

THE UNDERGROUND LAMP POST

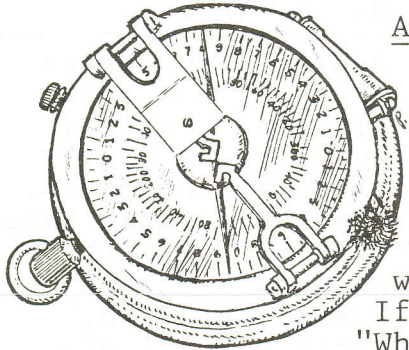


- MINERS WERE THE FIRST ECOLOGISTS -

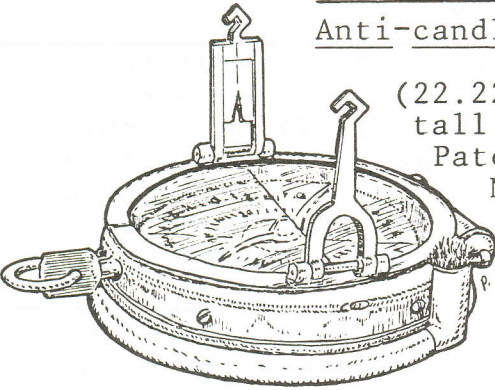
Vol. V, No. 9

Fall, 1992

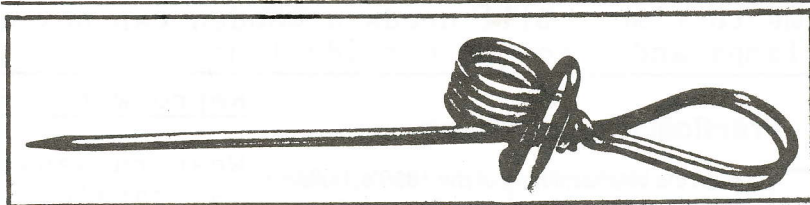
The Underground Lamp Post, devoted to old mine lamps, carbides, and candleholders. Mini-editor: Henry Pohs, 4537 Quitman St., Denver, Colorado, 80212



Amazing - Keith Williams has shown us this beautiful unmarked one-of-a-kind mine surveyor's compass with a built-in oil wick lamp. Made completely of brass, it is 3.6 in. (91.44 mm) in diameter with a round, flat oil font base which includes a wick tube and a filler cap. The upper compass includes: folding, silvered sight vanes with hooks; a leveling vial; and a pendulum-inclinometer. As usual, the fine workmanship suggests European instrumental manufacturing. If indeed manufactured, it suggests the question . . . "Where are all the others?"



Anti-candle - John Pawloski has sent a photo of his tin anti-candle . . . 0.875 in. (22.225 mm) in diameter and 6.0 in. (152.4 mm) tall. It is marked "ANTI-CANDLE . . . Salsbury's Patent . . . For Petroleum - Burns 14 Hours . . . Made in London". Perhaps our English readers know more about this item.



Authentic - We've mentioned before the crudely-made, red-rust, obviously-reproduced candlesticks supposedly from a Michigan mine that are often seen in shops lately. We have recently seen this candlestick in a private collection. It looks very authentic, i.e., fine gray-finish unoxidized steel; 0.1875 in. (4.7625 mm) diameter which is slightly smaller than the reproductions; and tapered, single-facet points on the shaft and the hook. 10.5 in. (262.19 mm) long. Does anyone know more about this candlestick?



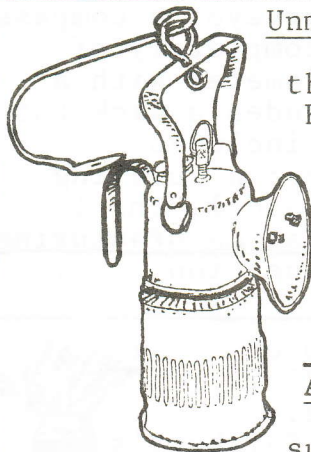
Collectors - We were fortunate to be able to attend the collector's meeting at the University of West Virginia in Morgantown last July where we met for the first time so many of our eastern readers and lamp friends. Many thanks to all for their kindness, specially Prof. Gay Bindocci from the University. Lighting items and accessories were available in almost cargo quantities! If this meetig has found a home at U V W's Comer Museum, it can easily achieve CONVENTION status and dignity with show-and-tell displays, sales-trade tables, specialized technical papers and historical-educational presentations. Organizational and financial backing are necessary. The time has come for a national Old Lamp and Mining Artifact group to sponsor an annual OLMA Convention.

