

# THE UNDERGROUND LAMP POST

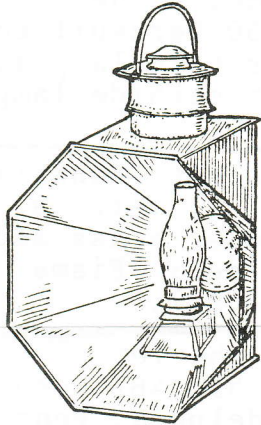
- MINERS WERE THE FIRST ECOLOGISTS -



Vol. VI, No. 1

Fall, 1993

The Underground Lamp Post, devoted to old mine lamps, carbides, and candle-holders. Mini-editor: Henry Pohs, 4537 Quitman St., Denver, Colorado, 80212



A NEW MINING LIGHT.

### Boesch's Reflecting Lantern.

By the economy of nature our earth is covered with darkness one-half of the time, and were it not for the benefits which we derive from artificial lights, a large portion of our existence would be passed in a most unprofitable and unpleasant manner. But thanks to the scientific and inventive world which have so thoroughly overcome the darkness as to permit the night, in a great measure, to be turned into day.

Although the facilities for lighting our dwellings, our streets and our ordinary places of business and pleasure are and have been abundant and cheap for years, yet we have never had a light such as would be suitable for lighting up a large area with a single burner without entailing a large expense for its maintenance. This want was particularly felt in our hydraulic mines where it is necessary to light up large and high banks during the night to enable the miner to direct the hydraulic stream effectively against it. Mr. Emil Boesch, of this city, knowing that such a light was required has invented and secured letters patent through the MINING AND SCIENTIFIC PRESS Patent Agency for the improvement represented by the accompanying cut.

The chief advantages of this lamp are first, the employment of an ordinary coal oil or other burner for giving the light; secondly, in providing an abundant ventilation at the bottom, top and rear so as to properly feed the flame with air and prevent the interior of the lamp from becoming so hot as to break the glass front; thirdly, in the employment of a focal reflector which can be adjusted up or down or to either side according to the direction in which it is desired to concentrate the light, and fourthly, in constructing the entire lamp in a convenient portable form so that it can be moved from place to place readily when required.

This lamp is mechanically constructed and is admirably adapted for lighting up mines, mills, halls, wharves and other open spaces. The inventor, Mr. Emil Boesch, is a practical lamp manufacturer, and is proprietor of the large

Left - From the Mining and Scientific Press of December 7, 1872, p. 360.

It was new then, but it is old now; recently rediscovered.

Send your information and sales-trade notices early for our next issue. We hope to have the safety lamp series finished by then and expect more space to be available. Thanks.

lamp factory on the corner of Pacific and Kearny streets, in this city. This, we believe, is the only lamp factory on this Coast. Mr. Boesch has procured a number of patents for improvements on lamps, lanterns and reflectors within the past few years, through our Patent Agency, and has met with united success as a pioneer in his business. The lamp represented by the engraving is meeting with a fair sale, and is giving much satisfaction. For further particulars address Emil Boesch, N. W. corner Kearny and Pacific streets, this city.

## UNITED STATES PATENT OFFICE.

HENRY J. RICHARDS, OF WILKES-BARRÉ, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOHN F. SHEA, OF SAME PLACE

No. 622,076.

Patented Mar. 28, 1899.

3, 1899.

H. J. RICHARDS.  
MINER'S LAMP.  
(Application filed Mar. 9, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

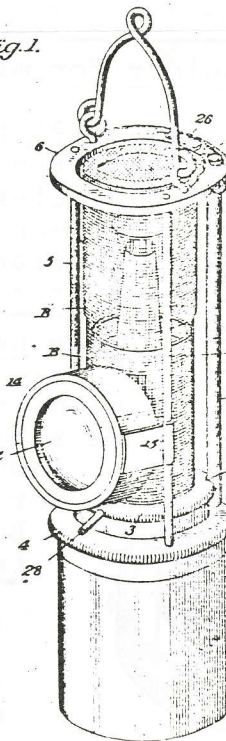
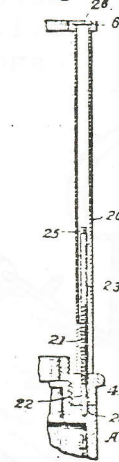


Fig. 5.



oil-cup after 55  
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It will be evi-  
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will be impos-  
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from ring 4,  
and 4 are pre-  
the oil-cup.  
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nit gas to the  
preferably in 80  
within the  
side directed  
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the reflector,  
, adapted to  
gas from the  
ring out the  
inney creates 90  
the flame and  
l prevents it  
As shown, the  
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lified locking  
which may be  
The lower  
headed at 21,  
line threaded  
of a threaded  
reached open- 100

Wm. E. Keith

Henry J. Richards  
By [Signature]

Safety lamps, too - Henry J. Richards of Wilkes-Barre, Pennsylvania, manufactured several different kinds of oil wick cap lamps. This patent suggests that he may also have made safety lamps. An earlier patent in 1892 numbered 476,488 was also issued to Richards for a safety lamp design. Has anyone ever seen a safety lamp with his name or either of these two patent dates on it? We'll try to show the other patent in another issue.

