

No. 619,843.

Patented Feb. 21, 1899.

E. H. J. SCHÜLKE.
ACETYLENE GAS BURNER.

(Application filed Jan. 25, 1898.)

(No Model.)

FIG. 1.

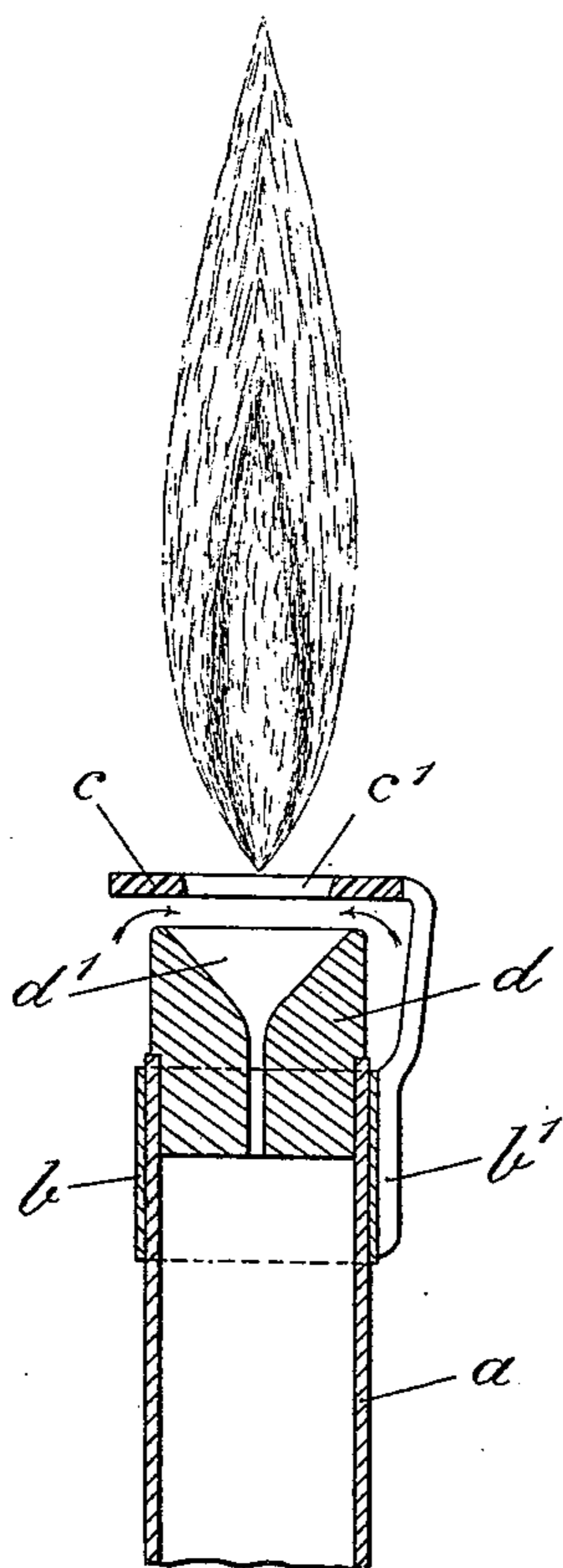


FIG. 3.