Carbon Oil - Old reliable Jack Ramsdell down in Carson City, Nevada, has written to assure our readers that "carbon oil" as mentioned in the last issue is nothing more than KEROSENE. He says that when all else fails, you can always trust Webster!

Lamp sale- Wayne Roberts, P. O. Box 558, Chino Valley, California, 86313, 602-636-2345, has oil, safety, carbide lamps, sticks, stocks, photos, etc., for sale. You can contact him for details.

Cap tins and lamps - John Kynor, 224 Adams N E, Albuquerque, New Mexico, 87108, 505-266-4475, has sent his updated WANT list for cap tins. Write or call for your copy. John has tins, boxes, and the occasional lamp or candlestick for buy-sell-trade.

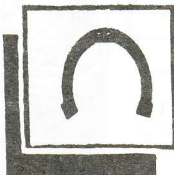
Calendars - Claude Travis, Box 4, Merle Travis Highway, Beechmont, Kentucky, 42323, is anxious to obtain a back issue of the Senior Conflow calendar with the cap lamp illustrations . . . No. 3, 1984.



Unmarked lamp - Christian Tauziede, 6 Rue Audronet cu Cercean, 60550 Verneuil en Halette, France, has sent this sketch of a carbide hand lamp he acquired in Scotland. He says that, "Although it looks like a Justrite or a H. Hesse, some features are different and there are no marks or stampings on it." Trade - M. Tauziede has several lamps for trading: a Polish safety lamp; ETOILE French carbide lamp. He wants safety lamps. His KOEHLER safety lamp is stamped "KO-PAX SAFETY LAMP, MARLBORO, MASS., U. S. A." Can one or more of our safety lamp specialists tell him (and the Lamp Post) what the "KO-PAX" means?

American Lamp - William R. Sevier, Box 302, Somerville, Indiana, 47683, 812-795-2532, wrote early this summer that he had an AMERICAN LAMP & SPECIALTY CO. carbide cap lamp (in good shape but with the flame tube missing) for sale or trade. We have heard since, however, that it has been sold by now. This, then, will keep our readers informed that such items still do appear from time to time. Bill needs a wooden cap box and a wooden squib box, safety lamps and uncommon carbide lamps.

Practical Blacksmithing



Learn the blacksmithing of the 1890's, building everything from miner's candlesticks to cowboy cooking tools to your own blacksmithing tools, using forges, a drill press, and a power hammer from the early 1900's. This is a two-credit course.

Tuesdays and Thursdays, June 9 - July 16
2:30 p.m. - 5:00 p.m.
\$150.00, Roy Jayne Blacksmithing, 1820 Ty, Gardnerville

Repro watch - Jack Ramsdell sent this advertisement from the Western Nevada Community College Summer '92 catalog. He says that he has applied for a student loan. This should remind all serious collectors that there are modern reproductions (sometimes called 'fakes') in the market-stream and that more and more may arise.

Whatzit?- The baby WOLF safety lamp attachment shown in our last issue has not yet been identified. Errol Christman is very anxious to resolve it.