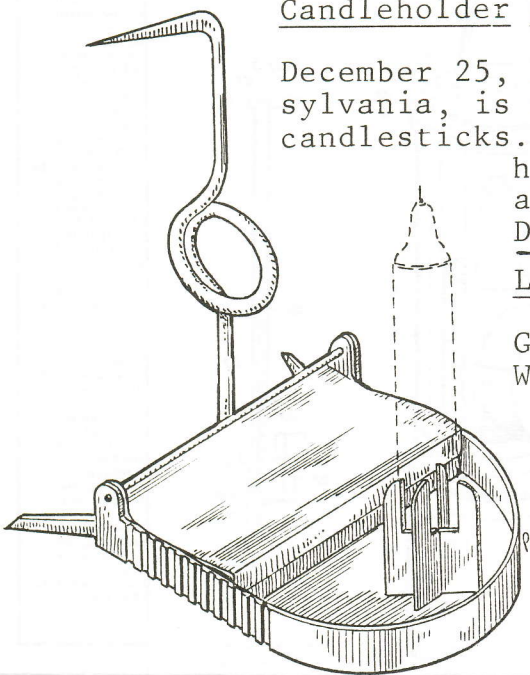
Stonebridge information - Dr. Bob Kraft, 971 Baileyana Rd., Hillsborough, California, 94010, 415-343-1976, is involved in studying the folding Stonebridge candle lanterns, vintage early this century. He would welcome any advertising material, written references or anything else which would help establish a worthwhile story. Please share your information with Bob.

Mining ribbons - David Crawford, 1308 Halsted Rd., Rockford, Illinois, 61103, needs UMWA and WFM or other mining badges and ribbons. He will trade lamps for ribbons.



Carbide hand lamp trade - Contact Christian Tauziede, 6 Rue Audronet du Cerlean, 60550 Verneuil en Halette, France, for information about trading for this lamp as described in an earlier issue. He also has French carbide lamps and a Polish safety lamp to trade.

Australian lamps - Gerry Dillon, 29 Warramunda Crescent, Banksia Park, Adelaide, So. Australia, 5091, offers the following for trade: Pinnacle carbide hand lamps, brass and aluminum; Premier carbide hand lamps, brass and steel; Fisma carbide hand lamps from Spain. Make your offers to him.



Candleholder for mining? - The illustration at the left from U. S. patent # 531,467 issued December 25, 1894, to August Nittinger of Philadelphia, Pennsylvania, is often found on research listings of miner's candlesticks. Clearly, it is not a stick; rather, a candleholder. But, was it for mining use? The patent abstract calls it a "stick" and a match safe box. Does anyone have more information?

Lamp needs - Your mini-editor is thankful to a kind Californian for the Little Giant brass screw feed part we needed for a lamp. We still need two water doors for the same type lamp. Also, we need a nickel-plated bottom for an I T P cap lamp and a brass bottom for a Buddy cap lamp. We'll listen to sell or trade talk. Many thanks.

Miner's candle - a flower.  
Looks like forget-me-nots; Cryptantha virgata.



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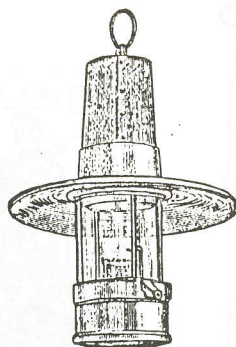
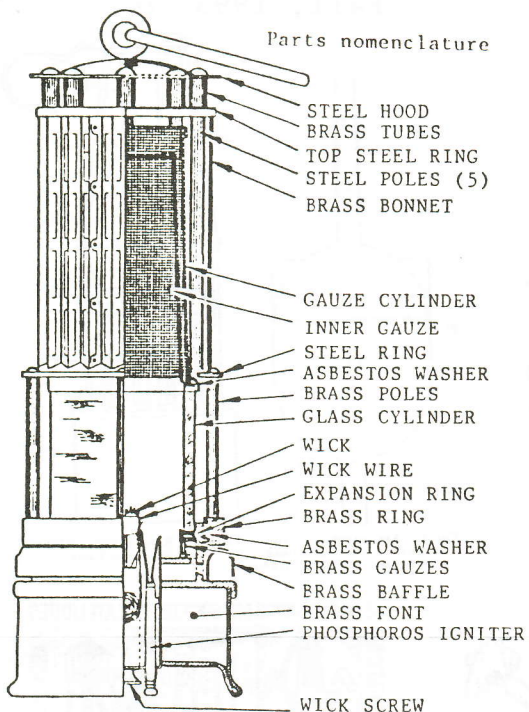


