

# EUREKA!

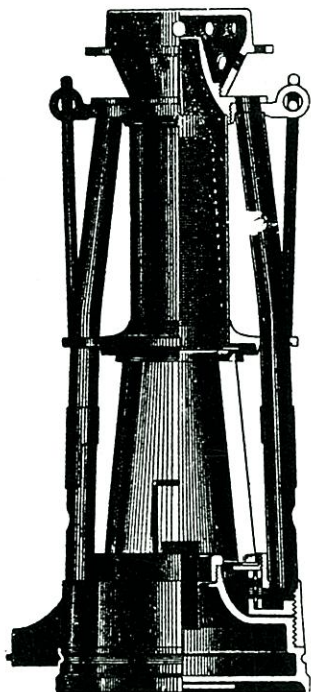
THE JOURNAL OF MINING COLLECTIBLES

ISSUE 5



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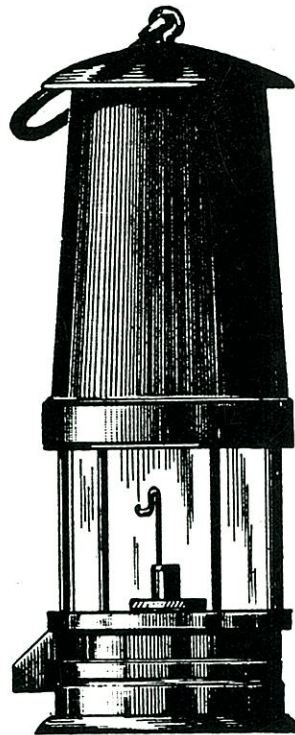
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miners' lamp by actual test, is our "ASHWORTH - HEPPLEWHITE" lamp—a good point to remember when buying lamps.

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Will show a cap in a mixture containing 2 per cent. of gas. Absolute safety to the wearer.

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***EUREKA!***

The Journal of Mining Collectibles

# EUREKA!



A PUBLICATION DEDICATED TO THE COLLECTING,  
PRESERVATION, AND HISTORICAL RESEARCH OF  
EARLY MINE LIGHTING AND COLLECTIBLES

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**Front cover:** Advertisement for American Safety Lamp & Mine Supply Co.

**Back cover:** Western Pennsylvania miner. Courtesy Ken Rupp.





# EDITORIAL



## REGIONAL VIEWS AND NATIONAL ORGANIZATIONS

I'll admit it, I'm an *Eastern* mining memorabilia collector. I've only ever owned one Varney candlestick, and I got rid of it. Most of the collections within easy visiting distance have few or no carbide hand lamps, gold scales, single jacking bits, or any indications of an interest in mining artifacts from other regions. I don't apologize much for this deficiency, I just rely on the editors and contributors to *Eureka!* from across the country to provide our readers with a balanced perspective. This issue is a good example, with articles on mining history from Pennsylvania, Iowa, Arizona and California, articles on Australian and English mining lamps too!

My own local perspective can get me in trouble, though. Several readers wrote in to comment on my October Editorial, and on my generalizations about a law against open flame lamps in mining. Ray Morrison of Wheeling, WV wrote:

"I would like to clarify your statement on open lights in mining. To my knowledge, no states forbade the use of open lights — except in mines classified as gaseous — until 1969 when the Federal Coal Mine Health and Safety Act was passed. Then all mines were considered as gassy.

The big change (from carbide to electric lamps) came when coal mines changed from hand loading to mechanical loading. If a miner's lamp went out while hand loading (contract work) no great problem. In the case of mechanical loading (paid by the hour) you hurt the coal company in the pocketbook."

Ray and others remind me that small western hard-rock mines, such as the asbestos mine Todd Town wrote

about, used carbide lamps into the 1970's. A cave explorer friend tells me he almost took a summer job at a gold mining operation in Alaska, because they are still using carbide lamps. I appreciate the letters. Publishing *Eureka!* wouldn't be much fun if I didn't learn something in the process.

What to do about the regional nature of mining memorabilia collecting? Some collectors would say "nothing: it only makes sense for folks to limit their interest to local history, and collect the tools used in a particular region."

Other collectors have asked that *Eureka!* publish more articles about mining history in general. They want to see the big picture in which all these parts fit together. And everyone seems to agree that the more we can publish about rare or unusual mining collectibles, from all over the world, the better informed they will be when collecting. In a private swap between collectors, or at a large busy flea market, the same adage is true: "knowledge is power."

Henry Pohs offers a suggestion. Readers of his *Underground Lamp Post* will find in the Fall 1992 issue a call for a national organization of collectors. Those interested may write to Henry Pohs, 4537 Quitman St., Denver, CO 80212.

To start off the new year, we've begun to experiment with some new layout styles. Readers may notice the use of three column format on some of the articles as well as a more liberal use of white space on others. We're not sure which we like better. Let us know your opinion!

James Van Fleet, Editor-in-chief



# Force Feed Quartet

by Dave Thorpe  
&  
Mike Puhl



*Among the lamps made by Augie Hansen, only the Force Feed is found in variations. Four distinct styles show a regular transition from their predecessor, the Drylite, to the final basic Hansen cap lamp.*

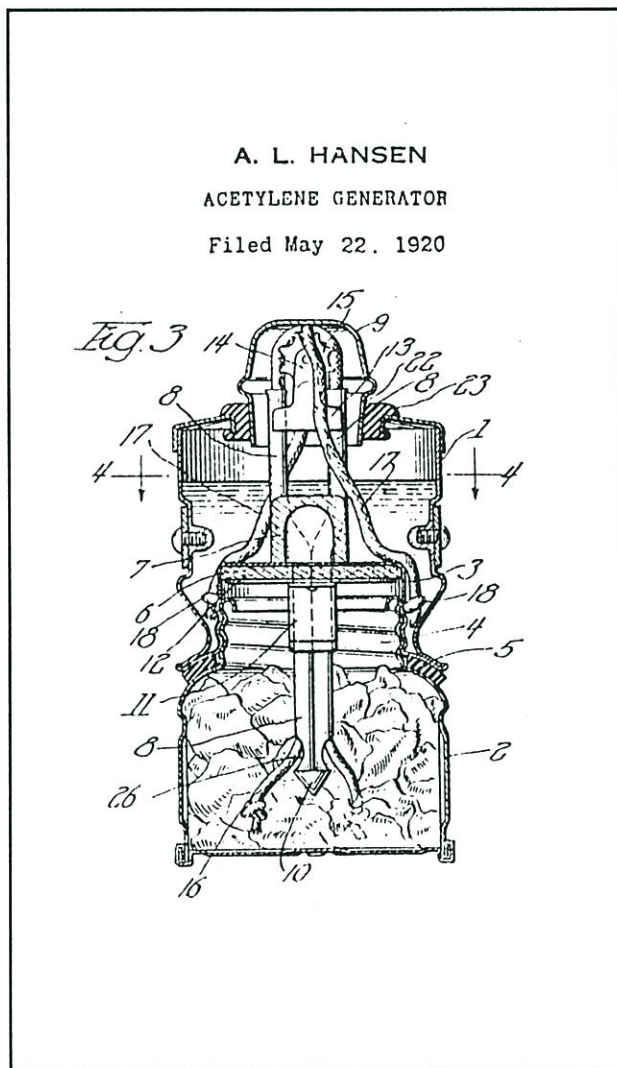
*The earliest Force Feed lamp was the boldest in design. It used the Drylite's larger capacity tank as well as the heavy reflector brace.*



Ask most cap lamp collectors about Hansen lamps and they can recite the names Drylite, Force Feed, and Hansen as if it were a grammar school drill. Augie Hansen patented and manufactured these three lamps, beginning in 1920, with the unusual Drylite which used a wick to feed water instead of a conventional dropper. The mechanism did not work well and, a year later the lamp was replaced by the Force Feed. Much more functional, this new lamp stood the test of time long enough to undergo several design modifications. These subtle changes are reviewed in the following article.



*Early Force Feed top stamping.*



*Drylite patent showing tank cut-away.*

**1** The Force Feed cap lamp used a true water dropper. In addition, a small patented plunger was added for an extra squirt of water when needed. The first Force Feed models resembled the Drylite in their outward appearance (see opposite page). They are identified by a more robust waist than seen in later models. This appearance is due to the larger water tank, taken directly from the Drylite.

The patent cutaway diagram shows how the tank surrounds the screw threads. This made rational use of space in a lamp where water could be wicked up from any recess, but in a dropper-based lamp, like the Force Feed, the water from this space was unusable.

The early Force Feed lamps also used the heavier reflector brace as on the Drylite. Additionally, all first generation models were equipped with the reflector-slot igniter.



**2** The first change in design was logical: the large tank was slimmed down so that the entire water chamber lay above the threads. The lamp had a much less stout appearance. The example shown right is from Mike Puhl's collection. The reflector-slot igniter is still retained on this model, but the reflector brace is now lightened with several windows along its length.