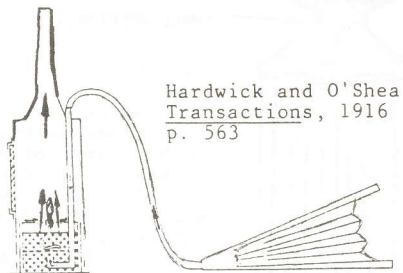
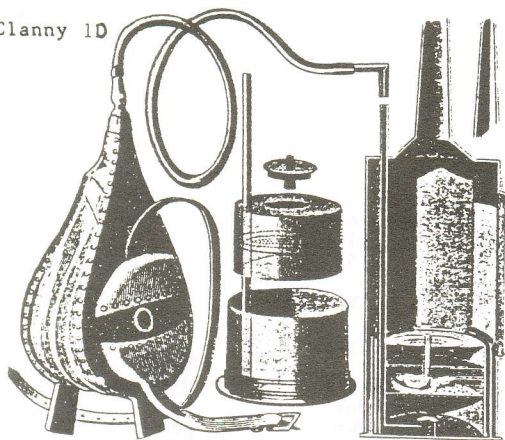
Trade or sale - Bob Schroth, P. O. Box 1258, Lake Arrowhead, California, 92325, offers for trade or sale: nickel WOLF cap lamp; a nice brass ARROW; a very nice brass X-RAY; two BALDWINS; and other lamps and sticks. He has several rare cap tins for trade only.

Safety lamps - Our current series on flame safety lamps continues on pp. 3-6.

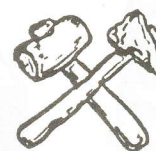
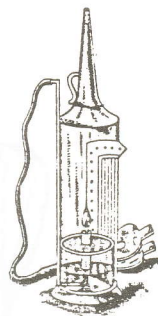
Acknowledgements - Once again our thanks goes out to all who support the Lamp Post. It can continue only because of the interest and generosity of many readers and correspondents . . . printing for this issue from Tennessee, envelopes from Colorado and postage (though the deficit continues to grow) from Ohio, Indiana, Kentucky, California, Missouri, Colorado, Canada, Iowa, Illinois, Alabama, Germany, Virginia, West Virginia, Georgia and Arizona. Many thanks to all.

Lamp Post © Copyright, Henry A. Pohs, 1992

Clanny 1D

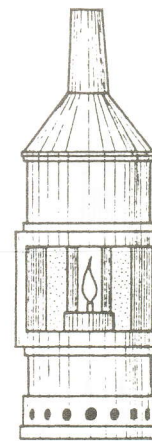
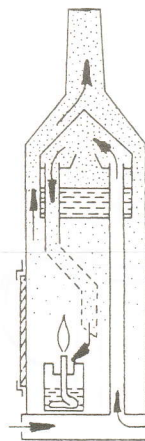
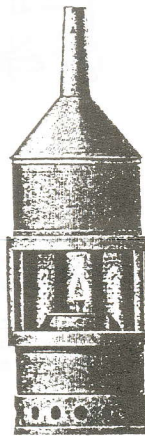
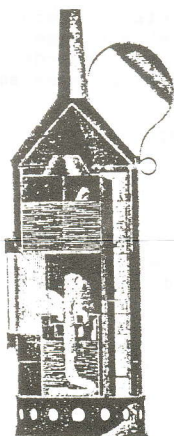


Hardwick and O'Shea Transactions, 1916 p. 563

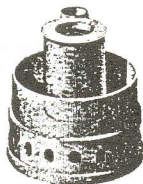
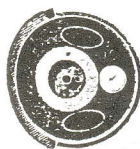


Clanny 2

Dr. William R. Clanny's second or 'steam' lamp was made of tin or copper with a glass window. Air passed in through a tube in the bottom of the lamp and was conducted through an extension of the tube to a point high up in the lamp. Above the oil vessel and flame, and situated about the middle of the lamp, was a water reservoir which was heated by the oil flame so as to generate steam by boiling the water. The air admitted through the inlet tube was conducted below the oil vessel by two tubes and then passed up the sides of the cistern and out through a chimney. This lamp was quickly extinguished. There is no record that it was successful underground.

