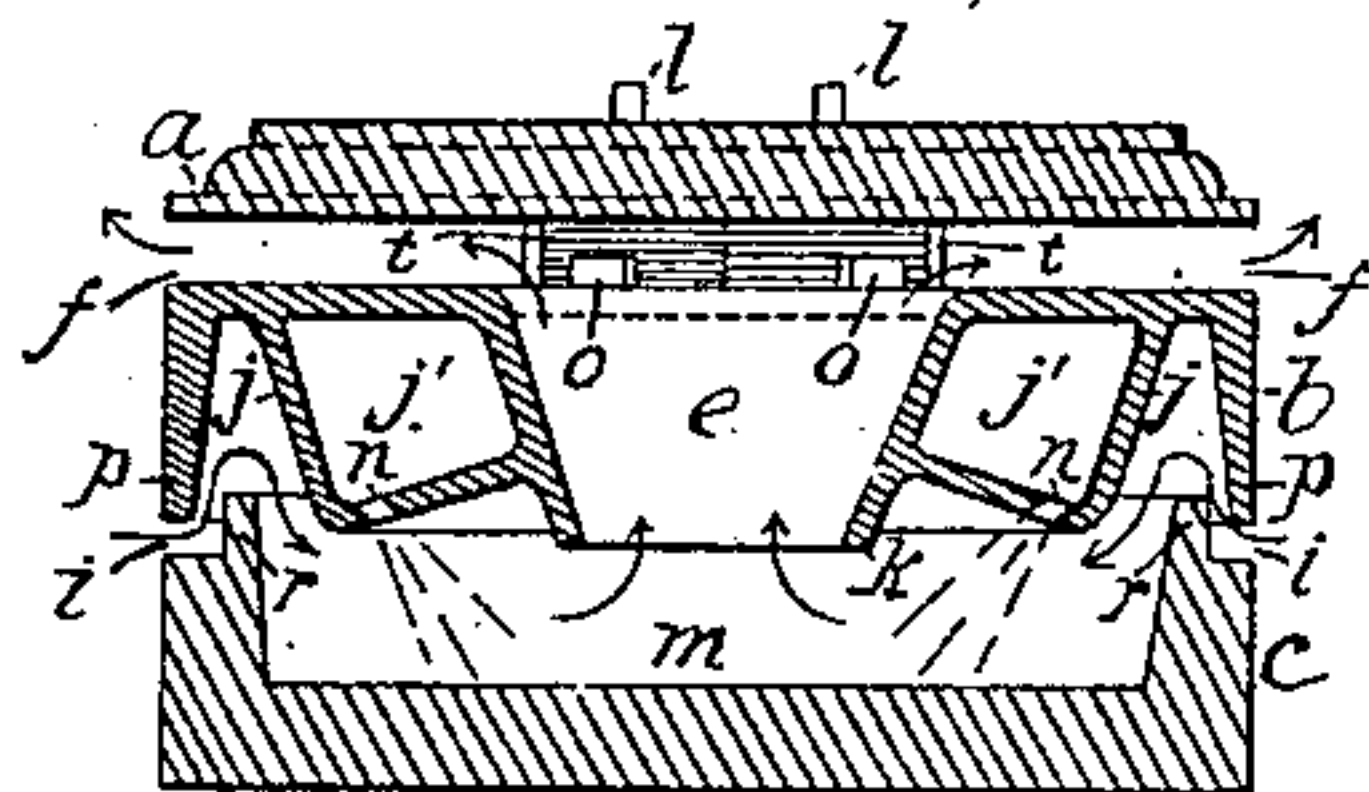
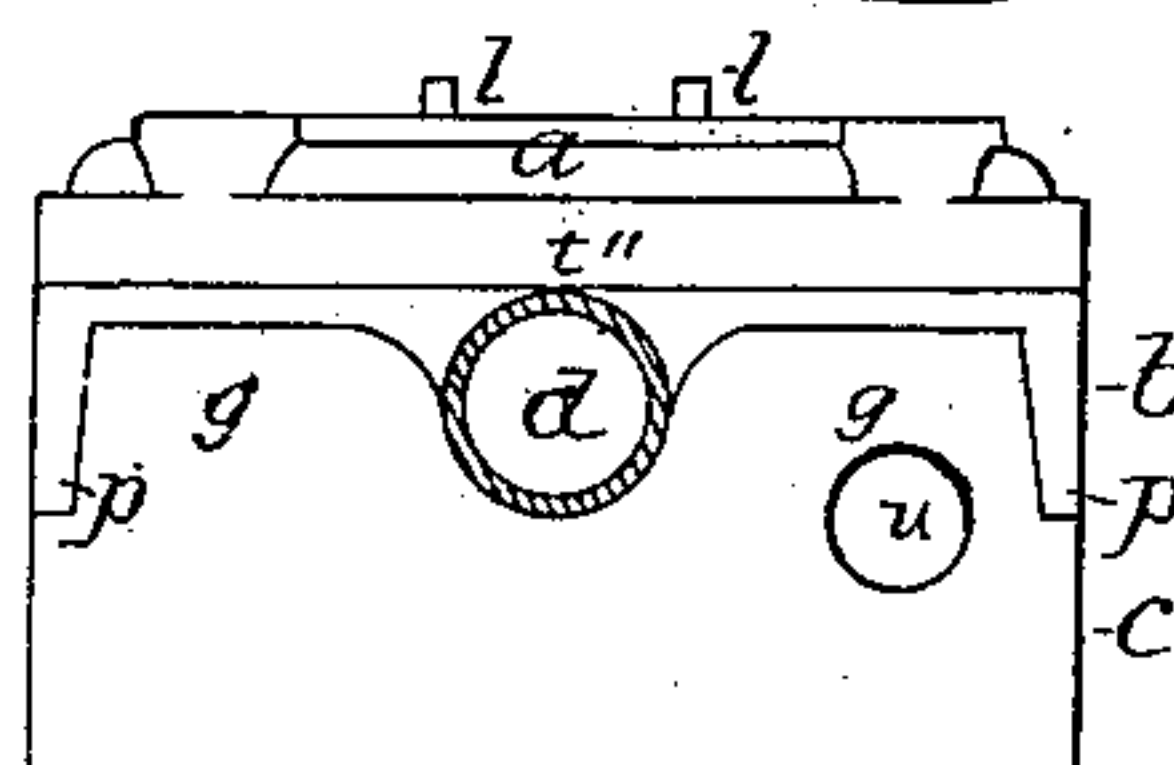
