3 Sheets—Sheet 1.

D. C. WILMOT.

OIL-STOVE.

No. 187,574. Patented Feb. 20, 1877.

Fig. 1.

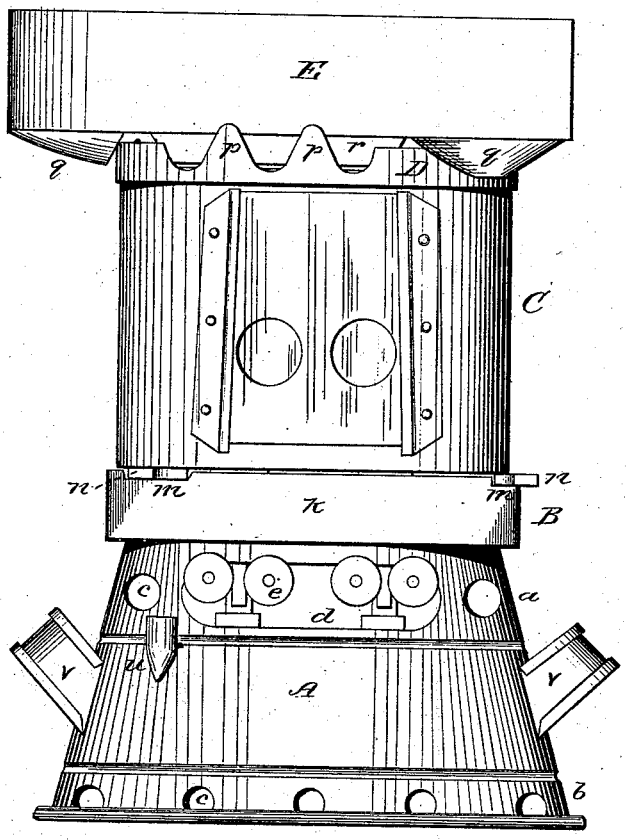
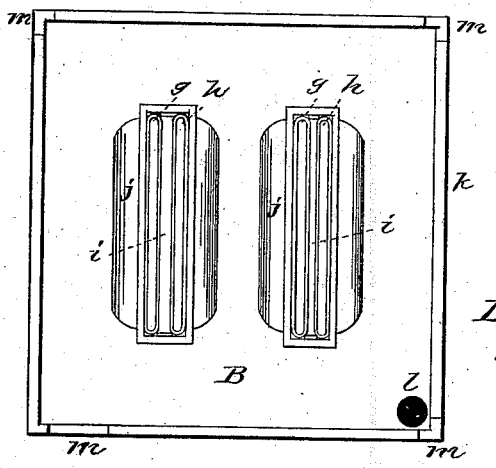


Fig. 2.



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3 Sheets—Sheet 2.

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Fig. 3

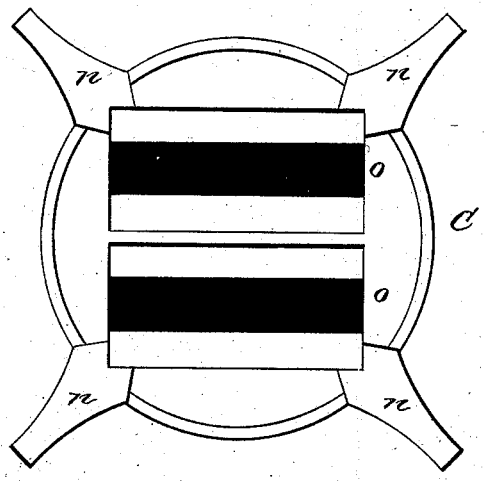


Fig. 4.

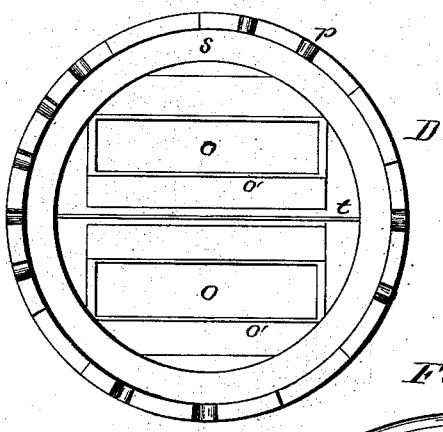


Fig. 5.