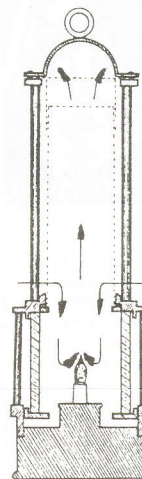
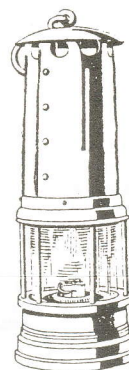
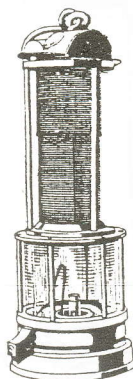
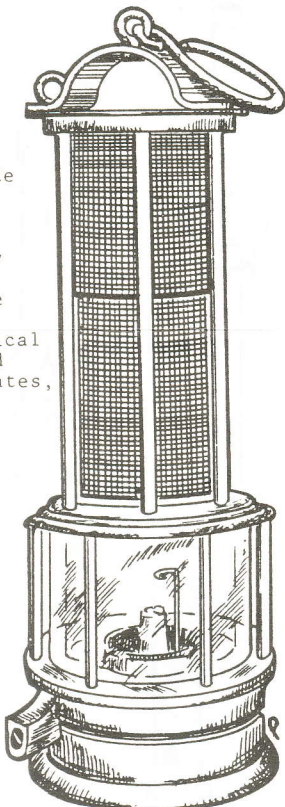


Hardwick and O'Shea Transactions, 1916 pp. 565,566



Clanny 3 - 4 - 5 - 6A

Dr. William R. Clanny's third, fourth, and fifth lamps have been described, but no drawings or models exist. His sixth lamp, made in 1843, took on many of the distinguishing design shapes of the prolific Newcastle Davy lamp. Occasionally known as the 'Glenny lamp' (a corruption of Clanny), it added the glass below the gauze cylinder to provide more illumination. This design is the historical CLANNY lamp which was manufactured in England, Europe, the United States, and other countries.

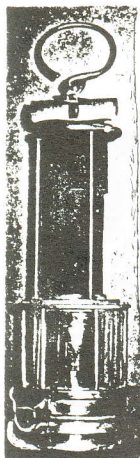


Clanny 6C

Canada 3



Stable Lantern/Lanterne stable



Clanny 6B

3.5 in. (88.9 mm) base diameter
10 in. (254 mm) height over hood

THE ENGINEERING AND MINING JOURNAL
MAY 19, 1883.
204

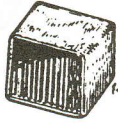
DAVY & CLANNY SAFETY MINER'S LAMP.

Tin Plate, Sheet
Tin, Metals,
Etc.

SAFETY WIRE GAUZE.

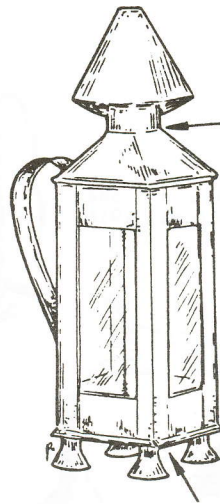
MERCHANT & CO., Importers, Philadelphia.

This 1883 advertisement mis-used the CLANNY name as "Clancy" for promoting the sale of miner's safety lamps. A CLANNY-type lamp (with glass) is illustrated.



Davy 0

Sir Humphry Davy's experimental safety canals. Sketched from a photograph at the Science Museum, South Kensington, London.

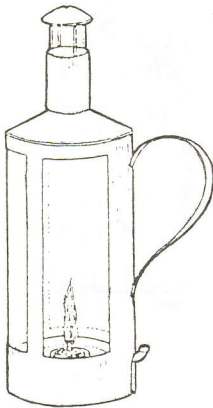
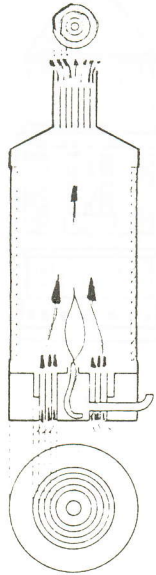


SMALL APERTURES

Davy 1

Sir Humphry Davy's laboratory model of a flame safety lamp as described in his paper of November 9, 1815. It was constructed of sheet tin with four glass side plates. The air entered below the flame through a number of metallic tubes .125 in. (3.175 mm) in diameter and 1.5 in. (38.1 mm) long. The products of combustion passed out through a chimney composed of two open cones guarded by a plate containing "many small apertures."