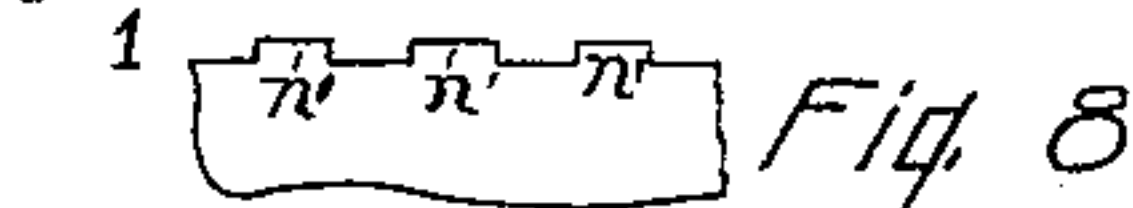
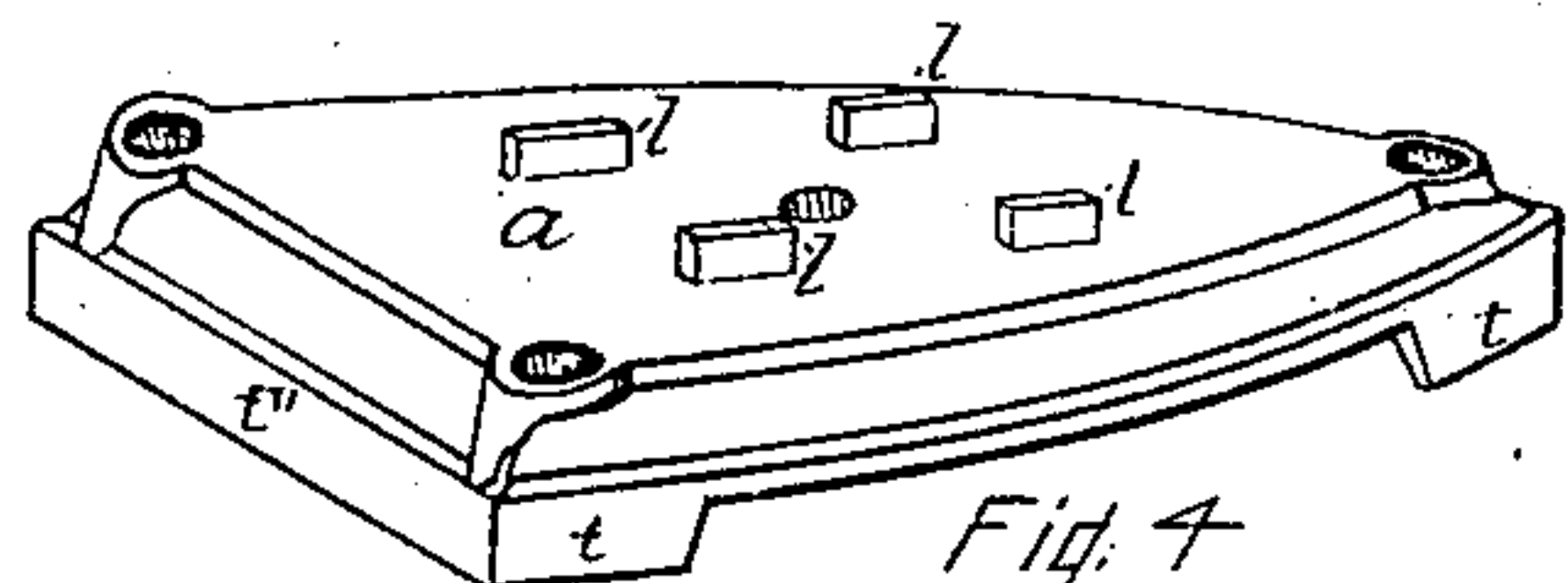
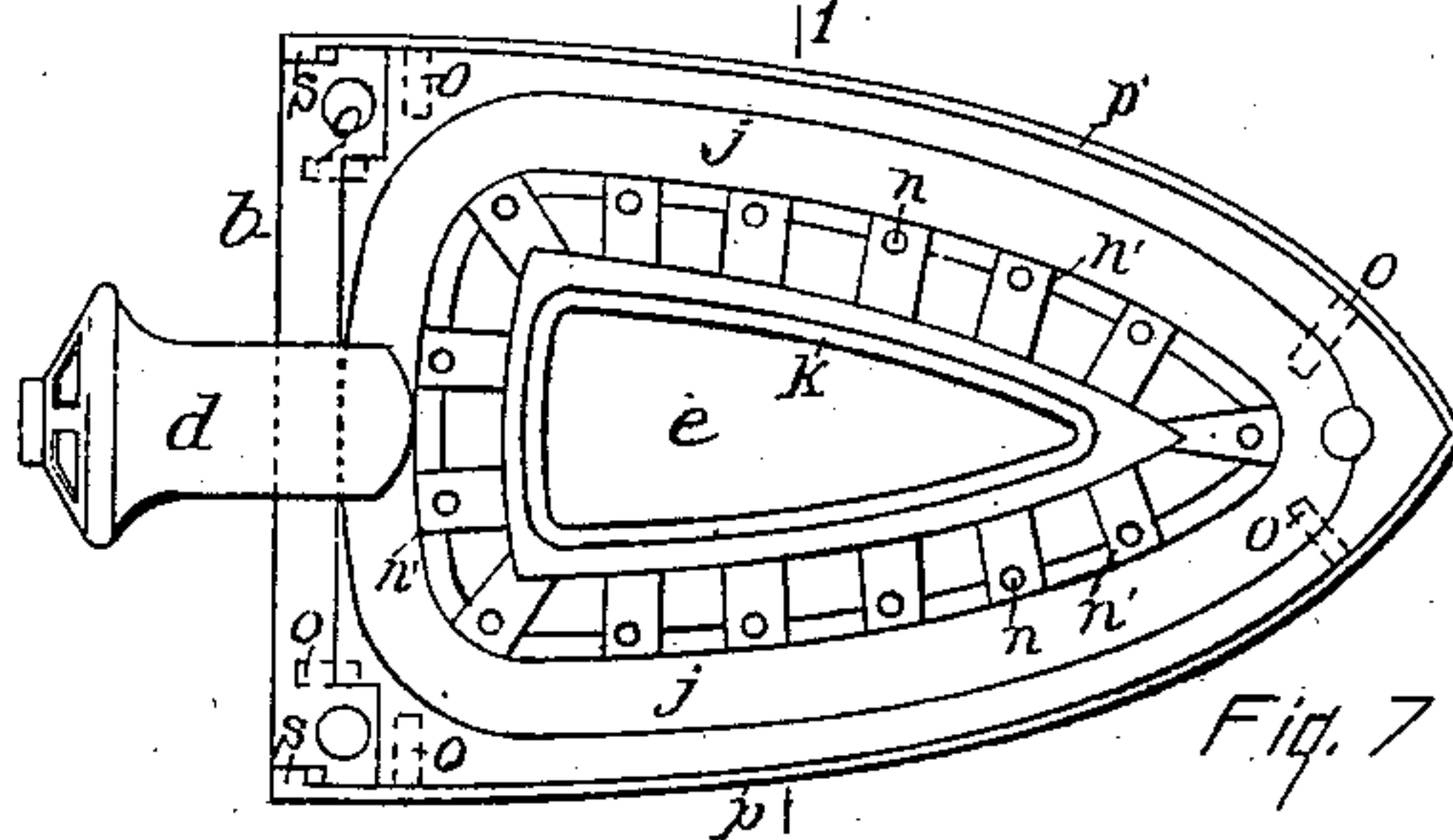
