

(No Model.)

2 Sheets—Sheet 1.

W. L. CORT.  
GAS STOVE.

No. 464,295.

Patented Dec. 1, 1891.

Fig 1

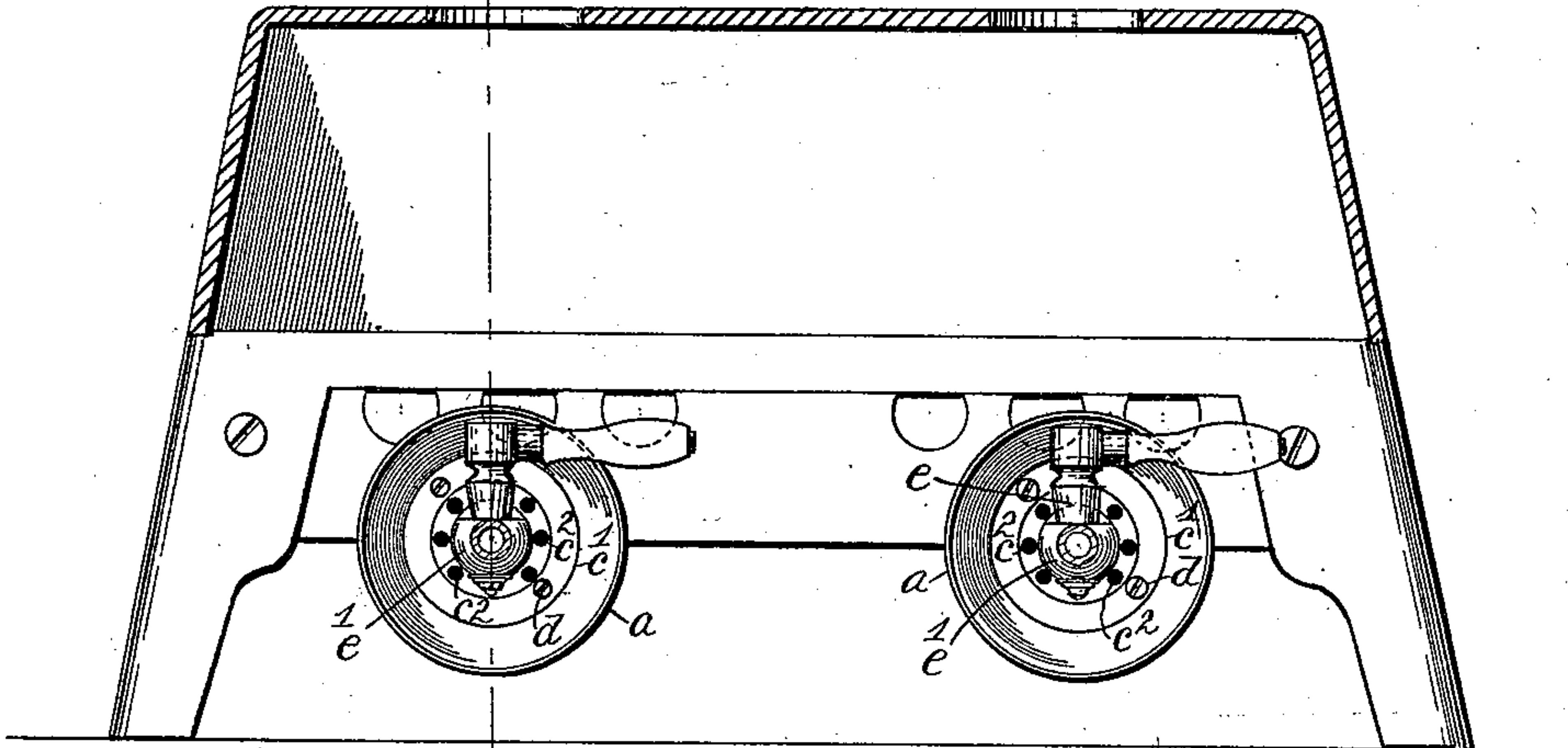


Fig 2

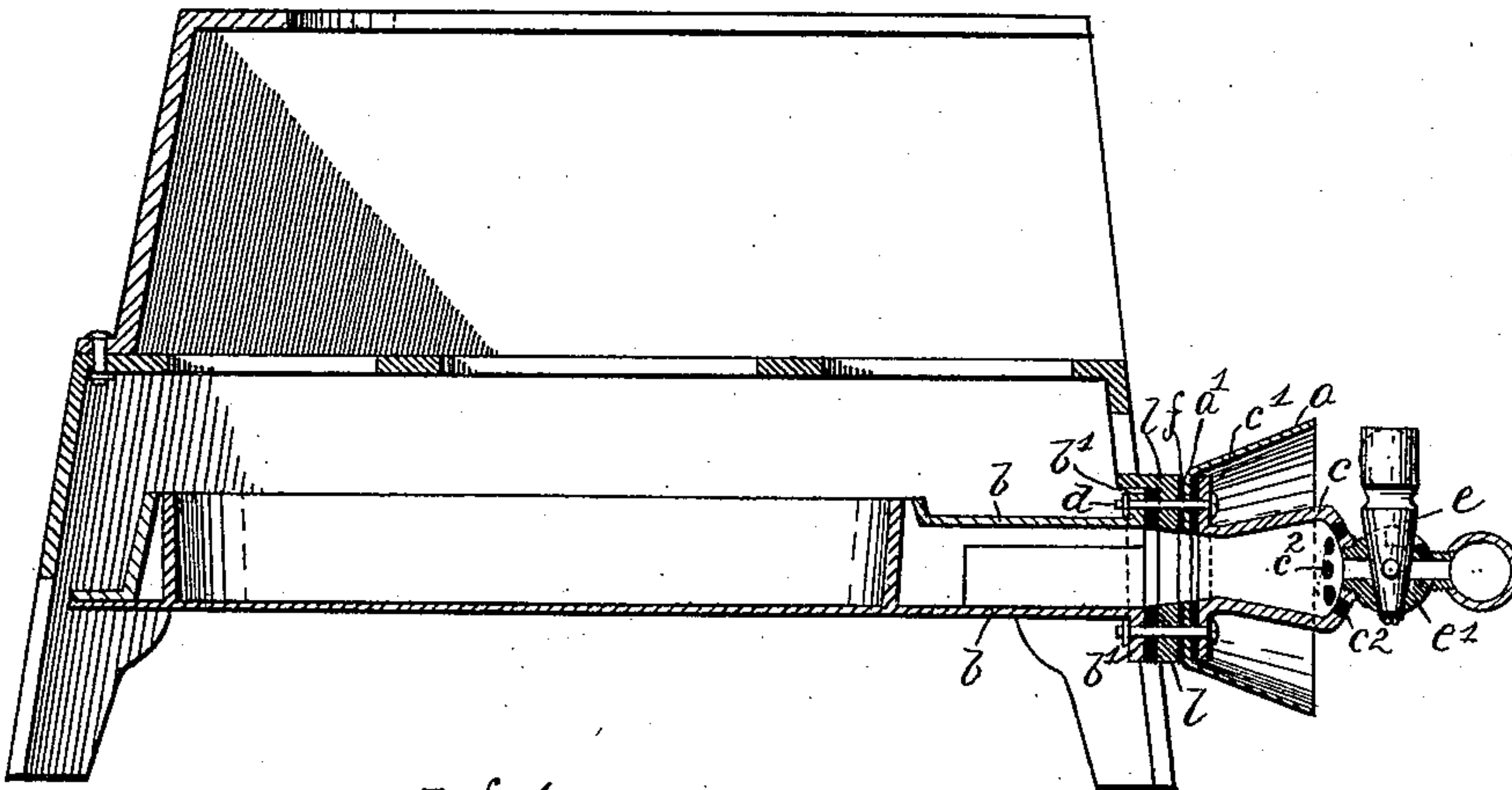
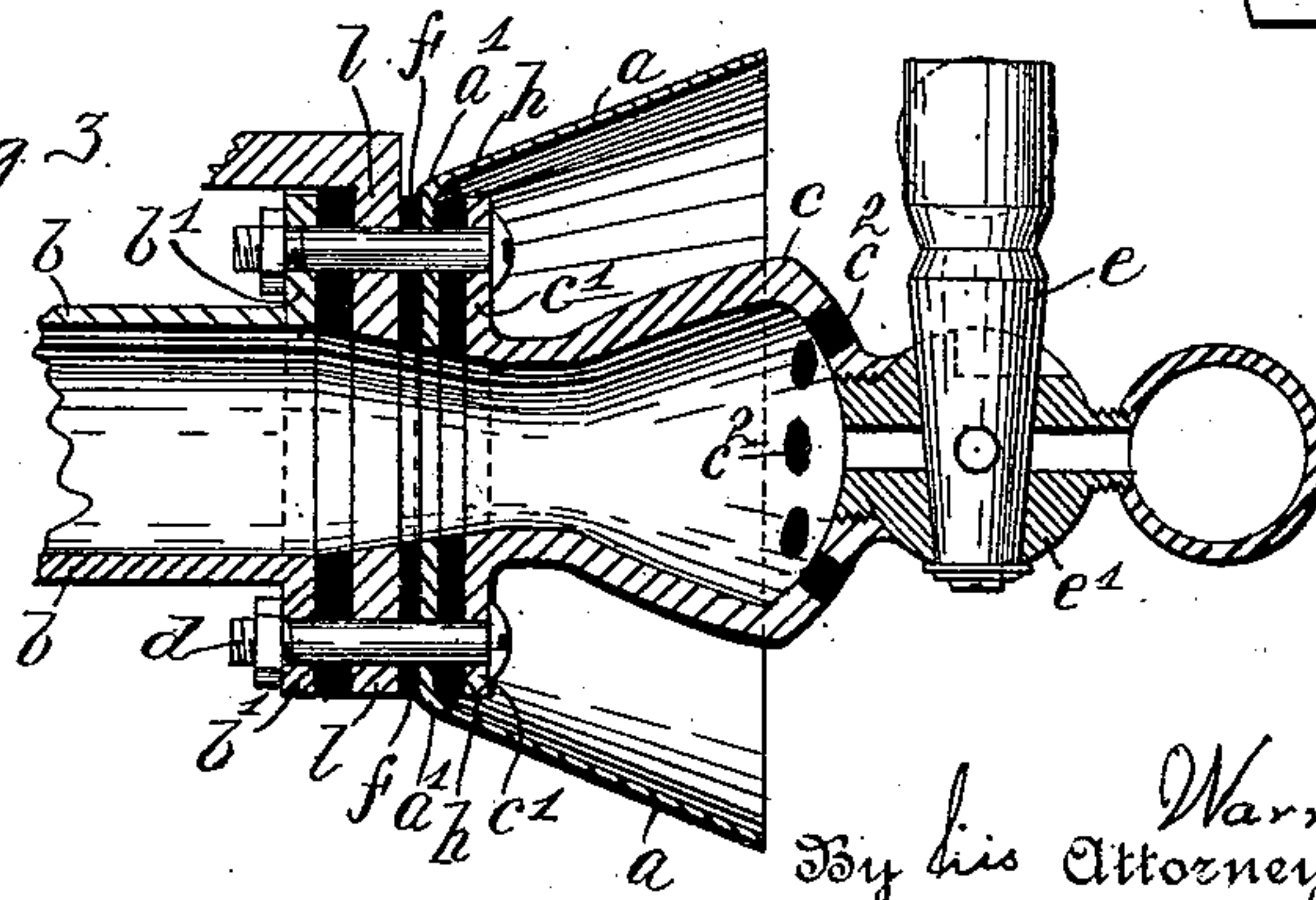