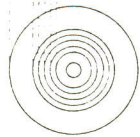
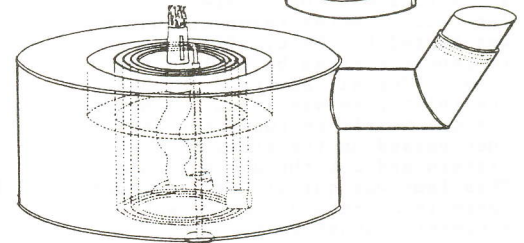
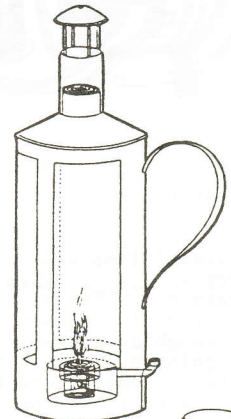
METALLIC TUBES



Davy 2

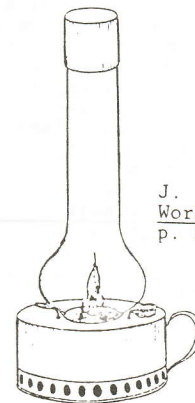
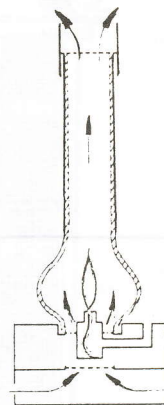
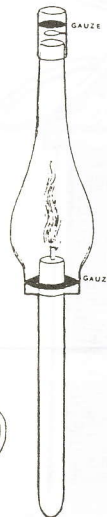
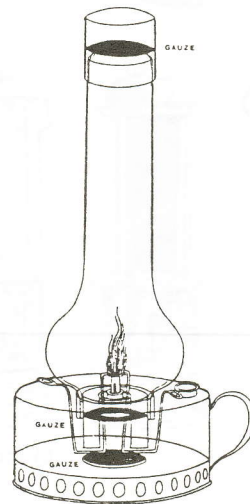
Sir Humphry Davy's second experimental lamp described in his paper of November 9, 1815, used "safety canals to guard both the inlet and the outlet." These were "close concentric hollow metallic cylinders of different diameter placed so as to form circular canals of the diameter of from one-twenty-fifth (.04 in., 1.016 mm) of an inch to one-fortieth (.025 in., .635 mm) of an inch, and an inch and seven-tenths (1.7 in., 43.18 mm) long, by which air was admitted in much larger quantities than by small tubes." This lamp was constructed of sheet tin with glass windows.

J. Davy, Works of H. Davy, p. 38, plate 1



Davy 3

Sir Humphry Davy's third experimental lamp described in his paper of November 9, 1815, arranged for the entrance of air and the exit of the products of combustion "through apertures covered with brass wire gauze of 1-200 of an inch (.005 in., .127 mm) in thickness, the apertures of which should not be more than 1-120 if an inch (.008 in., .211 mm). This stops explosions as well as long tubes or canals, and yet admits of a free draught of air." This lamp consisted of a tin font, a glass chimney, and the brass wire gauze.



J. Davy, Works of H. Davy, p. 38, plate 1

Davy 4

A fourth type of experimental lamp attributed to Sir Humphry Davy appears in several references. It consisted of a capped cylinder of wire gauze covering a candle, both of which were sealed from the atmosphere by a wad of moist clay. There is no evidence that this VERY TYPE of illumination device was ever taken underground.



