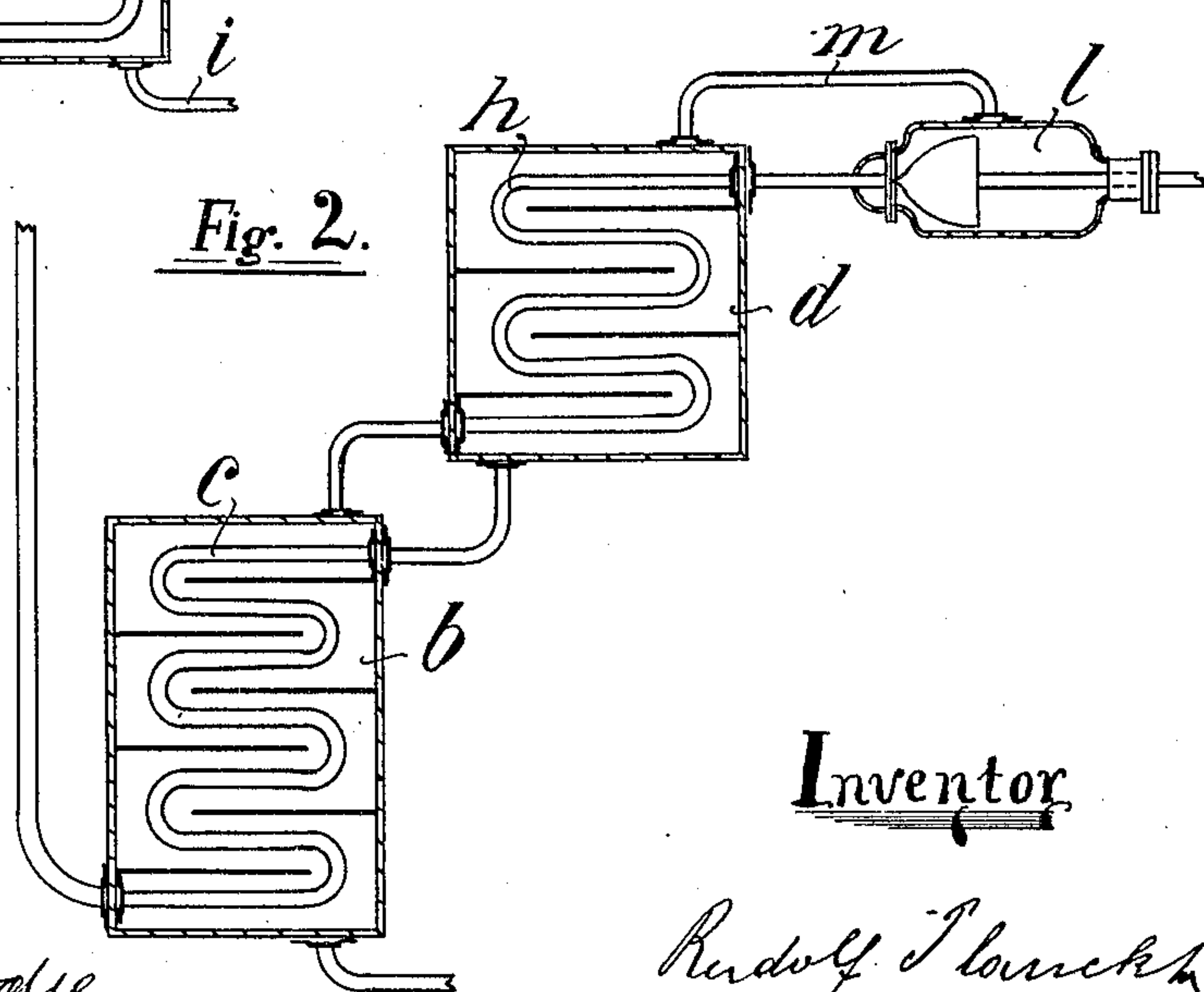
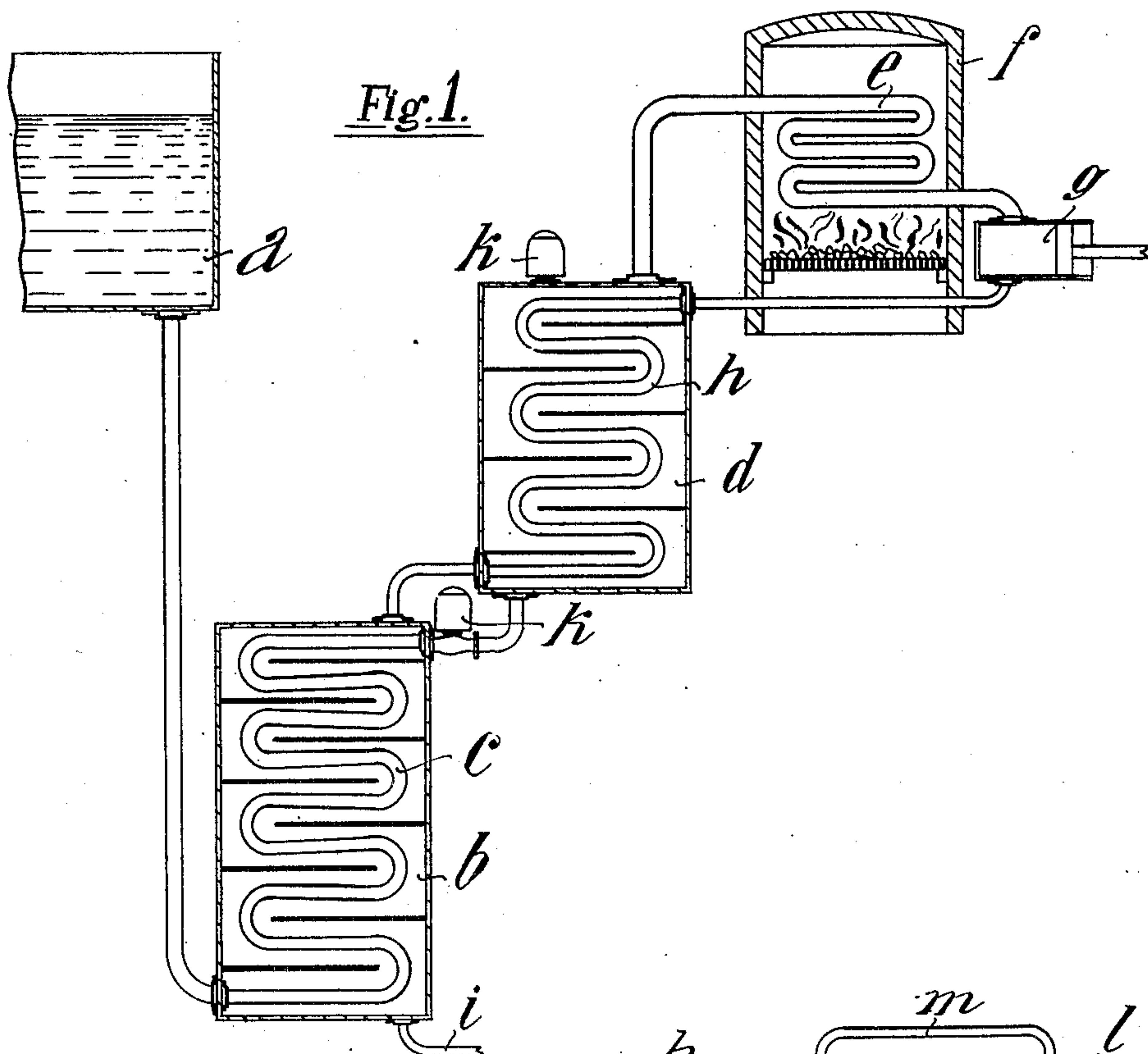