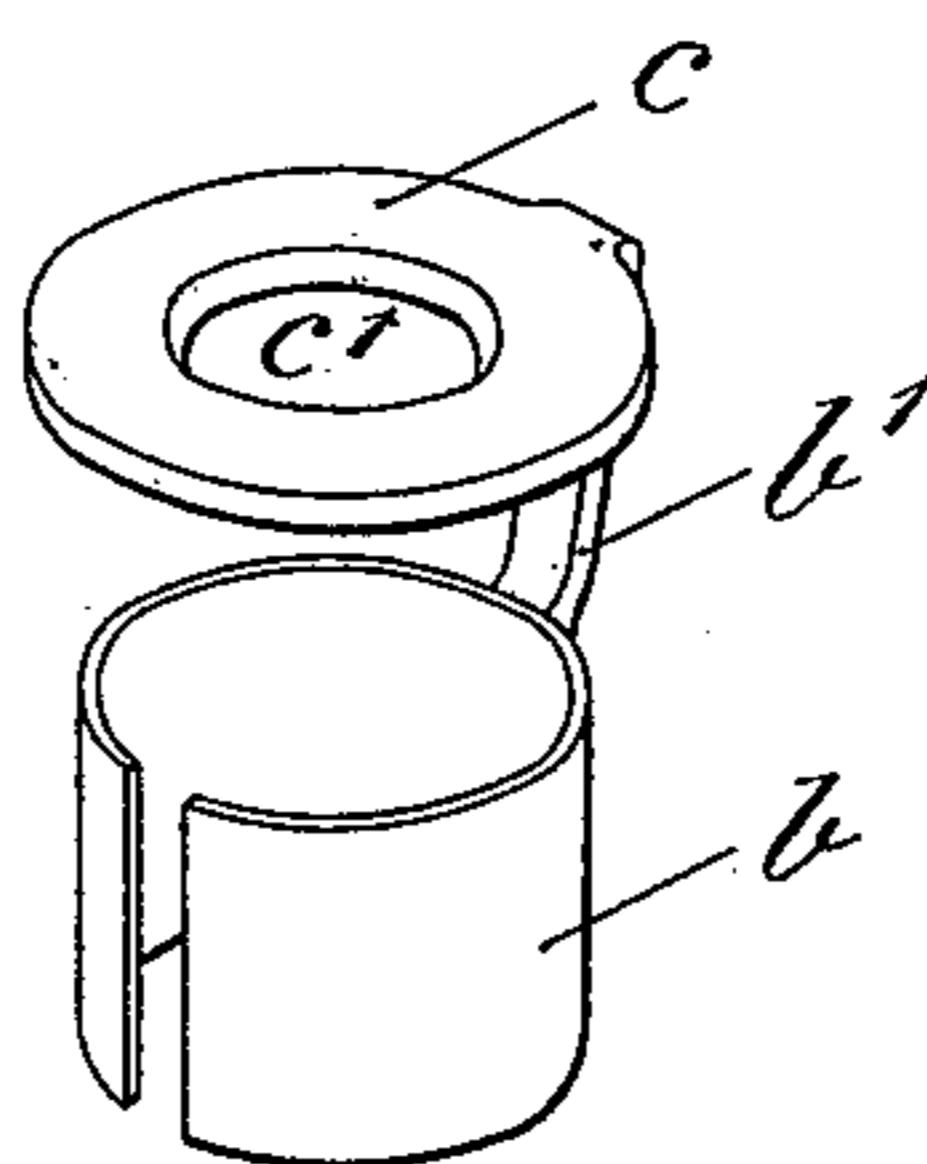
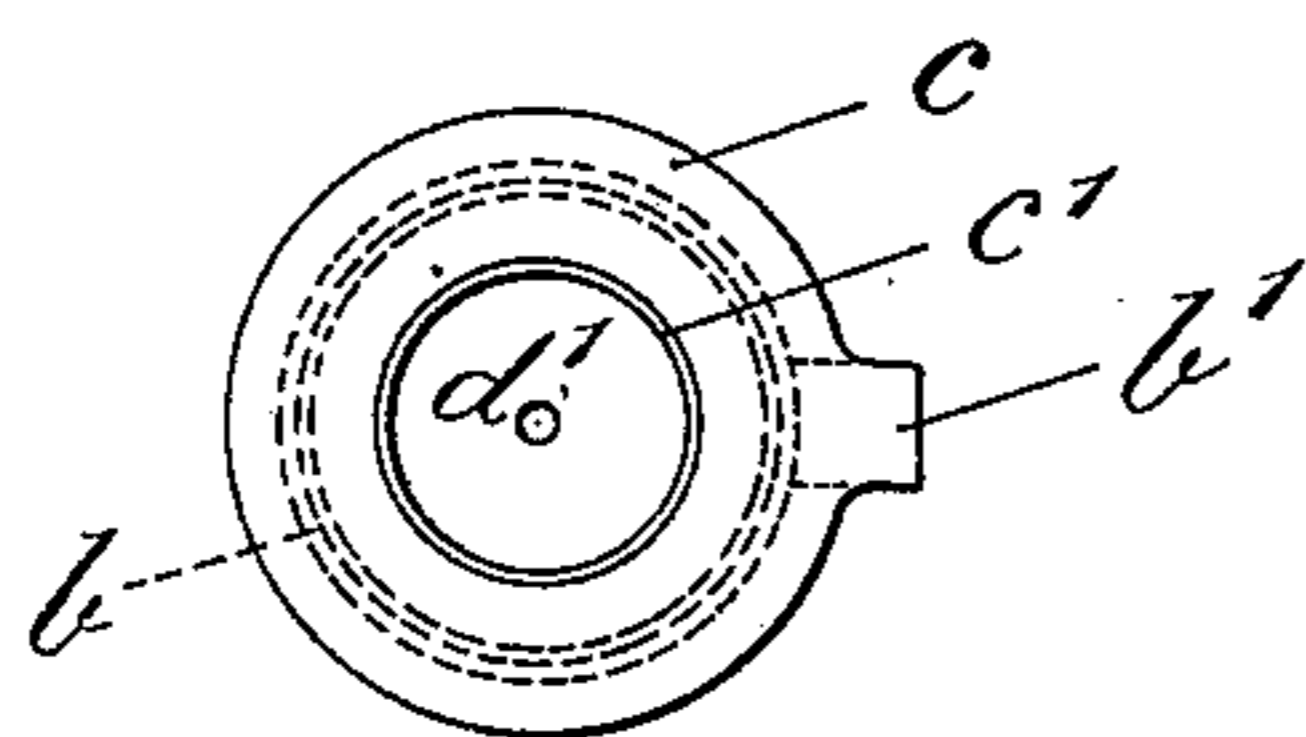