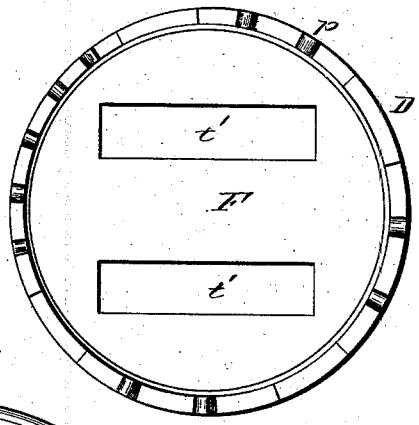
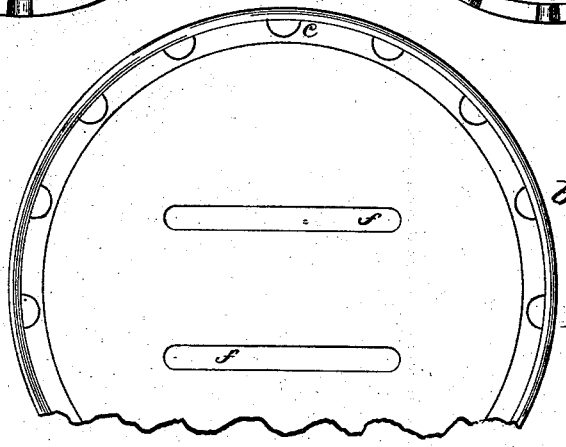


Fig. 6



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3 Sheets—Sheet 3.

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OIL-STOVE.

No. 187,574. Patented Feb. 20, 1877.

Fig. 7.

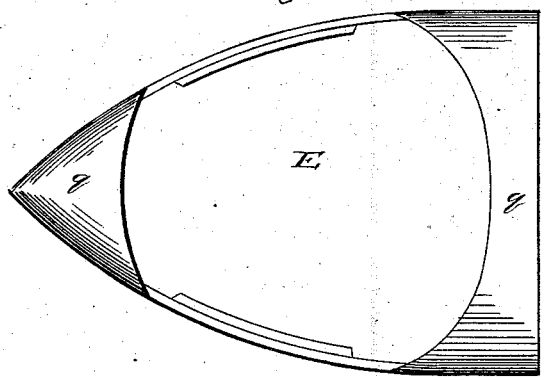
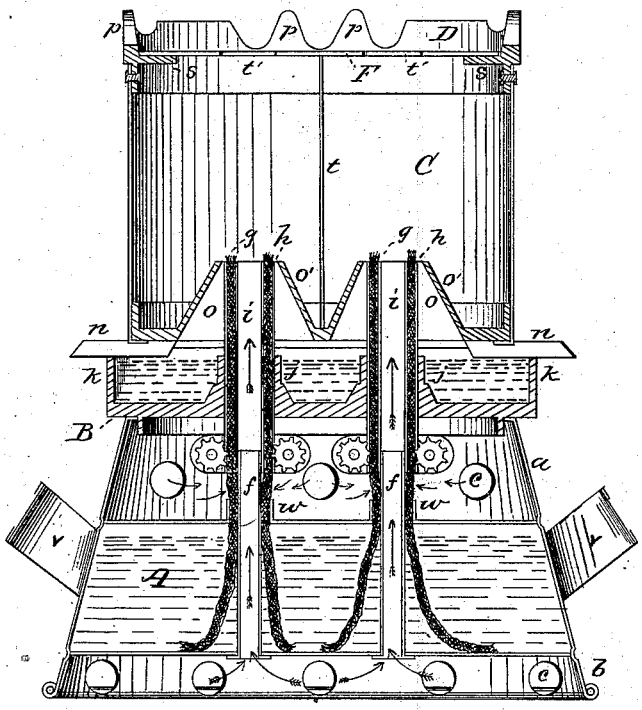


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE.

DON C. WILMOT, OF BOONE, IOWA.

IMPROVEMENT IN OIL-STOVES.

Specification forming part of Letters Patent No. **187,571**, dated February 20, 1877; application filed January 15, 1877.

To all whom it may concern:

Be it known that I, DON C. WILMOT, of Boone, in the county of Boone and State of Iowa, have invented a new and valuable Improvement in Oil-Stoves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my invention. Fig. 2 is a top-plan view of the drum-support with the wick-tubes attached. Fig. 3 is a plan view of the under side or bottom of the drum. Fig. 4 is a top-plan view of the drum. Fig. 5 is a similar view, showing the slotted disk or plate in place; and Fig. 6 is a bottom-plan view of the oil-reservoir. Fig. 7 is a bottom-plan view of the shell for heating sad-irons. Fig. 8 is a longitudinal vertical section of the stove.

This invention has relation to oil-stoves, and has for its object to furnish a stove of this character simple in its construction, convenient in use, and effective in operation, and also to insure the perfect circulation of air around and through the several parts, whereby the oil or burning-fluid used may not become overheated and dangerous, and at the same time develop great heat, the construction, arrangement, and combination of parts whereby these results are obtained being hereinafter described, and subsequently pointed out in the claims.