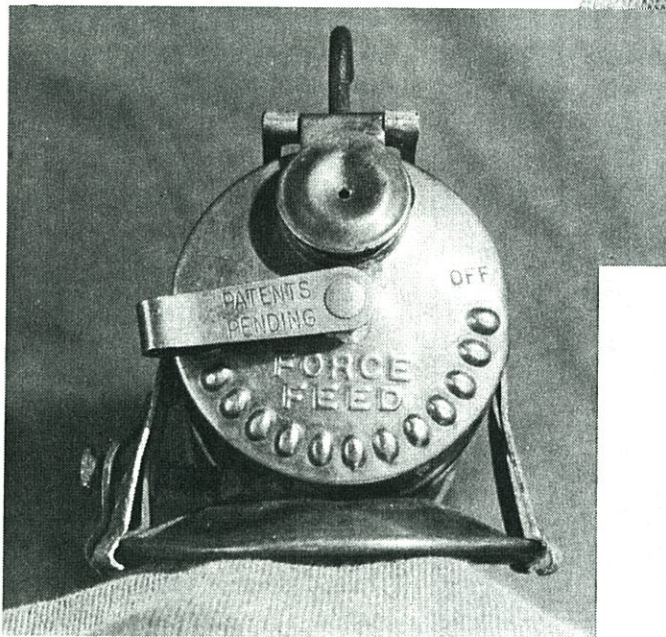


**3** The third Force Feed variation, shown left, introduces the patented Snap-lite® igniter in place of the reflector-slot wheel. The igniter is neatly attached in one of the diamond shaped windows of the lightened reflector brace. The first lamps to use the new Snap-lite® still retained the old reflector stamping with two small ridges as finger guides for the now absent slot igniter. Obviously, no slot is cut between them.

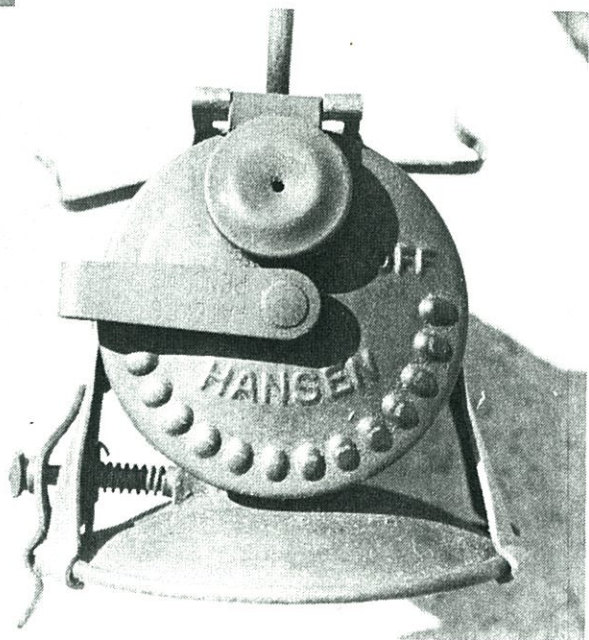


4 The final Force Feed variation, shown right, is from Mike Puhl's collection, and represents the most radical change of all. The lamp is now a Force Feed by name only, for the plunger mechanism has completely disappeared. The new water feed screws in a reverse direction to the old one, so now the stamping "OFF" (on the tank's top) is changed from its position on the right hand side (in raised letters), to the left hand side (in incuse letters). The new incuse stamping suggests that it was added *after* the die was stamped.

With no rationale for continued use of the Force Feed name, a new die was made for the top, sporting the new name: "Hansen". On the new lamp, the word "OFF" is die stamped in raised letters and is properly located on the left.



*Top stamping of latest Force Feed (above) compared to its replacement: the basic Hansen (right).*





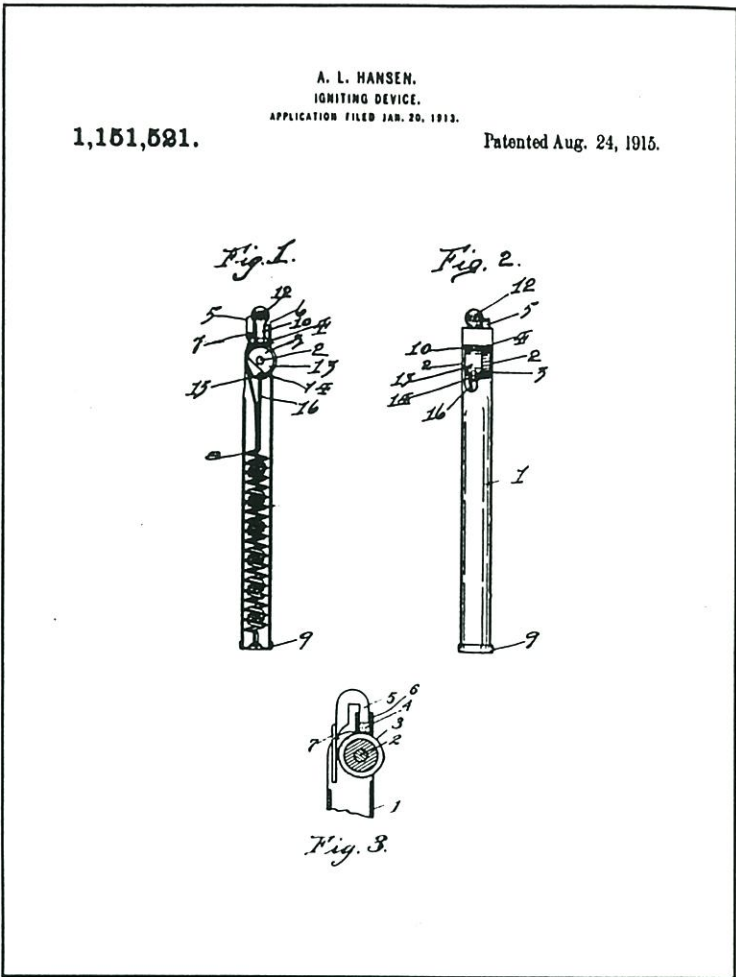
# Justrite Lighters

by  
Dave  
Johnson

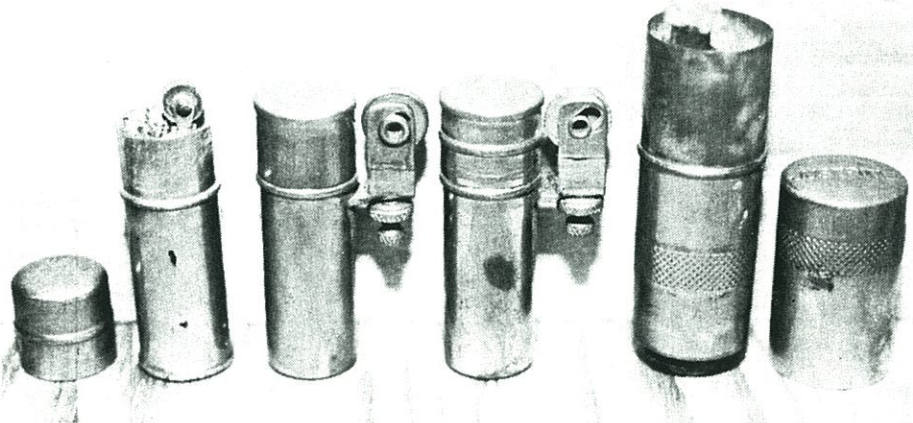
The 1913 Justrite Catalog No. 1 illustrates "The Justrite Gas and Squib Lighter No. 120 - A new idea for lighting squibs - safer than matches - never fail". The same lighter was also advertised as the "No. 120 Fuse Lighter" in an insert included with the Model 85 Pit Lamp (illustration below). In a 1913 Marshall-Wells Hardware catalog it is referred to as a "Vest Pocket Gas Lighter". The Hansen patent shown right was filed in 1913 and granted in 1915. Made of brass with a snap striker, it is 4 1/8" long and 5/16" in diameter. Justrite distributed these items to their dealers on cardboard display cards holding one dozen lighters.



**No. 120 FUSE LIGHTER, Price 25c**  
Extra Flints, 3 for 10 Cents



*An example of the No. 120 lighter.*



*Justrite stamped lighters not found in their mining catalogs.*

Justrite produced at least three other lighters (see photo below). Though the Justrite name appears on the bottom of each lighter, I have been unable to find them listed in any of their catalogs. The three shorter lighters are 1 5/16" tall, 5/8" in diameter, made of nickel-plated brass, and patent dated February 21, 1922. This was a William Frisbie patent. Typical of his work, it was a crude design relative to Hansens's No. 120. The taller lighter looks as though it is based upon a Justrite match safe.

All four of these unadvertised lighters were found in the Hurley, Wisconsin area, in the Gogebic Iron Range.



# Hansen's Last Patent

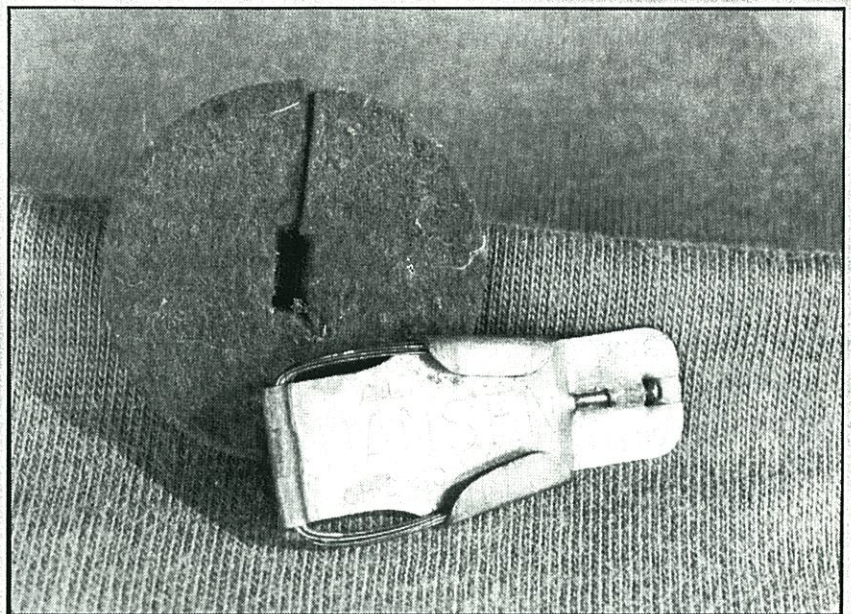
by Dave Thorpe

When I look at a patent for mine lighting, I'm always interested in the date that the patent was *filed*. This marks the time that the invention was conceived and first produced. The date that is stamped onto various relics reflects the additional time it took the U. S. Patent and Trademark Office to consider and grant the patent. Many times there are several years difference between these two dates, sometimes only months.

