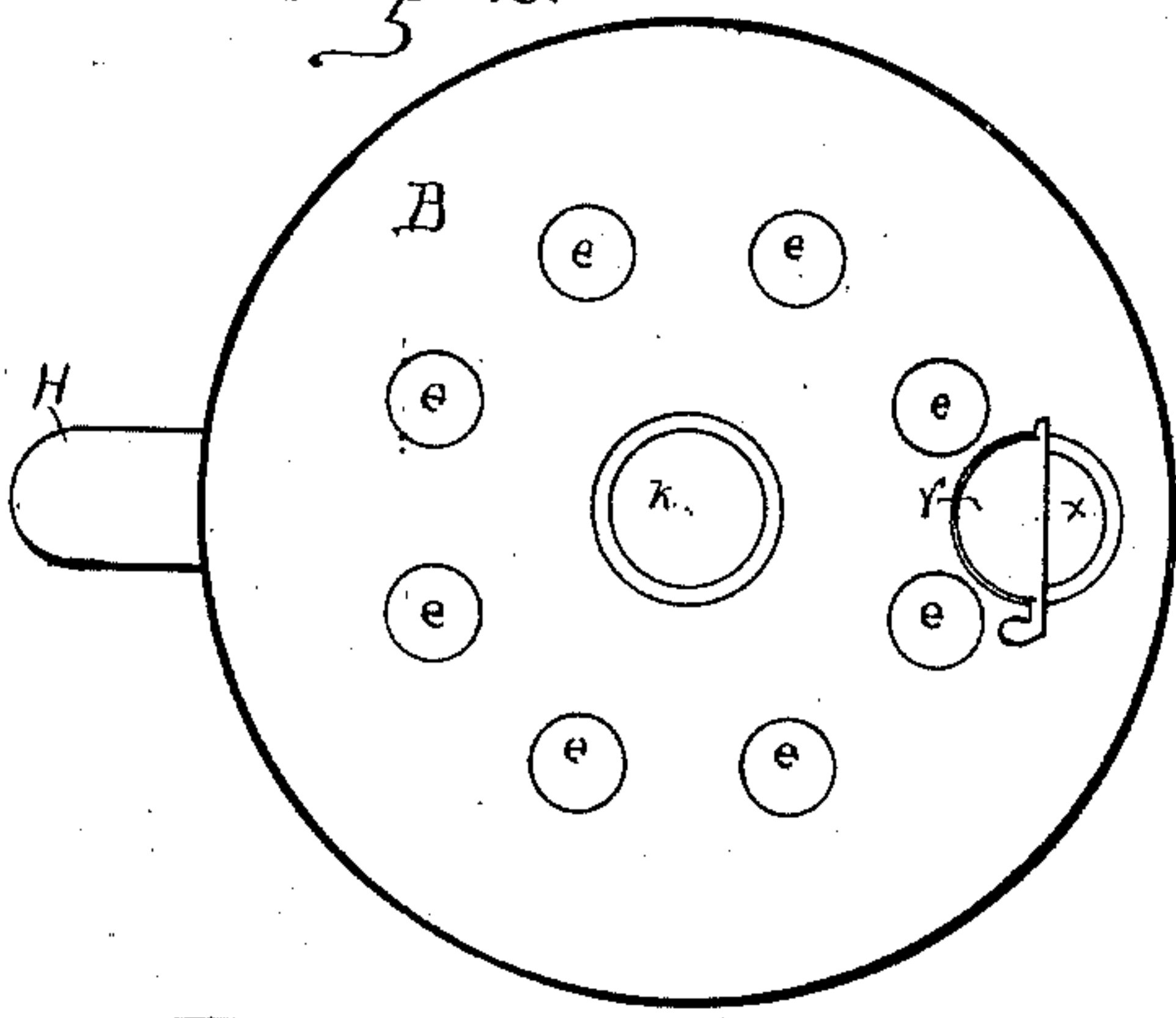


Fig. 1.

