

No. 881,491.

PATENTED MAR. 10, 1908.

H. SANDVOSS.
REGULATOR FOR LIQUIDS, &c.
APPLICATION FILED JULY 13, 1906.

Fig. 1.

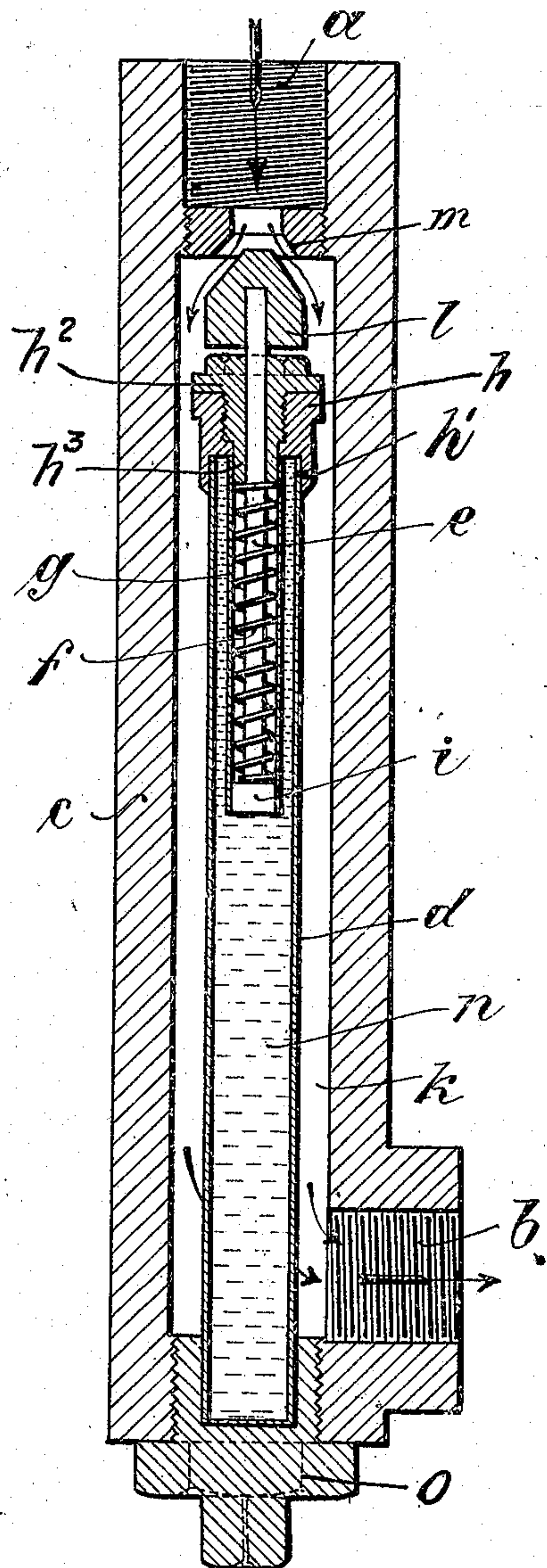
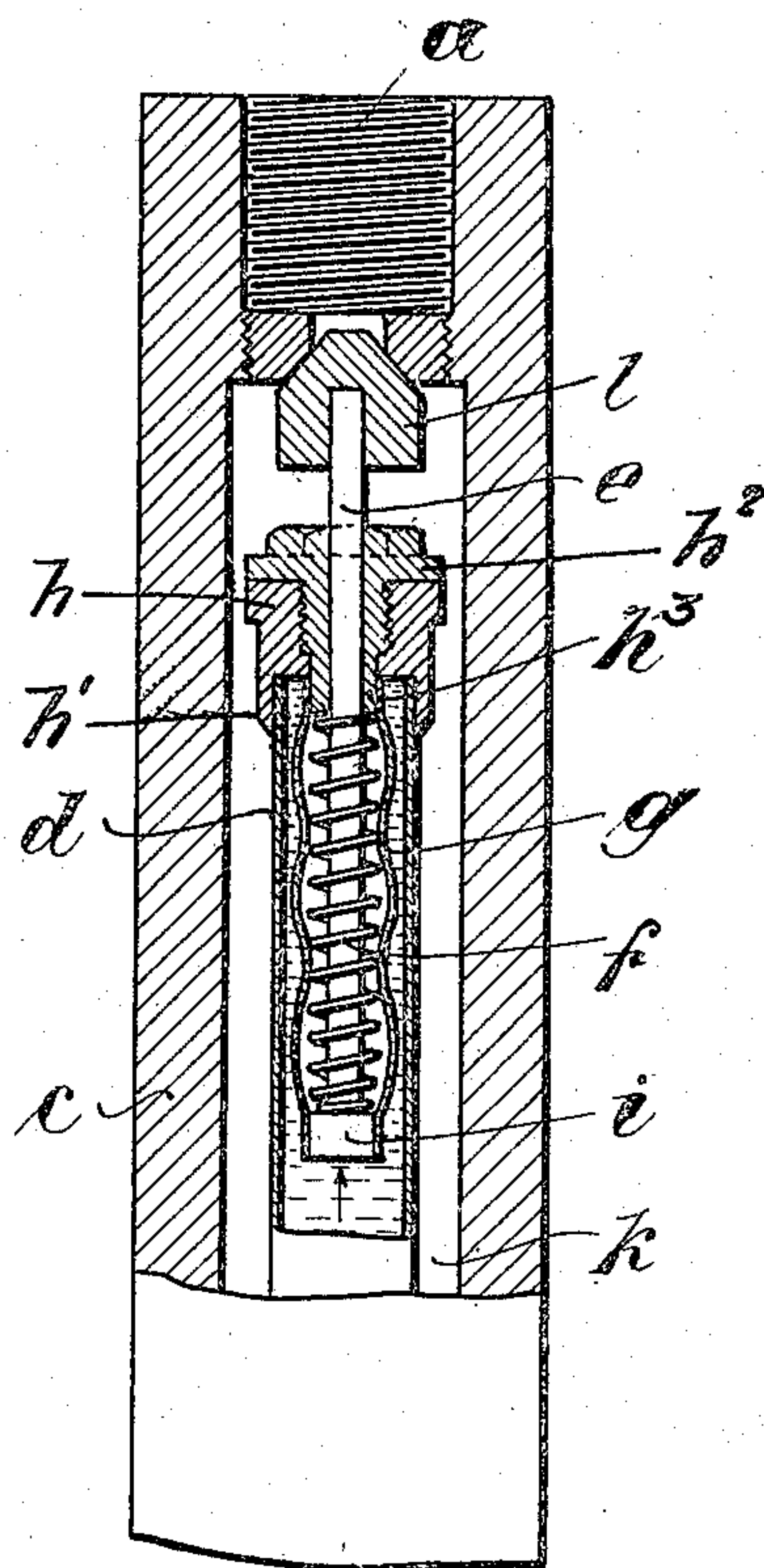