Augie Hansen was arguably the most prolific inventor of acetylene mine lights and accessories. From 1910 through the twenties, he obtained at least 33 patents. The majority belonged to his employer, the Justrite Manufacturing Company. However, the last *five*, obtained during the 1920's, were for his own A. L. Hansen Manufacturing Co.

In 1927 he was granted his last patent. This was for the Force Feed lamp. But, he had *applied* for it a full six years earlier in 1921. If the last five patents are considered by the dates they were actually *filed*, it is apparent that an obscure tip-cleaner pack was the item he last invented. Applied for in April 1923, it took little more than a year to clear the patent office, and was granted in June 1924.

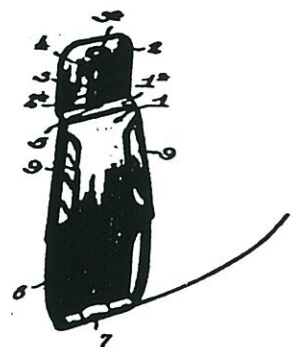
The specimen shown in the photo is stamped "PATS. PEND.", dating its manufacture to the narrow time frame of 1923-24. The tip-cleaner pack is extremely rare. Later models may exist, bearing the patent date.



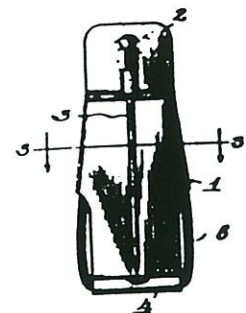
## U.S. Patent 1,498,371

Augie L. Hansen  
Filed: April 30, 1923  
Patented: June 17, 1924

*Small enough to be held in the fingers, this patented invention was simply an open rack for holding several lengths of fine steel wire. Just pull one off the rack and you have an instant tip cleaner for a carbide light. The apparatus is nickel plated steel, and has a pin on the back side for attaching to the miner's clothing. Trivial and obscure? Yes, but pure Augie Hansen!*



Front side showing one wire extended

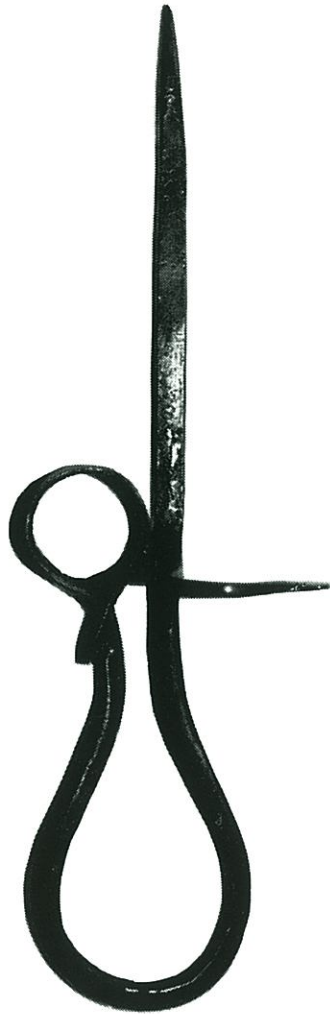


Back side showing pin to attach to clothing.



# Steel Mastodons

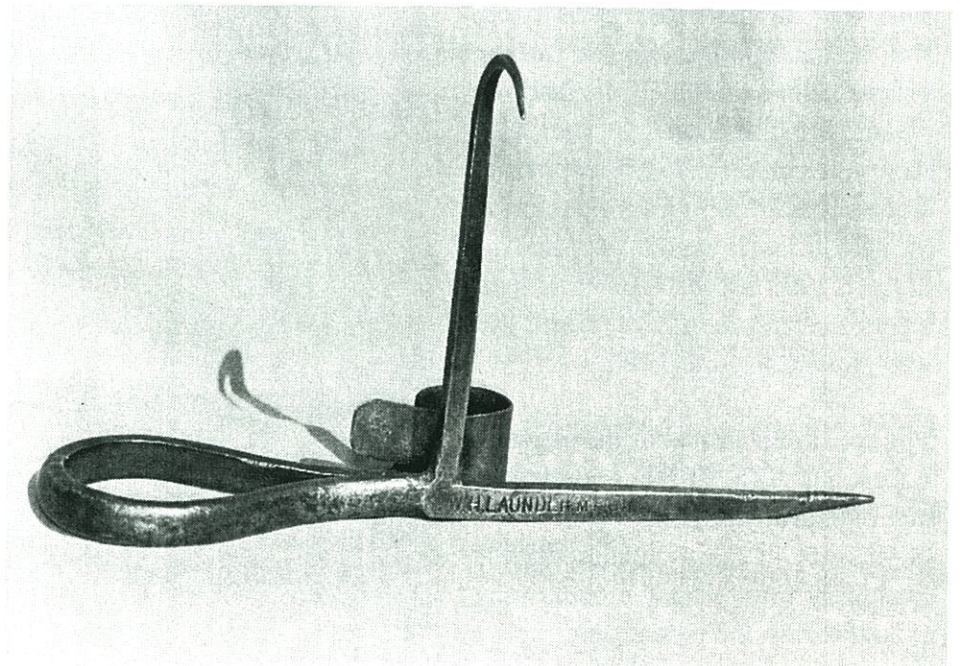
by Dave Thorpe



*The stamped name on a candlestick can transform an otherwise plain artifact into a Picasso.*

Even crude “blacksmith” candlesticks show a great deal of workmanship and ingenuity, for they are forged from a single piece of steel into a spike, thimble, handle, and hook. From a historical perspective, they reflect a narrow window of mining Americana from the latter 19th century. Still, they are awarded a low status by collectors, and can hardly be given away.

One subtle feature, however, will transform an otherwise typical stick into an item that will be coveted by many. That small aspect is the presence of a gang-stamped name. Not a hand inscribed dedication, or individually stamped letters (detected by their uneven line), but a single die stamping that is replicated from stick to stick. What is it in a gang stamping that fires up the collector’s mania?



(ABOVE AND RIGHT) *Who was W.H. Launder? At least two sticks manufactured by this blacksmith have been found. Many believe that he lived and worked in the mining district of Bodie, California.*



Without analyzing the general psychology of those who have, for various reasons, become infected with the spirit of collecting, it must be accepted that we all, to one degree or another, are enthusiasts of history.

As an archeologist digs through old building rubble, analyzing each bit of block and mortar for its significance in time, he occasionally uncovers an item that provides a quantum leap in his interest and knowledge. It might be a type of tool, an

On his way home he may bring a few bits of limestone from the past with him to sell at the local flea market. Every chip was recovered from miles below the surface. Every bit reflects time as it was millions of years ago. But only the stones with fossils will sell. Even the non-scientist can identify them.

As the Siberians performed monumental feats of digging through layers of ice, eons old, the world yawned...until a frozen mastodon was found. Clearly, others such as this

an identifying gang-stamp, it is nearly as dull to a collector as an amorphous wad of steel. It is like another bit of mortar to the archeologist, like a chip of limestone to the geologist, or another scoop of ice to the Siberian...just part of the job.

The C. Cleaves stamped candlestick is a fabulous instrument. It has a graceful scalloped and spiked thimble. The edges of the hook are beveled and the handle is perfectly formed. Little is known of Mr. Cleaves, but he surely appreciated art. Several other gang-stamped sticks such as the W. H. Launder, the



icon, or a pot... something he has seen before in similar form. It would be made by the same civilization in time, perhaps by the same person, he can *identify* it. This man-made creation gives a new meaning to the dig, and yields many conclusions.

A geologist may bore through endless layers of strata noting the chemical composition of the minerals. Every change is routinely logged as he toils in documenting earth's history. But when he brings up an ancient fossil, things suddenly become very interesting. He has found a visual imprint of life as it was.

one lived in the area. It was a glimpse of life preserved.

The same interest is ignited with the discovery of a gang-stamped candlestick. It is like finding the blacksmith's own footprint. But this imprint is frozen into his steel creation for eternity. It will be found on many of his sticks, as if his feet had tread over wet cement.

Though the plain blacksmith stick was indeed made by some person and is novel in its own right, without

S Mather Butte, and the E. A. Sherwood are occasionally found. *Their* intrigue lies in learning what kind of people *these* blacksmiths were.

(ABOVE) C. CLEAVES CANDLESTICK. *Though all sticks of this maker share similarities, such as the gracefully scalloped thimble and the peculiar thumb lever, many varieties exist.*

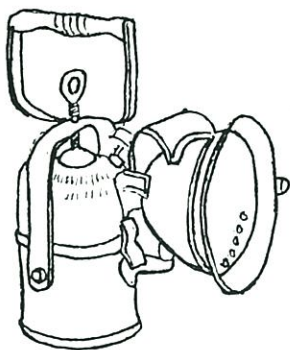


Most collectors are familiar with the carbide lamps produced by the Wolf Safety Lamp Co. of America. Less well known is the Wolf Safety Lamp Co. Ltd. of England.