Simonin, Underground Life, p. 116

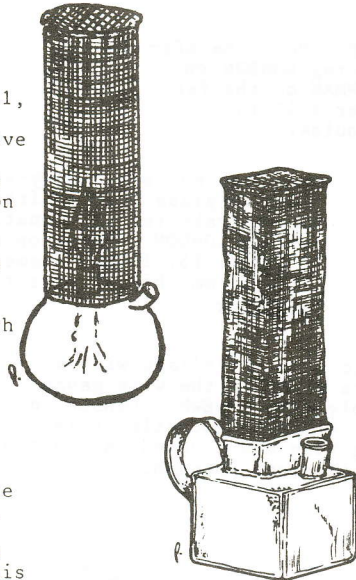


Palmley, Colliery Manager's Handbook, p. 610



Davy 5A

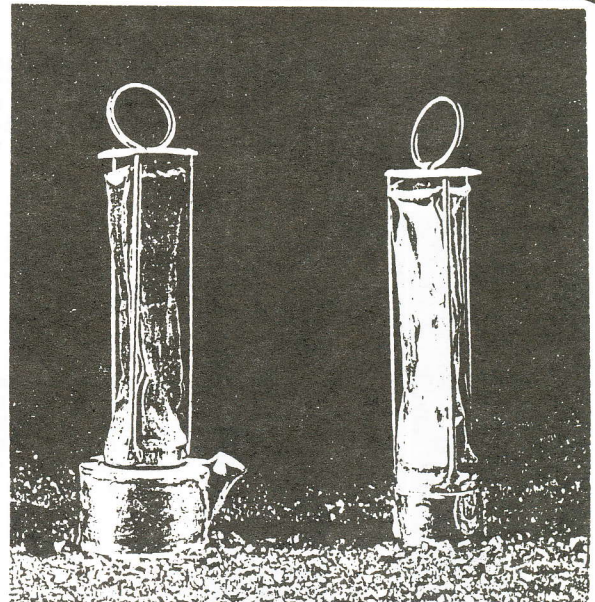
The discovery of the properties of the wire gauze cylinder was communicated by Sir Humphry Davy to the Royal Society in a paper on January 11, 1816, entitled "An account of an invention for giving light in explosive mixtures of fire damp in coal mines by consuming the fire damp." In this paper he stated that - "This invention consists in covering or surrounding the flame of a lamp or candle by a wire sieve; the coarsest that I have tried with perfect safety contained 625 apertures in a square inch (25.4 mm²), and the wire was 1-70 of an inch (.014 in., .363 mm) in thickness; the finest 6,400 apertures in a square inch (25.4 mm²), and the wire was 1-250 (.004 in., .102 mm) of an inch in thickness."



This final experimental lamp used by Davy was shown as Figure 11 on a plate accompanying his paper of November 9, 1815, and this drawing is reproduced from it. The Royal Society possesses a very early experimental model of this lamp.

Davy 5B

A final form of Sir Humphry Davy's laboratory model of a flame safety lamp. His scientific studies and practical experiments reduced the design to its simplest form . . . a fuel font and a wire gauze combustion chamber closed to the gaseous atmosphere.



Davy 6

British Museum photo of two authentic original Davy safety lamps. These first working underground flame safety lamps were rather small by later lamp standards. Left - 2.25 in. (57.15 mm) diameter x 7.5 in. (190.5 mm.) tall. Right 1.5 in. (38.1 mm) diameter x 7.0 in. (177.8 mm) tall.

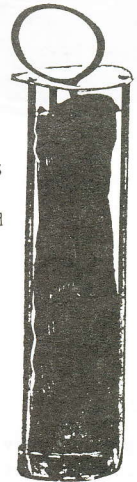


Davy 7

One of the first Davy safety lamps to be taken underground. Small tin font, iron pillars, round top plate, and iron wire gauze construction. 1.5 in. (38.1 mm) diameter font x 7.0 in. (177.8 mm) tall under the ring. This lamp is on display in the Science Museum, London.

