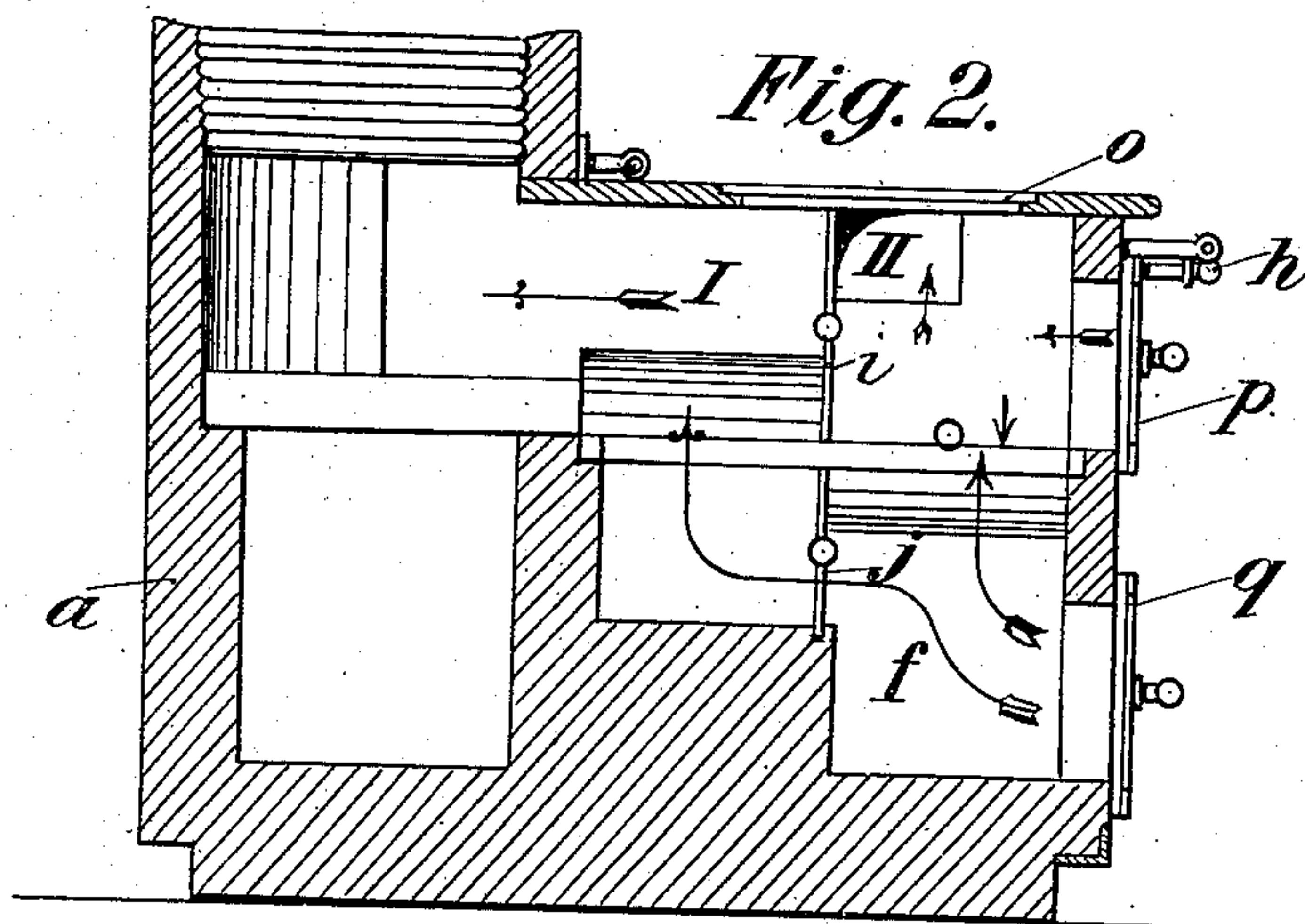