CALL: 814-944-9307 AFTER 5PM  
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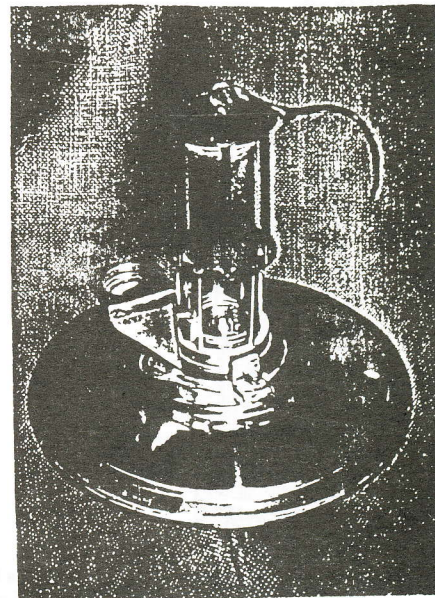
Safety lamps - Our current series on flame safety lamps continues on pp. 3-6.

Thanks - It always seems so repetitive, but each issue we must thank those who continue to make the Lamp Post possible. Our printing continues to route through Tennessee. Postage this issue has come from Illinois, Australia, Ohio, New Mexico, Pennsylvania, New York, Colorado, Michigan, Florida, Arizona, Switzerland and Canada. Thank you all. We will continue to do our best.

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The proch or pit-bottom safety lamp was a bonneted Clanny-type which burned a mixture of 1/3 paraffin (kerosene) and 2/3 colza oil in two flat 3/4 in. (19.05 mm) wide wicks for increased illumination. An enameled reflector threw the light downward from a high position.



An unusual safety lamp adapted to a hollow water float for use as a fire damp inspector's lamp. It includes a brass lamp font, a sheet steel float, brass fasteners, two wire gauze members, a round wick, and a lateral reflector mirror for viewing the flame from above its floating position. Model FRIWO 1910 from G L Z Miner's Lamp Manufacturers in Zwickau, Saxony, Germany. Ca. 1950.

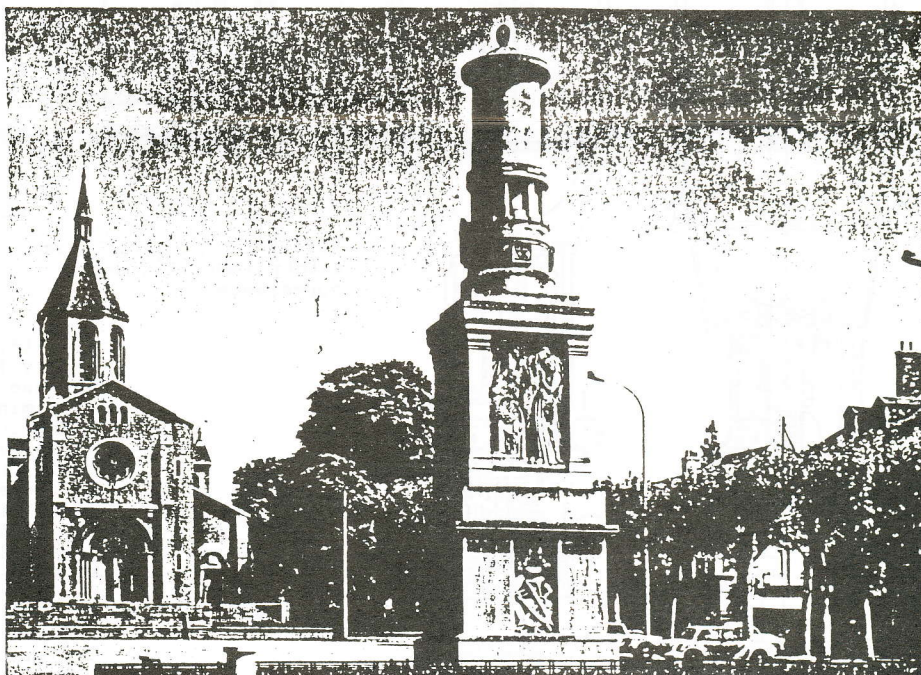
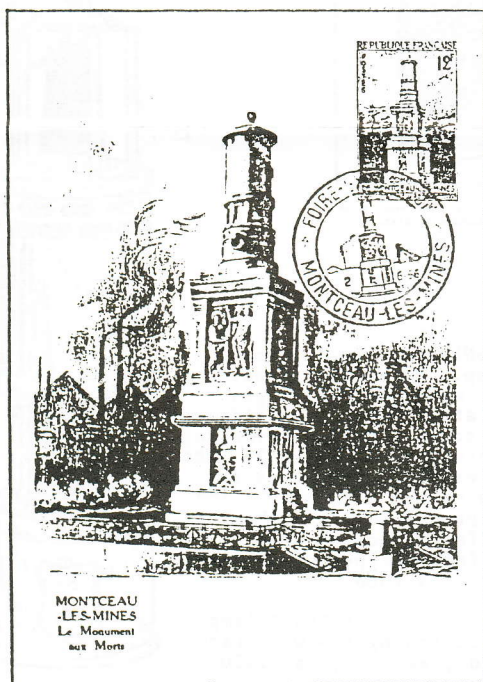
Lamp diameter 3.75 in. (95 mm), height 10.0 in. (254 mm), float diameter 13 in. (330 mm).

