

No. 614,463.

Patented Nov. 22, 1898.

D. GROVE.  
BAKING OVEN.

(Application filed May 10, 1898.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

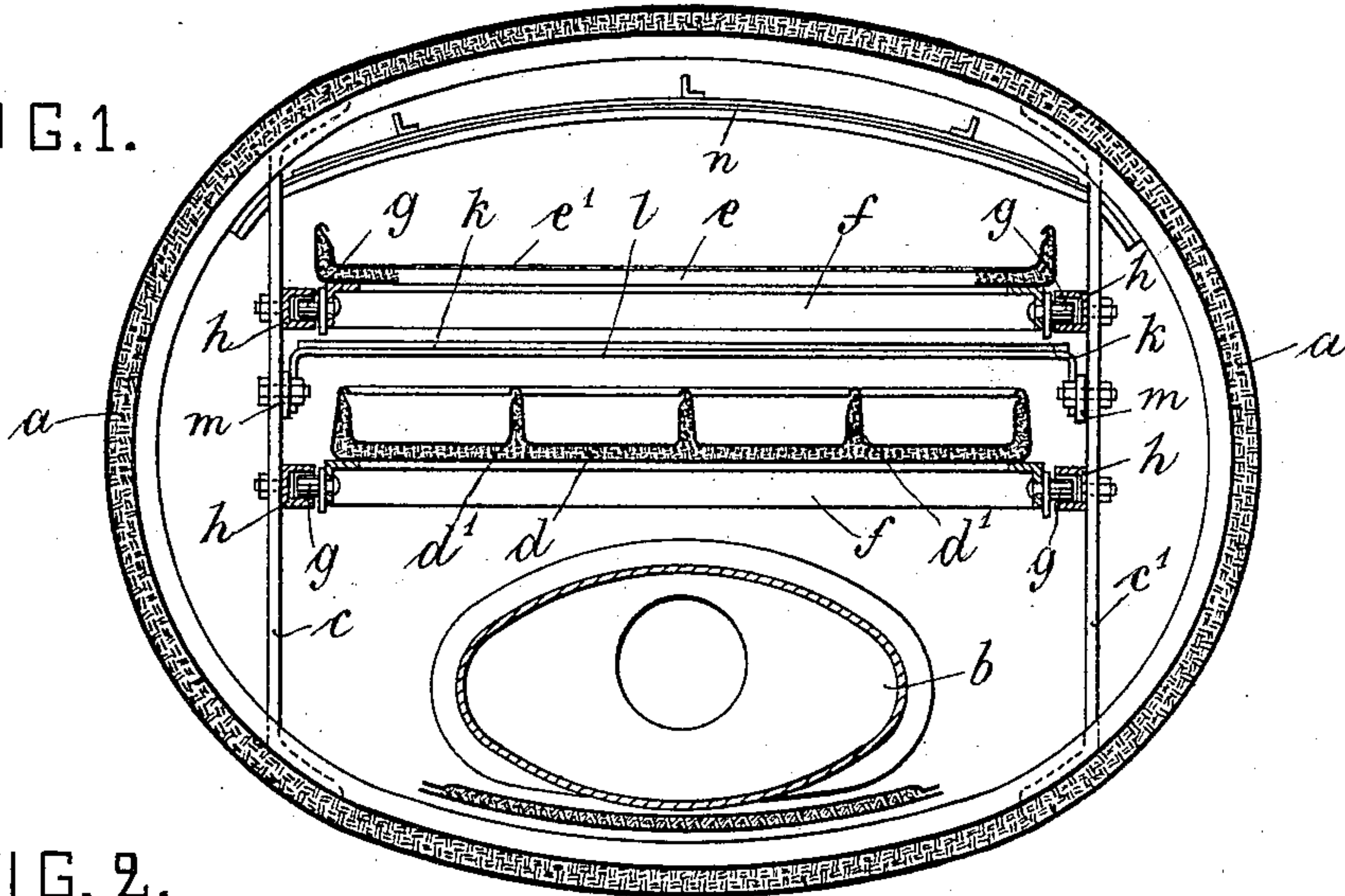
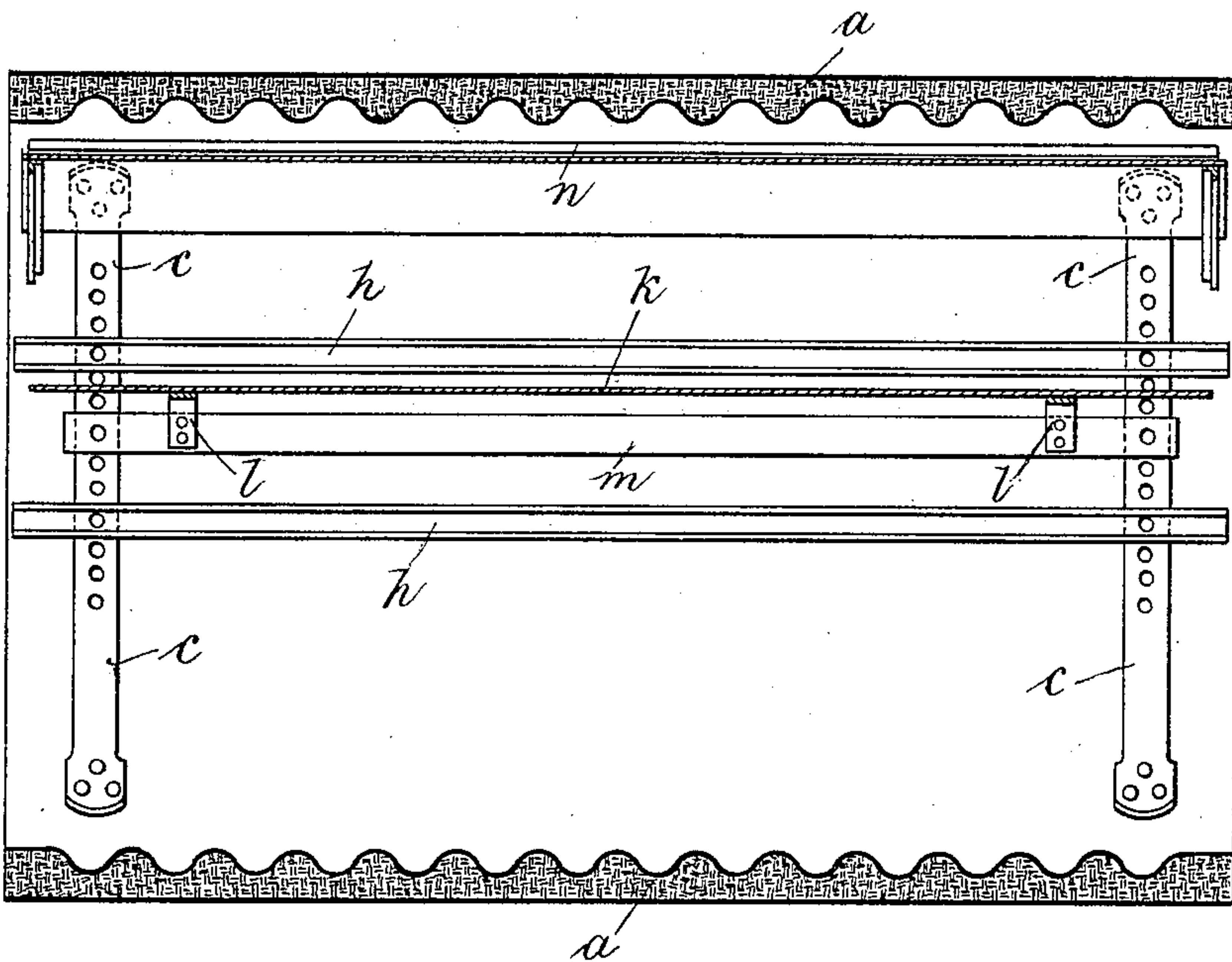


FIG. 2.