No. 870,747.

PATENTED NOV. 12, 1907.

R. PLANCKH.
BOILING AND DISTILLING APPARATUS.
APPLICATION FILED JAN. 7, 1907.



Witnesses

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RUDOLF PLANCKH, OF GRAZ-EGGENBERG, AUSTRIA-HUNGARY.

BOILING AND DISTILLING APPARATUS.

No. 870,747.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed January 7, 1907. Serial No. 351,242.

To all whom it may concern:

Be it known that I, RUDOLF PLANCKH, a subject of the Emperor of Austria-Hungary, and resident of Graz-Eggenberg, Austria-Hungary have invented certain
5 new and useful Improvements in a Boiling and Distilling Apparatus, of which the following is a specification.

The present invention relates to improvements in a boiling and distilling apparatus.

The invention consists of the combination of several
10 apparatus for exchanging heat to the fluid for distillation in such a way, that the fluid, which comes from the reservoir, goes through heated condensing apparatus in which it evaporates into a second heat exchanging apparatus from which it goes into a superheater and com-
15 pressor where after further heating it goes through the same apparatus in a different manner, transferring its heat to the rising fluid, leaving as cooled distillate.

The drawing gives diagrammatic view of two forms of construction of the invention.

20 Figure 1 shows how a compressor is employed for superheating, and Fig. 2 shows how an injector, which is fed with high tension steam, is employed for the same purpose.

The improvements consist in the combination of sev-
25 eral apparatus in such a way that the fluid which comes from the reservoir *a* into the serpentine pipe *c* evaporates into the apparatus *d*, owing to the heat conveyed to it by the distillate, from which, after further heating, it goes into the serpentine *e* which is in the superheater *f*

from which it is compressed into the first apparatus *b* 30
by the compressor *g* through the pipe *h* whereby the fluid in the apparatus receives the heat while the distillate goes out through the pipe *i* as cooled distillate. In order that the gases, such as air, carbonic acid and the like, which arise during the heating of the fluid, may
35 escape vents *k* are arranged in suitable places.

In the second form of construction; instead of a superheater an injector *l* which is fed with high tension steam is employed which is adapted to superheat the evaporate coming from the pipe *m*. 40

If it is intended not to let the fluid evaporate but only give it a certain high temperature, only one apparatus is arranged, and in this case the compressor can be dispensed with.

I claim: 45

In a boiling and distilling apparatus, the combination of a tank *a*, a tube fixed at the bottom of this tank, a serpentine pipe *c* the lower end of which is connected with the lower end of the said tube, a casing enveloping the said serpentine pipe *c*, a casing *d* connected with the upper end
50 of the said serpentine pipe *c* by a tube, a serpentine pipe *h* in the said casing *d* connected by its lower end to the upper part of the casing *b*, a superheater *f* containing a tube *e* connected with the upper part of the casing *d*, and a suitable compressing device connected by a tube with
55 tube *e* and with the upper part of the said serpentine pipe *h*, substantially as shown and described.

RUDOLF PLANCKH.

Witnesses:

ALVESTO S. HOGUE,
AUGUST FUGGER.