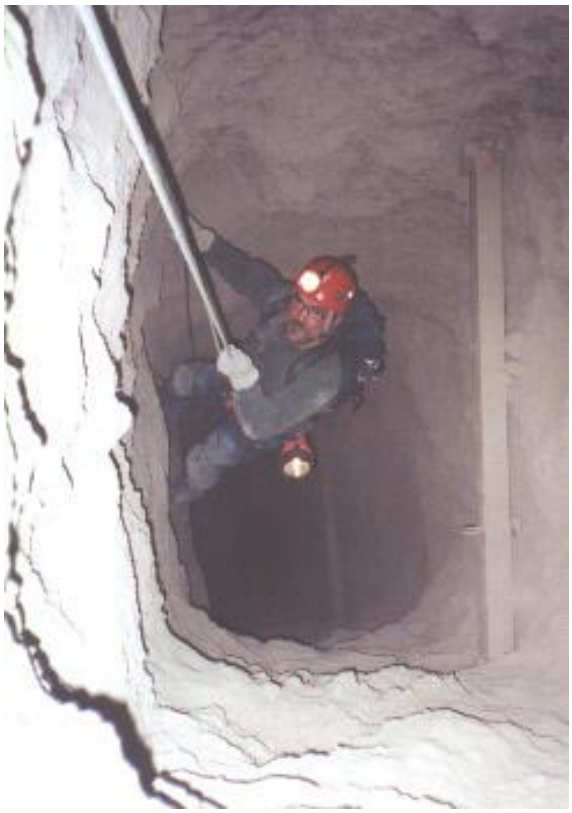
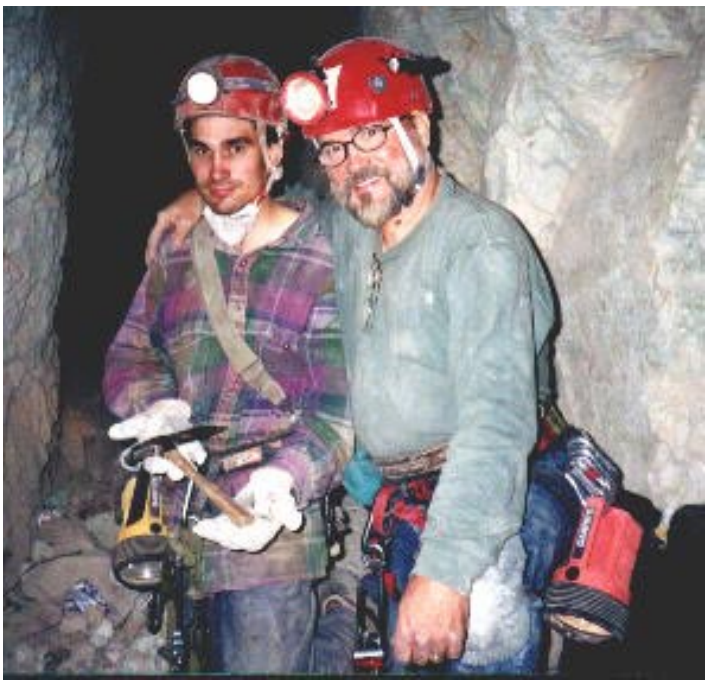
NEWS

Park City Show Coming Fast

June 16th and 17th is fast approaching for the Park City Show. Just a reminder to get your reservations in. I have flyers about the show for anyone who wants more info. Send me your name and address for snail mail. Call the Inn at Prospector's Square (1-800-453-3812) and mention you are with the Mining Artifact Collectors Show to get the special discounted rate. There are only 21 rooms available at this price. The room rates start at $71. Table for the show is $20. Banquet and auction are $25 per person. To send reservations or for more information , our address is Tony and Ruth Moon, 2763 Willow Wick Dr., Sandy, Utah 84093. Hope to see you in Park City. Ruth and Tony



Bobrink Leads 2nd Annual Calico Exploration



Ted Bobrink pictured above with his son, led the second annual underground mine exploration trip in the Calico area on April 1st. The two day trip (camping at the mine site) involved both horizontal and vertical explorations. Ted is seen rapelling a shaft in the photo at left. Several box ends and a wire candlestick were recovered. This excursion is increasingly popular with some traveling from as far away as Michigan. Those interested in next year's trip may contact Ted at: mineantiques@earthlink.net.

Mazatzal Mountains Discovery

by Bruce Beck

Bruce Beck recently discovered this defunct gold mine operation in the Mazatzal (pronounced mah-tah-zel) Mountains near Payson, Arizona. The pictures tell it all.

Water flume.

Gold mill.

Glory hole.

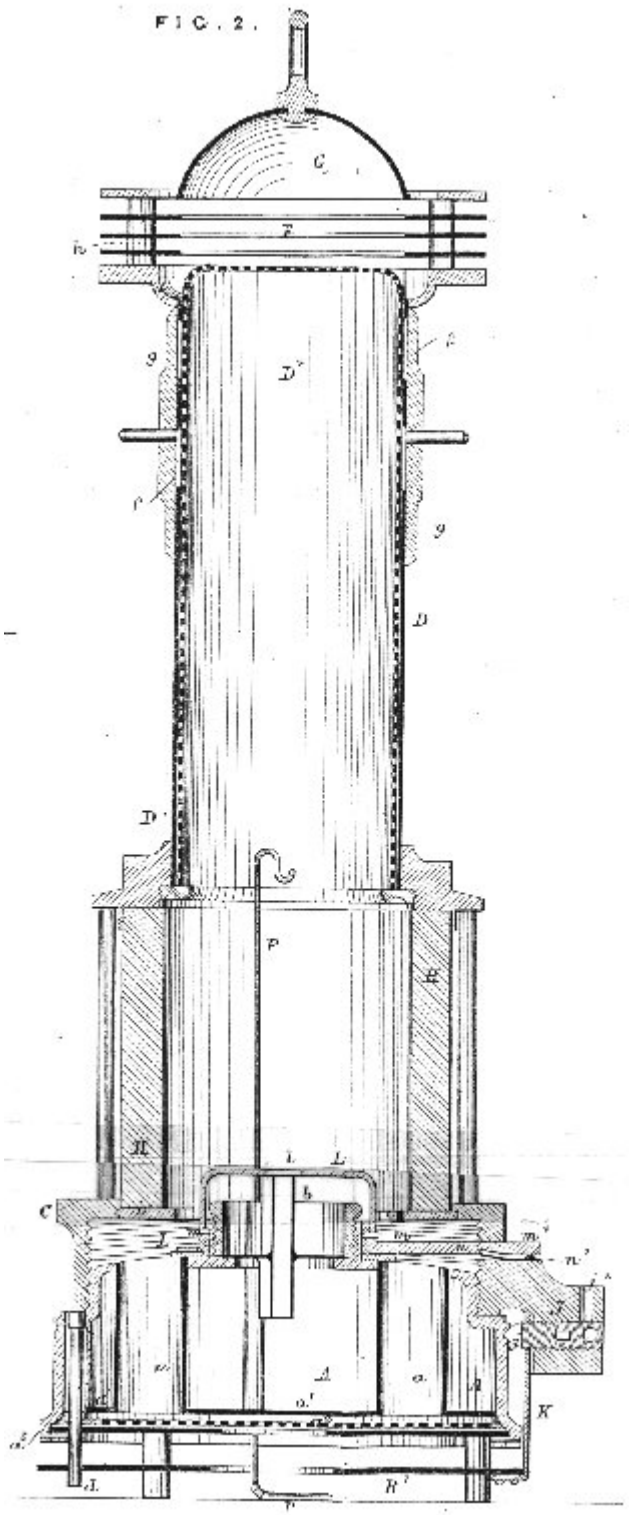
Pulley and shaft.

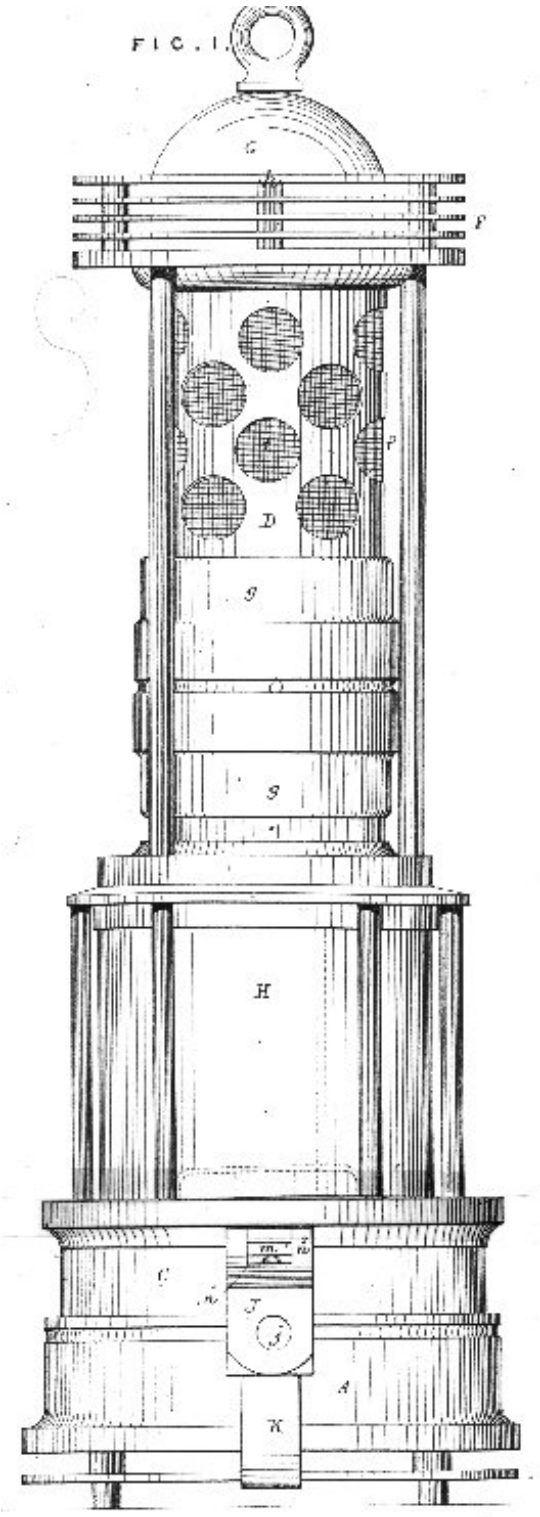
A Patented Clanny Lamp

by Manfred Stutzer

Some years ago I was able to acquire a patented Clanny lamp for my collection. The lamp has some unusual construction details compared to the well known ordinary Clanny lamps. Of special interest is a stamping on the small bonnet which partially covers the gauze. The stamping reads: "Landaus Patent". Years later I found a patent description (No. 768 from 1874). The patent was given to Marcus Israel Landau, of Bury Court, Saint Mary Axe, in the City of London, for the invention of "Improvements in Miners' Safety Lamps and other Lamps"

