

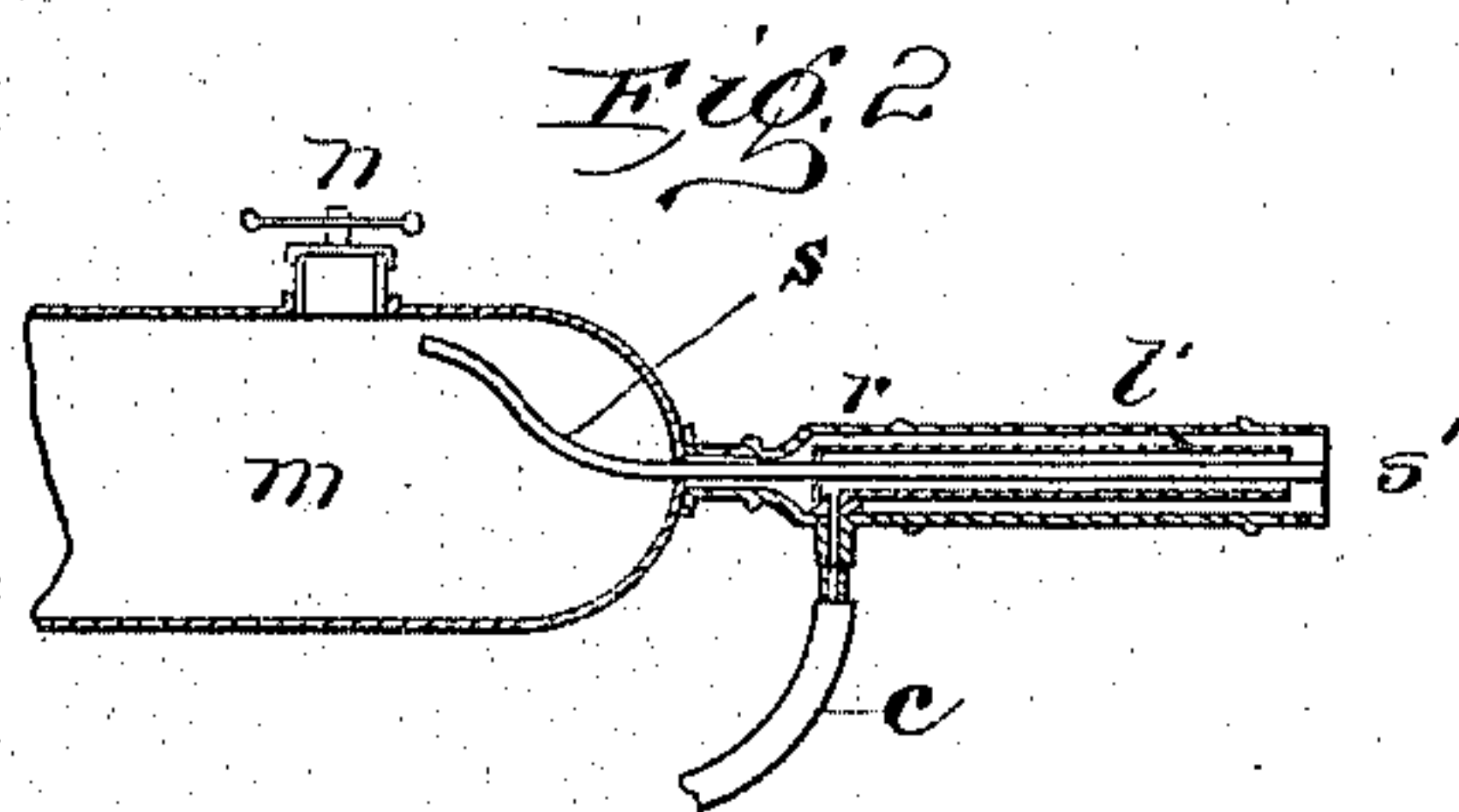
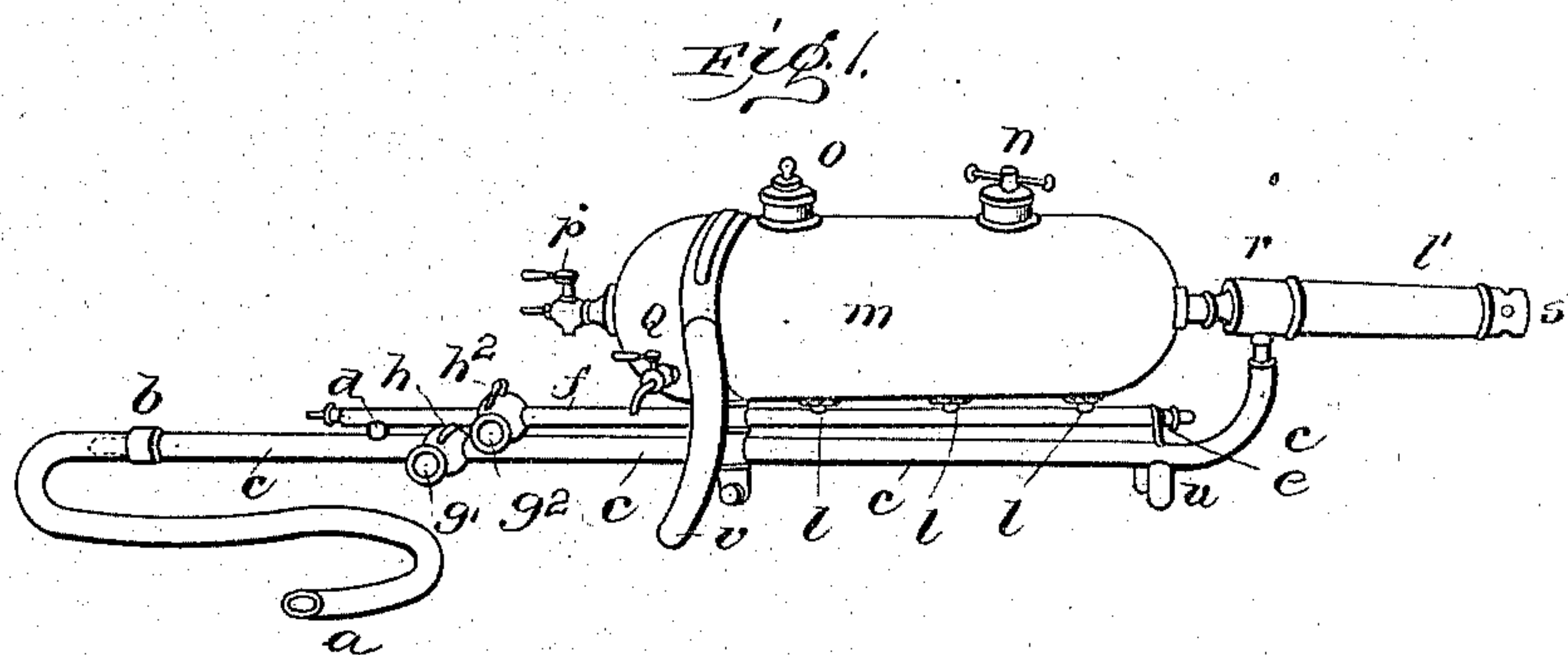
No. 666,481.