In 1883 Carl H. Wolf of Zwickau, Germany, designed a very successful mine safety lamp which has survived as today's common flame lamp for gas testing. It includes the following features:

- Safety wire gauze (Davy)
- Glass cylinder (Clanny)
- Confined "burnt Air" in the upper part of the lamp (Stephenson)
- Spring-type expansion rings (Upton and Roberts)
- Underfeed air intake (Elion)
- Double wire gauze tapered cylinders (Marsaut)
- Metal bonnet, often louvered (Marsaut)
- Naphtha fuel
- Independent internal igniter
- Wick feed screw
- Magnetic lock



Perhaps one of the largest safety lamp reproductions is this monument to departed miners in Mons, Belgium.



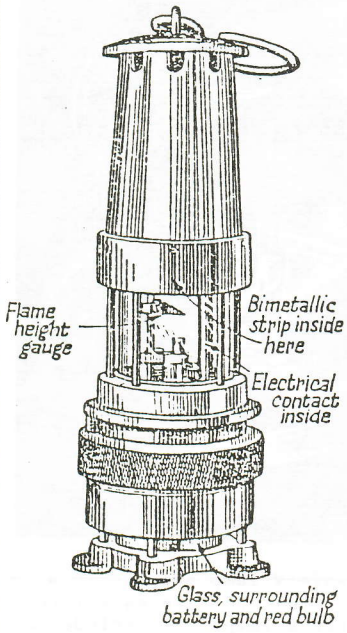


FIG. 9. The Spiralarm.

Tall SPIRALARM safety lamp manufactured by J. H. Naylor, Wiggan, England.

4 in. (101.6 mm) diameter x 14 in. (355.6 mm) tall.

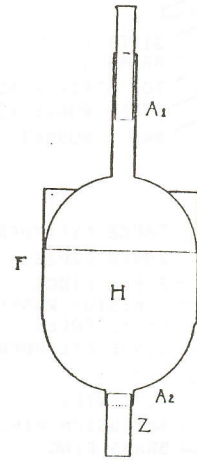
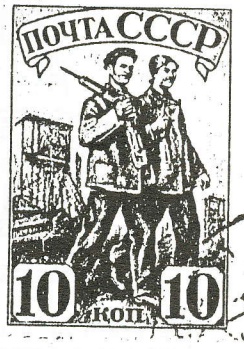
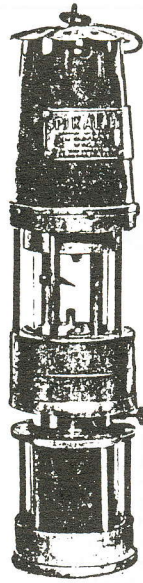


FIG. 3. APPARATUS USED FOR STUDYING THE CONDITIONS GOVERNING SUITABLE DESIGN.

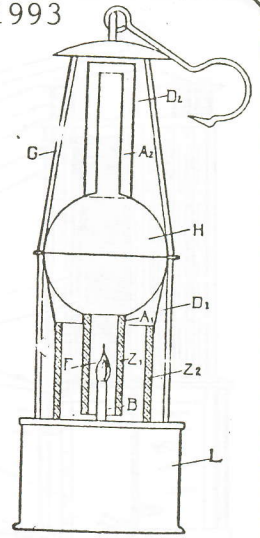
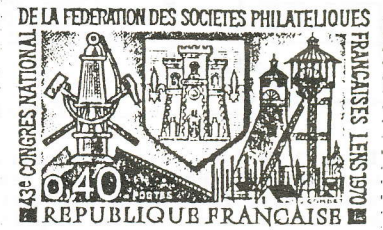
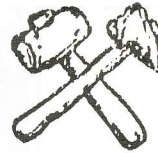


FIG. 4. EXPERIMENTAL MODEL OF FLEISSNER LAMP.