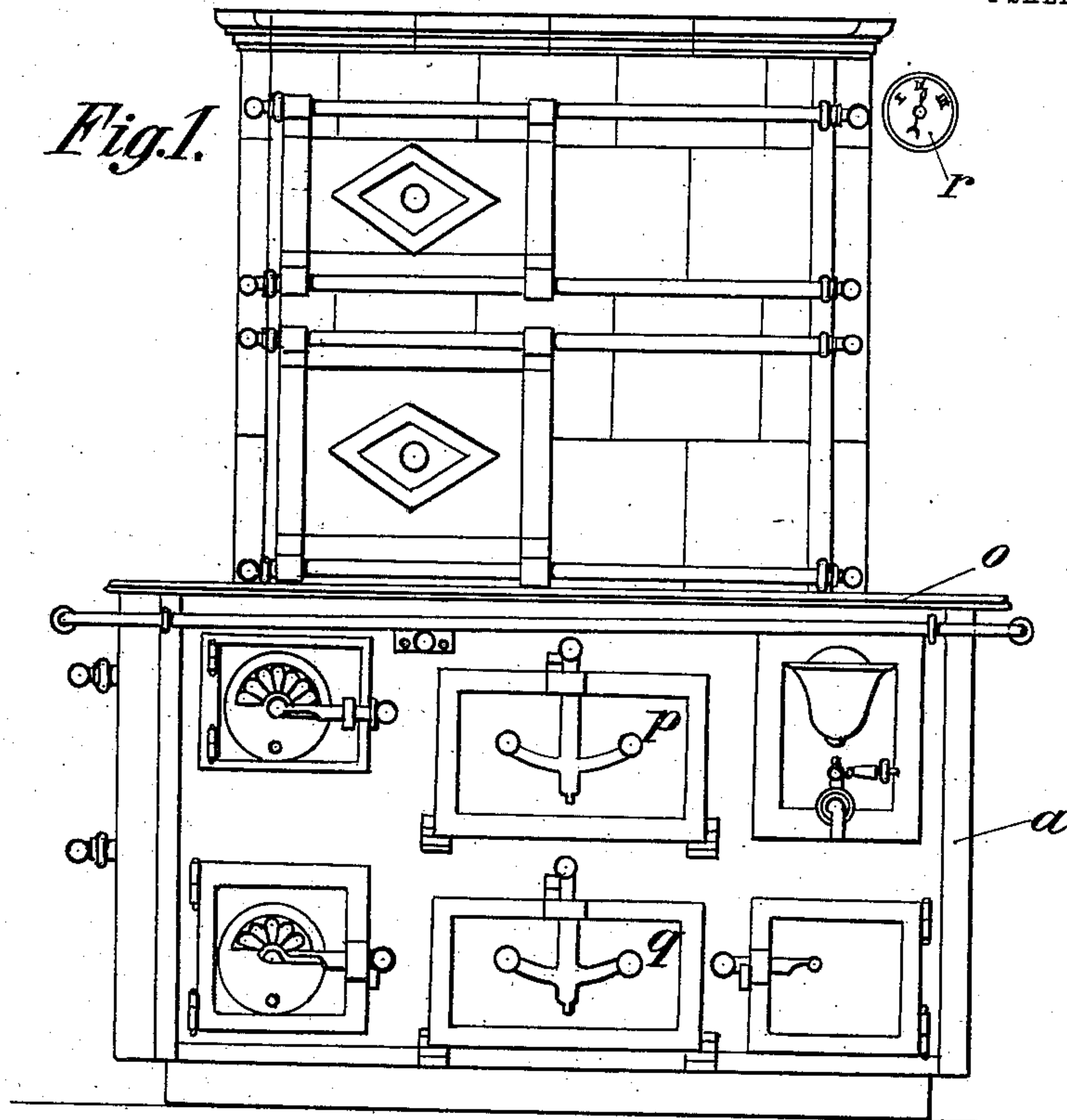