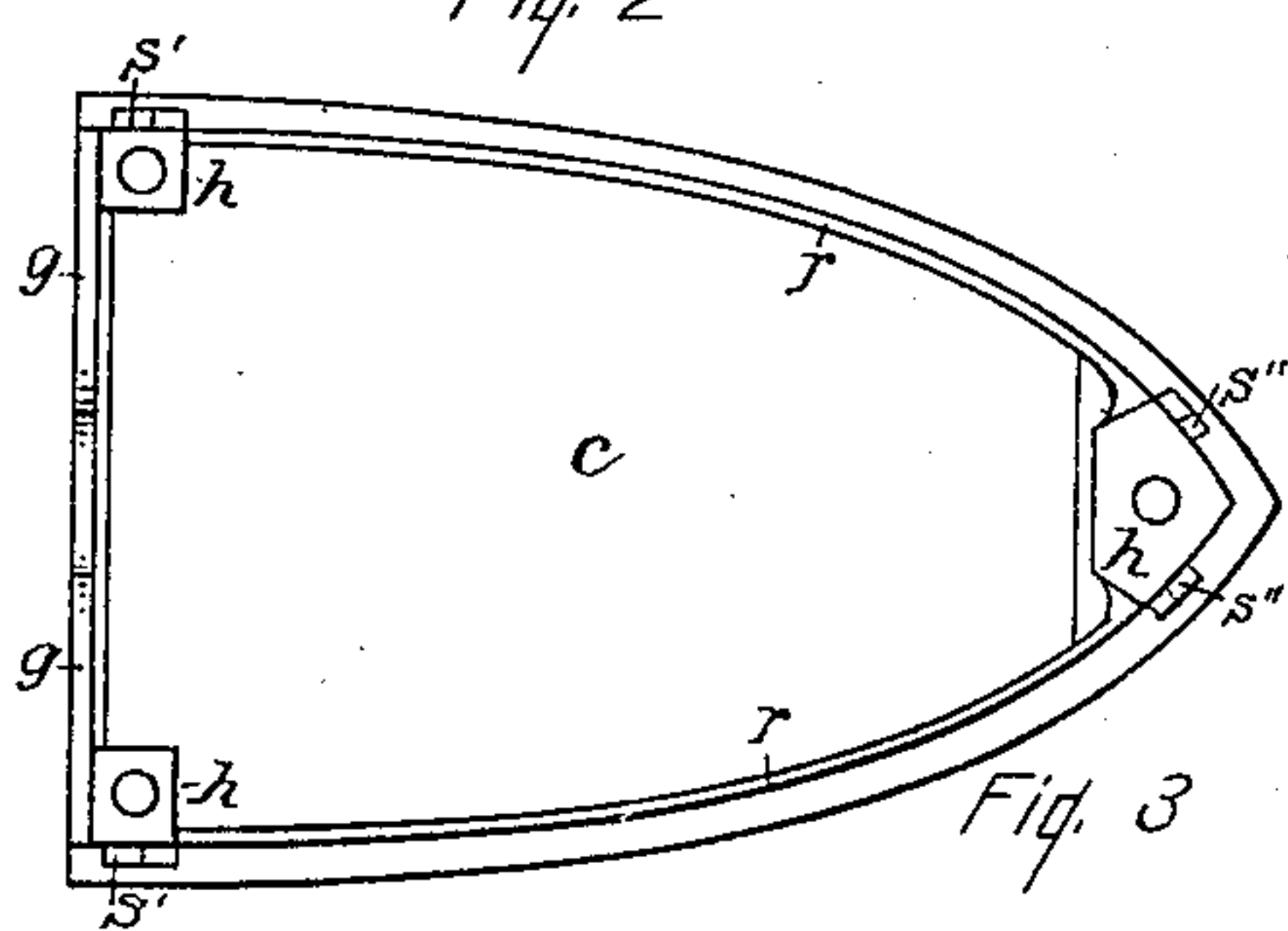