Short SPIRALARM safety lamp manufactured by J. H. Naylor, Wiggan, England. A bi-metallic heat gauge reacted to the height of the flame (more gas in the atmosphere) to light a battery-operated warning bulb inside the lower red glass.

4 in. (101.6 mm) diameter x 12 in. (304.8 mm) tall.



FLEISSNER "Singing" flame safety lamp design data.

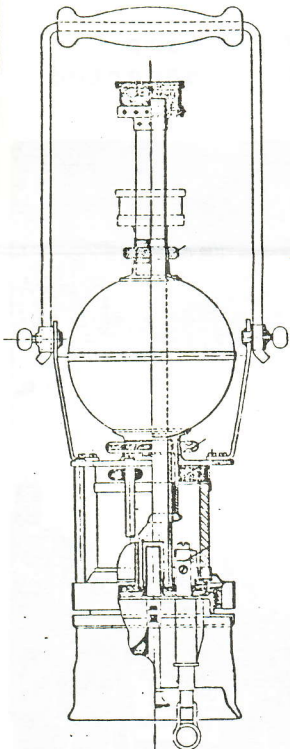


FIG. 5. SECTION OF FLEISSNER LAMP BURNING BENZENE.

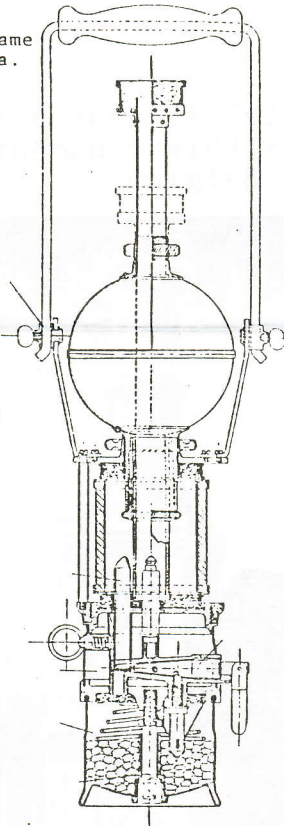


FIG. 6. SECTION OF FLEISSNER LAMP BURNING ACETYLENE.

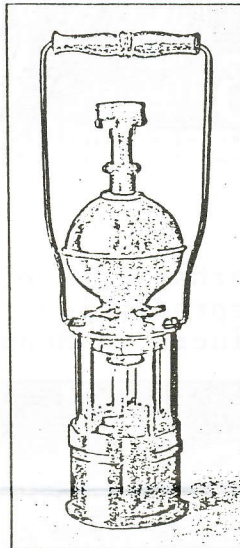


FIG. 7. ACTUAL APPEARANCE OF LAMP BURNING BENZENE.

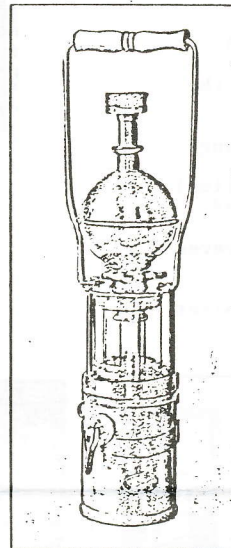
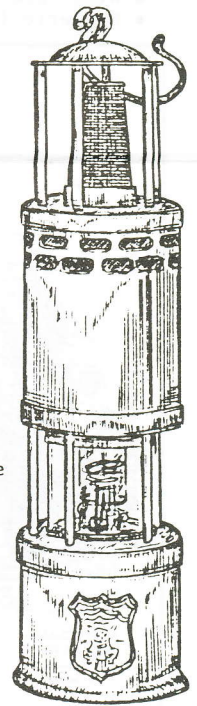


FIG. 8. ACTUAL APPEARANCE OF LAMP BURNING ACETYLENE.

FLEISSNER "Singing" flame safety lamp original appearance.

The FLEISSNER "Singing" flame safety lamp. This lamp signaled methane or other explosive gas in a mine atmosphere by emitting a humming sound when the percentage of gas mixture rose above 1%. The sound increased in volume as the percentage of gas increased. The sound was produced by the physical law of different sounds made by gas of different sounds when burnt at the end of a tube.

This model of the FLEISSNER lamp was manufactured by the Wolf Lamp Co. in Leeds, England, ca. 1920.



Carbide safety lamps - Much of the following information about carbide flame safety lamps has been supplied by Manfred Stutzer of Ludwigshafen, Germany.