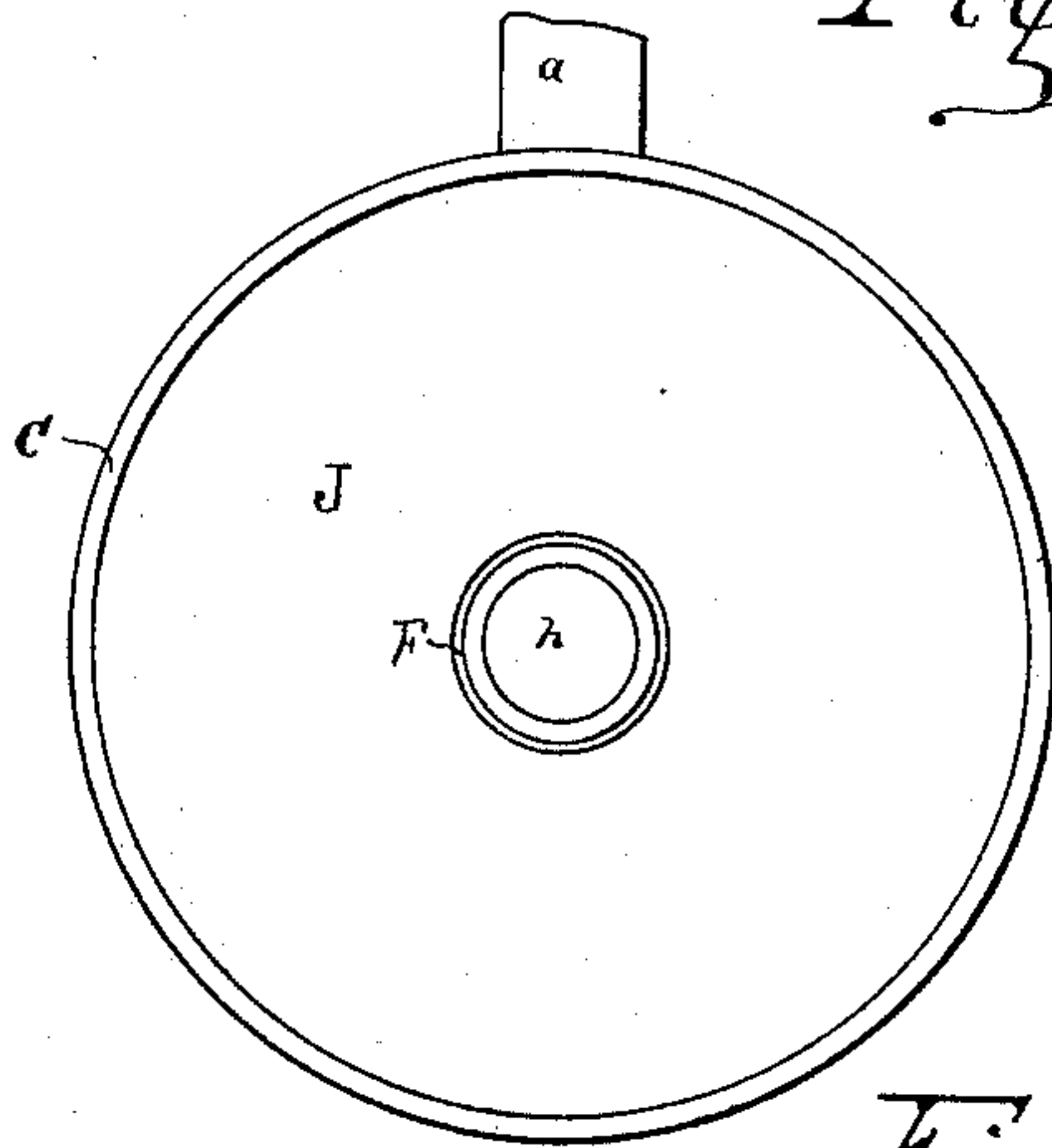


Fig. 4.

Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM MCK. BURNS, OF MILTONVALE, KANSAS.

## HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 385,499, dated July 3, 1888.

Application filed July 30, 1887. Serial No. 245,673. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MCK. BURNS, a citizen of the United States, residing at Miltonvale, in the county of Cloud and State of Kansas, have invented certain new and useful Improvements in Heating-Drums; 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, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to heating-drums in which hot-air tubes are so placed as to present the greatest surface to the heat, and providing for the admission of fresh air to said tubes and through the same into the room to be heated.

The objects of my improvements are to so construct a heating-drum as that it shall readily diffuse heat, greatly economize fuel, and be readily convertible for use either on top or alongside of a stove or as a separate heater, by being placed in the room above and connected with the stove below. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top plan of my invention; Fig. 2, a vertical section through Fig. 1 when used as a heater; Fig. 3, a vertical section showing construction when used as a drum on top of a stove, and Fig. 4 a top plan of the cover to be placed on top of the stove.

Similar letters refer to similar parts throughout the several views.

The drum A has cap B, bottom I, internal heating-tubes, Z Z and E, hole o, with cover n, flue y, with divisions w and x, and damper v. Said cap B has flanged holes e e and K, the hole K being closed by a lid, m, when the device is used on a stove. The circumference of said drum A is extended below the bottom I and forms an air-chamber, which has openings f f and i, through which the outside air is admitted to said chamber and thence to said tubes Z Z and E.

If it be desired to introduce the fresh air from without the house, one end of the air-tube a is inserted at the opening i and the other end extended to the locality from which

the fresh air is to be taken. It will be noticed that the opening i is a slot extending to and through the lower extremity of the drum A, and shaped at the top to fit the air-tube a, thus allowing the drum to be freely removed from or returned to its place without disturbing said tube a.

When used as a heater and not resting on the stove, the cover n is removed and the smoke-pipe H from the stove is attached to the drum A at o, so the smoke and heat enter said drum through the hole o and circulate freely about said hot-air tubes Z Z and E, thus heating the air as it passes through said tubes. The flue y, which connects with a smoke-pipe and thence with the chimney through the division x, extends to the bottom of said drum A, and an opening being made in one side of said flue at its lower end a draft is created, which draws the smoke from o through said drum and discharges it through said flue y. By turning the damper V, which is in the drawings represented as a half-circle pivoted to the casting between the divisions w and x, the division x is closed and the division w is opened, thus allowing a more direct draft across said drum, as might be found convenient or deemed necessary when first starting a fire.

For use on top of a stove, the cover J, having smoke-hole h, is made to fit closely over the top of the stove. A rim, c, on said cover J serves as a flange over or within which to place the drum A, and which may be of sufficient width to close the openings f f, and having an inverted slot, i, to close around said cold-air pipe a, as heretofore described with reference to the drum. The cover n is placed over o and the lid m over k, and the hot-air tube E is converted into the smoke-pipe F by being shoved down over the smoke-hole h, thus leaving an opening above for the smoke and heat to enter the drum A, where they circulate and pass out, as heretofore described.

For convenience of construction and putting together, the cap B, bottom I, and cover J are cast and have flanges to which to attach said tubes, pipes, and flue; but I do not wish to be confined to this mode of construction, because the whole device may be made of sheet-iron or other metal and without any or all of said flanges.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. A heating-drum having the cap B, the bottom I, inlets below the bottom, and the  
5 openings *o k*, in combination with the cap *n*, the lid *m*, and a suitable smoke-flue, as set forth.

2. The combination, with the heating-drum having internal vertical tubes and an air-chamber below the same, of the central vertically-sliding pipe or tube F and the smoke-flue *y*,  
10 arranged at one side and having an opening at its lower end for the admission of the smoke, as set forth.

15 3. The combination, with the heating-drum having the series of internal vertical heating-tubes, and an air-supply chamber below the

same, of the smoke-flue *y*, arranged at one side of the drum, and having an opening at its lower end for the admission of the smoke, and  
20 provided at its upper end with the divisions *w x*, and the damper *v*, pivoted between said divisions, and adapted to close either of them, substantially as described.

4. The combination, with a heating-drum, 25 of the cover J, having rim *c* and smoke-hole *h*, substantially as and for the purpose set forth.

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

WILLIAM McK. BURNS.

Witnesses:

C. P. BLACHLY,

W. H. NOBLES.