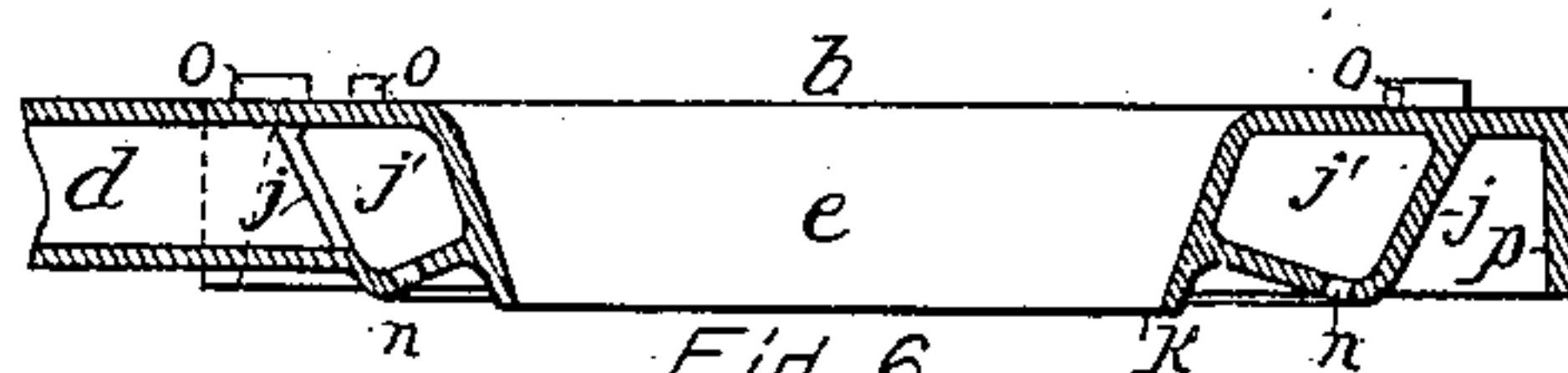
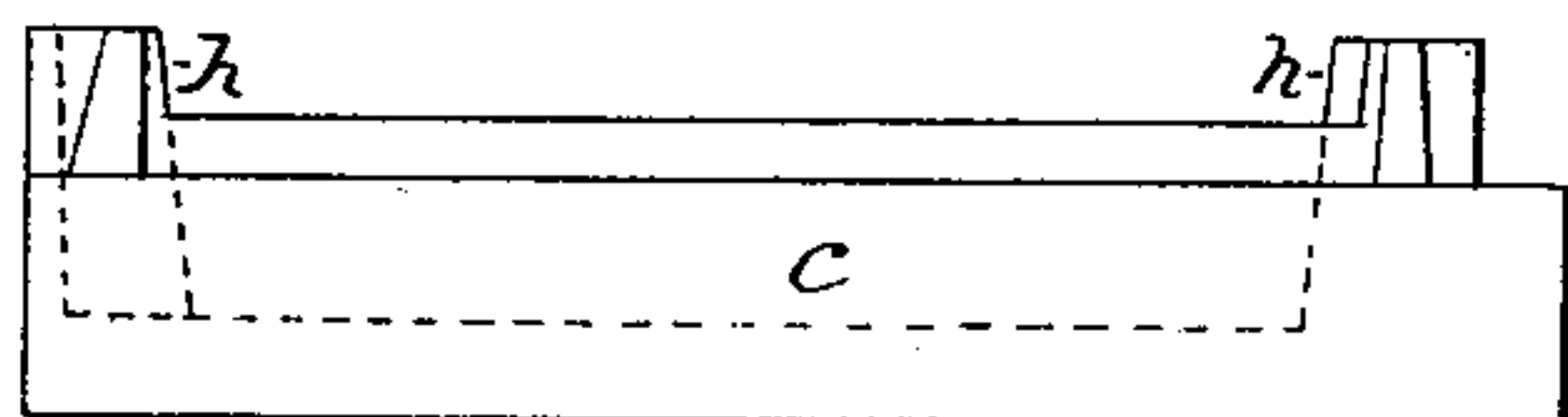