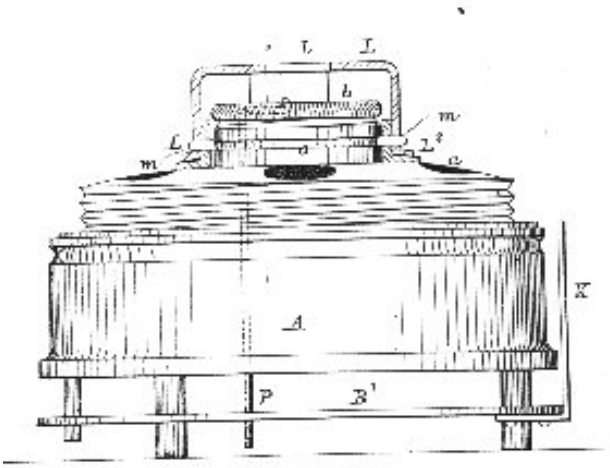
In the patent description one can read: "One object of my invention is to supply atmospheric air to miners' safety lamps and other lamps in such manner as to maintain combustion while preserving the flame from noxious or prejudicial gases, and strong currents and counter currents. I provide an annular chamber of circular, conical, quadrangular, or other shape, the upper edge of which forms a horizontal periphery, in which are perforations protected when necessary with wire gauze or metallic plate. The air enters through these orifices and passes into and circulates in the chamber. A portion of this periphery is without orifices. Wire gauze, perforated metal, or perforations are provided in the vertical portion of the side of the chamber beneath such non-perforated portion, and through the same air passes to the flame to maintain combustion. One advantage of this arrangement is that if miners work where there is a mixture of firedamp with the ordinary air of the mine the gas will not burn inside the lamp and will not extinguish the flame because it cannot enter the lamp except there be a strong down draft, when the gas might enter through the perforations and the flame





will be extinguished. If the miners work in choke damp, or air likely to affect respiration, the reduction or extinguishing of the flame will warn him of danger. I sometimes form the air chamber of a truncated cone shape and place the oil chamber outside."

My lamp is very similar to patent drawings (see pictures) and has a height of 9,5 inches.



A.D. 1874, 3rd MARCH. N° 768.

Safety Lamps.

LETTERS PATENT to Marcus Israel Landau, of Bury Court, Saint Mary Axe, in the City of London, for the Invention of "IMPROVEMENTS IN MINERS' SAFETY LAMPS AND IN OTHER LAMPS, ALSO IN BURNERS, AND IN APPLYING LAMPS FOR VARIOUS PURPOSES, AND IN APPARATUS FOR SUPPLYING AND REGULATING GAS, AND FOR VENTILATING."

Sealed the 28th August 1874, and dated the 3rd March 1874.

Lenticular Lamps

by Manfred Stutzer

Lenticular- (or tunnel-, Sicilian-, rooster-) lamps were used in mines and railroad tunnel constructions predominantely in South-European countries (Spain, Italy, Greece, South-France) and in the alpin countries (Austria, Switzerland, South-Germany) as well in parts of the Austrian-Hungarian Empire. The first lenticular lamps were introduced pre 1850 and after ~1920 they were substituted through other lights (carbide cap- and hand lamps, safety lamps and electric lights).

Lenticular lamps were made in iron and much rarer also in brass. We know simple made lenticular lamps and more fancy lamps (fitted with a fancy hook). In addition there are rarer eight-sided (octagonal) and even sixteen-sided lamps. Either the lamps were fitted with a rooster or a heart to fix the oil chamber plate, which can be oval or arrow shaped.

The diameter of the lenticular oil chamber can vary from ~ 8 cm to 20 cm. Mostly the lamps burned vegetable oil. Often the name of the manufacturer is stamped on the lamp.

(Illustration right) Turkish mining stock share. "Mines de Balia-Karaidin", 1913.

France: The name for the lenticular lamp in France is "Rave" or "Crezieux Stephanois". The lamps were used often in the Soane-et-Loire mining area around St. Etienne. Most of the French makers were located in St. Etienne. Names of makers are:

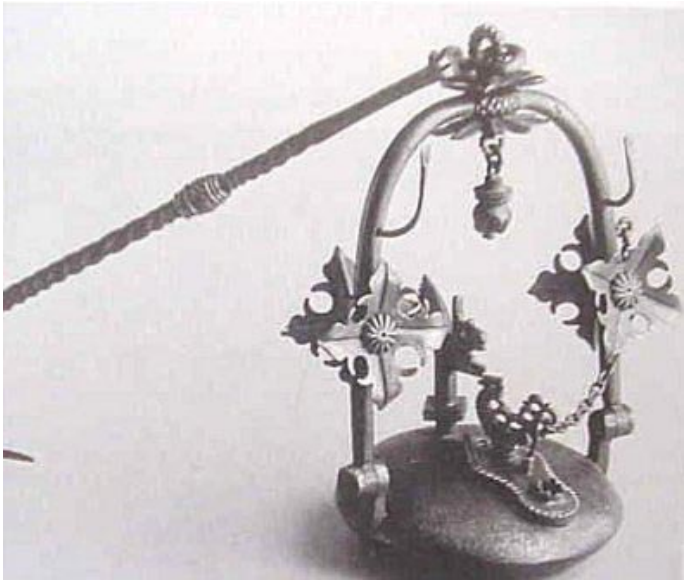
A. Clozet
P. Varenne
V. de Verrier
Tezenat
Canonier
Dervieux
Ollagno
Goutelle
G. Rossi/Paris
Appareils d'Eclairage H. Luchaire/Paris

Germany: Names of makers or dealers are: Gebr. Rötelmann in Werdohl, Westfalia and Wilhelm Seippel in Bochum, Westfalia. Lenticular lamps are pictured in sales catalogues (~1905) of the two mentioned German lamp makers, but it is more likely that the lamps were imported (France?) and only re-sold.

Austria: Name of maker: P. Pirringer in Graz

Bohemia: "Joachimthaler Lamps", maker: unknown

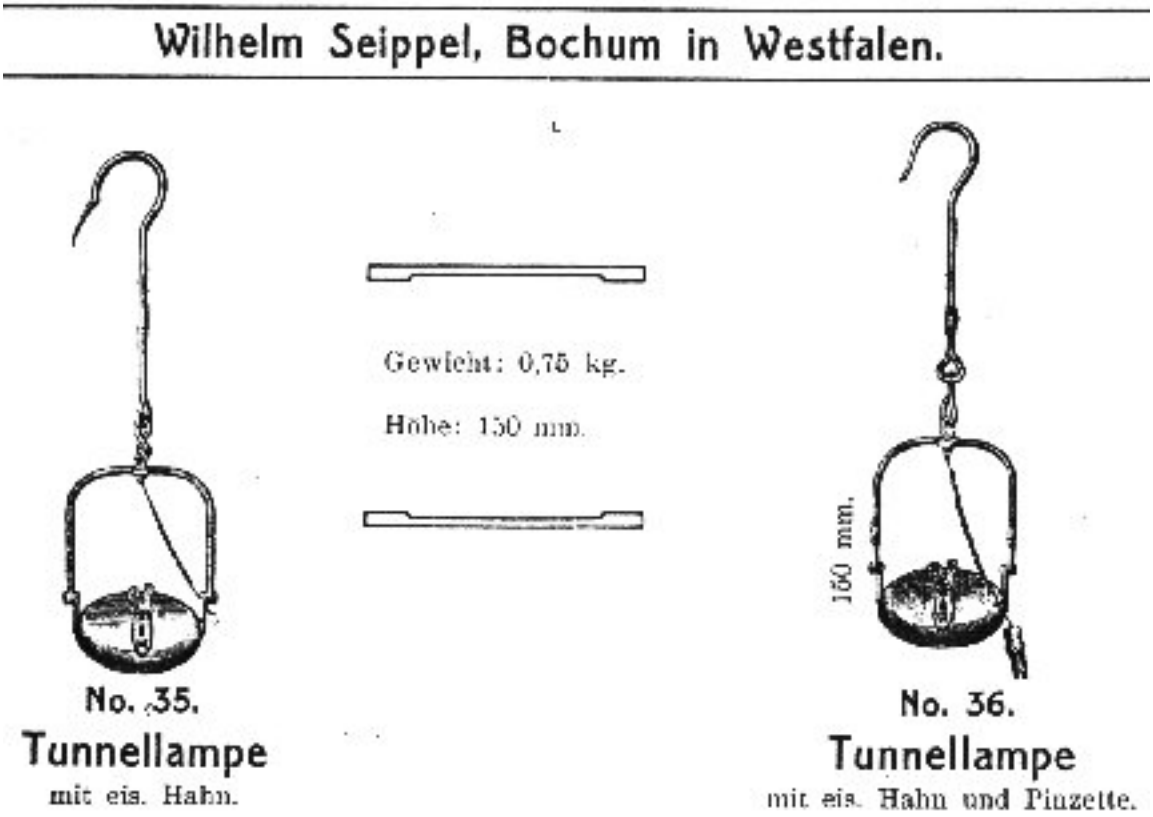
(left) French tunnel similar lamp made by G. Rossi, Paris. (right) French tunnel lamp made by "Appareils d'Eclairage H. Luchaire, 27 Rue Erard, Paris, ~1900.