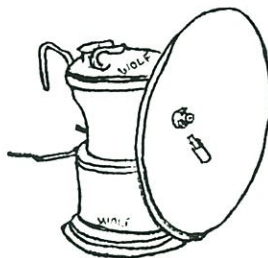
# Wolf: in English Clothing

by Dave Johnson

## WOLF ACETYLENE LAMPS



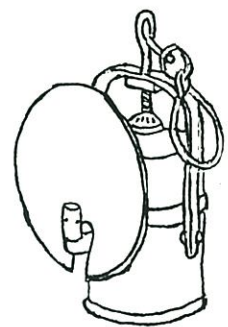
No. 60A MPH



No. 911C



No. 854



No. 60A

Made in Sheffield, England, these four lamps represent the Wolf line-up in an undated brochure.

The Wolf Safety Lamp Co. Ltd. produced at least four carbide hand lamps - No. 60A, No. 60AB, No. 60A MPH, No. 854 and a carbide cap lamp No. 911c.

The No. 60A is made of tinned steel, with a 5 1/2" brass reflector, brass water regulating valve, and steel bail with banging hook. The lamp is 8 3/4"

tall, weighs 2 lbs. 14 oz., giving a light of 25 candlepower and was advertised to burn for 10-12 hours on a 9 oz. charge of carbide.

The 60A MPH is the same lamp as the 60A but with a "milk-pail" handle and brass bonnetted reflector. The 60AB is a 60A with the same bonnetted reflector as the 60A MPH

weighing a total of 3 lbs. 3 oz.

The 854 lamp is made of tinned steel, with a patented overall bridle, a 3 1/2" brass reflector, ring hook and wire handle. The lamp is 9 3/4" tall, weighs 3 lbs. 4 oz., giving a light of 20 candlepower and was advertised to burn for 10-12 hours on a 9 oz. charge of carbide.

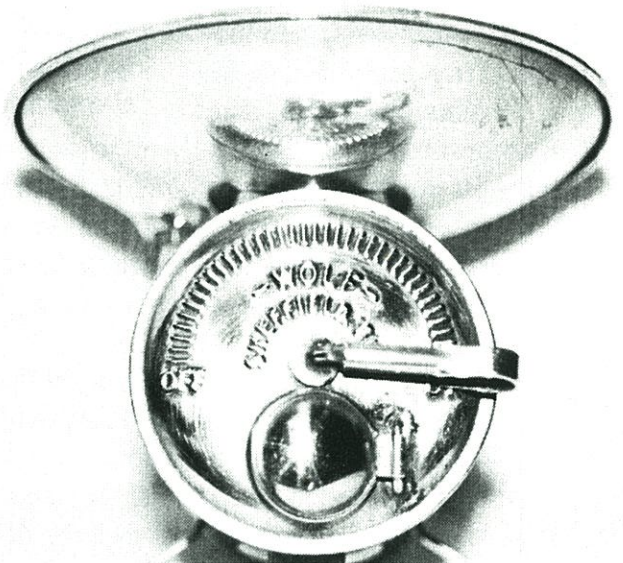




The most interesting lamp produced by the Wolf Safety Lamp Co. Ltd. is the No. 911c carbide cap lamp. Made entirely of brass, except for the 4 1/8" aluminum reflector, the lamp is 4 1/2" tall. Weighing 7 1/4 oz., the lamp was advertised to burn for 4 - 4 1/2 hours on a 1 1/2 oz. charge of carbide. As can be seen in the accompanying photos, this lamp bears only a vague resemblance to the American made Wolf carbide cap lamp, yet it has the same catalog number. Have any other collectors found an example of this lamp?

*(RIGHT AND ABOVE) Wolf cap lamp showing Sheffield stamping on top.*

*(Below) Logo from Wolf brochure. Many English Wolf safety lamps appear with the name William Maurice.*



**THE WOLF SAFETY LAMP CO. (WM. MAURICE) LTD.**

**SAXON ROAD WORKS, SHEFFIELD 8**

**ENGLAND**



# The What Cheer Tool Co.

by Dave Johnson

In an article entitled "Oil and Sunshine Lamp Products of the What Cheer Tool Company" (Fall 1989 MAC), Jim Steinberg illustrated several products of the What Cheer Tool Company of What Cheer, Iowa. In his article, Mr. Steinberg makes the unsubstantiated claim that the What Cheer Tool Co. was primarily a distributor, not a manufacturer. A report from the What Cheer Centennial Publication indicates this is untrue.

The What Cheer Tool company began under the firm name of *Thompson, Walker & Thompson* in the early 1880's. In the early years, their production work was performed in the *Curtin & Parkins* blacksmith shop and W. C. Johnson's machine shop, both located in nearby Oskaloosa. Early products were limited to coal drills and picks. About 200 drill machines were sold in the first year of production.

By October of 1886 the demand for its drills and picks had become so great that the firm decided to manufacture them within their own facility, located South of the Rock Island Railroad tracks. In the period of January through June of 1887 the firm produced and sold 790 drill machines. By the Fall of 1888, the firm employed 18 men in their factory and were producing 150 drill machines a week, as well as other products.

At this time the chief-blacksmith was Thomas Curtin, who had previously manufactured products for the firm in his own blacksmith shop. William



*Brass and tin What Cheer (L) and Grier Bros (R) oilwick lamps.*

Smith was in charge of the drill operation, Jessie Southwick was head-mechanic and James Davison was book-keeper and general salesman.

Shortly before 1900 Thomas Thompson left the firm and the name was changed to the *What Cheer Drill and Miner's Tool Co.* Alexander Walker was President and General Sales Manager, partner William Thompson was Vice-President and Treasurer, William Walker was Secretary and James Walker Assistant Secretary.

In the late 1890's and early 1900's, the firm had four salesmen on the road outside of Iowa, while James Walker covered Iowa. During this period there were about 30 employees in the factory. The firm was shipping its products to every coal producing state in the nation, as well

as Canada, Mexico and parts of South America. The firm also repaired coal cars for mining companies in its shops. Alexander Walker was a prolific inventor who held 17 patents of coal drilling machines alone, while several more were held in the firm's name.

In later years, with coal mining declining and more firms producing equipment and supplies, the firm entered the automobile business, first selling Chevrolets and later Star and Durant autos. The firm did not do well in this venture and permanently closed its doors in 1926, unable to survive in an increasingly competitive market, after having been a million dollar a year production firm.

It is not known with any certainty whether or not What Cheer produced their own oilwick and carbide lamps.



their own oilwick and carbide lamps. The firm did have the ability to produce lamps. An old photo of the interior of the What Cheer factory clearly shows a punch press and lathe that could have been used to manufacture lamp parts.

An earlier product of this firm is the seldom seen Thompson and Walker oilwick lamp. Apparently not manufactured for long or in great numbers, few examples of this brand name are seen today.

Numerous similarities between What Cheer lamps and Grier Bros. lamps would indicate that Grier produced at least some oilwick lamps for What Cheer. We may never know for certain who actually produced all the What Cheer lamps.

**SOURCE:** What Cheer Centennial Publication, undated. Ottumwa Public Library.



(ABOVE) *Tin What Cheer (L) and Grier Bros. (R) oilwick lamps as seen from stamped side.*

(BELOW) *Opposite side of tin What Cheer (L) and Grier Bros (R) oilwick lamps.*

(BELOW LEFT) *Stamp mark found on What Cheer lamps.*





# Carbide Safety Lamps

by Dave Johnson

*Carbide safety lamps, such as this Wilhelm Seippel model, are identified by their two compartment lower section.*



Carbide was naturally seized upon as a substitute for oil in safety lamps just as it was in cap lamps. However it never enjoyed the success in safety lamps that it did in cap lamps. At least three major European mine lamp manufacturers developed safe and efficient carbide safety lamps. Carbide safety lamps never enjoyed any level of acceptance in the United States. Unlike the oil fueled safety lamps, the carbide safety lamps produced 10 candlepower.

While they produced more light for the miner, at least four drawbacks are inherent in carbide safety lamps. First, there is the increased weight of the lamp caused by the need for water and carbide, as well as the extra weight of the mechanism. Second, the miner must carry additional carbide and water to allow the lamp to burn through a full shift. Third, the lamp gets very hot when stationary at a work station, much more so than an oil fueled safety lamp. Fourth, the lamp requires more attention at the hands of the miner.

These drawbacks may be the reason that only three firms produced carbide safety lamps in any significant numbers. These firms were Friemann & Wolf (Germany), Wilhelm Seippel (Germany), and Societe Anonyme D'Eclairage et D'Applications Electriques, which produced Arras lamps. The Friemann & Wolf and Arras lamps seen here are much more sophisticated than the Seippel unbonnetted model.







# Commemorative Mining Medals

by  
Manfred Stützer



Commemorative medals were issued when long running mines closed, for anniversaries of a mine or mining companies, for anniversaries of specific mining regions or for any other number of reasons. Those medals most commonly found were produced in eastern and western Europe throughout this century, although earlier medals exist. Medals were also produced in the United States but not in the numbers produced in Europe. These medals were produced in copper, brass, bronze, nickel and silver.

The Deep Navigation Mine medal (center page) commemorates the 100th anniversary (1879-1979) of this famous mine's op-

eration. The location of this mine is at Treharris, South Wales.

The French medal (both sides shown above) commemorates French coal mining. The obverse side, dated 1928, illustrates a miner laboring underground.



The first German medal (below left) commemorates the 750th anniversary of a famous old copper area in Germany.

The second German medal (below right) commemorates Germany's re-occupation of the Saar Region in 1935 after having lost control of this famous coal mining region at the end of World War I.