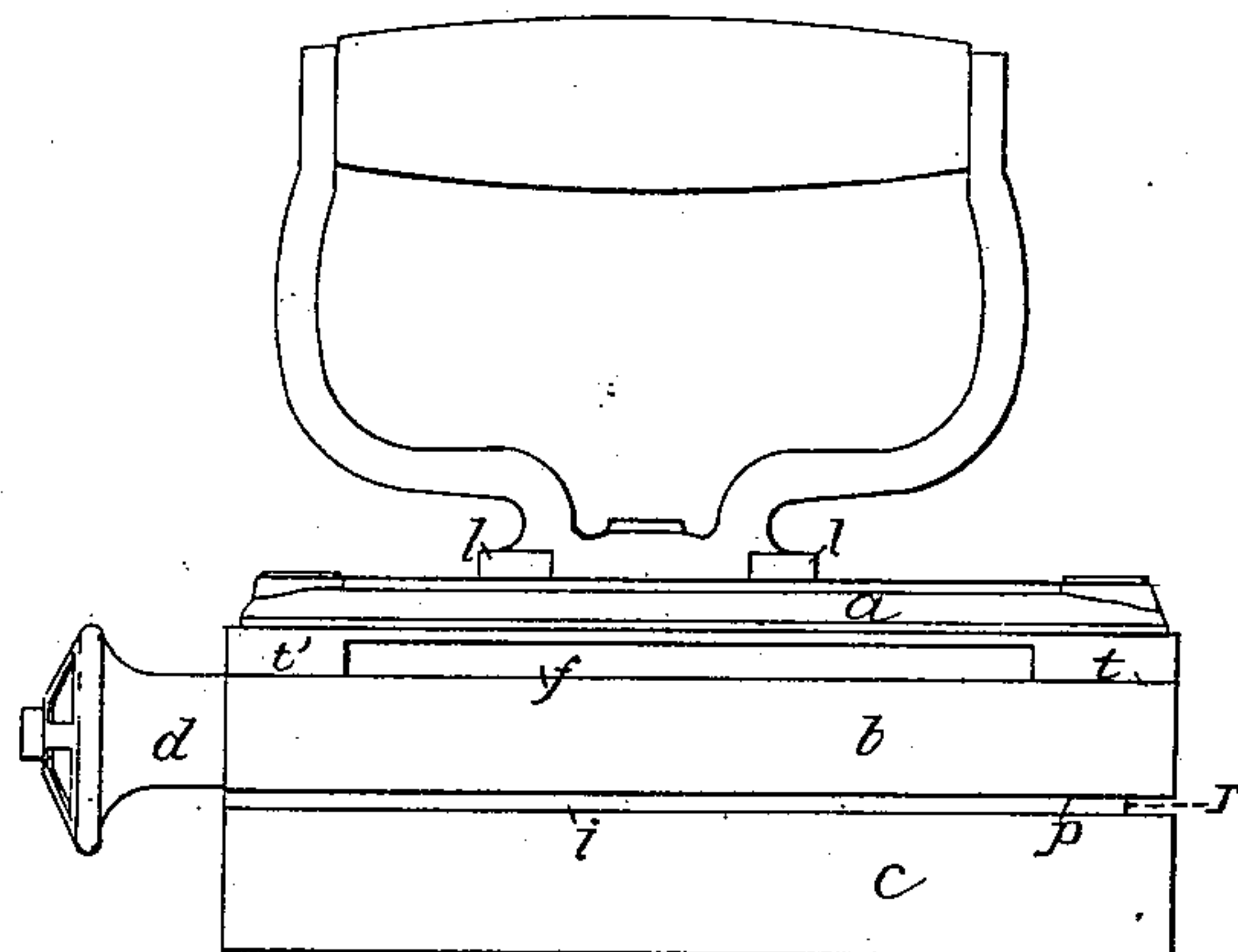


