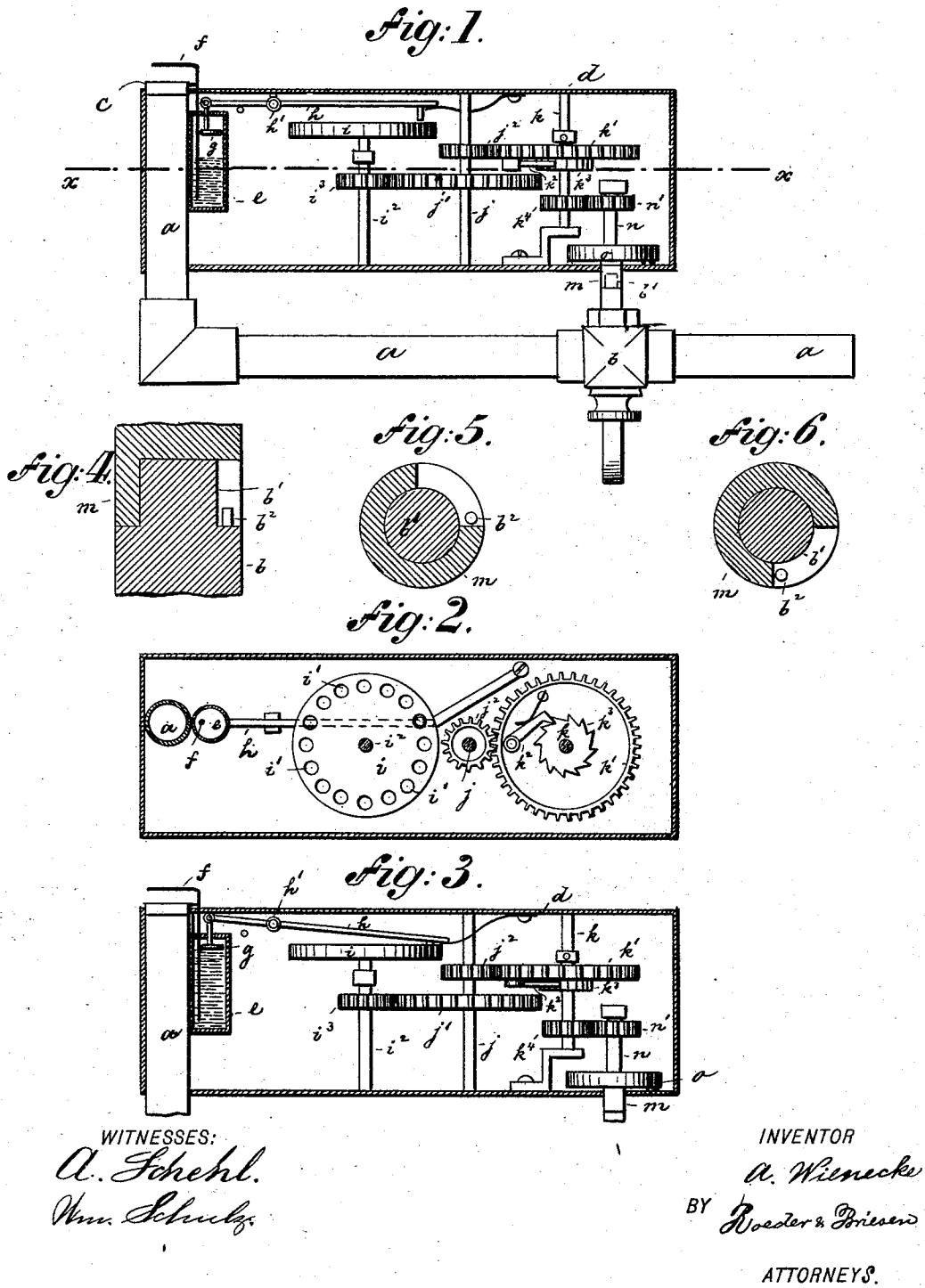


(No Model.)