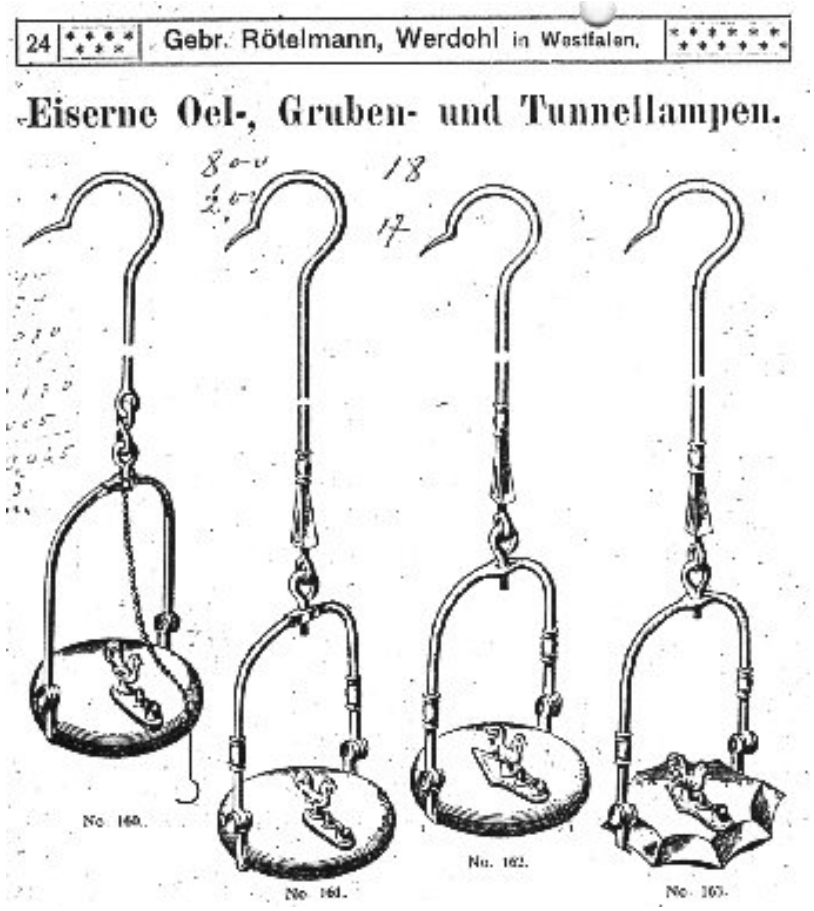
(left) Very oranamental lenticular lamp, France. (right) Lenticular lamp with fancy hook and rare bail.

(left) Lenticular lamp with brass rooster in center of the lamp, France. (upper right) Lenticular lamp with fancy hook, Bohemia. (lower right) Lenticular lamp with a fancy hook.

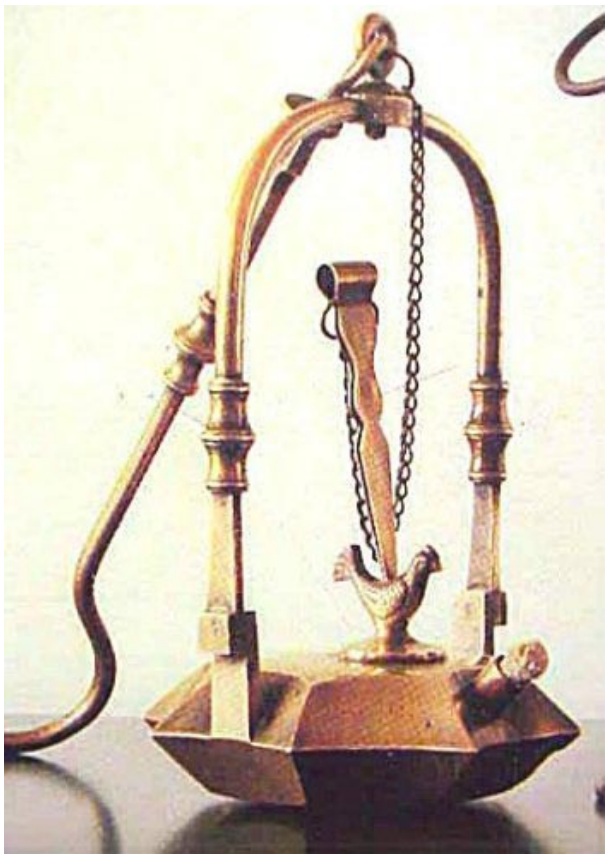
(left) Lenticular lamp with stamped brass plate ("Glueck-Auf" and name of the owner). (right) Lenticular lamp with fancy bail (Austrian-Hungarian). (below) Lenticular lamp made by P. Pirringer in Graz/Austria.



Advertisement by "Wilhelm Seippel in Bochum, Westfalia, Germany, 1905

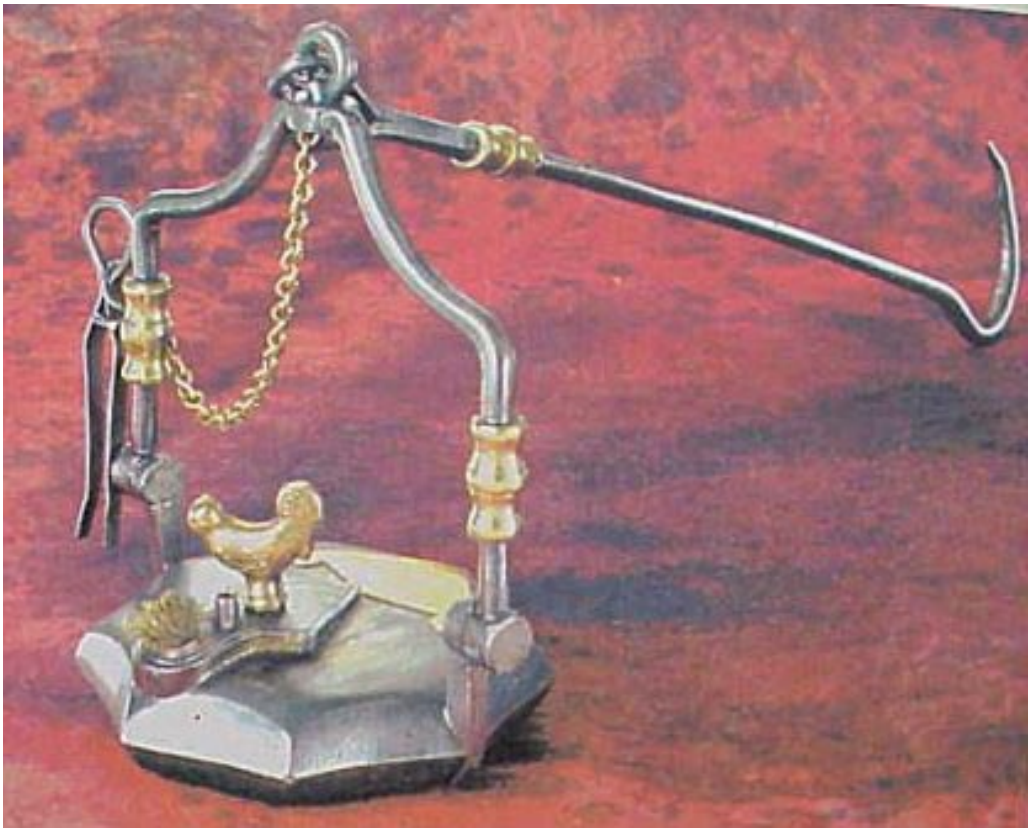


Advertisement by "Gebr. Roetelmann in Werdohl, Westfalia, Germany, 1908.



(left) Eigtht-sided lenticular lamp with brass rooster. (right) Eight-sided brass lamp.

Eight Sided Lamps



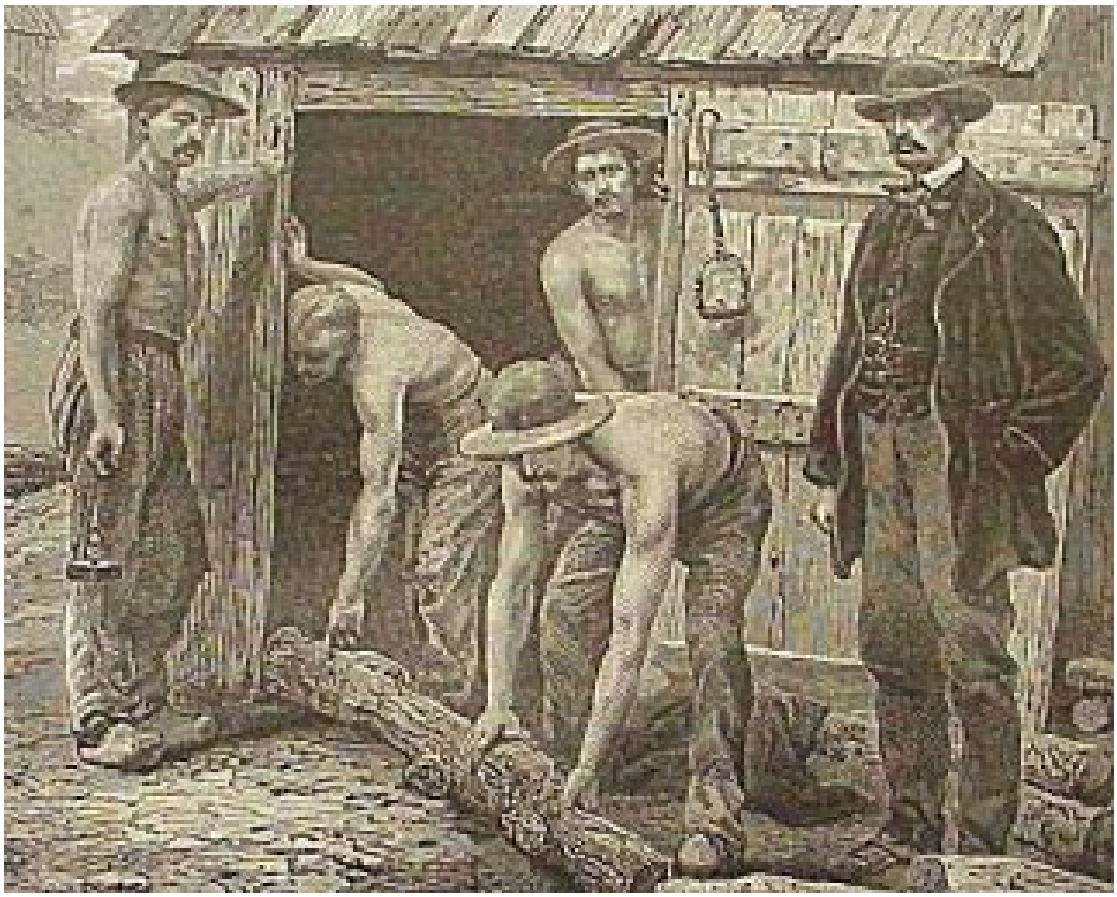
"Joachimsthaler" eight-sided lenticular lamp, Bohemia.