No. 725,865.

PATENTED APR. 21, 1903.

H. W. O'DOWD.  
GAS HEATING SAD IRON.  
APPLICATION FILED SEPT. 18, 1902.

NO MODEL.



Witnesses  
J. Mowrey.  
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# UNITED STATES PATENT OFFICE.

HENRY WATKINS O'DOWD, OF NEWARK, NEW JERSEY.

## GAS-HEATING SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 725,865, dated April 21, 1903.

Application filed September 18, 1902. Serial No. 123,830. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY WATKINS O'DOWD, a citizen of the United States, and a resident of Newark, in the county of Hudson and State of New Jersey, have invented a certain new and useful Gas-Heating Sad-Iron, of which the following is a specification.

This invention relates to sad-irons that are heated with gas-flame, and has for its objects the perfect combustion of the gas with its attending benefits, concentration of heat where most effective, and freedom from the escape and disturbance of the gas-flames by the movements of the iron. The objects are attained by the means set forth in this specification and the accompanying drawings, which form a part thereof.

Referring to the drawings, in which like letters refer to similar parts throughout the several views, Figure 1 represents a side elevation of the iron. Fig. 2 is a side elevation of the bottom plate. Fig. 3 is a plan of the bottom plate. Fig. 4 is a perspective view of the top plate. Fig. 5 is a cross-sectional view through the middle of the iron as indicated by line 1, Fig. 7. Fig. 6 is a longitudinal section of the middle plate. Fig. 7 is a plan of the bottom side of the middle plate. Fig. 8 is an enlarged detail relating to the middle plate. Figs. 7 and 8 show a slight modification in the construction of the under side of the middle plate. Fig. 9 is an end elevation of the iron without the handle.

The iron consists of four parts—the handle, top plate *a*, to which the handle is secured, middle plate *b*, which comprises the burner, and the bottom plate *c*, toward which the burner-jets are directed. The bottom plate *c*, as shown in Figs. 2, 3, 5, consists of a thick plate with flanges rising from its side edges, and near their top they are offset to make an inner flange *r*, reduced in thickness. At the point and each of the back corners are posts *h h h*, upon which the middle plate rests and which are tapped for fastening-screws. The flange *g*, connecting the two posts at the rear, rises to the same height as the posts, as shown most clearly in Figs. 2 and 9. Stops *s' s' s' s'* on the sides of the posts *h* engage with stops on the middle plate. The stops *s'* engage stops at the rear of the middle plate, and the stops *s''* engage the forward ends of the de-

pending flanges of the middle plate. A hole *u*, Fig. 9, may be cut through the flange *g*, through which the gas may be lighted and the flames observed.

The middle plate *b*, Figs. 6, 7, is the burner-plate. An opening *e*, conforming to the outer shape of the plate, is central thereof and has a drooping flange *k* a little longer than the depth of the plate, and the opening is less in area at the bottom than at the top. This flange, with the top of the plate and the walls *j*, Figs. 5, 6, 7, form a gas-chamber *j'*. An extension *d* from the chamber affords means for the admission of gas and air to the chamber. A flange *p* borders the sides of the plate, and the back end is made to fit upon the flange *g* of the bottom plate, as in Fig. 9. Lugs *s s* upon the insides of the ends of the flanges *p*, Fig. 7, join the lugs *s' s'* of the bottom plate, and the lugs *s'' s''* of the bottom plate, Fig. 3, fit within the point of the flanges *p*. Lugs *o*, Figs. 6, 7, on the top of the plate are guides for the placing of the top plate, as may be seen in Fig. 5. The gas-chamber is shown in longitudinal section in Fig. 6 and in cross-section in Fig. 5 through line 1 of Fig. 7. The flange *k* extends below the chamber. The holes *n* for the gas-jets are bored at an angle, so that the jets will be directed toward the central part of the plate, as shown in Fig. 5. In Figs. 7 and 8 the holes are shown to be bored in elevations *n'* from the chamber. These elevations are not shown in Figs. 5, 6.