A. WIENECKE.
GAS BURNER.

No. 506,759.

Patented Oct. 17, 1893.



UNITED STATES PATENT OFFICE.

AUGUST WIENECKE, OF BROOKLYN, NEW YORK.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 506,759, dated October 17, 1893.

Application filed April 12, 1893. Serial No. 470,101. (No model.)

To all whom it may concern:

Be it known that I, AUGUST WIENECKE, of Brooklyn, Kings county, New York, have invented an Improved Gas-Burner, of which the following is a specification.

This invention relates to a gas burner in which the gas is automatically turned off when blown out or not lighted, or when the supply of gas is temporarily suspended.

In the accompanying drawings: Figure 1 is a longitudinal section of my improved gas burner showing the cock closed; Fig. 2 a horizontal section on line *x, x*, Fig. 1, looking upward; Fig. 3 a section similar to Fig. 1, showing the position of the parts with the cock open; Fig. 4 a detail vertical section through the plug of the cock and Figs. 5 and 6 cross sections of Fig. 4, showing the sleeve in different positions.

The letter *a*, represents the gas supply pipe provided with stop cock *b*, and burner *c*, as usual. In close proximity to burner *c*, there is contained in a suitable casing *d*, a vessel *e*, containing mercury. A bent wire *f*, partly projecting over the flame and dipped into the mercury serves to transmit the heat from the flame to the latter. Above the mercury there is contained within the vessel *e* a float *g*, connected at one end to a detent spring lever *h*, pivoted to casing *d*, at *h'*. The detent of lever *h*, engages indentations *i'*, of a wheel *i*, fast on spindle *i'*. The spindle *i'*, is by gear wheels *j'*, *j'*, intergeared with spindle *j*, which in turn by gear wheel *j'*, is intergeared with wheel *k'*, loose on spindle *k*. The gear wheel *k'*, is provided with a click *k'*, engaging a ratchet wheel *k'*, fast on spindle *k*.

The plug *b'*, of cock *b*, is surrounded by a revolving sleeve *m*, one quarter of which is cut away. A pin *b'*, on cock *b*, engages the sleeve *m*, and revolves the same when the cock is opened. To the sleeve *m*, there is attached a spindle *n*, which by gear wheels *n'*, *k'*, is intergeared with spindle *k*. To the

spindle *n*, is connected the inner end of a coiled spring *o*, the outer end of which is connected to casing *d*.

The operation of the device is as follows: When the cock *b*, is opened, the sleeve *m*, is revolved to compress the spring *o*, and also to revolve spindle *k*, which is thus put under tension to revolve in the reverse direction. This tension is by click *k'*, transmitted to wheel *k'*, and thence by the train of gearing to the wheel *i*. As long as the gas is lighted and the mercury expanded (Fig. 3) the wheel *i*, is locked in position by the detent lever *h*, and thus the gas will be properly fed to the burner. But when the light is for some reason extinguished, the mercury will contract and the float *g*, falls to tilt lever *h*, and liberate wheel *i*, (Fig. 1.) The wheel *i*, having been put under tension as described, will now revolve, to close the cock. If the cock is closed by hand the pin *b'*, will not take the sleeve *m*, with it, but the latter will be revolved by the spring *o*, as soon as the mercury has cooled sufficiently to release wheel *i*. The vessel *e*, should be only partly filled with mercury, so that the latter may freely expand under the ordinary temperature of the room, without acting upon the float.

What I claim is—

1. The combination of a burner with a supply cock, a surrounding sleeve *m* engaging the same, a spring *o* secured thereto, a train of gearing, a wheel *i*, a lever *h*, a float and a column of mercury in proximity to the burner and operating the float, substantially as specified.

2. The combination of burner *c*, with vessel *e*, containing mercury, a heat transmitting wire *f*, a float *g*, and a supply cock *b*, operated by such float, substantially as specified.

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Witnesses:

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