K. LUGER-HEFEL.
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APPLICATION FILED AUG. 23, 1907.

899,254.

Patented Sept. 22, 1908.

4 SHEETS—SHEET 1.



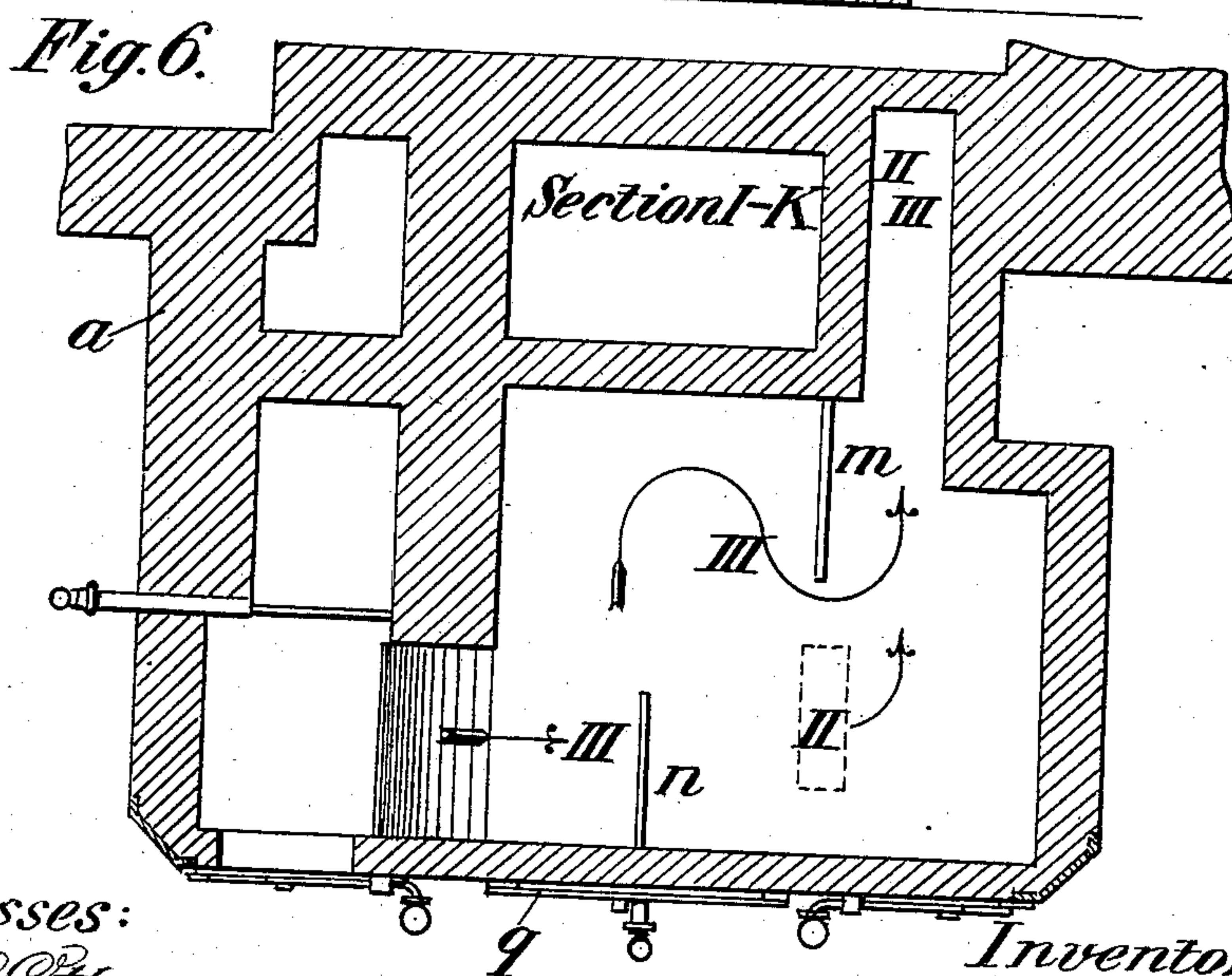
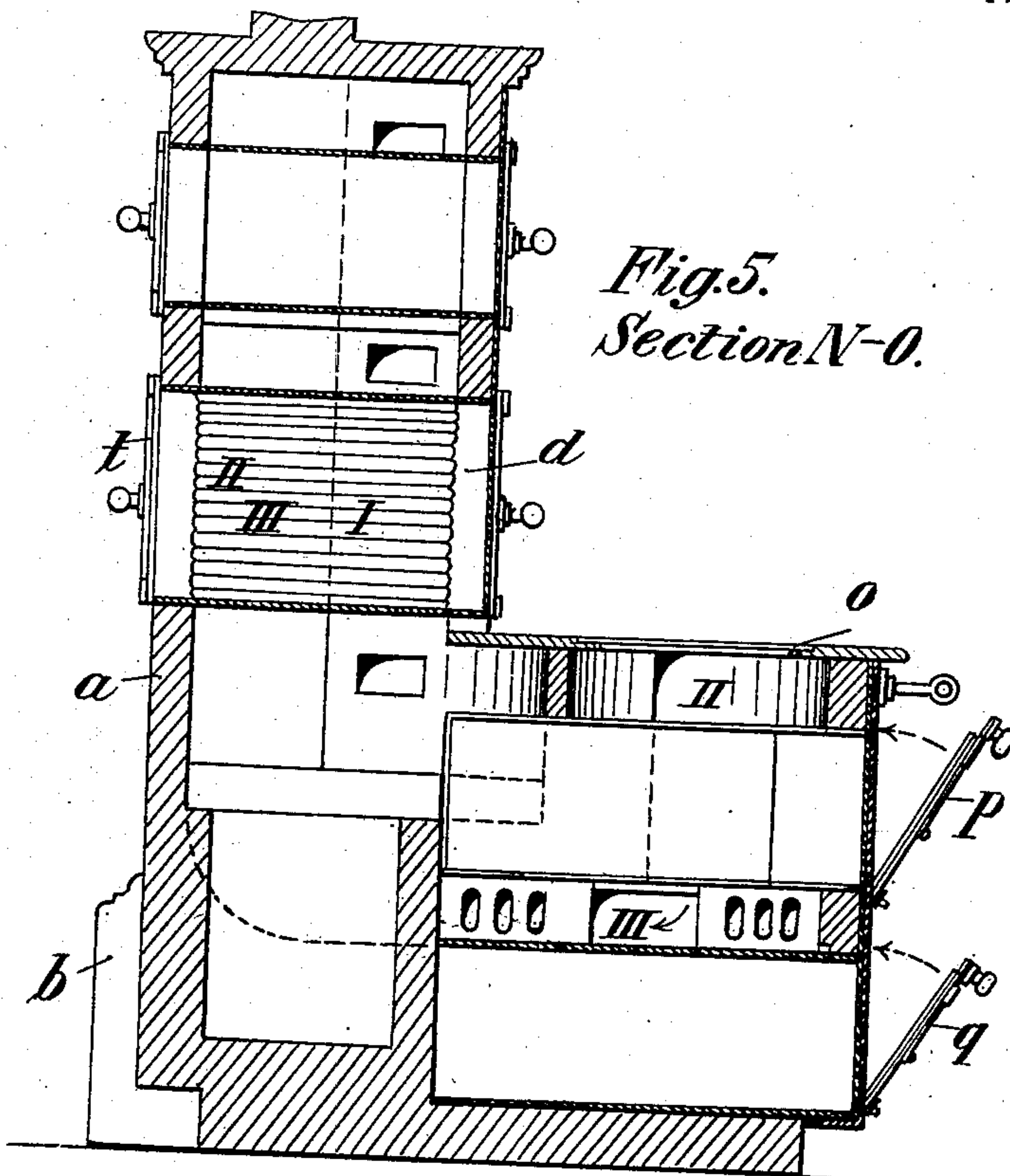
Witnesses:
Georg Otto
Albert Grünfeld