Sixteen Sided Lenticular Lamps

(left) Sixteen-sided lenticular lamp.

(below) Sixteen-sided lenticular lamp, very fancy.

Miners with tunnel lamps, 1903, Lengefeld/Erzgebirge, Germany.



«Mine de Montchanin ', print by Simonin " Le Tour de Monde", 1865.

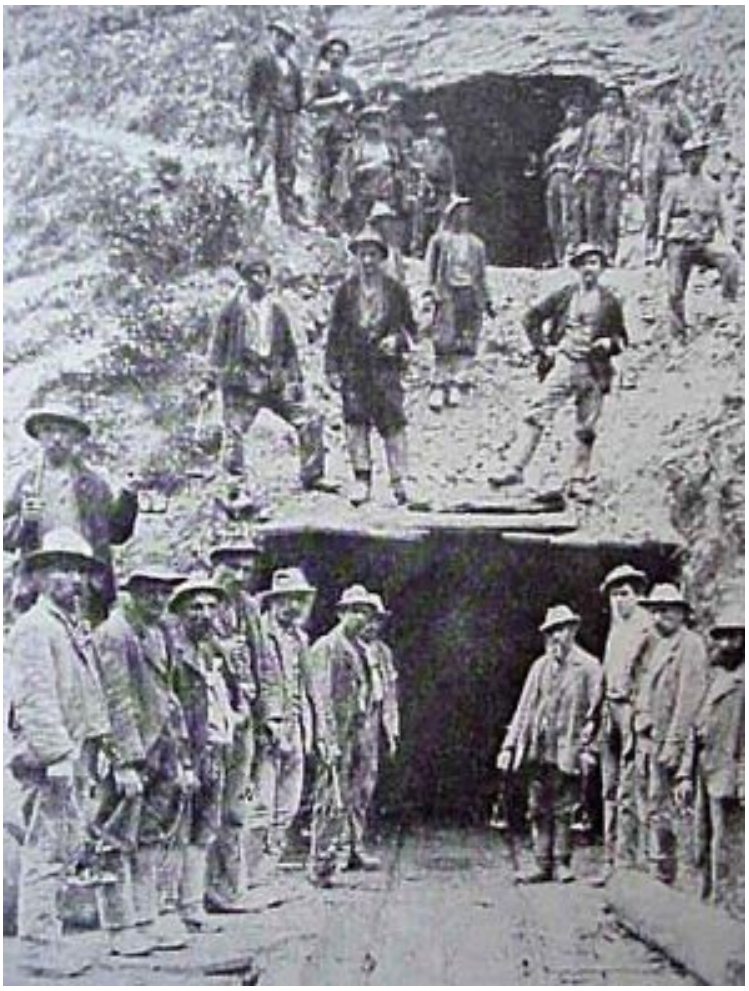
Greek silver ore miners with tunnel lamps, Laurion, ~1900

Italian miner with tunnel lamp, 1906, preparing a blasting.

French miners, print by Simonin,"Le Tour du Monde, 1865.

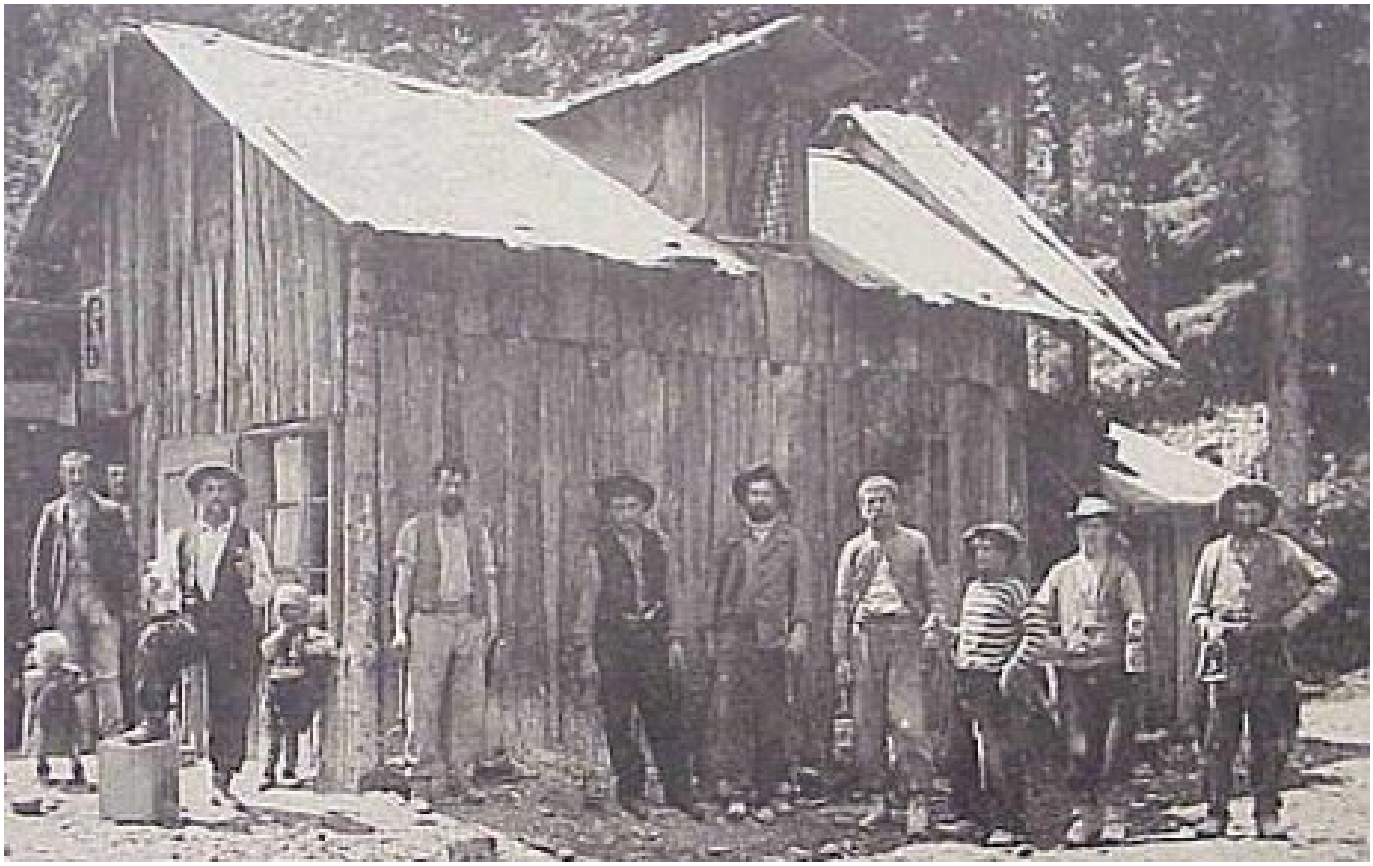
Miners with tunnellamps, Simplon tunnel, 1903, Switzerland.

Spanish coal miners with tunnel- and safety lamps, 1916, Mina Baltasara, Asturia.



(left) Austrian coal miners, ~1905, "Wolfsegg-Traunthaler Braunkohlenwerke". (right) Austrian miner "Hans Lackner", ~ 1900, Gold mining Salzburg area.

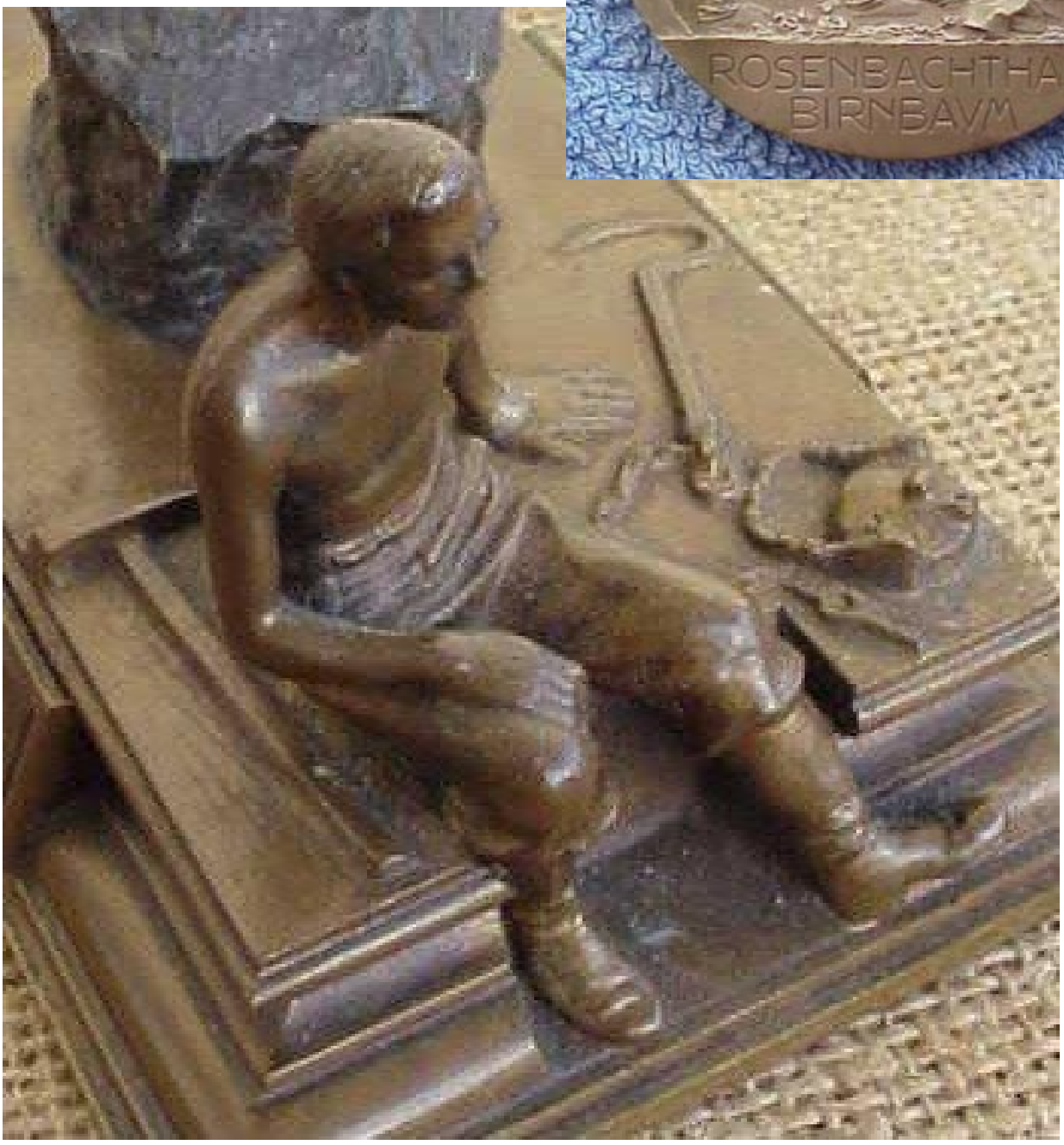
Miners with tunnel lamps, ~1905, Freudenberg, Germany.