- 1. Manufacturer: Frieman & Wolf - Carl Wolf
  - Pre-WWII in Zwickau, Saxony, Germany
  - in Sheffield and Leeds, England
  - in Brooklyn, NYC, USA
  - Post-WWII in Duisberg, Germany



A. Wolf "Stuchlick" lamp - Germany, 1903

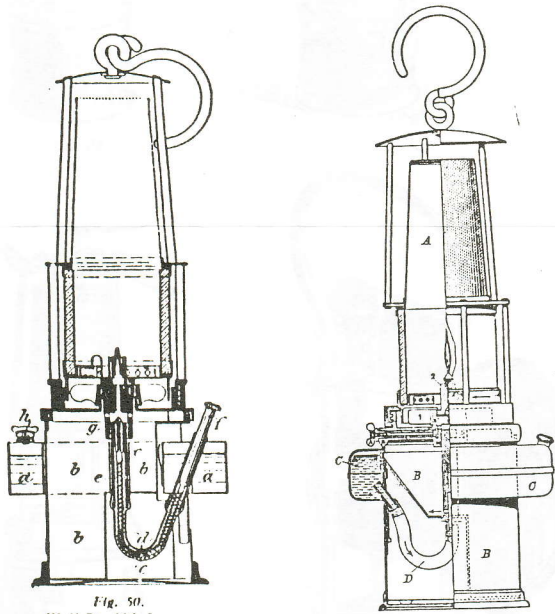
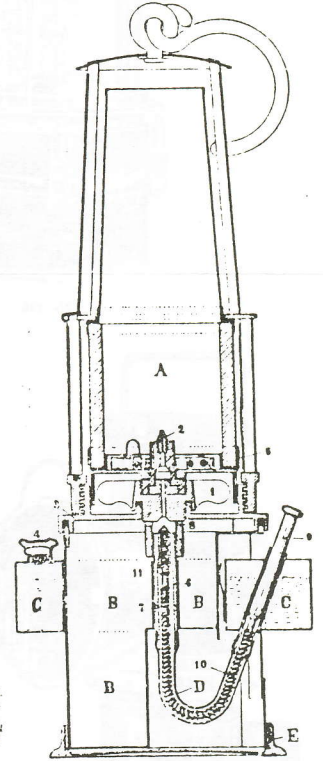
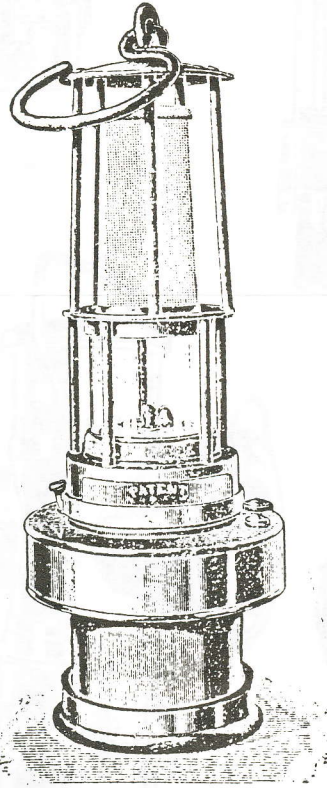


Fig. 50.  
Wolf-Stuchlik-Lampe.



B. Wolf "Pokorney" lamp - Germany and England, after 1905

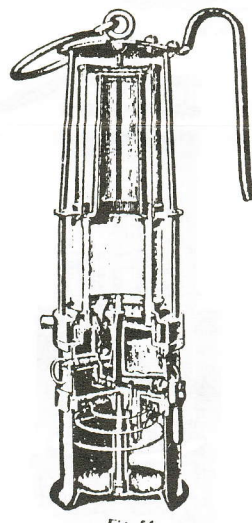
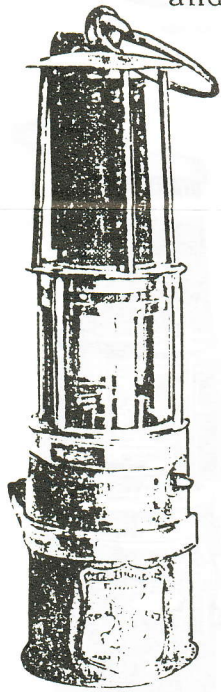
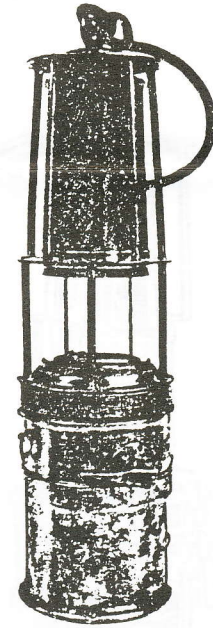
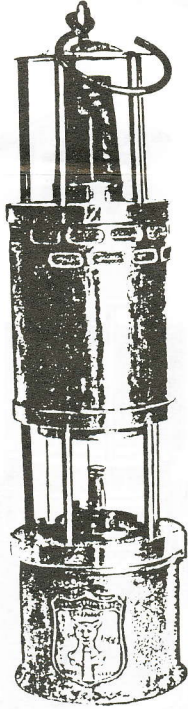


Fig. 51.  
Wolf-Pokorny-Lampe.