Fig. 2.



Witnesses:
Arthur Junge,
William Schulz.

Inventor:
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UNITED STATES PATENT OFFICE.

HERMANN SANDVOSS, OF NEUSS, GERMANY.

REGULATOR FOR LIQUIDS, &c.

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Specification of Letters Patent.

Patented March 10, 1908.

Application filed July 13, 1906. Serial No. 325,999.

To all whom it may concern:

Be it known that I, HERMANN SANDVOSS, a subject of the German Emperor, residing at Neuss-on-the-Rhine, Germany, have invented
5 new and useful Improvements in Regulators for Liquids, &c., of which the following is a specification.

This invention relates to a regulator for liquids on exhaust outlets, etc., in which
10 mercury or a similar material, when influenced by the heat, actuates a piston or plug to open or close a valve.

In the accompanying drawing: Figure 1 is a longitudinal section of my improved regulator, showing the valve open, and Fig. 2 a
15 similar section of the upper part thereof, showing the valve closed.

An outer casing *c*, is provided with a liquid, steam or air inlet *a*, at one end, and
20 an outlet *b*, near the other end. Within casing *c*, is inclosed a tube *d*, of such a diameter that an annular passage *k*, is formed between casing *c*, and tube *d*. This tube is received at its lower end within a socketed
25 screw plug *o*, that closes the bottom of casing *c*. At its upper end there is mounted on tube *d*, an annular cap *h*, having a depending flange *h'*, surrounding the upper end of the tube. Cap *h*, has an inner screw thread
30 which is engaged by a threaded perforated plug *h²*, the lower reduced end of which projects through cap *h*, into tube *d*, as at *h³*. A stem *e*, plays within upper part of tube *d*, and passes through plug *h²*, by which it is
35 guided. The upper end of stem *e*, carries a valve *l*, adapted to close against a seat *m*, controlling inlet *a*. Valve stem *e*, is nor-

mally drawn down by a surrounding spring *f*, abutting at the top against projection *h³*, and at the bottom against an imperforate head *i*,
40 on the bottom of stem *e*. Within tube *d*, is contained a body of mercury *n*, which is separated from stem *e*, by a tubular bag or flexible casing *g*, attached to head *i*, and projection *h³*. This bag is thus inclosed within
45 tube *d*, and in turn incloses stem *e*, and spring *f*. It will thus be seen that when the temperature of the liquid, etc., flowing through casing *c*, rises above the desired point, it will, by expanding the mercury *n*,
50 act upon head *i*, of valve stem *e*, so that valve *l*, is raised against its seat *m*. In this way the flow of liquid is stopped until the temperature of the regulator again falls, when valve *l*, will be opened by spring *f*.
55

I claim:

A device of the character described, comprising a casing having an inlet and outlet, an inclosed mercury tube, an annular threaded cap fitted thereon, a perforated
60 screw plug engaging said cap, an inlet valve having a spring-influenced stem that passes through the perforated screw plug into the mercury tube, a head at the bottom of the stem, and a flexible casing secured to said
65 head and to the screw plug, substantially as specified.

Signed by me at Dusseldorf, Germany, this twenty-sixth day of June 1906.

HERMANN SANDVOSS.

Witnesses:

WILLIAM ESSENWEIN,
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