Patented Jan. 22, 1901.

G. & U. PALAZZI & V. PIVETTA.
SELF ACTING MELTER.

(Application filed Apr. 7, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

GUIDO PALAZZI, UGO PALAZZI, AND VITTORIO PIVETTA, OF NAPLES, ITALY.

SELF-ACTING MELTER.

SPECIFICATION forming part of Letters Patent No. 666,481, dated January 22, 1901.

Application filed April 7, 1900. Serial No. 11,975. (No model.)

To all whom it may concern:

Be it known that we, GUIDO PALAZZI, UGO PALAZZI, and VITTORIO PIVETTA, residing at Naples, in the Province of Naples, Kingdom of Italy, have invented certain new and useful Improvements in Self-Acting Melters, of which the following is a specification.

The present invention relates to a self-acting melter and solderer in which the flame is sustained by a jet of steam.

Our invention is to be used in lieu of the ordinary mouth-blowpipes or the blowpipes wherein a blast of air is generated by bellows.

In order to better understand the nature of the invention, attention is called to the accompanying drawings, in which—

Figure 1 is a side view of the apparatus, and Fig. 2 is a sectional view of the steam and gas exits.

In both views like parts are designated by the same letters of reference.

The gas issues from the supply-tube *a*. The latter is joined to the conduit *c* by means of the coupling *b*. A smaller pipe *f* is supported above and parallel to the conduit by the connecting-tube *d* and the standard *e*.

The regulating-valves *g*¹ and *g*² are arranged within the conduit *c* and tube *f*, respectively. Pointers *h*¹ and *h*², carried by the movable member of the valve, serve to indicate the degree of aperture and control the flow of gas.

The burners *l l*, which serve to heat the water in the boiler *m*, are carried by the pipe *f*. The boiler is provided at its upper part with a manhole *n*, having a screw-cover, and also with a safety-valve *o*. A level-cock *p* and a discharge or blow-off cock *q* are provided.

At one end of the boiler is secured the steam-exit pipe, which is bent upward within the boiler, as shown in Fig. 2, and extends in the upper part of the same, as is usual in such connections. The steam-exit pipe is inclosed at its exit within a coupling-box *r*, which also receives the coupling of the gas-conduit *c*.

From the coupling-box *r* to the burner *s* the steam-pipe is inclosed within the gas-conducting tube, and both together are enveloped by the larger tube *l'*. Legs *u* and *v* serve to support the entire apparatus in a horizontal position. The joints and couplings are arranged to allow of the device being dismantled when desired.

The operation of the apparatus is as fol-

lows: The boiler is charged with a sufficient quantity of water through the manhole *n*, the level being indicated by the water flowing out of the cock *p*, which is kept open for this purpose. The cock is then closed. Steam is generated by means of the burners *l l*, the heat from which is regulated by means of the valve *g*². The steam flows out at *s'*, and as soon as its strength is considered sufficient the apparatus is placed near the melter-pot, and the valve *g*¹ first being opened the issuing gas is ignited. A sufficient quantity of air to make the proper mixture is drawn on the injector principle through the several small openings shown adjacent to the outer extremity of the larger tube *l'*. The proper amount of water is always maintained within the boiler, the minimum level being indicated by means of the cock *q*. The valve *g*² serves to regulate the flames issuing from the burners *l l* and to some extent the force of the escaping steam.

This apparatus greatly facilitates the melting, inasmuch as it renders unnecessary the blowing of the bellows by a workman, and that once in function works automatically. It further effects a saving of fifty per cent. on the gas, and a few minutes are sufficient to melt from one hundred to two hundred grains of gold or silver or other alloys used in this trade.

Having thus particularly described and ascertained the nature of our invention, what we claim, and desire to secure by Letters Patent, is—

An apparatus for melting by means of gas and steam, comprising a boiler, a steam-outlet thereto, a gas-conduit, an exit thereto surrounding the steam-outlet and a shunt, burners therein adjacent to the boiler, and a valve on the conduit and an independent valve on the shunt for regulating the burners, substantially as set forth.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

GUIDO PALAZZI.
UGO PALAZZI.
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Witnesses:

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