Azetylen-Sicherheitslampe  
Wolf-Pokorny 1905.

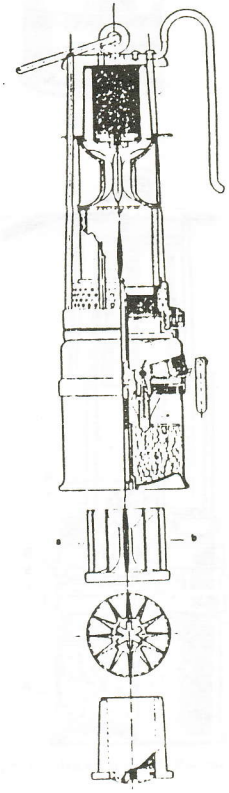
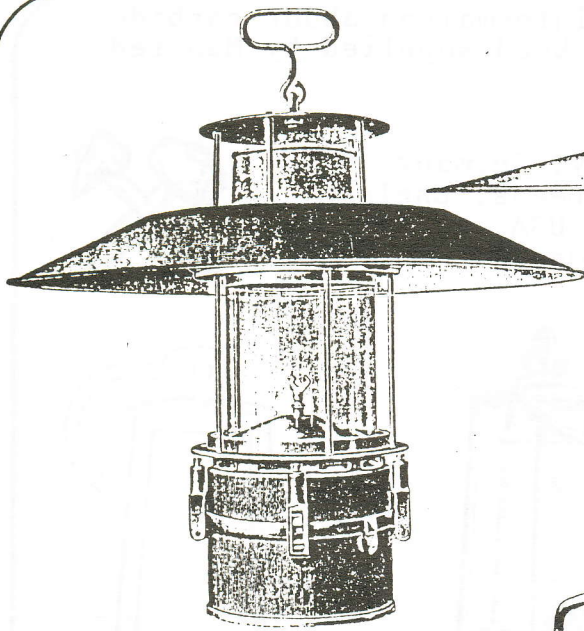
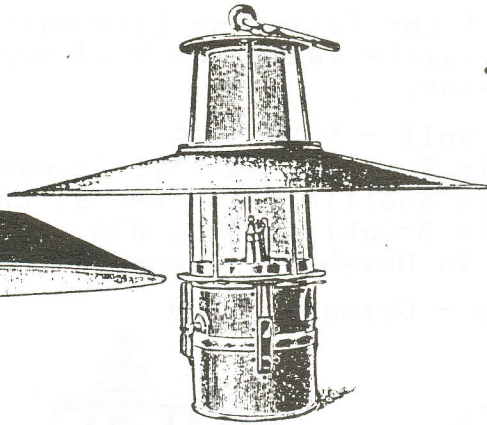


Fig. 51.

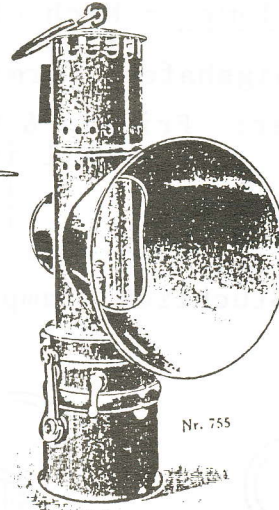
The WOLF "Porkorney" acetylene carbide flame safety lamp as manufactured in Sheffield, England, ca. 1905.