Fig 3



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By his Attorneys  
*Gifford & Saw.*

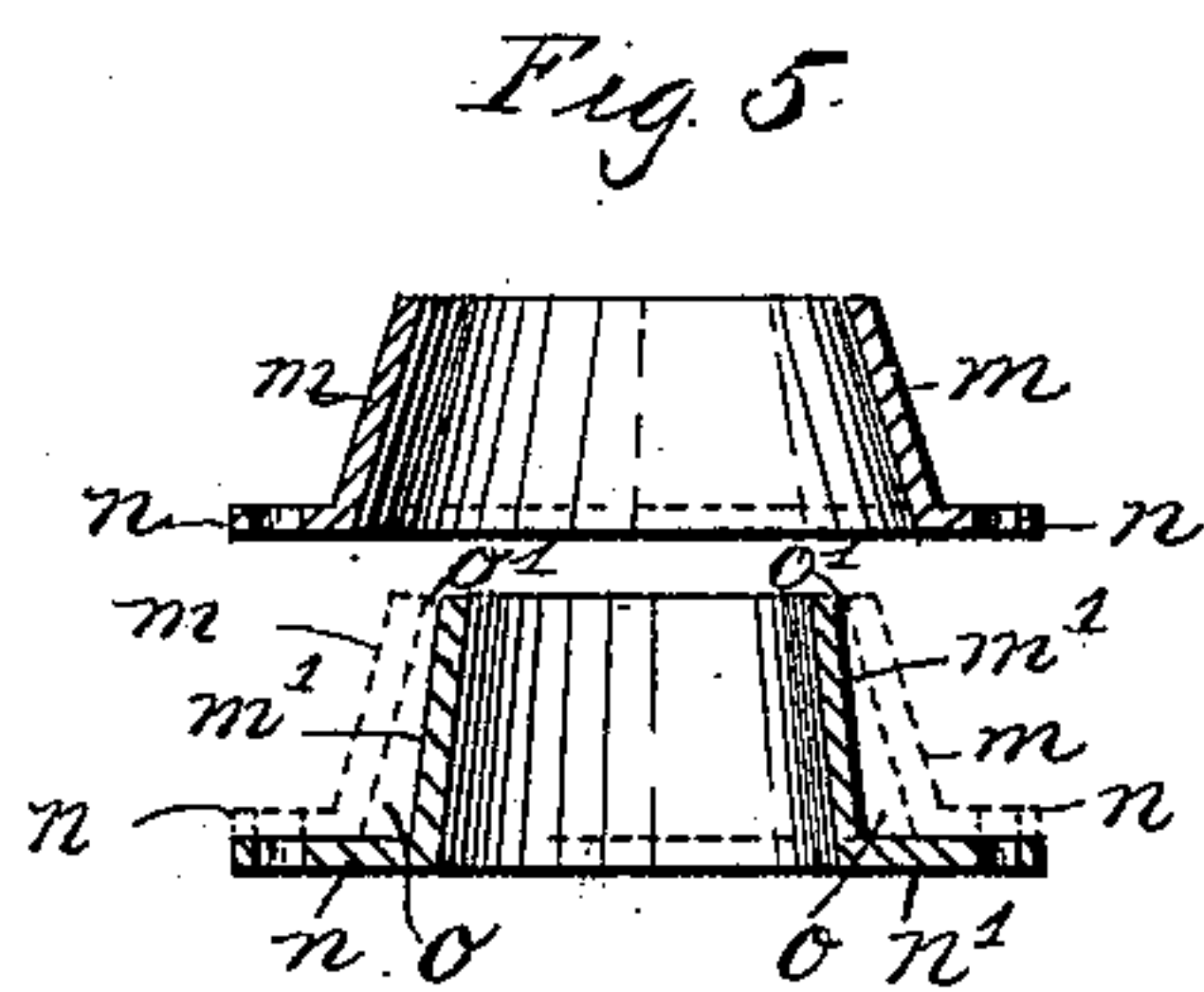
