

O. M. MÜLLER.

LAMP BURNER.

APPLICATION FILED MAY 27, 1909.

970,084.

Patented Sept. 13, 1910.

Fig. 1

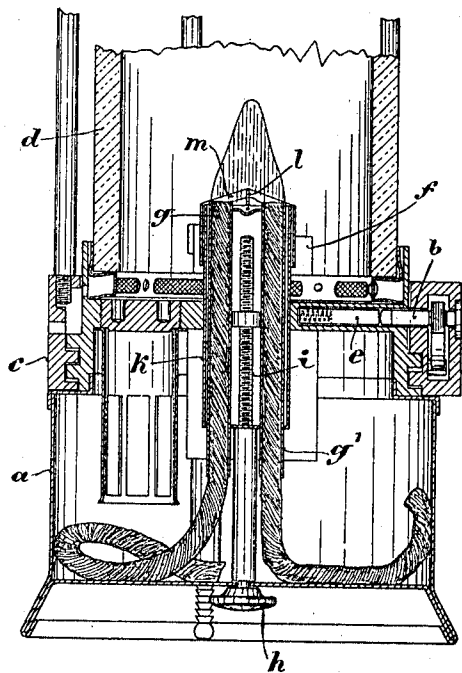
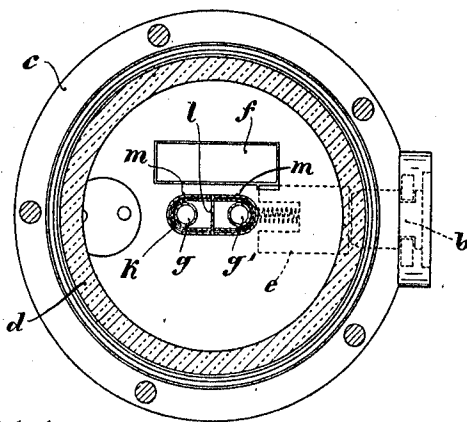


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

OTTO MAX MÜLLER, OF GELSENKIRCHEN, GERMANY.

LAMP-BURNER.

970,084.

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To all whom it may concern:

Be it known that I, OTTO MAX MÜLLER, royal mining councilor, a citizen of the German Empire, and resident of 51 Kaiserstrasse, Gelsenkirchen, Germany, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a specification.

The burners with flat wicks frequently used, on account of their greater lighting power, in preference to circular wick burners, have several disadvantages. The feed movement of the wick is liable to produce an uneven top surface, giving rise to a one-sided flame; adjustment of the burner to produce a flame sufficiently small to test for fire-damp cannot be effected unless the burner is specially constructed for the purpose. If the lamp is inclined in the plane of the flat burner the reduced supply of air is liable to give rise to imperfect combustion, and to charring of the wick.

The present invention obviates these disadvantages by constructing a flat burner of two or more separate burners which are placed side by side, spaced from each other, but the flames of which are united by means of a fixed heat-conducting bridge-piece placed between the burners and rising above the top surfaces of the same. The bridge terminates below the hearts of the flames, so that the latter will unite above the top of the bridge. The effect produced by these bridge-pieces is mainly due to the fact that the heating thereof produces a suctional effect and drives air perpendicularly upward. Air for combustion, heated in advance, is thus supplied at an increased rate between the individual burners, so that the flames are naturally drawn together and finally united. This spreading of the flame increases the luminous effect of the carbon particles. As compared with the circular burners used in benzen miner's lamps the lighting power is nearly doubled, while the consumption of fuel is only slightly higher. The lamp is, therefore, more economical for a given candle-power.

Preferably the bridge forms a chamber, open at the top, with side-walls and transverse partition wall rising above the level of the burner. The vapors emanating from the wick flow to the rim of this open chamber and there mingle with the air drawn toward the burner. This construction is of special advantage in testing for fire-damp. The

wicks are naturally never absolutely level, so that when they are lowered the flame is ultimately confined to one of the separate burners, namely the one with the higher wick. If the partition wall of the bridge-chamber is apertured sufficient air for the remaining small flame is admitted over the extinguished burner, whereas otherwise the supply of air would be obstructed by the burner-sleeve.

One form of construction, as applied to a miner's lamp, is illustrated in the accompanying drawing, in which—

Figure 1 is a vertical section of the lamp, and Fig. 2 a horizontal section.

On the reservoir *a* the glass chimney *d* is held by the screw-ring *c*, the latter being locked by the pin *b*. When inserted the pin *b* displaces the slide *e*, by which means the igniting device *f* is held fast, so that it cannot be actuated until the lamp has been properly closed.

The burner comprises two circular wick-tubes *g*, and *g'*, which are arranged a short distance apart and are vertically adjustable in a fixed sleeve *k*, by means of a spindle *i*, having head *h*. Between tubes *g*, and *g'*, is placed a bridge or cross-piece *l*, made preferably of metal and projecting above the top of the wick-tubes. This bridge extends across an oblong shell *m*, that encompasses both wick-tubes, so that the bridge is conductively connected thereto. In addition to the effects already enumerated the advantage is obtained that the wicks do not become charred so quickly, if the lamp is held in an inclined position. In that case the flame is again distributed to both burners and the latter obtain sufficient air from the sides for normal combustion. Though it is not essential, the improved burner is preferably used in conjunction with the known "under" air-supply, since this supply insures the requisite regularity.

What I claim is:—

A burner provided with a pair of spaced circular wick-tubes, an oblong shell encompassing the same, and a bridge that extends across the shell intermediate said tubes and projects vertically above such tubes.

Signed by me at Barmen, Germany, this 15th day of May 1909.

OTTO MAX MÜLLER. [L. s.]

Witnesses:

OTTO KÖNIG,
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