The Polish Mining medal commemorates the 1988 National Exhibition of Philatelic Miners.



The Charleroi medal commemorates the 100th anniversary of that Belgian coal mining area from 1830 to 1930.

The Berwind White Coal Mining Co. medal was issued to commemorate the 50th anniversary of this company. Notice the carbide lamp worn by the miner. This medal was produced by Tiffany of New York, an unusual product for this famous firm. (Dave Johnson collection)



The Baggeridge Colliery medal was issued in 1967 at the closure of the mine after 71 years of operation. The coal mine was in the West Midlands Division, Gospel End near Sedgley, Staffordshire England.

All medals, unless otherwise indicated, are from the Manfred Stützer collection.



# L. E. Polhemus Manufacturing Company



## Miner's Lamps and Supplies

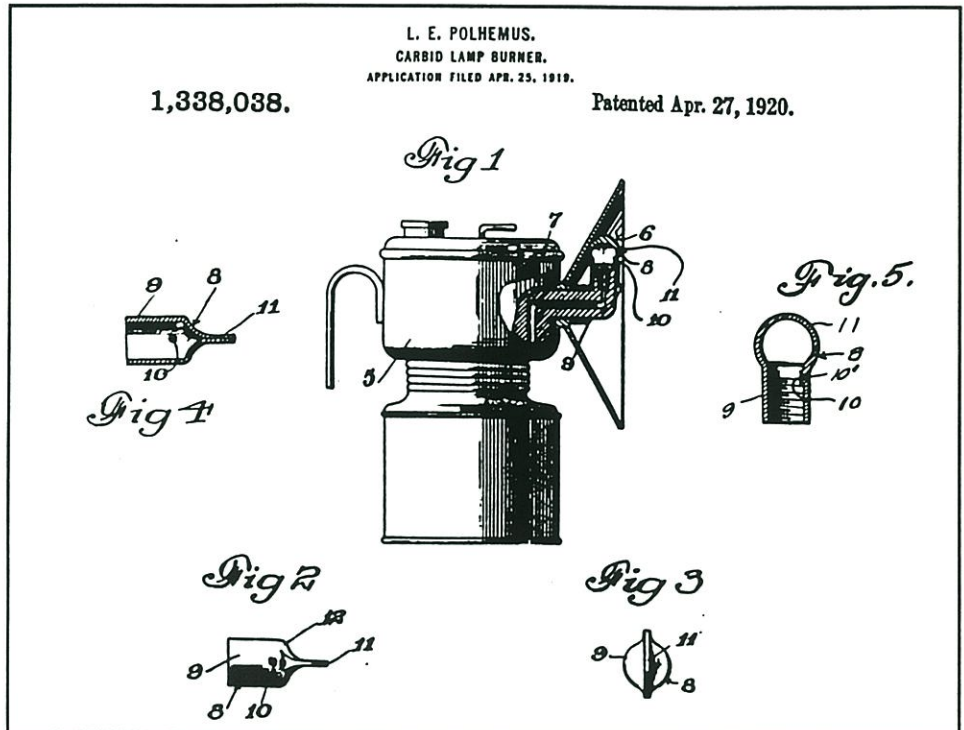
Bob Schroth, Dave Thorpe, Tony Moon, Tina & Todd Town

In the rural copper mining foothills of Miami, Arizona, lived an eccentric fellow whose two loves in life were carbide lamps and parrots.

Louis Edward Polhemus is still remembered as "Polly" by a few of the old folks in the Globe-Miami area. They knew him as the man who sold parrots from his variety store throughout the 1920's.<sup>1</sup> He also sold several models of carbide lamps to the local miners including Justrite, I.T.P., and Wolf. Additionally, he manufactured and sold two patented burner tips. His logo shows both a parrot and a miners' lamp.

The so-called "Polly" Burner was a fairly simple device: a crimped tube with a hole in the side. Its purpose was to convert a vertically directed flame (as on many hand lamps) to horizontal. An advertisement from a 1923 Keystone Catalog shows it stamped with "The Polly" name, the patent date, and a parrot (below right).

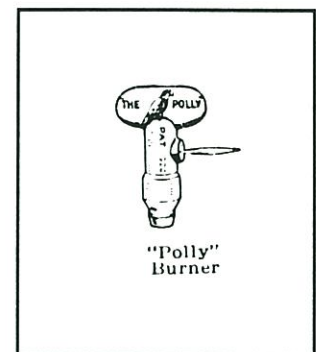
The patent drawing is not so fancy. The tip is shown on a generic type cap lamp with a vertically oriented gas tube. It was probably designed for the canister type Wolf hand lamp, many of which are found, used and abused, in eastern Arizona. The patent was filed in 1919 and granted in 1920.



*Patent for burner tip described as crimped brass tube with hole in side. Actual product may have been cast (see below).*

His other flame tip was known as the "Bess" Burner. Advertisements show it to have been patented in 1921. His only child Elizabeth, born later in 1927, was also known as "Bess".<sup>2</sup> The burner had a wide knurled edge for easy finger removal from the lamp. Either of these tips, if stamped as in the ads, would be very collectible today.

Polhemus was granted his last patent in 1924 for a carbide lamp. He had filed for this patent in 1919, just as he had for the "Polly" burner. From the



*The "Polly" Burner.*



outside, the lamp looks like a canister Wolf lamp. A series of specially beveled surfaces are described for the carbide chamber, however the patent text is so difficult to make sense of, it is no wonder that it took the U.S. Patent Office a full five years to consider it, compared to the "Polly" burner which was run through in twelve months flat.



Enlarged reverse views of the "Bess" Burner. Length overall,  $\frac{3}{8}$ ". Greatest diameter  $\frac{3}{8}$ ". 1 is the tapered shank; 2, the milled edge; 3 and 4, water grooves provided to lead water around the gas flame.

The "Bess" Burner.

"Polly" began to advertise in Arizona Mining Journal in 1923. His first ad, shown right, babbles on with camp enthusiasm. Although he proposes a monthly "Polly" column, subsequent entries are little more than cute self indulgent advertisements.

His ads ran for only two years and nothing more was seen of him in the mining literature. Today, there is no one with the name of Polhemus living in Arizona. His parents and a baby are buried in a Globe graveyard, but his own whereabouts remain a mystery. Polly has achieved a sort of immortality though, for his name lives on in old mining documents and perhaps on a few well used burner tips.



## My Debut

Well, "Folks":

The other day Mr. Willis, the editor of the Arizona Mining Journal, asked me to come into the Journal with my "Polly" column every month—so here I am, "Folks", and now you will have to "Abide With Me" for some time to come.

First of all, my business is selling merchandise. I own the only store of its kind in the world, called the "Polly", located at Miami, Arizona—in the heart of one of the largest copper-producing districts in the world. We sell all kinds of sporting goods, miner's lamp supplies and about everything that you can think of, from a steam engine to a pair of "Galluses". Now that that is settled, and I have made by "debut", I will try, from month to month, to wrap your heart strings around mine, and we will, in due time, get better acquainted with each other.

It matters not what you want or where you are located, the North or South Pole, or the center of the desert, when you are in need of anything, just drop your order to us; it will have the best of attention and will be spreading back to you in a very few hours. SERVICE! is the nickname of the "Polly", and now, you many mining men, when you have finished reading this "Coming Out" story, just remember that we are the headquarters for miner's lamps of all makes.

Here is a little burner, called the "Bess", \$3.00 per hundred. It's a dandy. Mr. Mine Manager, equip your miners' lamps with them—they are guaranteed. Send for as many as you wish, and if you don't like them, they won't cost you a penny.



L. E. POLHEMUS, Prop.

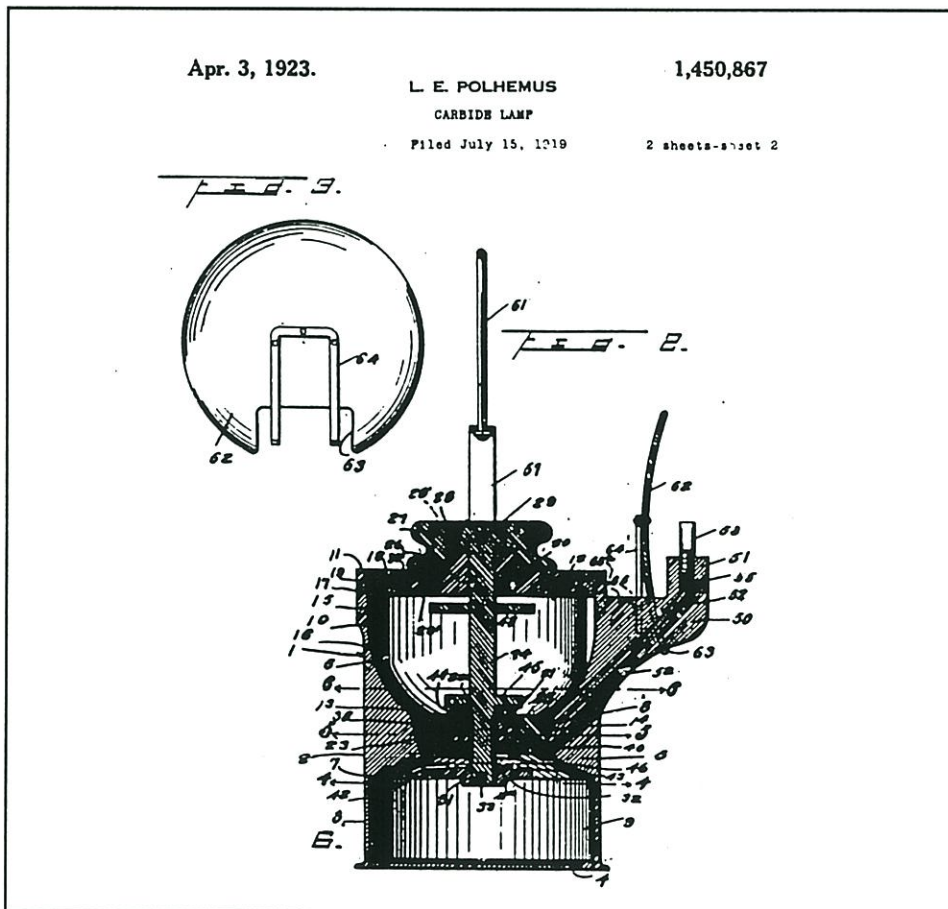


MIAMI, ARIZONA

First ad from Arizona Mining Journal, 1923.