Witnesses:

E. K. Bolton

Admunt

Inventor:

David Grove

By Richard R.

his Attorneys.

No. 614,463.

Patented Nov. 22, 1898.

D. GROVE.  
BAKING OVEN.

(Application filed May 10, 1898.)

(No Model.)

2 Sheets—Sheet 2.

FIG. 3.

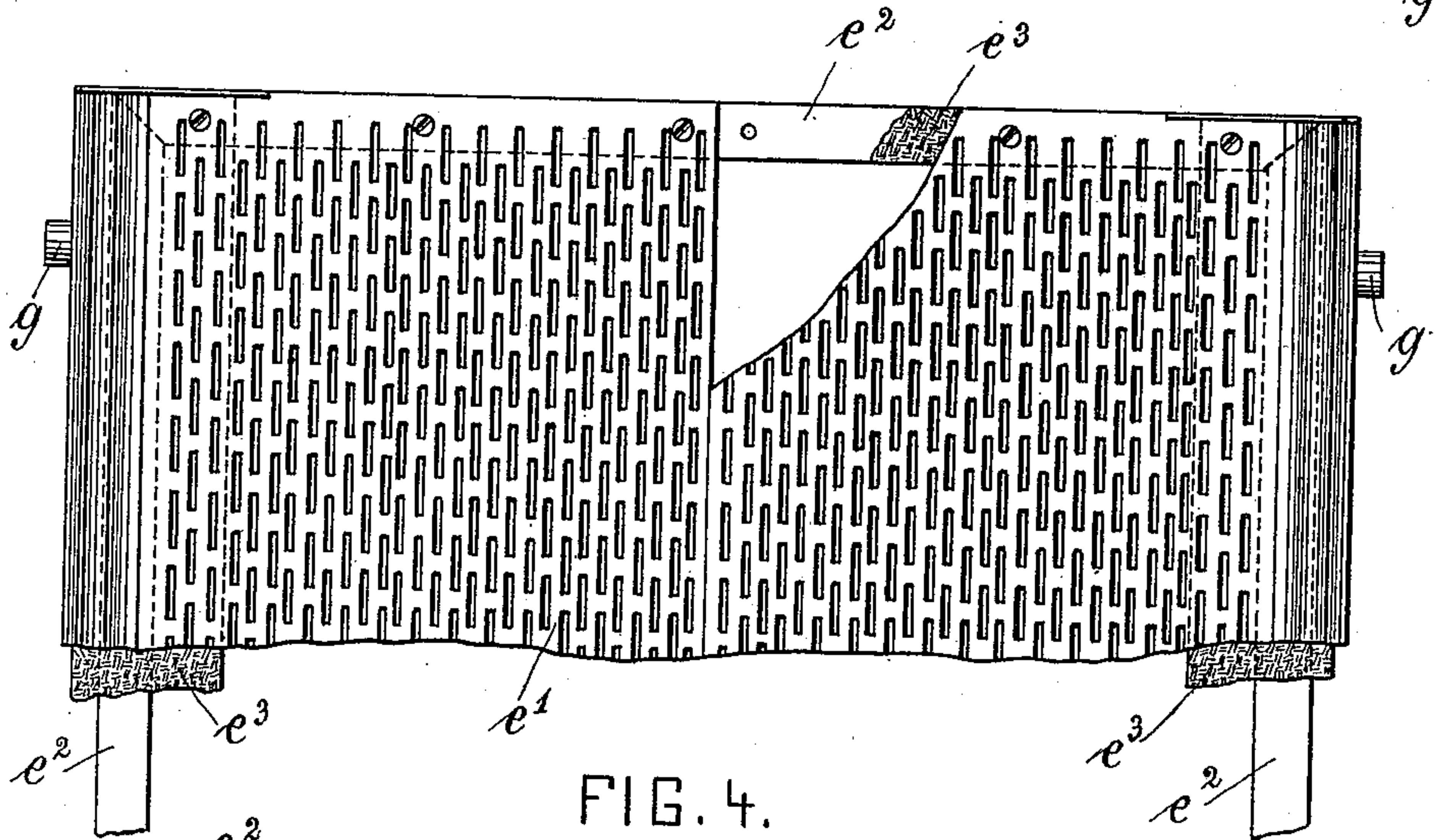
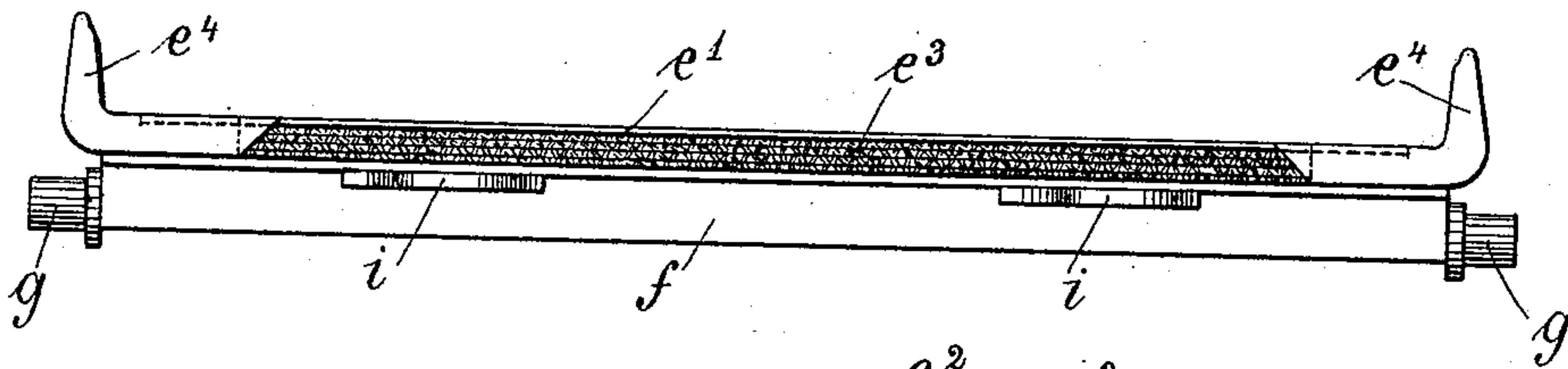
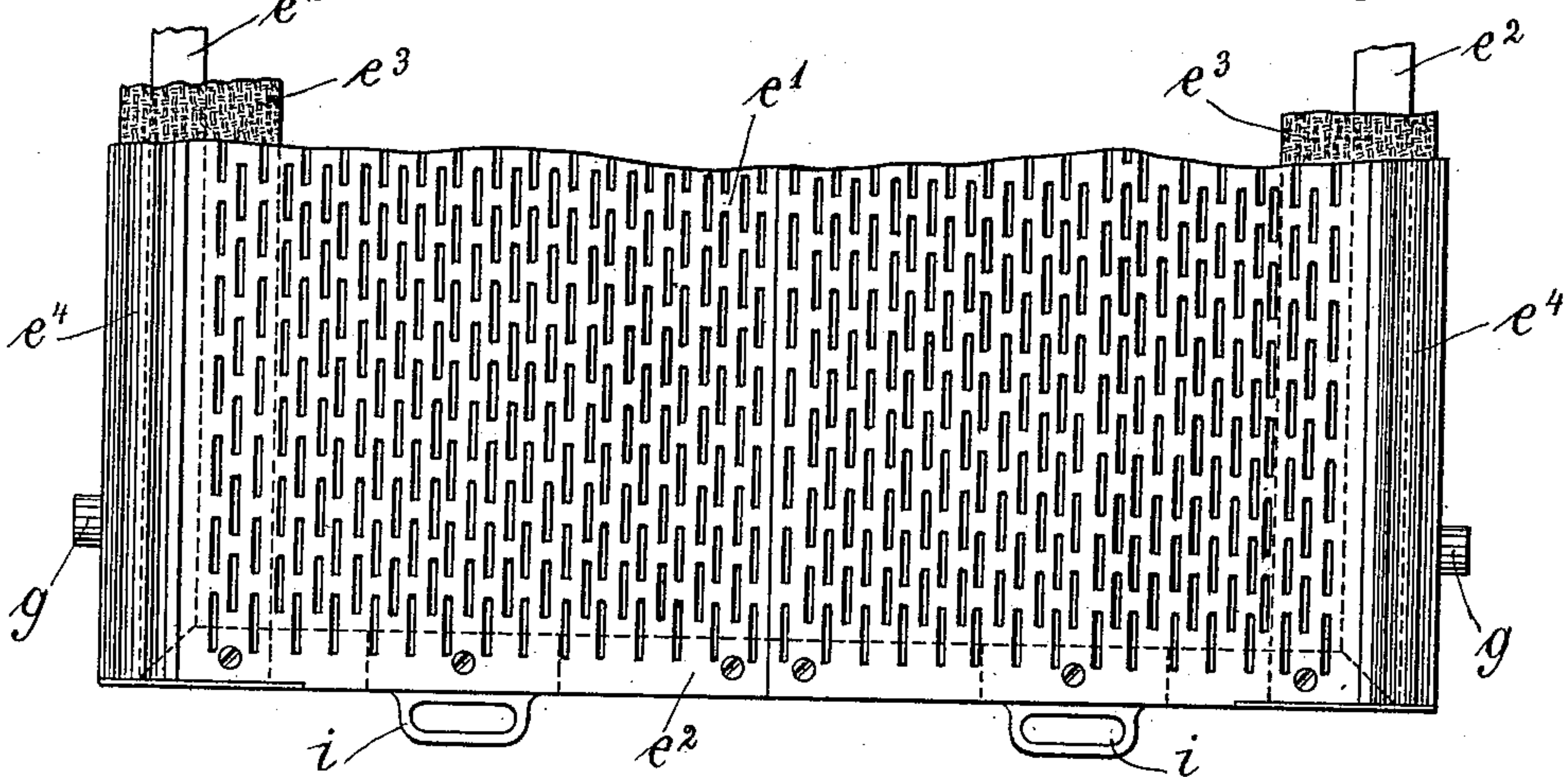