Inventor:
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Attorney.

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4 SHEETS—SHEET 4.

Fig. 7.

Section E-F

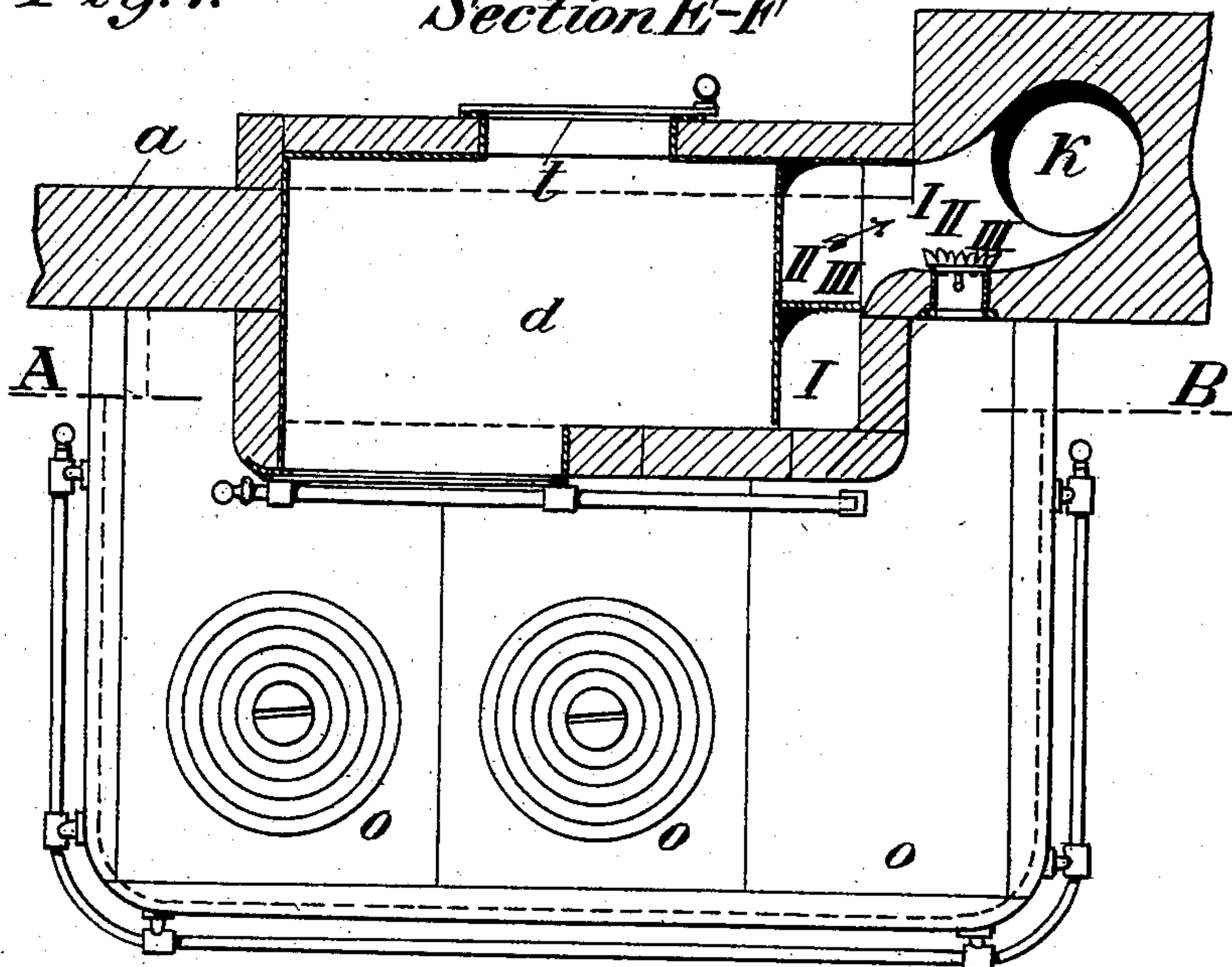
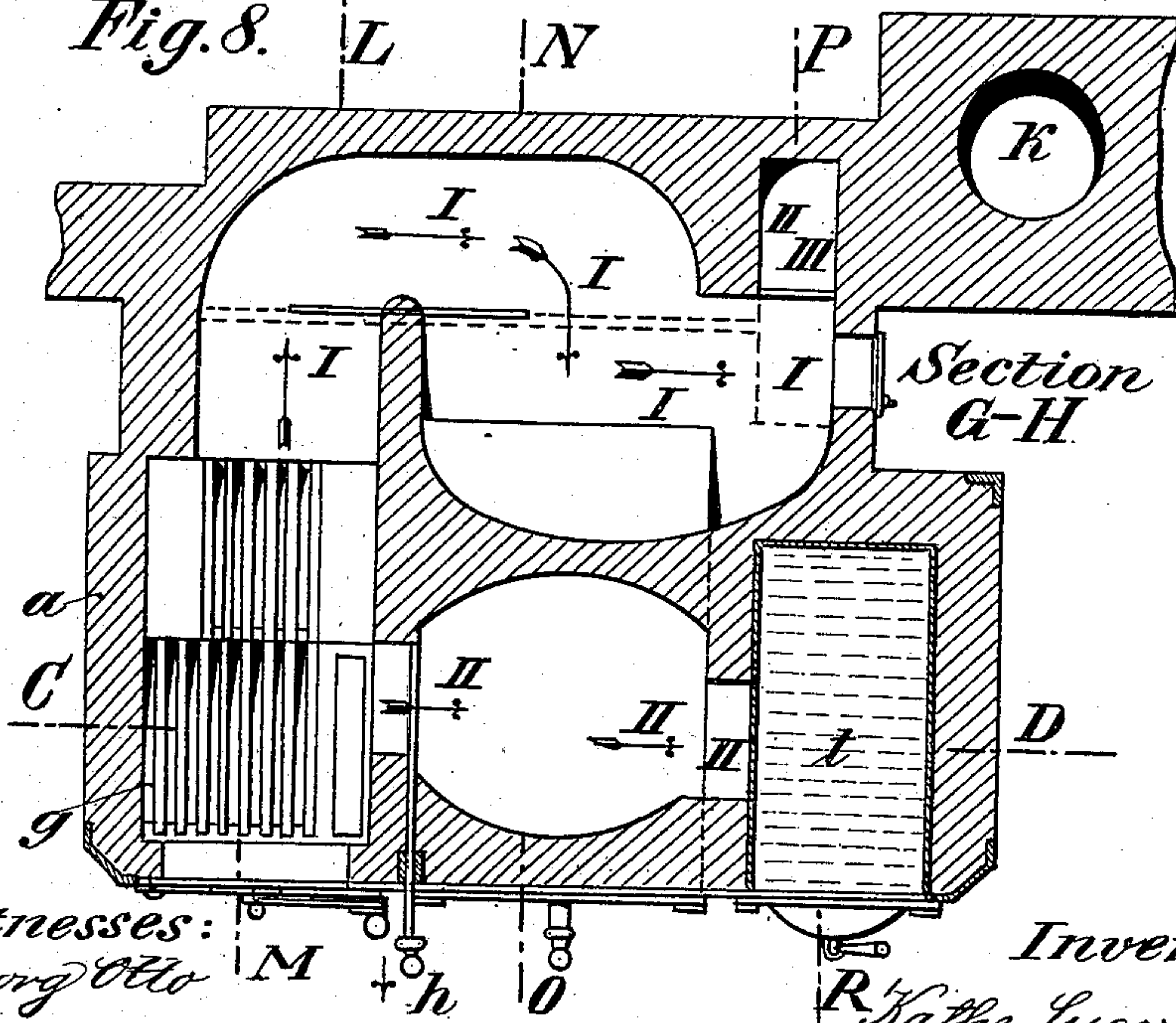