French miners with tunnel- and carbide lamps, 1910.

Austrian bronze medal, 1905, issued on the occasion of tunnel "Karawanken" breakthrough.

Small Austrian bronze figurine, 1904, issued on the occasion of tunnel "Wochein" breakthrough.



(above) Austrian bronze medal, 1906, issued on the occasion of tunnel « Wildalpen-Goestling » breakthrough

(right) French silver medal, "Société Anonyme des Mines et Usines de Peyrebrune", ~1900..

More on Cast Aluminum Lamps

by Mick Corbridge

Reading various lamp collecting material, it is obvious that cast aluminium lamps are still very popular with collectors, and the information that comes to light on the design patterns of these lamps slowly grows.

One style of lamp of interest to me is that of the 'Thorn & Hoddle', which I have covered before in a previous issue of 'Eureka'. This design is almost identical to that produced by 'Ackroyd & Best' of Morley, and it is only by close examination of the two lamps, that the differences are realized. The 'Thorn & Hoddle' is always stamped with the manufacturers name on the bottom of the base, whereas the 'Ackroyd & Best' version was never stamped with any manufacturers information.

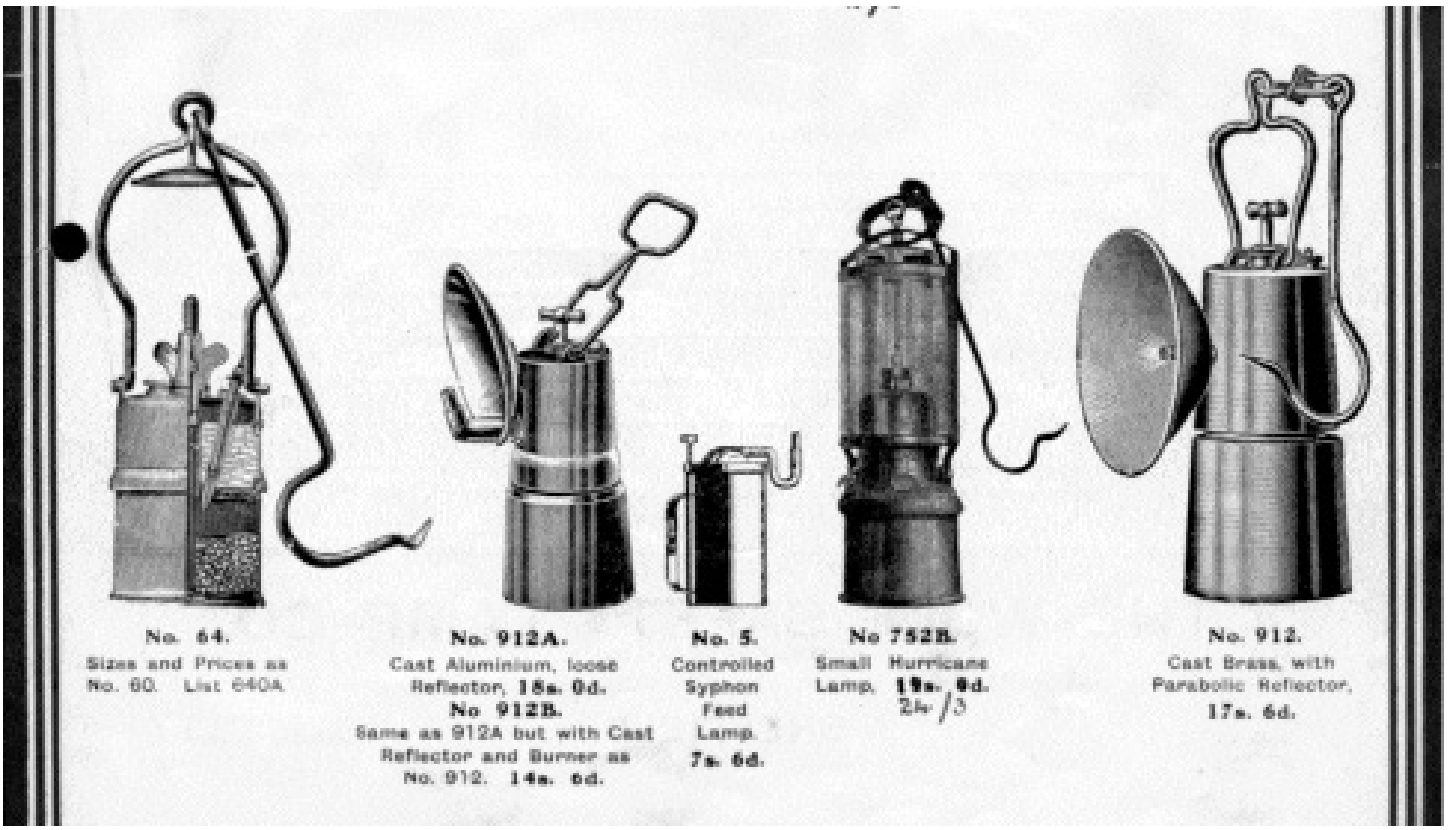
The picture shows one of each manufacture side by side, and even though the sizes and style are identical, the following differences can be noted:

1) – The water taps are different; the 'T&H' has a 'T'-bar multi-turn threaded needle valve, while the 'A&B' has a turn on-off valve.
2) - The water doors are different in that the 'T&H' has a knurled screw in water door, whilst the 'A&B' has a similar sized screw-in door which has a 'wing' grasp centrally mounted on the top.
3) - Finally, it can be seen that the jet stems are of different lengths. This is because of the different design of front hood arrangements that could be purchased for these lamps if required; (examples of the manufacturers' different styles of hood can be seen in 'Eureka' issues 20 & 26).

As for the pair of examples shown without hoods in the picture above, the 'T&H', (shown on the left), is complete with its normally supplied handle and hood mounting screws, and its has highly polished aluminium which is not a standard finish on these lamps. The 'A&B', (shown on the right), has the hood mounting screw holes sealed, and a mining pattern hook & bail; the finish is the normally found 'dull' aluminium. The three mentioned difference points of water taps; water doors & jet stem lengths can all be clearly seen. In these models, an extra and larger reflector could also be fitted from the top mounting screws, and this swung down over the cast-in small reflector shown.

This brings up the question of who manufactured the castings of the lamp bodies? 'Ackroyd & Best' were the first company to supply this design of lamp, i.e. pre-1927 after which then the company name changed to 'Hailwood & Ackroyd'; all of the 'Thorn & Hoddle' lamps known, are from the mid-1930's and are stamped on the base with their date of manufacture. I am almost sure that neither of the companies would have had their own casting facilities required for the construction of such a style of lamp, and with both company lamp bodies being identical in size and shape, plus the fact that there is no known link between the two companies, it is presumable that the body castings were manufactured elsewhere.

A further British lamp of a similar design to the ones mentioned above, was model No. 912B that was produced by 'Wolf Safety Lamp Co.' of Sheffield. This model was from a different casting but had a similar tapered base section & a front cast-in reflector. Unfortunately I do not have any pictures of what this lamp actually looked like, but the following advert shows its sister lamps, the 912A & the 912, & the advert mentions the 912B.



I have never been able to acquire a 912B, but I have a 912A. This is an unfired example in excellent condition and having a highly polished aluminium body. It has a hook and bail instead of the wire handle that is shown in the advert, i.e. the hook and bail is similar to that shown in the 912 in the ad above.

The only other cast aluminium lamp that I know of that meets the basic description of the 912B, is the one which is covered in the 'Eureka' article – issue 18 page 36. This lamp is believed to be a 'Wolf of America' produced lamp, & is described in 'The American Carbide Handlamp Survey' as 'Wolf aluminium with tall narrow body'.

I have one such lamp, (see photo), and I know of 3 other identical lamps. It is interesting to note the 3 lamps that I know of in Britain, originally came from 'Wolf of Sheffield'. As a few other American 'Wolf' carbides have been known to have come from 'Wolf-Sheffield', It is still highly probable that these 3 cast aluminium lamps did originate from America, but I wonder if some were sold from Sheffield advertised as the 912B? I doubt it, as the design description is somewhat different, in shape and size as to that indicated in the previous advertisement.

John Spence: Oil Wick and Safety Lamp

by Dave Johnson

While there were a multitude of both oilwick and safety lamp manufacturers, few manufactured both types of lamps, an exception was John Spence of Scotland.

Shown here is an early Davy Style all brass (except for the 4 steel posts) safety lamp with an external fuel filler with a knurled threaded cap and a sloped font. This 9" tall lamp is stamped: J. SPENCE AIRDRIE. Airdrie is located about 11 miles east of Glasgow Scotland nearest the Clyde Basin Coalfield and in close proximity to the other two main nineteenth century Scottish Coalfields, the Ayreshire and Fifeshire Coalfields, also close to some nineteenth century iron mining operations.