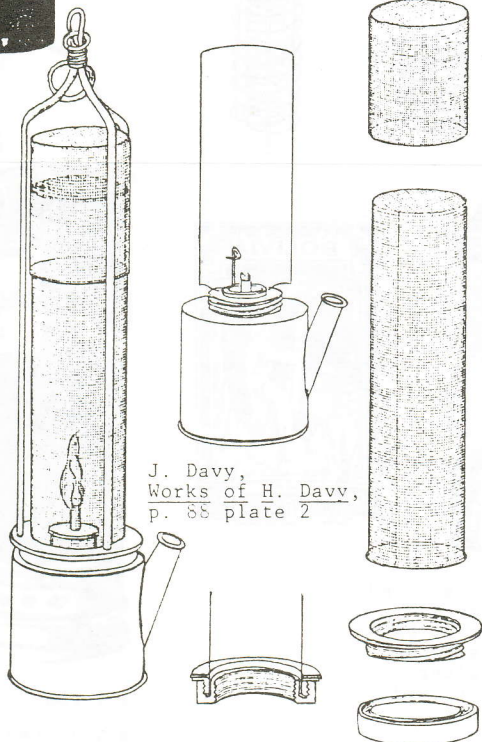
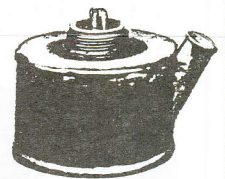
One of the first Davy safety lamps to be taken underground. Small tin font, iron pillars, round top plate, and iron wire gauze construction. 2.25 in. (57.15 mm) diameter font x 8.0 in. (203.2 mm) tall under the ring. This lamp is on display in the Science Museum, London.

Davy 8



Davy 9

By mid-1816 Sir Humphry Davy had developed a safety lamp design with a larger font, a wick pick, and no top plate. One of his papers on safety lamps included this drawing.



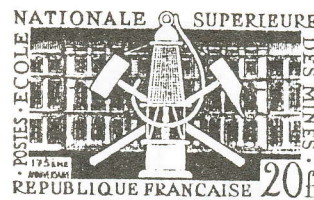
J. Davy,
Works of H. Davy,
p. 88 plate 2



Davy 10

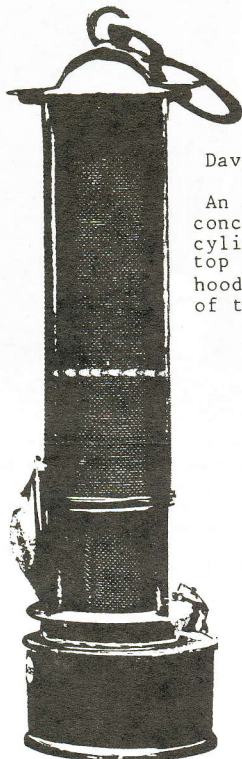
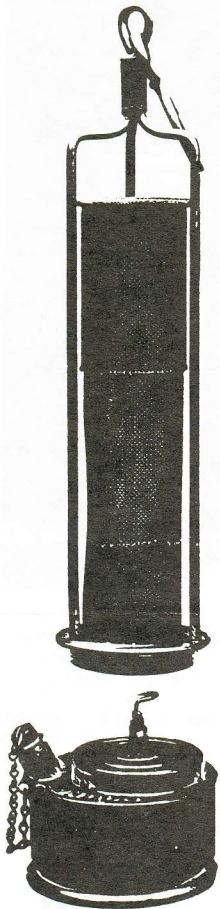
Sir Humphry Davy's written reports included his recommendation for the use of double gauze cylinders in continuous currents of mixed explosive atmosphere. This lamp has two gauze cylinders, one inside the other, and a cross metal top plate. 1.75 in. (44.45 mm) diameter cast brass font x 8.5 in. (215.9 mm) tall.

Photo: Sheffield University collection



Davy 11

An advanced basic Davy-style lamp. Note the off-center font and the incuse lettering LONDON on the top of the font (probably NEWMAN on the far side). 2.5 in. (63.5 mm) diameter x 11 in. (279.4 mm) tall over the wire shoulder.