Fig. 8.

L N P



Witnesses:
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Inventor:
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by: William H. Hark
Attorney.

UNITED STATES PATENT OFFICE.

KATHE LUGER-HEFEL, OF DORNBIRN, AUSTRIA-HUNGARY.

COOKING-RANGE.

No. 899,254.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed August 23, 1907. Serial No. 389,825.

To all whom it may concern:

Be it known that I, KATHE LUGER-HEFEL, née KATHARINA HEFEL, a subject of the Emperor of Austria-Hungary, residing at Dornbirn, in the Duchy of Vorarlberg, Empire of Austria-Hungary, have invented certain new and useful Improvements in Cooking-Ranges, of which the following is a specification, reference being had to the drawings forming a part thereof.

These improvements relate to a double cooking range and their object is to economize fuel; to reduce radiation, and to so construct the range that the cost of cooking is equally cheap for a small or large output.

The improved range is shown in the accompanying drawings in which,

Figure 1 represents a front elevation. Fig. 2 a cross section along line L—M Fig. 8. Fig. 3 a section along lines A—B Fig. 7 and C—D Fig. 8. Fig. 4 a cross section along line P—R, Fig. 8. Fig. 5 a similar section along line N—O, Fig. 8. Fig. 6 a horizontal section along line I—K, Fig. 3. Figs. 7 and 8 similar sections along lines E—F and G—H respectively, Fig. 3.

a is the hearth or fireplace built of brick and furnished with a heating chamber or oven *c*, the dampers *i*, *j*, *h* and the water tank or the boiler *l*. Another part of the range furnished with heating chambers or ovens *d* and *e* projects above the level of the hearth.

The products of combustion of the fuel on the grate pass through three different conduits or flues and their direction is indicated in the drawings by arrows numbered I, II and III. The air enters the fire chamber through multiple air inlets in the doors of the fire box and ash pit. The first flue I leads products of combustion backwards from the grate to the back of the range Fig. 8, passes them underneath the oven *d* and allows them to ascend sidewise passing between the chambers *d* and *e*, and finally over the chamber *e* into the chimney or main flue or outlet. The second flue II Fig. 8 extends laterally from the grate *g* over the oven *c* to the boiler *l*, the products of combustion passing under the boiler and sidewise along it to the chimney. The third flue III (Figs. 3 and 6) extends downwards from the side of the grate *g*, the gases passing under the oven *c*, and underneath the boiler, and meeting here with the products of combustion from the second flue with which they escape to the chimney. As

will be seen with reference to Fig. 6, partitions or baffle plates *m* and *n* are arranged in the third flue to cause the gases to follow a longer path than they would without baffles. The novel feature of the grate is its duplication whereby the products of combustion may pass away laterally as well as backwards. A further advantage is obtained by making the ovens or equivalents of corrugated sheet metal so that they offer a larger surface to the gases and cause them to follow a longer path whereby the heat contained in them is better utilized. The corrugated plates *s* serve the same purposes. The ovens are so arranged that access may be gained to them from the front instead of from the side of the range as hitherto.

In the chimney flue a draft indicator *r* is provided which consists of a fan connected with a finger moving over an index, so that the draft may be regulated as desired by means of a damper.

Another novel feature of the range is the construction of the back which, as shown in Fig. 5, is provided with an extension which passes into the next room and may serve as a heating stove. In summer when it is not intended to use this part of the range it may be cut out by the damper *i*, *j*. If the range is to be used for a large amount of cooking all three conduits or passages are opened whereby the heat is specially applied to the oven *d*. In this manner only very little heat will radiate into the room containing the range.

The heating chambers extend through the whole width right to the back of the range. In the oven *e* food may be kept warm without boiling.

What I claim is:

1. In a cooking range the combination of a grate having a rear outlet and two lateral outlets with an oven, the rear outlet communicating with a flue extending adjacent one end of the oven, one of said lateral outlets opening above the grate and communicating with a flue extending over the oven and the other lateral outlet opening at the level of the grate and communicating with a flue extending under the oven.

2. In a cooking range the combination of a grate having an outlet at its end and two lateral outlets with an oven one of said lateral outlets opening above the grate and communicating with a flue extending across the top of the oven and the other lateral outlet

opening at the level of the grate and communicating with a flue extending across the bottom of the oven.

3. In a cooking range the combination of a
5 grate having an outlet at its end and two lateral outlets with an upper oven and a lower oven, the outlet at the end of the grate communicating with a flue extending under the
10 oven, one of said lateral outlets communicat-

ing with a flue extending over the top of the lower oven and the other lateral outlet communicating with a flue extending under the bottom of the lower oven.

In witness whereof I have hereunto set my 15
hand in presence of two witnesses.

KATHE LUGER-HEFEL.

Witnessess:

MARY FALCONER,
HERNANDO DE SOTO.