## Notes

1. Store was first located on Sullivan St., second at Live Oak, and third at Keystone Ave. In the 1927 Directory he is listed under "Notions".
2. "Bess" is remembered by her best friend Clarisa Case who went to college with her in Tempe. They graduated in 1947. "Bess" became a teacher at the Lower Miami School. She later married a government worker from Kansas. They moved to Cuba where she was killed in an auto accident. She was buried in Kansas.



Canister lamp with complex beveled chambers.



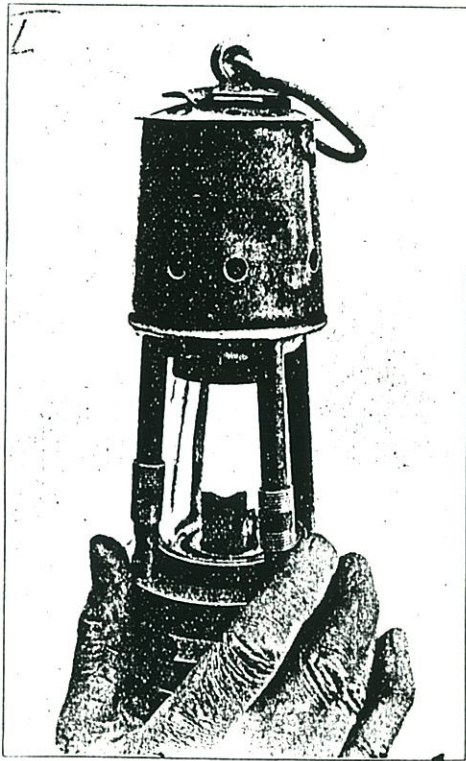
# Ashworth Safety Lamps

Mark Ballard and James Van Fleet

The lamp developed by James Ashworth, English Mining Engineer, is one of the most beautiful and interesting flame safety lamps. It was also one of the most sophisticated methane gas testing instruments in use at the turn of the century.

The original Ashworth "Deputy" or "Fireman's Lamp" was developed around 1889. It was based on the Gray patented safety lamp, which was highly recommended for gas testing in a report of the Royal Commission on Mine Accidents, 1886.

"After the publication of the report an improved form [of Gray lamp] was brought out by [Ashworth], who has had a life-long experience in experimental work with safety lamps, and his lamp is well known throughout the English coal-fields and also in the colonies, as Ashworth's patent Hepplewhite Gray."



The original caption for this illustration, from a 1902 paper by Ashworth, reads: "Ashworth's patent Gray, Deputy or Fireman's Lamp. Showing mode of manipulation when testing for firedamp."

There is some evidence of a rivalry in the early 1890's between Ashworth and other lamp inventors such as Mr. Stokes. The Stokes lamp was similar in design, but

burned alcohol for testing for small percentages of methane gas or "firedamp."

In a publication from 1910, J.B. Marsaut, inventor of another popular flame safety lamp, was critical of the Gray style of lamp with its large, hollow standards "since these large tubes through which the air is conducted into the Gray lamp cast rather large shadows."

Most of the rival gas testing systems were eventually brought together, and by 1900, James Ashworth had included in his lamps many of the features patented by Mr. Stokes, Dr. Clowes, and Mr. Gray. In an article published in 1902 James Ashworth defends his own lamps, which were being manufactured by Messrs John Davis & Son, Ltd, All Saints Works, Derby, England. He writes:

"As late as 1901 the original inventor, Mr. Gray, again took out a patent, which he called No. 2, combining all the best points of the Gray and Ashworth lamps."

By that date, the Ashworth lamps are available in five different styles:

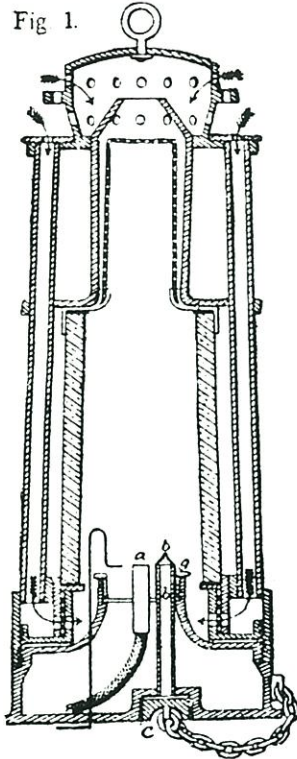
- 1) The basic Ashworth-Hepplewhite-Gray.
- 2) The Clowes hydrogen gas-testing lamp.
- 3) "The Ashworth-Gray with Stokes alcohol spirit gas-testing attachment."
- 4) "Ashworth-Gray with separate oil and alcohol spirit gas-testing burners."
- 5) "a tri-wick safety lamp, for burning petroleum spirit, and fitted with a Wolf patent relighter."

In the examples of these lamps shown in Ashworth's article, some are bonneted, some unbonneted. The tri-wick lamp is shown with a bonnet and ordinary wire standards.

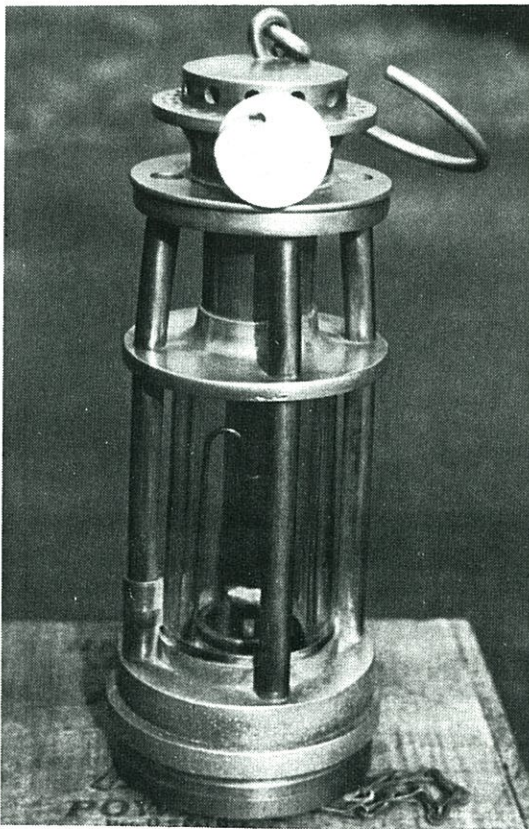
Ashworth writes that "the capacity of a safety lamp to detect small percentages of firedamp depends principally on its heat, and these are the reasons why hydrogen gas and alcohol spirit were adapted by the writer to his Hepplewhite-Gray type for laboratory and main air current testing in coal mines."



Fig 1.

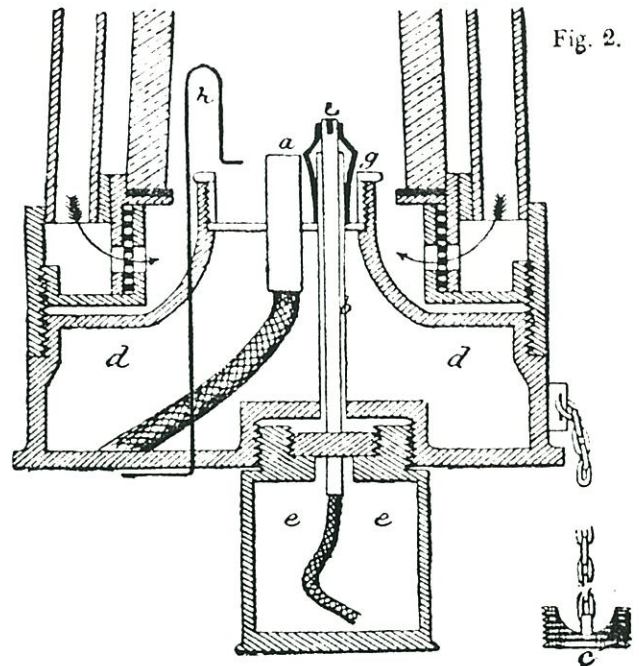
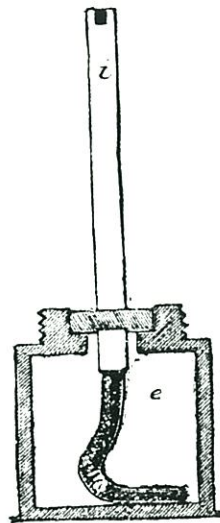


The Stokes alcohol gas testing lamp.



Aluminum and brass Stokes gas tester. Note the painted glass. Photo by Fred D'Ambrose.

Fig. 3.



The Clowes and Stokes varieties produce the high heat needed to detect small percentages of methane gas, as low as .25%, up to 2%. Higher percentages were detected using the wick flame, burning colza, paraffin, or other oil fuels.