FIG. 4.



Witnesses:  
E. R. Bolton  
O. R. Munk

Inventor:  
David Grove

By *Richard R.*

his Attorneys.



# UNITED STATES PATENT OFFICE.

DAVID GROVE, OF BERLIN, GERMANY.

## BAKING-OVEN.

SPECIFICATION forming part of Letters Patent No. 614,463, dated November 22, 1898.

Application filed May 10, 1898. Serial No. 680,252. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID GROVE, a subject of the Emperor of Germany, and a resident of No. 24 Friedrichstrasse, Berlin, in the Empire of Germany, have invented certain new and useful Improvements in Baking-Ovens, of which the following is an exact, full, and clear description.

This invention relates to a baking-oven provided with an inner heating-body for heating the air in the oven and with two or more hearth-plates arranged one above the other, preferably withdrawable and replaceable and between which are arranged plates acting as intermediate heating-bodies which are capable of adjustment. Such intermediate plates, on account of their radiating heat in conjunction with an upper radiating-sheet in the oven, cause the loaves or pastry on the hearth-plates to be sufficiently and uniformly heated above and below. The bottom hearth-plate, situated next to the heating-body, is preferably provided with partitions which act as heating-ribs and thoroughly bake the sides of the loaves, whereas the intermediate or upper plate is formed of a sheet provided with holes or slots, so that the radiating heat of the intermediate heating-body acts upon the bottom part of the loaves on the upper or intermediate hearth-plate and at the same time also heats the upper part of the loaves on the hearth-plate beneath same.

Referring to the accompanying drawings, Figure 1 is a cross-section of an oven with two hearth-plates lying one above the other. Fig. 2 is a longitudinal section through the same. Fig. 3 is a front end elevation, and Fig. 4 is a plan of the partly-broken hearth-plate.