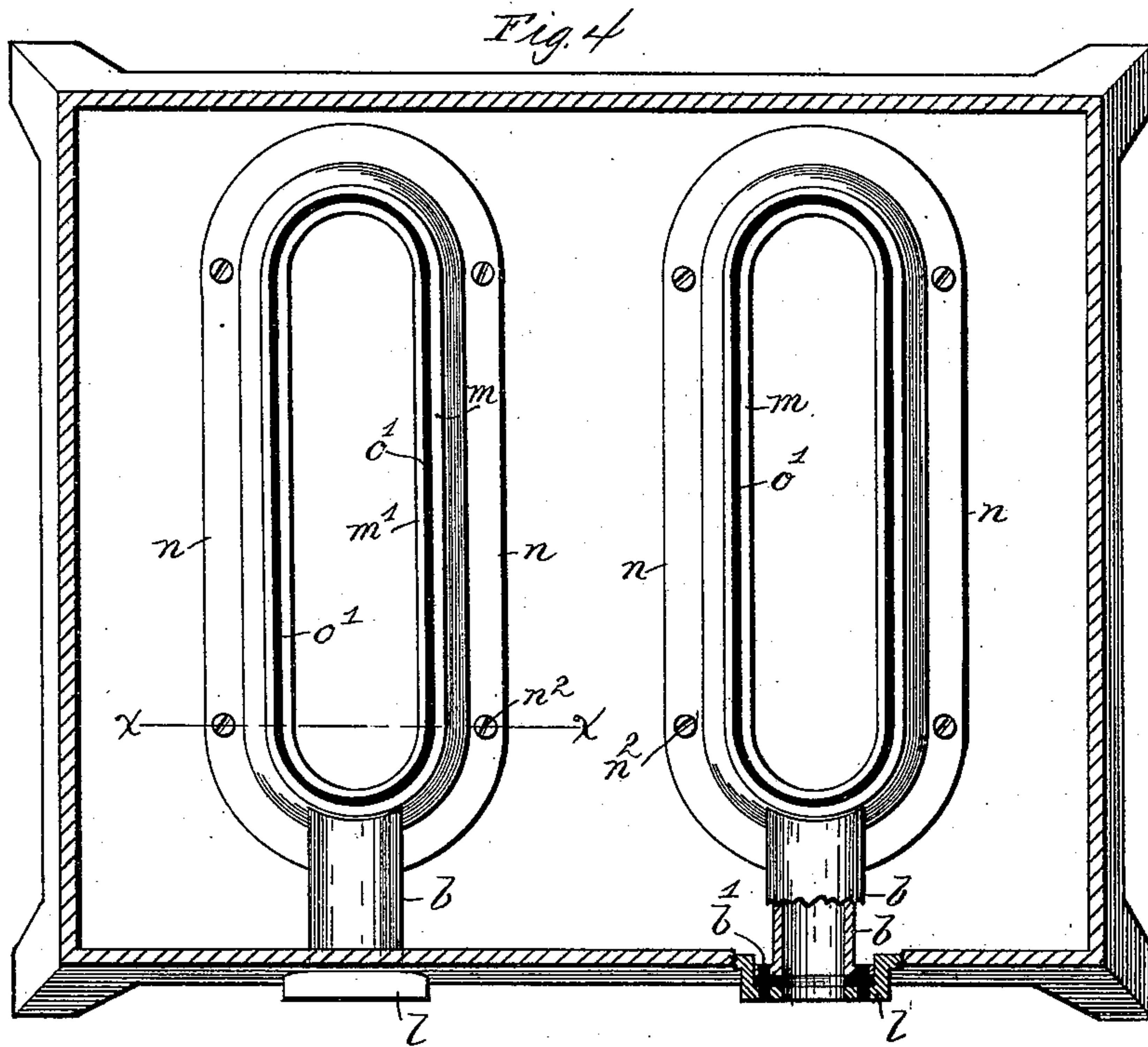
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# UNITED STATES PATENT OFFICE.