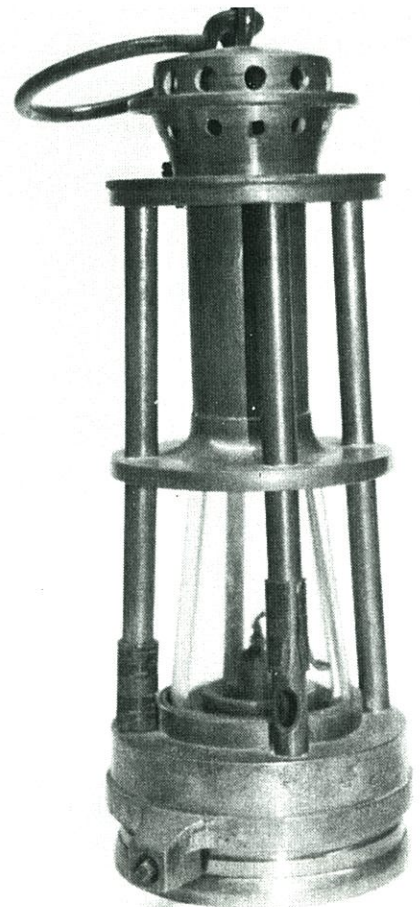
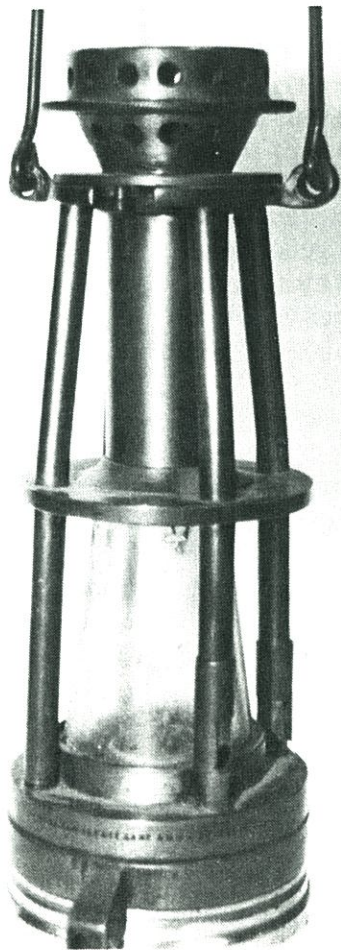
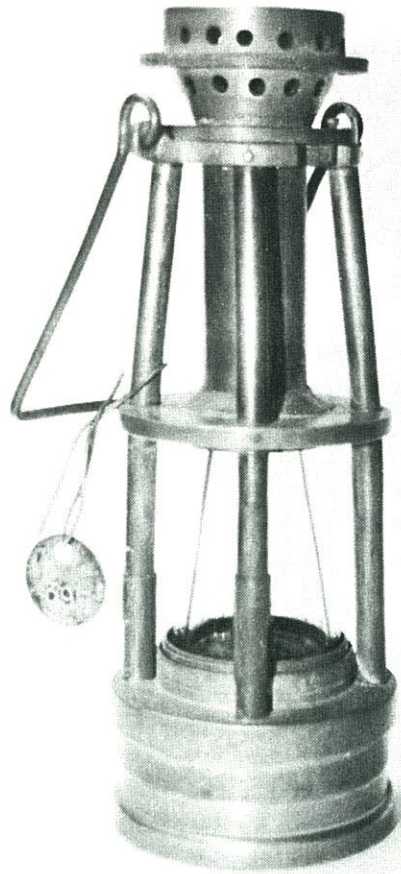
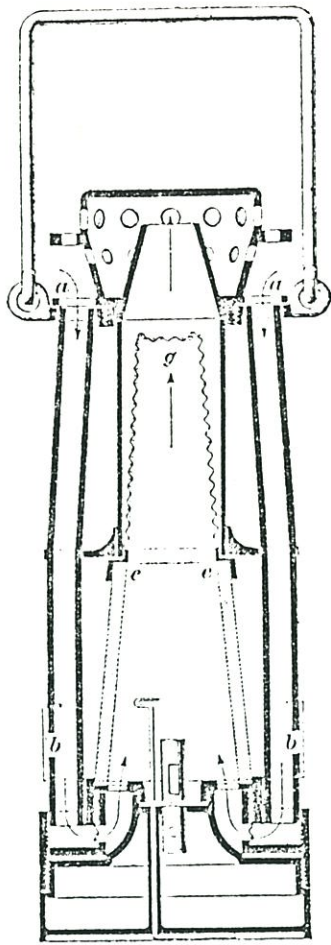
The AHG lamp is described best in a 1920 report:

“As usually constructed, there are four hollow-tube standards. When the lamp is used for testing, the air enters the tops of the standards and passing downward enters the lamp through the gauzed openings below the flame. By this means, a thin layer of gas against the roof may be detected without tilting the lamp. When the lamp is used for general work, the holes in the tops of the tubes are closed by a sliding lid, and the lower apertures in the tubes, which are closed when testing for gas, are opened to admit air more freely to the flame.”

“In some lamps there are three, instead of four, standards, one only of which is hollow, the other two being of thin wire, so as to not impede the light. By a change in the oil vessel and wick tube, these lamps may be made to use either sperm or lard oil, or colza and similar oils. The Ashworth-Hepplewhite-Gray lamp has a high illuminating power, and is said to be safe in currents having velocities as high as 100 feet per second.”

The mention of air current velocities, and of testing main air currents in coal mines is important. An air current moving gas through the gauzes of a lamp increased the chances of explosion. Almost all of Ashworth's lamps protect the flame with a unique conical glass. In some cases, the “back” of the glass is painted black, to allow better inspection of the flame.







**OPPOSITE PAGE, CLOCKWISE:**

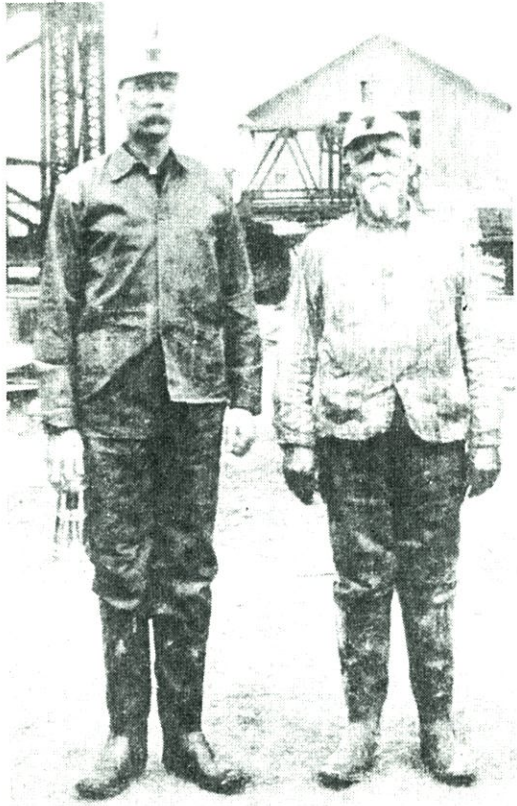
**Schematic of the Ashworth-Hepplewhite-Gray safety lamp.**

**Aluminum AHG from the collection of Mark Ballard.  
Note the "bent" standards.**

**Brass AHG lamp, with top ring handle and straight standards. From the Sterling Hill, NJ, Mine and Museum.**

**Brass AHG marked "American Safety Lamp & Mine Supply Co., Scranton, PA" around base. Sterling Hill Mine and Museum.**

The AHG safety lamp saw use in the United States as well, and the American Safety Lamp & Mine Supply Company of Scranton, PA manufactured lamps identical in most details to the English Ashworth.



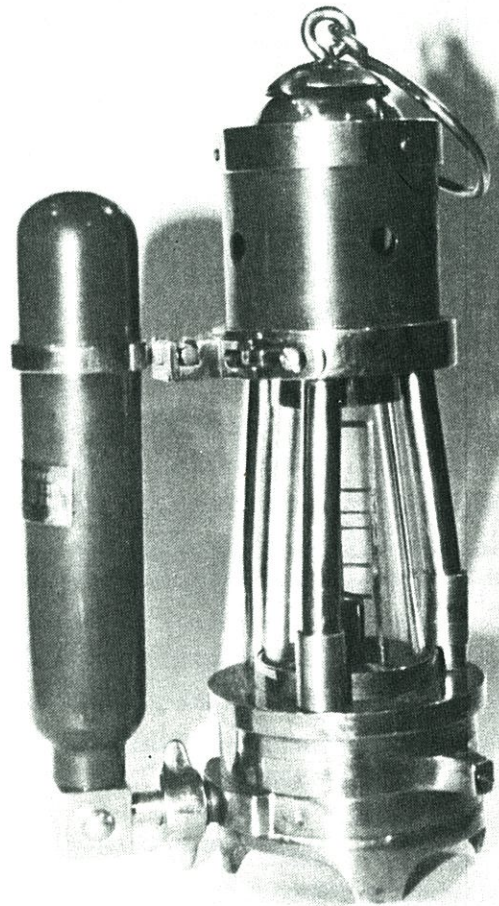
**An Ashworth lamp in action. The photo shows Illinois State Mine Inspectors Hector McAllister (left) and Pres. Richard Hewsam, at the site of the Cherry Mine Disaster, 1909.**

Certainly the most unusual Ashworth style lamp is the Clowes hydrogen gas-tester. It is described as:

"An Ashworth-Hepplewhite-Gray lamp, with a somewhat taller glass chimney for the purpose of observing a flame cap. It is equipped with appliances for using a hydrogen-gas flame, when testing for gas. A small tank containing compressed hydrogen gas attached to the lamp by a clip and a screw. A seamless copper tube is connected with the reservoir and runs through the oil vessel and up alongside the wick tube."