The baking-oven comprises in a known manner a preferably elliptical casing or shell *a*, closed all round, which is formed of an outer plain and an inner corrugated sheet, between which a suitable material preventing the radiation of heat is provided. In the bottom part of the oven is arranged the heating-body *b*, fed from without with fuel and communicating with the chimney, such body heating the air within the casing or shell *a*. Vertical supports *c c'*, which are secured within the casing by means of rivets or in any other similar manner, are adapted for carrying or supporting the hearth-plates *d e*. These

hearth-plates are firmly connected with cross-supports *f*, whose lateral trunnions *g*, provided with rollers, run in U-shaped guide-rails *h*, which may be adjusted at any desired height. For this purpose the supports *c c'* have holes through which pass the securing bolts or pins for the rails *h*.

The bottom hearth-plate *d* is formed of two sheets with interposed packing of insulating material, such as asbestos, fossil-meal, or the like. The lateral edges are bent upward and by correspondingly bending the divided upper sheet intermediate longitudinal ribs or ledges *d'* are formed, which serve as heating-ribs for also heating the ends of the loaves adjacent to the ribs. Such a bottom hearth-plate divided by partitions is of special advantage for baking-ovens in which square loaves are to be baked. In some cases—for instance, for baking round loaves—the intermediate ribs *d'* may be entirely dispensed with.

The upper hearth-plate *e* is formed of a slotted or perforated sheet *e'*, which is secured at its edges to rails or angle-iron *e<sup>2</sup>* and employing an intermediate layer *e<sup>3</sup>* of insulating material—for instance, asbestos—and preferably divided in the center for eventually changing the width of the hearth-plate. In this case of course the frame composed of the members or parts *e<sup>2</sup>* is also adjustable. The lateral edges of this hearth-plate are likewise bent upward at *e<sup>4</sup>*. The handles *i* serve for drawing out the plate *e*. Such handles are also provided on the bottom hearth-plate *d*. Between the upper and lower hearth-plates *e* and *d*, respectively, is provided a plain or preferably corrugated sheet-metal plate *k*, which is supported by cross-ties *l*, whose longitudinal rails *m* are secured by means of holes and bolts to the supports *c c'*, thus likewise enabling the plate *k* to be adjusted at any desired height, according as the upper surfaces of the loaves on the lower hearth-plate or the lower surfaces of the loaves on the upper perforated hearth-plate are to be subjected to the radiating heat of the intermediate plate *k* becoming heated and consequently acting as a heating-body. In the upper part of the oven is arranged a plain or undulated radiating-sheet *n*, firmly secured to the casing or shell *a*, such sheet *n* radiating



its heat toward the upper part of the loaves on the upper hearth-plate. In view of this arrangement of the baking-oven the loaves on several hearth-plates, being arranged one  
5 above the other, are thoroughly baked, since the hot air constantly circulates in the oven and is always reheated by the heating-body *b* after the heat has been imparted to the loaves or hearth-plates and radiating-sheets  
10 *k* and *n*.

Instead of the two hearth-plates, which are arranged one above the other, as shown in the drawings, there may be employed, according to the height of the oven, especially for  
15 special pastry, three or more plates, between which the adjustable intermediate heating-bodies are to be provided. The baking-oven may be employed for stationary or transportable purposes.

20 Having now particularly described and ascertained the nature of the said invention, I declare that what I claim, and wish to secure by Letters Patent, is—

1. In a baking-oven, the combination with the casing having a heating-body within the same at the bottom thereof, of the upright standards, the hearth-plates carried thereby and the heating-plate supported by said standards between the hearth-plates, substantially as described. 25

2. In a baking-oven, the combination with the casing, of the heating-body within the same, the upright standards, the rails adjustably carried by the standards, the hearth-plates slidingly supported by said rails, and  
35 a perforated plate located between the hearth-plates and adjustably carried by the standards, substantially as described.

In witness whereof I have hereunto signed my name, this 27th day of April, 1898, in the  
40 presence of two subscribing witnesses.

DAVID GROVE.

Witnesses:

FRANZ KOLLM,  
C. H. DAY.