The top plate *a* has flanges *t* at the point, side flanges *t'* at the rear sides, and flange *t''* at the rear, as in Figs. 1 and 4. Lugs *o* on the top of the middle plate, as in Figs. 5, 6, 7, match the insides of these flanges and guide and steady the top plate in its place. The plates *a b c* are secured together by means of screws through the plates *a b* into the tapped holes in the posts *h* in the plate *c*. The handle is secured to the top by means of a screw and lugs *l l l l*. (Shown in Figs. 1, 4, 5, 9.)

Fig. 5 illustrates the relative positions of the several parts when they are united. Between the middle and bottom plates there are openings *i* between the flanges *p* and *r*, and there is a space having openings *f* between the middle and top plates. Between the plates *b c* a combustion-chamber *m* is formed, to which the opening *e* serves as a chimney.



When the gas is ignited, the direction of the flames toward the center of the iron and the outlet *e* causes currents of air to flow in the direction of the arrows—that is, to the chamber *m* by way of the openings *i* and from the chamber through openings *e* and out through the openings *f f* beneath the top plate.

The entire closure of the rear end of the combustion-chamber by the flange *g* (except the hole *u*) prevents all backward suction upon the flames. In fact, the arrangement of the several parts protects the flames from disturbance while the iron is in use, and the movements of the iron promote such a circulation of air as causes perfect gas combustion, and consequently efficient heating results.

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

1. In a gas-heating iron the combination of the handle, top plate, middle plate, and bottom plate, united together substantially as shown, the middle plate forming a burner with a supply-tube at its rear end, said middle plate having a flanged opening through the center of the plate, the bottom plate with the middle plate above it forming a combustion-chamber, the side flanges of the middle and bottom plates affording air-intake openings between them, and air-outlet spaces between the top and middle plates, all substantially as herein set forth.

2. In a gas-heating iron the combination of the top, middle, and bottom plates as shown, the middle plate having a burner on its under side conforming to the outer shape of the iron, a supply-tube to the burner, a flanged central opening through the burner conforming to the shape of the middle plate, the burner being adapted to project the jets toward the center of the bottom plate, and side flanges projecting below the inner flanges of the bottom plate, the bottom plate forming a combustion-chamber and having inner flanges that project above the lower edges of the

middle-plate flanges forming an air-intake between said flanges, and a space between the middle plate and top plate, substantially as herein set forth.

3. In a gas-heating iron the combination of the top, middle and bottom plates to form a combustion-chamber having its air-intake between the middle and bottom plates and its air-outlet through the center of the middle plate and between the middle plate and the top plate, the burner integral with the under side of the middle plate and surrounding the central opening in said plate, a supply-tube to the burner projecting from the rear of the iron, the space between the burner and the bottom plate constituting the combustion-chamber, the back end of the iron having no outlet from the inner chamber, and the burner being adapted to project the jets toward the center of the bottom plate, substantially as herein set forth.

4. In a gas-heating iron the combination of the top, middle, and bottom plates substantially as shown, the middle plate forming a burner with a supply-tube at its rear end, a flanged opening through the center of the said plate, the bottom plate with the burner and flanges above it forming a combustion-chamber, the side flanges of the middle and bottom plates affording air-intake openings between them, air-outlet spaces through the central opening in the middle plate and between the sides of the top and middle plates, the burner being adapted to project the jets toward the center of the bottom plate, and a lighting and observation hole in the flange at the back of the iron, substantially as herein set forth.

Signed at New York city, in the county of New York and State of New York, this 7th day of August, A. D. 1902.

HENRY WATKINS O'DOWD.

Witnesses:

GEO. H. SCUDDER,  
W. J. DOUGHERTY.