A represents the oil-reservoir, having the two flanges or rims *a b* projecting therefrom, said flanges having suitable openings *c*, to allow the free circulation of air, and also an elongated opening, *d*, through which pass the rods and hand-wheels *e* of the ratchets, for raising or lowering the wicks. Through the reservoir A are formed air passages or tubes *f*, to further increase the circulation of air around the wick-tubes, and to keep the oil within the reservoir cool; also, in part, for supplying air to the drum for the purpose of increasing combustion. The wick-tubes *g h* are in pairs, and arranged parallel to each other, with spaces *i* left between them, which receive the ends of the air-tubes *f*, which extend above the top of the reservoir A, thereby making a continuous and unobstructed air-passage from the bottom of the reservoir to the burners. These wick-tubes are firmly secured within castings *j*, formed upon a support, B, of any suitable form, the same having upwardly-projecting flanges, or a continuous rim, *k*, making thereby a water-receptacle, the water being drawn off through an opening, *l*, by withdrawing a stopper or plug. The water within the receptacle, as it becomes warm, will throw off a vapor, which is carried at once to the fire, and by it decomposed, developing a great degree of heat. Upon each corner of the rim *k* is a suitably-formed recess, *m*, upon and within which rest arms *n*, projecting out from the under side of the drum C, which act as insulators to prevent, to an extent, the transmission of heat from the drum to the support B. The bottom of the drum C, with the arms *n*, are cast together, and has openings *o* for the reception of the wick-tubes, and around which are formed caps *o'*, which reach nearly to the tops of the same, and the openings are of sufficient size to present an unobstructed air-space around the tubes at this point, to increase the draft, which is made to strike the foot or bottom of the blaze with considerable force, as it is all concentrated upon that point. Around the upper end of the drum C is secured a rim, D, having several curves, *p*, extending above the rim, the purpose of which is to accommodate it to a shell, E, and thereby prevent the too rapid escape of the heat. The shell E has flanges *q r*, which likewise accommodate themselves to the peculiar form of the rim D, the purpose of said shell being for the support of sad-irons when the stove is used for laundry purposes.

It will be seen that the peculiar shape of both the rim D and the shell E prevents any escape of the heat, except in an upward direction around the sides of the sad-iron, the cold air being excluded therefrom. The peculiar form of the top or rim with its shell may be adapted for heating any article having a flat under surface used in book-binding and other trades; and the main purpose of this construction of parts is to confine the draft and heat to any article placed within the shell.

The rim D is also formed with an interior

flange, *s*, upon which rests a metal plate or disk, F, the same having openings *t'*, corresponding in form to the openings *o* at the lower end of the drum, which serve to create or cause a draft. The burners are kept separate from each other by a central partition, *t*, which also serves as a support for the plate or disk F, to prevent the same, at or near its center, from becoming bent or otherwise injured.

It will be noticed that the short tubes *w* upon the top of the oil-reservoir, through which the wicks pass, do not meet or connect with the lower ends of the wick-tubes *g h;* thereby a space is left, which exposes the wicks to the current of air which passes through the openings *c* above the reservoir, thus keeping the wicks cool and preventing the heat passing down the wicks to the oil.

The reservoir A is filled through a spout, *u*, secured to the exterior of the same, thereby greatly facilitating the operation, as the reservoir may be filled with oil while the stove is in operation, and without any danger to the attendant. The reservoir is also provided with handles *v*, by which it may be conveniently transported from place to place as necessity requires.

It will be seen that every provision is made for a complete and thorough circulation of the air through all parts of the stove, and the peculiar arrangement of the burners secures a draft so direct that great heat is developed.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the reservoir A, having air-tubes *f*, with the support B and the wick-tubes *g h*, arranged in pairs, with an air-space, *i*, between them, substantially as and for the purpose set forth.

2. The combination, with the independently-removable drum C, having the horizontal legs or arms *n*, of the support B, formed with rim *k* and recesses *m*, substantially as and for the purpose set forth.

3. The support B, with flange or rim *k*, forming a receptacle for water, said support having rigidly secured thereto, by castings *j*, wick-tubes *g h*, and leaving between them air-spaces *i*, substantially as and for the purpose described.

4. The combination, with the rim D, having annular flanges *s*, of the plate or disk F, with openings *t'* and partition *t*, substantially as and for the purpose set forth.

5. The drum C, having rim D, with curves *p*, in combination with the shell E, formed with flanges *q r*, substantially as and for the purpose specified.

6. The drum C, formed with openings *o* and partition *t*, in combination with the removable plate or disk F, having openings *t'*, as and for the purpose set forth.

7. An oil-stove consisting of the reservoir A, with flanges *a b*, openings *c*, tubes *f*, support B, with wick-tubes *g h* and air-spaces *i*, and the drum C, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DON C. WILMOT.

Witnesses:
G. S. RHOADS,
A. R. EVERETT.