WARREN L. CORT, OF FLATBUSH, NEW YORK.

## GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 464,295, dated December 1, 1891.

Application filed July 14, 1891. Serial No. 399,506. (No model.)

*To all whom it may concern:*

Be it known that I, WARREN L. CORT, of Flatbush, Kings county, and State of New York, have invented a new and useful Improvement in Gas-Stoves, of which the following is a specification.

My invention refers more particularly to gas-stoves used for heating sad-irons, and relates to the burner of the stove and to the supply-pipe by which the gas enters the latter.

In the drawings, Figure 1. is a front elevation of the stove, showing my improvement on the same. Fig. 2 is a sectional side elevation. Fig. 3 is an enlarged sectional side view of the stop-cock and air-chamber and parts of the stove. Fig. 4 is a plan view of the lower part of the stove, showing the burners; and Fig. 5 is a sectional view of one of the burners through the line  $x x$ , Fig. 4.

Heretofore in the use of gas-stoves much trouble has been caused by the stop-cock or valve which regulates the flow of the gas, and which is situated immediately outside of the frame of the stove, becoming heated and thus expanded, thereby interfering with the perfect action of the parts and frequently causing the stop-cock to stick, so as to be turned with difficulty. As will be seen in the construction shown in the drawings, the stop-cock  $e$  and its plug-casing  $e'$  and the mixing-chamber  $c$ , in which the air and gas are mingled, are situated immediately in front and just outside of the stove, and when the latter is in operation the radiated heat from the burning gas and from the heated sad-iron, as well as the direct heat from contact with the burner, causes these parts to become very much heated. To prevent this and keep the stop-cock and its adjacent parts cool, I employ a guard or deflector  $a$ . This, as shown in the drawings, consists of a strip of metal, preferably zinc or a metal having a low heat-conducting power, which is attached to the stove so as to project outward and encircle the mixing-chamber and stop-cock, and thus prevent the rays of heat from striking these parts. In the particular construction and arrangement of the parts shown in the drawings the pipe or tube  $b$ , which communicates with the burner, is provided with a flange  $b'$ , which fits against the perforated lip or skirt  $l$  of the main frame and is bolted through to the flange