The all brass oilwick cap lamp pictured here is stamped: JOHN SPENCE & SONS AIRDRIE & COATBRIDGE. Coatbridge is located just east of Glasgow between Aridrie and Glasgow. This oilwick measures 2 1/4" tall to the top of its slightly domed machine thread screw lid. The lid is cast brass and totally machined. The 1 3/4" base is also machined rather than stamped or formed like most oilwick bases. The machined threads are a separate piece soldered into the top of the font. The brass sheet stock used to form the font is heavier than ususally seen in oilwicks. This lamp weighs more than twice what the average similarly sized lamp would weigh, it was obviously built to last. Both lamps are high quality pieces showing excellent workmanship.

John Spence was one of many Scottish oilwick manufacturers, others include, but are not limited to, Thomas Hall at Irvine, Forsythe & Caldow at Kilmarnock, J. Melville at Lochgelly and D.B. Rankin at Airdrie. At some time in the future I intend to do articles on more Scottish oilwicks.

Carbide Lamps Manufactured by 'John Davis - Derby Ltd.'

by Mick Corbridge

All mining lamp collectors will have come across some items of mining collectables manufactured by John Davis, e.g. safety lamps, electric lamps, mining dials or exploders etc. When, some time ago, I came across two separate early John Davis catalogues, I was pleased to see advertisements for two rather distinct looking carbide lamps, one of which was had a different design of locking mechanism as to those of other British manufacturers. I have never seen either of these lamps in collections etc., and I decided to contact Davis Derby for any further information. Following a search of their archives, no reference of these lamps, (or of any other carbide lamp produced by themselves), was found, but in their reply they did forward some information upon their company's long history of lamp manufacture which lasted from around 1840 to the 1950's. I was surprised to be informed that the company itself was started in my hometown of Leeds in 1779 when they were then manufacturing optical surveying instruments. The Derby branch of the company was formed in around 1830, but John Davis didn't finally move there until 1843. This is about the time when the company started the manufacture of mining lamps, miner's dials and theodilites etc. In 1900 the company opened a branch in the U.S.A. in Baltimore, which I believe also still exists today. Searches of other museum & private achieves came up with no further information on any carbide lamps manufactured by John Davis.

The two lamps in question are shown here, both look to be a good design and knowing the high quality of other John Davis lamps, they should have been well made. The standard pattern lamp (this page) has a unusual design of eccentric locking, which I have only seen before on a German manufacturers design. A further interesting point to note re this lamp is the small size of the smallest of the three versions offered, i.e. only 4 1/2 inches, and classed as a half shift lamp having a 4-5 hours burning time.

The other lamp is a canister lamp, which appears to have a unusual water adjustment screw, and a large turn flag on the water door. This lamp has standard simplified eccentric locking, similar to most other lamps of this pattern, & again it was offered for sale in three sizes. Note the statement on the advert i.e. 'not complying with the Home Office Rules', I wonder what this refers to as the advert already has covered the condition of open flame i.e. 'for non-gaseous mines'.

It is interesting to note that the company of Davis Derby is still in existence today after first been sold by the family in 1962, it was then returned to the original company name of Davis Derby in 1993.

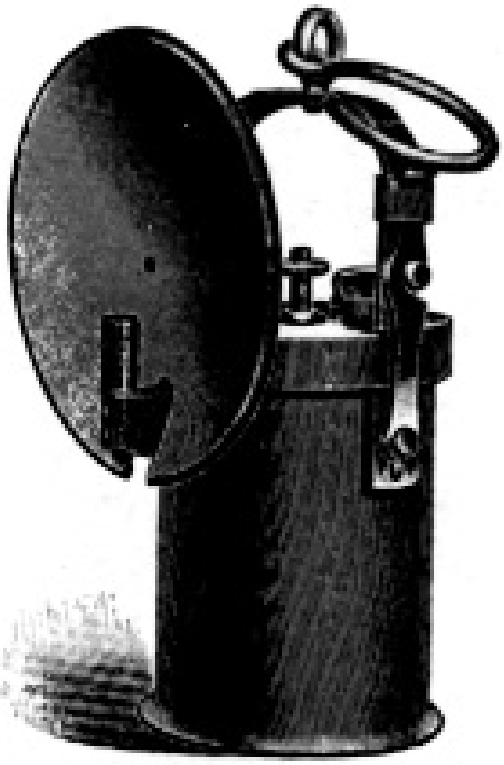
31

Acetylene Miners' Lamps.

OPEN TYPE.

FOR NON-GASEOUS MINES.

NOT complying with the Home Office Rules.



Strongly constructed in galvanized steel cases, with brass mounts.

Made in the undermentioned sizes and capacities :—

Calde Wond.	Height.	Weight (about).	Burning Hours.	Price.
HAKE ...	4½ inches	1¼ lbs.	4—5	7/9
HUNT ...	5½ ,,	2¼ ,,	8—9	8 3
HORT ...	6 ,,	2 lbs. 6 ozs.	12	8/9

Sample lamps upon application.

Double Spout Oil Wick

by Dave Johnson

Most mining artifact collectors have seen what are known as single spout and double spout oilwick cap lamps. The single spout is just that, one spout with just an outer metal skin. The double spout lamp has an inner spout liner, many times made of copper, that is of a smaller diameter than the outer spout and through which the wick is threaded.

The oilwick pictured here gives new meaning to the term "double spout", it has two separate spouts (wick tubes), each of which is a copper lined double spout, thus we have a "double double spout" lamp. While larger than most oilwicks from the UK, measuring 2 1/2" to the top of the lid with a base diameter of 1 7/8", this lamp is no larger than the average U.S. face lamp. The obvious advantage of this design is the increased light output, however, this comes at the cost of twice the usual fuel consumption. This increased fuel cinsumption is compensated for by a larger font (fuel reservoir) than most other oilwick cap lamps from the UK (see photo for size comparison with typical "Scottish" oilwick). A unique feature of this lamp is the way in which the lid is hinged to open forward between the spouts while most oilwick lids open at a perpendicular angle to the spout or, in some cases, open back toward the hook, away from the spout.

Made and used primarily in the Newcastle and Durham areas of northern England, this style of lamp did not gain wide acceptance judging from the number of surviving specimens. I know of only one other example in the U.S. and the lamp is reportedly very rare in Europe. This lamp is another oddity among the many oddities found in oilwick cap lamps.

Native Copper Mining Artifacts

by Dave Johnson

The Copper Country of the Upper Peninsula of Michigan is unique in its' copper deposits. While other copper mining districts have produced native copper, none have produced it in anything approaching the amount mined in Michigan. The deposits are broken into three types - amygdaloid, conglomerate and fissure (or mass).

The term amygdaloid is of Greek derivation and means almond-like. In these deposits the native copper is found in sizes from less than pinhead to rather large pockets. Mineral rock shot through with mere specs of copper had to be stamped to sand-like consistency in order to wash the worthless rock away from the metal, this required stamp mills. Better than half the copper taken from Michigan mines came from amygdaloid deposits. An early successful amygdaloid mine was the Isle Royale, located near Houghton, better known and much more successful was the famous Quincy Mine, at Hancock, working the Pewabic Amygdaloid Lode.

Copper Nail: The cavity left where a drill was stopped in the copper. When the bit is extracted it leaves a "nail" where the center hole of the bit was

Conglomerate deposits consist of boulders, gravel and sand all cemented together by native copper. The successful conglomerate deposits produced many more pounds of copper to the ton of rock mined than amygdaloid deposits. The rock removed from the conglomerate deposits was harder and required better equipment than was available in the early stamp mills which were able to work the more friable amygdaloid rock. In the Copper Country all material removed from the mine is termed "rock" with no distinction made for "ore" as in other mining areas.

Until the discovery of the famous Calumet Conglomerate Lode the known conglomerate deposits were small and could not be worked at a profit. It was the development of the Calumet Conglomerate that turned the Copper Country into one the greatest copper producing areas of all time and Calumet & Hecla into one of the greatest copper mining companies.

The third type of deposit, and the one we are most interested in here, is the fissure or mass deposit. It was these deposits that started the Copper Country on the road to greatness. Mines like the Minesota, Central, Cliff, Mass, Evergreen Bluff, National, Rockland, and Bohemian, all early producers, were mass mines.

In 1856, the Minesota Mine rocked the mining world when it found a single mass of solid native copper argued at the time to weigh between 420 and 550 tons. To give some idea of the immensity of this mass one need only to look at its' dimensions, which although irregular were immense. Measuring in at 46 feet in length, 18 feet at the widest point and 8 ' thick at its' thickest, it took 20 men laboring for 15 months, using 2,750 pounds of black powder, to free it from surrounding rock so that the process of cutting it up could begin.

At this time the only method of cutting up these masses was with two and three man drill teams using a 3/4" wide chisel of varying lengths. As the chisel was driven into the malleable copper a strip about 1/4" thick was pealed off the mass. When several strips had been pealed off they were struck at the bottom and a fan of chiselings resulted (see photo).

A chiseling fan: when native copper was removed by chiseling, this is an artistic result.

This process was repeated until a manageable chunk of the mass was cut free and could be hoisted to the surface. A good days work was considered to be the exposing of a single square foot of surface. Walking along the surface at several of the mass lode mines I have picked up dozens of individual chiselings from 1' to 10" in length with the use of a metal detector, but have only found one chiseling fan.

When the mass in the Minesota Mine was finally removed, 27 tons of chiselings had been shipped in barrels. The Minesota Mine was blessed or cursed, depend-

ing upon your point of view, with huge masses of native copper. When Number 2 Shaft was sunk a mass of copper was struck at the 60 fathom level that required a year to cut through. The Minesota ever-after had the distinction of being the only copper mine with a shaft lined with solid copper. By 1867 the Minesota Mine had paid out $1,760,000 in dividends

Other early mines had similar experiences similar to the Minnesota with mass copper. The Quincy Mine produced a mass of 300 tons, the National Mine 200 tons, Flint Steel Mine 125 tons, Aztec Mine 100 tons, Mass Mine 80 tons and the Rockland and Caledonia Mines each produceda 40 ton masses.

The Cliff Mine, the first in the Copper Country to pay a dividend to investors, in 1849, had three-quarters of all copper taken from its' workings in the form of masses weighing from 1 to 100 tons with one mass weighing in at 1800 tons. This 1800 ton mass was actually several large masses held together by stringers so it cannot be considered a single mass. The Bay State Mine produced a 600 ton mass that was also several masses connected by stringers. Whenever the discovery of a large mass of copper was reported there was a jump in price of that company's stock.