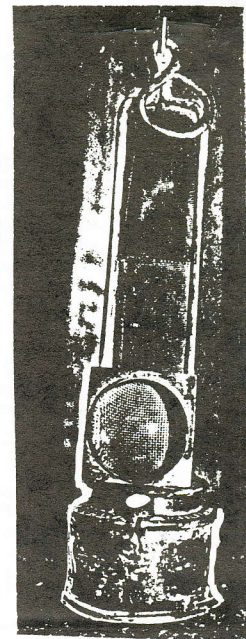


Davy 13

An advanced basic Davy-style lamp with a concave glass lens wired to the wire gauze cylinder. Probably marked NEWMAN LONDON on top of the font. A brass Newcastle-style hood and carrying ring are mounted on the top of the gauze. Dimensions unknown.

An advanced basic Davy-style lamp with a concave glass lens in front of the gauze to concentrate the illuminating light. Marked NEWMAN LONDON on the top of the steel font. 2.25 in. (57.15 mm) diameter x 11.25 in. (285.75 mm) height over the wire pillar shoulder.

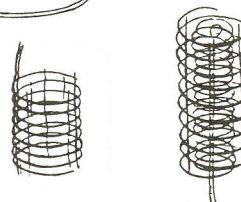
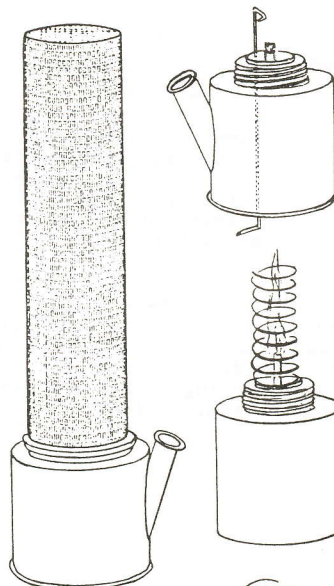
Davy 12



J. Davy,
Works of H. Davy.
p. 88, plate 2

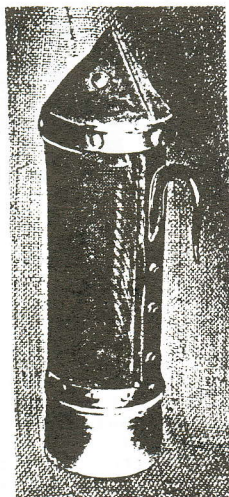
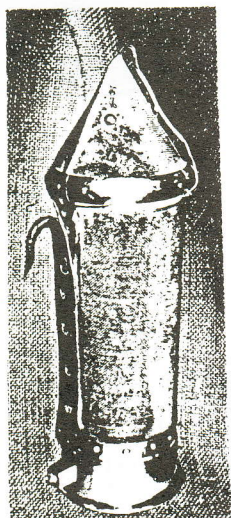
Davy 14

Sir Humphry Davy suggested a platinum wire coil around the flame for giving light in flammable media containing too little air to be explosive. These drawings are from his collected works.

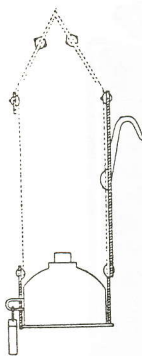


Davy 15A

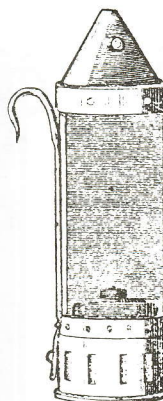
SCOTCH DAVY flame safety lamp. Flanged copper font; screw lock; conical gauze cap; small hook. 2.3 in. (58.4 mm) diameter, 1 in. (25.4 mm) font height, 10 in. (254 mm) overall height.



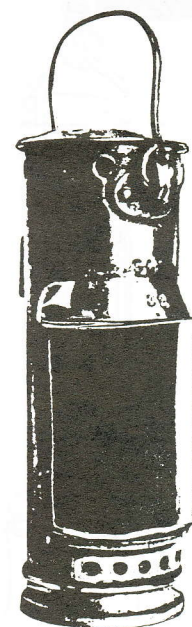
Davy 15B



Davy 15C



The Scotch Davy lamps were considered dangerous because the wire gauze itself was a support for the top cap and for the hook. The rivets tended to tear away from the gauze after only short service. This destroyed the protection and allowed explosive gases to reach the flame.



Davy 16A

Davy-in-can lamp