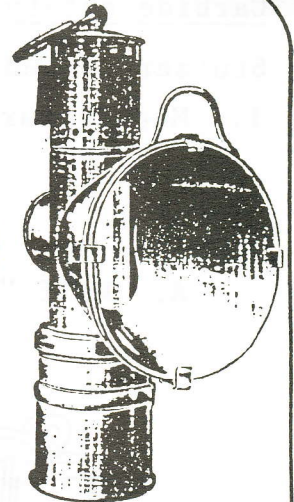
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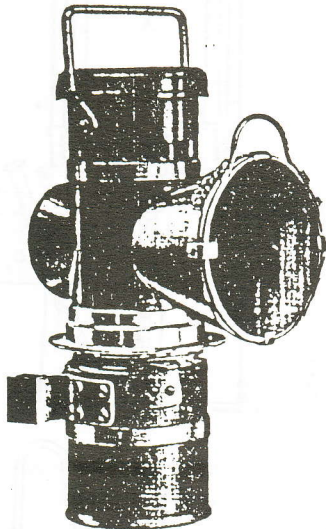
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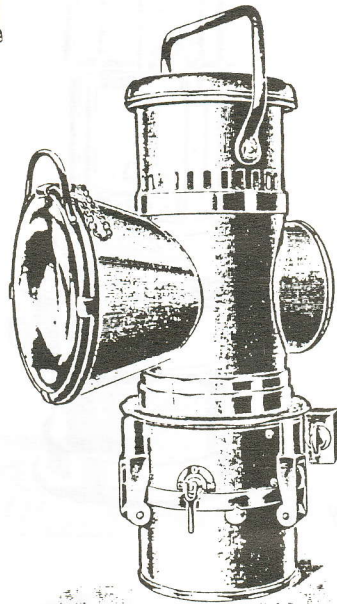
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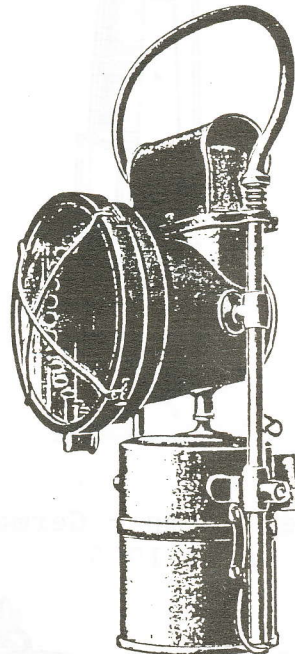
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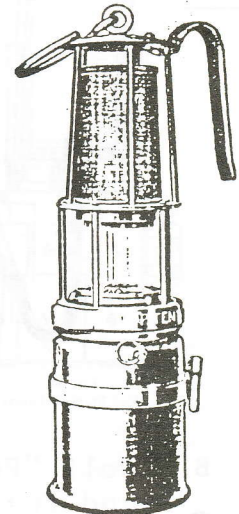
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Nr. 760



Nr. 800

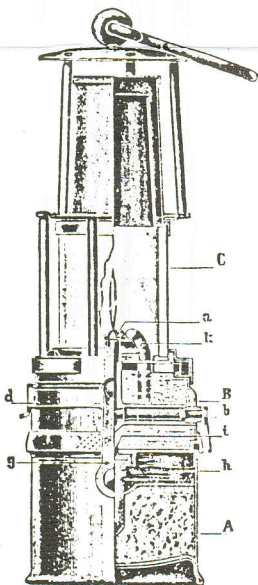
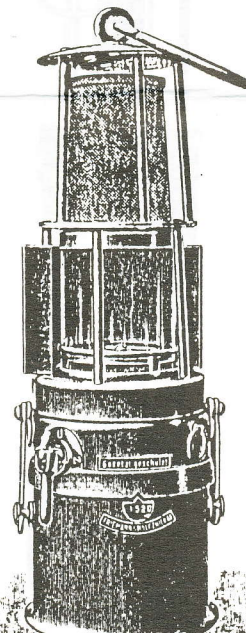
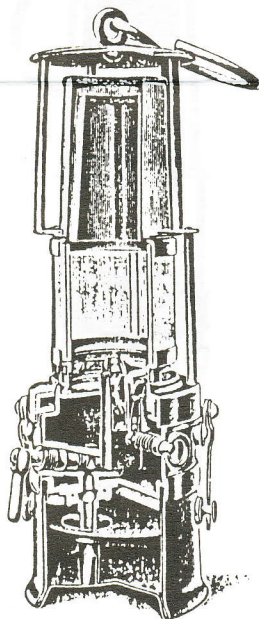
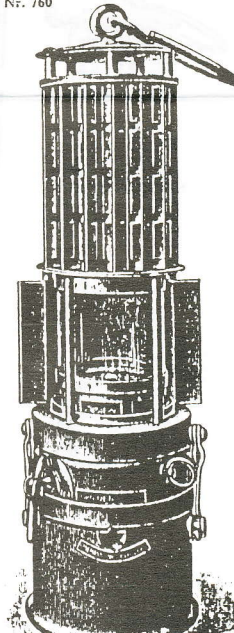


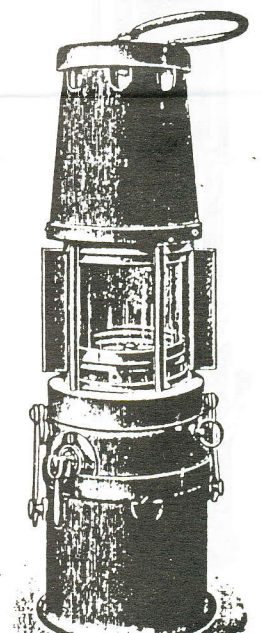
Fig. 102. —Wolf Acetylene Safety Lamp



Nr. 800



Nr. 801



Nr. 802