Hand drilling through native copper of any significant thickness was a difficult task due to the malleability of the metal, it did not powder like the rock under the blows of the sledge-hammers. Even with the development of air-powered drills the malleable native copper plagued the miners. A common occurrence was for the drill bit to become imbedded in the copper and break off in the hole. I have personally over the years picked up numerous pieces of copper while digging through the mine dump piles that had drill marks where the drill bit had stopped in the copper. These drill marks are sought by collectors and bring a premium price for local rock shops. Even more sought after are what are known as copper nails, the point where a drill has stopped in the copper and when extracted leaves a "nail" where the center hole of the bit was. These pieces are extremely rare, I have only seen four examples of them in collections in all my years of hunting in the Copper Country and I feel fortunate in having been able to purchase one of them almost 30 years ago.

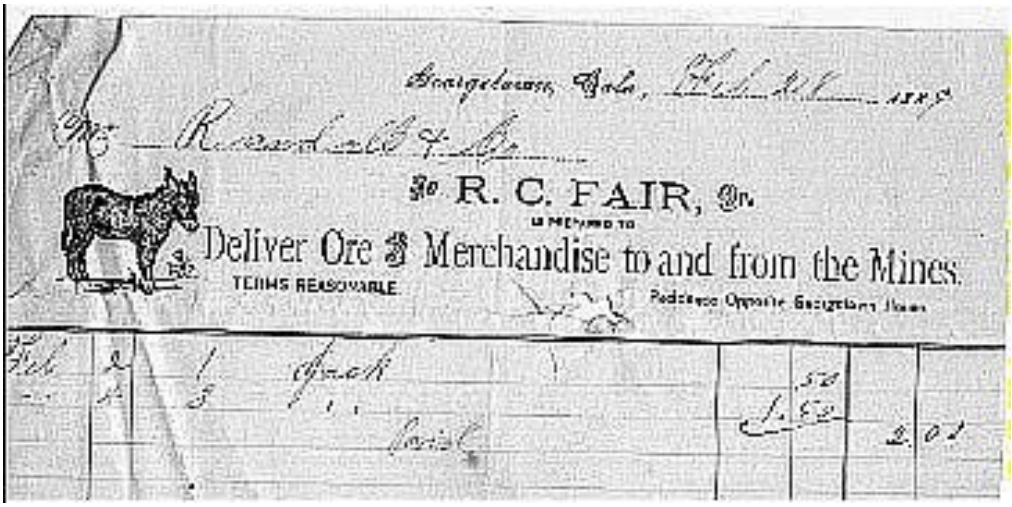
The copper nails and the copper chiseling fans are two unique mining artifacts that are an integral part of the mining history of the Michigan Copper Country. Unfortunately most of these artifacts were destroyed since they were the material that the miners sought to recover.

Sources:

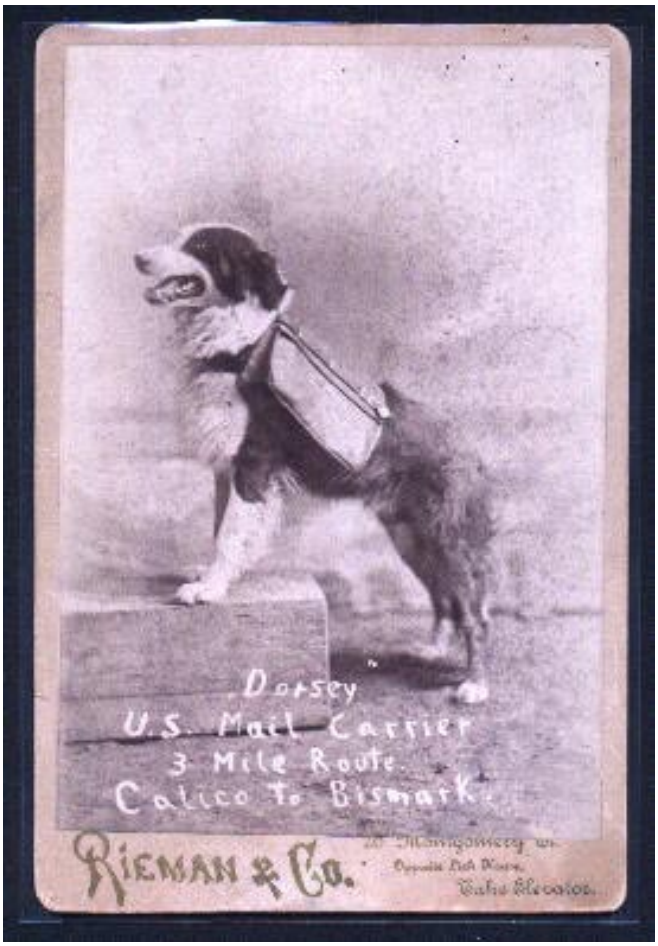
Strangers and Sojourners by Arthur A. Thurner
Red Metal by Harry C. Benedict
Boom Copper by Angus Murdoch
The Copper Handbook by Horace Stevens
Minesota Mine Annual Reports 1866, 1872 and 1880

Animal Assistants in Mining

by Ted Bobrink and Leo Stambaugh



This invoice above, from 1889 shows how most of the early mines were supplied here in the CO mountains. you could rent a small burro called a Jack and load it with a packsaddle. It climbed the narrow trails to the upper silver mines which were mainly above 9000 ft up to 12000 ft. elevation. The mines were small operations while exploration was taking place and even the larger mines didn't build wagon roads until there were quite a few of them in the area to share the high cost of road building. I have seen a lot of receipts but most just mention freight hauling, this one is unusual in that it was strictly for the mining trade and shows the Jack. The price was 50 cents per day for each animal. If you wanted a man to take them it got expensive, usually 2 or 3 dollars a day for him. (Leo Stambaugh)



Shown left, is an original 1883 cabinet card photo of a very famous dog named "Dorsey" You see Dorsey lived in the famous silver mining town of Calico, and he was the only dog ever to be an official mail carrier. He carried the rural mail on foot (paws) over a long rough trail from Calico to Bismark, a distance of seven miles. He wore a pair of specially made saddle bags and also wore special made booties to protest his paws from the sharp rocks. Dorsey became so far as ever heard the one and only mail carrying dog in the whole world. It attracted such widespread attention that he was photographed with his load of mail, and hundreds of people bought his picture. (Ted Bobrink)

Cap Tins Reported in 1999

by Andy Martin

ATLAS, No. 6, 25 caps.

AUSTIN, No. 6, U.S. PATENT
Reported by Graham Living.

HERCULES, No. 6, POWDER, **
Reported by Glen Hostlaw.

GRASSELLI, No. 6, SPELTER
Reported by Bob Schroth.

METALLIC CAP, No. 8, N.J.,
U.S. PATENT

UNION EXPLOSIVES, 25 caps, CLARKSBURG

Reported by Rob Youngs.

PEERLESS, 10 caps.

Reported by Nelson Ressler.

ALFRED NOBEL, No. X, ZUNDHUTCHEN

Paper label with black letters on white paper. Reported by Robert Hauck.

William Frisbie's X-RAY Lamps

by Dave Thorpe

Background: The Original X-RAY

X-rays are a form of electromagnetic radiation. They penetrate and pass through objects that even the strongest visible light can not. In the medical field, they can 'illuminate' objects in the dark. "X-RAY" was also the name Augie Hansen chose for the last lamp he designed for Justrite, and the logo was stamped on the bottom of these lamps. So popular was this new design, that other firms contracted with Justrite to make their own private-label versions (Ref. 1) When Hansen left the company in 1920, his replacement William Frisbie began to dispose of Hansen's products. The remaining stock of X-RAY lamps were quickly sold off, and spare parts assembled into a similar, but modified version called the Hunter's Special that was marketed in 1922.

Frisbee worked furiously with his own patents, but they lacked imagination. While Hansen's work was artful, Frisbie's was practical. Like a newly elected politician eager to replace old policy with his own, he pushed his own design: the Victor. The name itself was a snub to his predecessor. Just as Dan Quayle was no Jack Kennedy, Frisbie's lamp was no radical #innovation. It merely borrowed the design of Hansen's ribbed base and applied it to the tank. The lamp itself resembled that of Justrite's competitors more than any previous Justrite lamp. Plain as it was, trivial details of the brace, feed and water door evolved rapidly on a yearly basis throughout the 1920's (Ref. 2).


Design Patent for Victor Lamp. Wm. Frisbie, 1921

The New X-Ray

Fate was not kind to Mr. Frisbie. The 1920's were tough times for all carbide light makers. The electric era had begun and no amount of quick-fix changes could save the Victor. In 1922, an ornamental change was made on a test series of Victor-style lamps (Ref. 3). The ribs were replaced with raised dots...a design already used and rejected by Hansen due to their rapid wear (Ref. 4). This lamp was renamed and stamped "The Defender". Perhaps Frisbee's confidence as a 'victor' had diminished, and he needed to 'defend' his prized and evolving lamp. Doomed by the times (and the flawed raised-dot design), the Defender lasted for only a year while the wounded Victor soldiered on, still trying to reinvent itself with trivial changes to the brace and water door. By the mid-twenties an act of desperation took place for Frisbie and his Victor. Perhaps to reclaim the nostalgia of Hansen's golden era, the name "X-RAY" was resurected, and stamped onto the tops of otherwise typical Victor lamps. Mr. Frisbee had been humbled.

In surveying existing X-RAY lamps, their details do in fact match those of the latest batch of Victors produced. They use the latest top stamping, the later water doors, and the latest hook/brace mounts. Most are ribbed. Like the last Victors, some X-RAYs even had chrome plated reflectors and a modern wing nut holding it in place (Ref. 5). Like the Defender, not many were made, making them highly collectable today.