FIG. 2.



Witnesses:

E. B. Bolton

Odum

Inventor:

Ernst Heinrich Julius Schülke

by *Richardson*
his Attorneys.

UNITED STATES PATENT OFFICE.

ERNST HEINRICH JULIUS SCHÜLKE, OF BERLIN, GERMANY.

ACETYLENE-GAS BURNER.

SPECIFICATION forming part of Letters Patent No. 619,843, dated February 21, 1899.

Application filed January 25, 1898. Serial No. 667,889. (No model.)

To all whom it may concern:

Be it known that I, ERNST HEINRICH JULIUS SCHÜLKE, engineer, a subject of the Emperor of Germany, and a resident of No. 94 Leipziger-
5 strasse, Berlin, in the Empire of Germany, have invented certain new and useful improvements in devices in connection with acetylene-burners for preventing the formation of soot, of which the following is an exact, full, and clear description.

This invention relates to a device which is applied to acetylene-burners for preventing the formation of soot. Hitherto the great disadvantage in connection with acetylene-burners
15 has been that at low gas-pressure the flame formed soot at the outlet, so that particles of soot accumulated there, whereby the action of the burner was impaired and the burner was eventually rendered altogether
20 useless.

Now the object of this invention is to avoid this drawback by providing above the outlet of the acetylene-burner a disk or plate which is provided with an opening corresponding to
25 the outlet of the burner. This disk or plate acts in such manner that the outgoing stream of gas is set into flame only at the opening in the disk or plate—i. e., above the same—whereas in the space between the opening of the burner and the guard-plate or recessed
30 disk an ignition or formation of flame does not take place, in consequence of which particles of soot cannot accumulate at the outlet of the burner and an obstruction in the narrow passage of the burner is impossible. By
35 the arrangement of the cut-out guard-plate or recessed disk an increase of the supply of

air is also attained in consequence of the stronger draft in such manner that the acetylene gas is completely consumed, and even at
40 low gas-pressure the formation of soot is entirely avoided. In the accompanying drawings such a device is shown by way of example.

Figure 1 is a longitudinal section of the upper part of a burner which is provided with
45 the guard-plate or recessed disk. Fig. 2 is a plan view, and Fig. 3 is a perspective view of the guard-plate and sleeve for attaching it to the burner-tube.

The burner-tube *a* is inclosed by a sleeve
50 *b*, having an arm *b'*, on which the guard-plate or cap *c* is provided. This guard-plate or cap consists of a disk or plate *c*, having an opening *c'*, which is arranged just above the outlet *d'* of the burner and corresponds there-
55 with. The outlet *d* is of funnel shape.

Having now particularly described and ascertained the nature of the said invention, I declare that what I claim, and wish to secure
60 by Letters Patent, is—

In an acetylene-gas burner, the combination of a burner-tube having at its outlet the form of a funnel with a plate having an opening arranged above the burner-outlet, such opening having about the same diameter as
65 that of the end of the extension of the burner-tube.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ERNST HEINRICH JULIUS SCHÜLKE.

Witnesses:

FRANZ KOLLM,
CHAS. H. DAY.