$c'$  of the mixing-chamber  $c$  on the outside of the main frame. Between the lip or skirt  $l$  of the main frame and the flange  $c'$  of the mixing-chamber is placed the flange  $a'$  of the guard or deflector  $a$  in such a manner that the main part of the deflector projects outward over the mixing-chamber and stop-cock, and the whole is secured by the bolts  $d$ , passing through the flanges  $a'$ ,  $c'$ , and  $b'$  and through the skirt or lip  $l$ . The several parts are thus securely fastened in position, so that the gas entering through the stop-cock and mingling with the air in the mixing-chamber entering through the holes  $c^2$  passes through the perforation in the skirt or lip  $l$  of the frame and thence through the pipe or tube  $b$  to the burner, and the deflector  $a$  surrounds the mixing-chamber and stop-cock and its plug-casing  $e'$  and protects the same from the heat radiated from the burning gas and also from the mass of the heated sad-iron above. To protect these parts from the direct heat of the burner transmitted by the tube or pipe  $b$ , communicating with the burner, I interpose between the lip or skirt  $l$  of the frame and the flange  $a'$  of the deflector a washer  $f$ , of asbestos or similar material, and place a similar washer  $h$  between the flanges  $a'$  of the deflector and  $c'$  of the mixing-chamber. These washers effectually prevent all heat from passing from the pipe  $b$  to the mixing-chamber and the stop-cock beyond. It may not be necessary under all circumstances to use both washers  $f$  and  $h$ ; but either one may be used singly, as desired. As will thus be seen, the deflector  $a$ , surrounding, as it does, the stop-cock and other parts and having the asbestos rings or washers  $f$  and  $h$ , effectually protects those parts from the radiated or deflected heat from the gas-flame and also from the direct heat from the burner.

I do not wish to limit myself to this particular manner of securing the deflector, as it may be connected with the stove in a variety of ways, so as to be interposed between the parts to be protected and the heat from the flame and the burner.

The burners are composed of two annular plates  $m m'$  of metal, having horizontal flanges  $n n'$  and arranged to fit over each other, so as to inclose an interior space  $o$ . The flanges  $n$  and  $n'$  are clamped or fastened together by



bolts or screws  $n^2$ , and between the two flanges is placed suitable packing, so as to form a perfectly-tight joint that will prevent the escape of the gas. The plates  $m$  and  $m'$  extend upwardly and inwardly, the outer plate  $m$  having a greater inclination than the inner plate, so that at the top the two plates approach close to each other, leaving only a narrow opening  $o'$  between them, through which the gas passes and where it is ignited. The plates are oblong in form, so that when put together they form an oblong burner, as shown in Fig. 4, having a continuous opening or orifice  $o'$ , and thus producing a continuous oblong flame, which heats every part of the sad-iron. The mingled gas and air enters the interior space  $o$  through the pipe  $b$ , as described above.

In a burner formed of annular plates, as above described, there are no overhanging parts in the interior space to interfere with the free passage of the gas; but the gas or mingled air and gas passes rapidly through the interior space and out at the top, and, moreover, by reason of the annular plates inclining toward the top a large burner-chamber is obtained, which, with the inclining sides and narrow opening, concentrates the gas at the point where it is ignited, thus intensifying the heat. Furthermore, the inclination of the plates  $m$  and  $m'$  allows of varying the size

of the orifice or opening  $o'$ , so as to regulate the size of the flame, as by increasing the distance between the flanges  $n$  and  $n'$  by the packing the opening  $o'$  may be increased at pleasure.

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What I claim is—

1. In a gas-stove, the deflector  $a$ , arranged and adapted to surround the stop-cock and its casing and connected to the frame of the stove with the washer  $f$ , substantially as described.

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2. In a gas-stove, the combination, with the main frame having an opening in the skirt or lip, of the tube  $b$ , having the flange  $b'$ , the mixing-chamber  $c$ , provided with the flange  $c'$ , and the deflector  $a$ , substantially as described.

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3. In a gas-stove, in combination, the burner formed by the annular plates  $m m'$ , having the continuous orifice  $o'$ , tube  $b$ , provided with the flange  $b'$ , bolted to the inside of the perforated lip  $l$ , mixing-chamber  $c$ , provided with flange  $c'$ , bolted to the outside of the perforated lip, stop-cock  $e$ , casing  $e'$ , and deflector  $a$ , arranged to project outward from the stove and surround the chamber  $c$  and stop-cock  $e$ , substantially as described.

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WARREN L. CORT.

Witnesses

J. E. GREER,

FRED KEMPER.