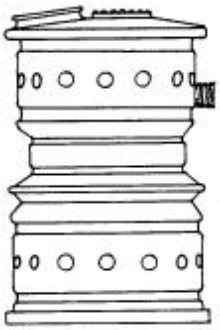
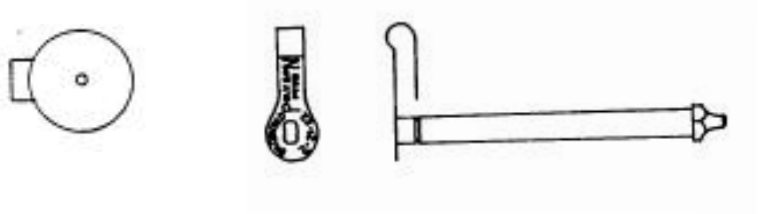
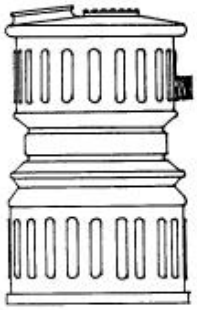
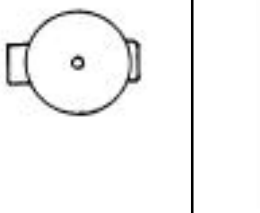
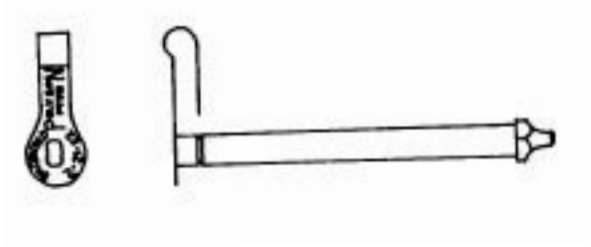
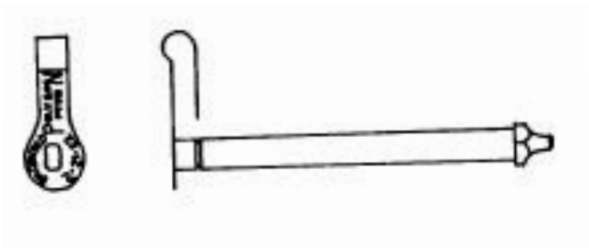
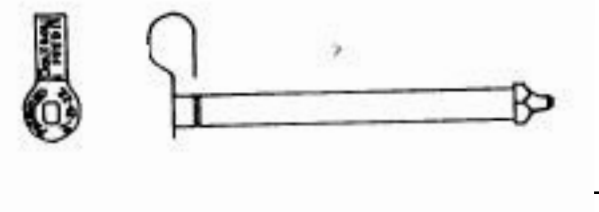
When was the top-stamped X-RAYs made? Unlike the Defender, the X-RAY stamping does not appear to have been officially trade-marked, so this doesn't help us. Since the lamp is found with the same accessories as the later Victors, it would have been run in the mid-late 1920's. The very latest Victors used a water door hinge that was integral with the neck of the opening, but no X-RAYs have yet been reported with this door.

The last Justrite Catalog that advertised the Victor was the No. 6, circa 1928 (Ref. 6), and so we may guess that the last X-RAYs were probably made through this date. Some of the X-RAYs reported have smooth stamped water doors and longer levers, and if we look at the time frame that these items occur on the 'horizontal' Justrite line (Ref. 7), it would seem that the X-RAY could have been made as early as 1923...and this is consistent with the fact that the raised dot Defender tank style (a 1922-23 item) is occasionally found on X-RAYs. A time frame of approximately 1924-28 is a fair guess.

(lamp shown in photos from author's collection)

Styles of Top-stamped XRAY Lamps

The table below demonstrates the four basic varieties of the X-RAY. This does not address the variations in hook vs. spade mount. See table to to view the detailed variations as reported.

Body Style	Water door and Feed combinations
	
	 
	  

Illustrations by Mike Puhl

Variations of Reported X-Rays

Body Style	Brass vs. Nickel	Water door	Hook vs. Spade	Lever Type	Reflector	Owner
Raised dots	Brass	Smooth no tab	Hook with flat brace	Long Patented 2-21-22 Polygon Feed	3" Brass round knurled nut	M. Puhl
Raised dots	Nickel	Smooth no tab	Hook with flat brace	Long Patented 2-21-22 Polygon Feed	3" Nickel round knurled nut	Reported by M. Puhl but not con-firmed
Ribbed	Brass	Smooth with tab	Hook with flat brace	Long Patented 2-21-22 Polygon Feed	3" Brass round knurled nut	M. Puhl A. Quamen
Ribbed	Brass	Raised rings	Hook with flat brace	Long Patented 2-21-22 Polygon Feed	3" Brass round knurled nut	D. Thorpe D. Des Marais
Ribbed	Brass	Raised rings	Narrow spade	Short Patented 2-21-22 Polygon Feed	3" Chrome-plated wing nut	L. Click

Above lamps from Mike Puhl's collection. If you look carefully, you can detect the differences in water door and tank design compared with the X-ray shown previously.

References:

1. Emmons-Hawkins Hardware Co. of Huntington, WV as well as Hardsocg used their own base stamping on models of the X-RAY.

2 For an in depth review of these changes, the reader is refered to Mike Puhl's excellent article in The Mining Artifact Collector, Vol. 4, 1989.

3. Trademark #267,518 filed: 6-17-22, awarded: 5-1-23, claimed continuous use since 4-28-22.

4. In 1982, Chuck Young pointed out to me several Defender lamps showing extensive wear of the raised dots resulting in holes through the lamp. Mr. Young believed this to be a design flaw, and believed the lamp was taken off the market due to this problem. Justrite cap lamps made in the late teens used raised dots as a gripping surface. These were replaced in 1919 by Hansen with vertical ribs.

5. L. Click collection, see table

6. Gaska, Mining Artifact Collector, No. 10, Winter 1991, p. 17.

7. Thorpe, Mining Artifact Collector, No. 10, Winter 1991, p. 14.

* It should be noted that "The Miner's Flame Light Book" (Henry Pohs) attributes the Victor design patent to Augie Hansen. This is incorrect. Design Patent 57,037, Feb 1, 1921 was that of William F. Frisbie.

Collecting Hammers

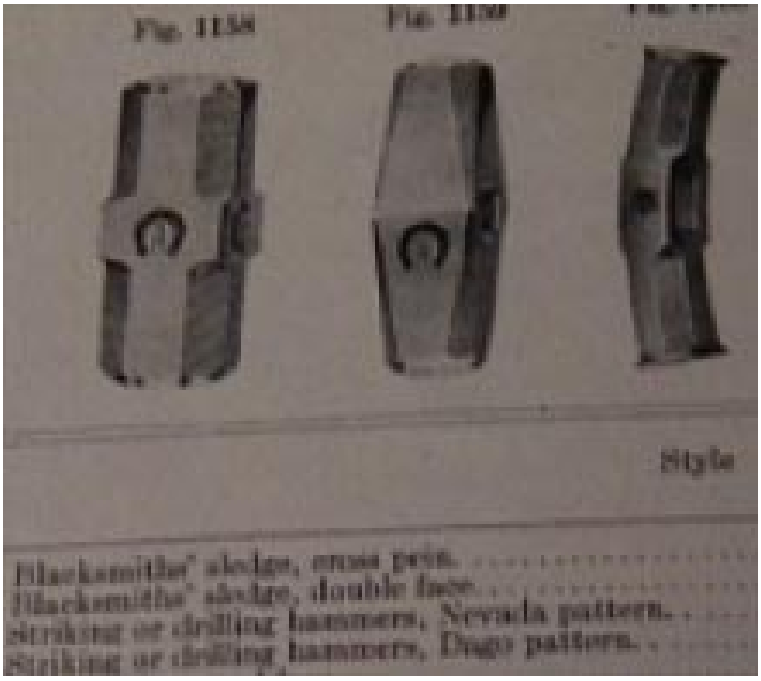
by Leo Stambaugh

I am putting up some photos of the different styles of Drilling hammers that were used here in CO by the miners around 1900 or so. Two styles most common were the "dago" or "Italian" curved body , and the straight "Nevada" style.

Georgetown, Silver Plume, Nevadaville, and most of the other camps with a large Italian population seemed to have a larger number of the dago pattern, miners said they gave more of a pendulum style of swing arc which was easier for long periods of drilling, especially when drilling upwards. They were also handy for setting rail spikes because the head was offset a ways making it easier to strike the spike close to the rail. I have seen them in catalogs in sizes from 3 to 8 pounds. Nevada patterns were a mid-range style of sledge that I have found in 3 to 6 pound sizes but were available up to the 16 pound size. Too big for drilling but great rock crushers. There are a lot of Nevada style hammers around but few are marked as such, I have only found 9 marked ones in all. The Oregon pattern is a shorter version of the Nevada Style, I have only seen 4 marked ones, and only one marked California which was a bit thinner than the Nevada version. I have one long California style that is marked "C.W.Pollard, Georgetown, COL." It was made by Fayette R. Plumb, hammers makers that made all the styles mentioned. Atha, Quikwerk, Yankee, and a few other hammers makers made them also. I am sending four attachments so you can delete if not interested, I know it gets a bit involved for what are basically just wack hammers.

The photo above shows a 3 1/2 pound "Oregon" hammer on the left and a Drill competition "Nevada" 8 pound hammer on the right. It belonged to a miner in BlackHawk,CO who competed regularly in contests. It has a short 28 inch handle for better control and accuracy. It is in almost perfect condition because of the great care he took to keep it ready for contests. both of these are Fayette R. Plumb brand. Another name I see a lot on all styles of hammer is Verona Tool works from Pittsburgh, I believe. Does anyone know much about that company or maybe have a catalog from them?

This is the shorter style with "Oregon" stamped in it. They came in at least the four pound single jack size and a 6 pound version which is this size here. I have also seen ads for a "Colorado" pattern but haven't seen a real example. There is also only one example that I have seen which is stamped "Dago" but hopefully there are other marked examples that may turn up.



Left, is a catalog showing some of the Dago styles along with a couple Nevada styles on the bottom of the photo.

Shown right is another catalog with the two styles using "Italian" instead of "Dago". It wasn't really derogatory towards Italians unless you said it with a bad attitude. One of my friends is a former State Mine Inspector, Roy Rizzardi, and he said if you used the term Dago underground it was usually another Italian anyway. These hammers were made by Quikwerk, which also made the Oregon pattern hammer.

One more and I will shut up. This is an old miniature tool set made in a blacksmith shop here about 1915. It is interesting because he made both the Nevada and Dago style hammer at the same time so they were both used concurrently here in Georgetown. The quarter is for scale, not the price of the set. Ha.