"When a test is to be made, the valve is opened, which permits the hydrogen gas to flow through the tube and be ignited by the flame of the wick. The wick is then lowered until its flame is extinguished. The height of the hydrogen flame is adjusted to the zero of a scale in the lamp. This scale consists of a number of fine cross-bars supported in a ladder-like frame in a position in front of the flame of the lamp. The several cross-bars mark the heights of the flame caps caused by various percentages of gas."

We can't help noticing the similarity of this scale to a Beard-Mackie sight indicator.

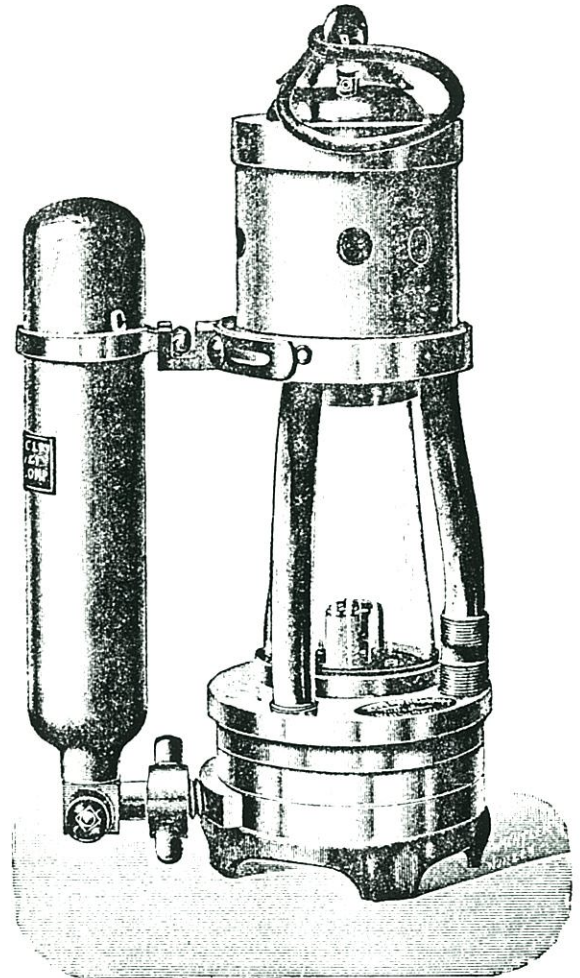


**Clowes lamp. The lamp is brass, and the bonnet and gas cylinder are typically painted red. Note the elegant lamp base! From the collection of Lester Bernstein.**





Clowes hydrogen cylinder, bearing a brass tag marked:  
**Redwood & Clowes Patent**  
**W. J. Frasher & Co.**  
**Commercial Road East**  
**London**



#### REFERENCES:

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Ashworth, James et. al. "Safety Lamps and Colliery Explosions: Discussion of the paper by Mr. James Ashworth." Canadian Mining Institute Transactions. 21: 201-213, 1903.

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Buck, F.P. Cherry Mine Disaster. Chicago: M.A. Donohue & Co., [nd]

Gases, Fires, Safety Lamps, Mine Maps. Scranton, PA: International Textbook Co., 1920.

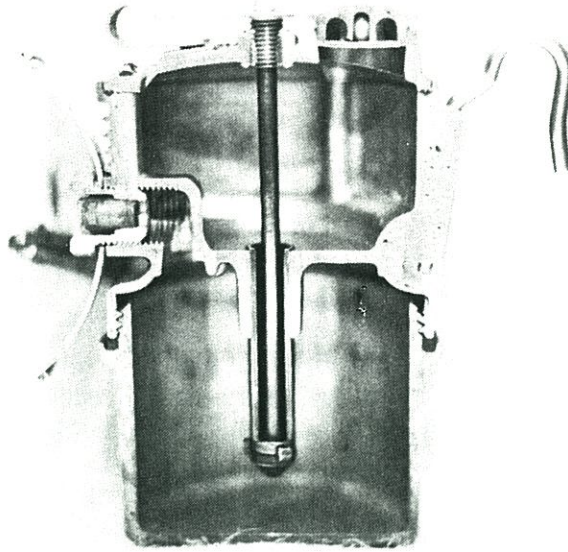
Hardwick, F.W. and L.T. O'Shea. "History of the Safety Lamp." Scientific American Supplement. No. 2124: 190-192, September 16, 1916.

Marsaut, J.B. "Various Types of Safety Lamps: a consideration of their comparative safety." Scientific American Supplement. No. 1784: 173-174, March 12, 1910.

Thanks to Lester Bernstein, Fred D'Ambrose, Richard and Robert Hauck, and Tony Moon for their assistance, and the use of their lamps and photos!



# LU-MI-NUM



## SALESMAN'S CUT-AWAY LAMP

by Dave Johnson

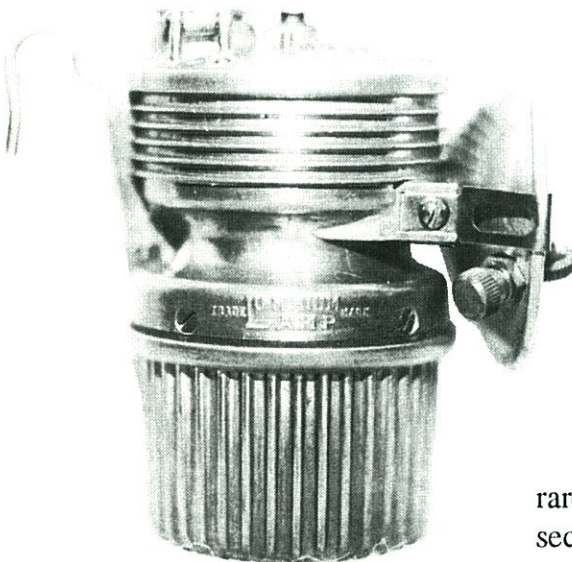
The LU-MI-NUM carbide lamp manufactured by the Fred R. Belt Company of Chicago is one of the most unusual looking cap and hand carbide lamps available to collectors. The lamp water chamber and base, with their unique finned heat dissipation feature, was manufactured of die-cast aluminum alloy, unlike other lamps which were made of die-stamped parts soldered together.

The cap lamps came in two models. The first, and much rarer, has a base that screws on. The second model uses a cam lock system to attach the base to the water chamber. The lamp was available with either a wire hook or an aluminum spade. A small smooth aluminum reflector is usually found on these lamps, though occasionally

they seem to have been fitted with the larger concentric ring reflector which is nickel plated. It is the same reflector that is found on the the hand lamp.

In order to demonstrate the features of their product, the Fred R. Belt Co. produced a cut-away version of their screw-threaded cap lamp. This cut-away shows the ball valve in the water cap that prevents the water from leaking when the lamp is tipped. The all brass water feed mechanism is clearly visible, as is the threaded piece that holds the burner tip and reflector in place. The top of the water chamber is a separate piece which is held in place by screws and is kept from leaking by a small diameter gasket.

Has anyone else found an example of this lamp?



*Viewed from "normal" side:  
note two set screws to keep top  
and bottom together.*



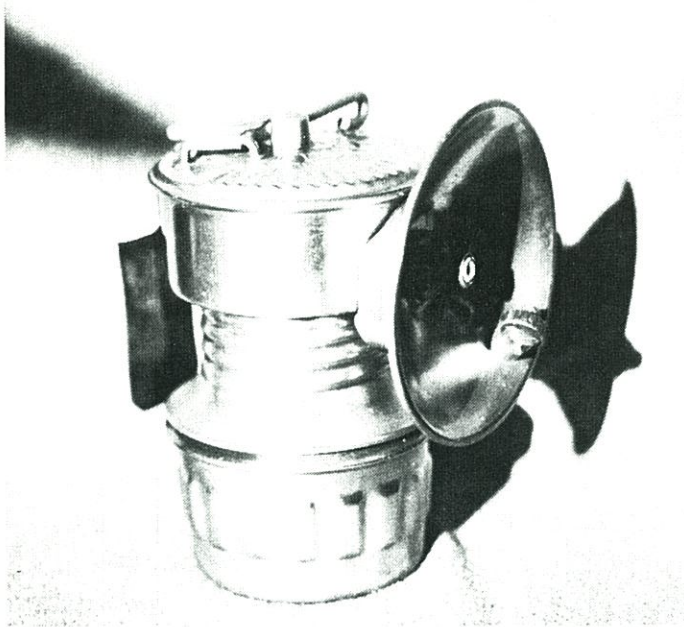
# Demon Strike Light

Stephen James McCabe

It has long been thought that the DSL lamp was manufactured in the United States to be exclusively exported to Australia, possibly by the Shanklin Manufacturing Company of Springfield, Illinois. This is yet to be *proved*.

When examined closely the DSL is very similar to a six patent date Guy's Dropper. During the course of researching this article I examined twenty blade style DSL lamps and one hook style lamp. I myself have been fortunate enough to have obtained four different blade style variations. I believe the DSL was very well marketed and distributed in Australia, both in the East and West states.

Included in this article are drawings of design variations. These have been cataloged according to Paul L. Kouts Carbide Lamp Reference, 1982.



*A Demon Strike Light carbide cap lamp.*

The water door on the DSL is different from a Guy's Dropper in that it has a crimped flange, more like the earlier style Premier lamp manufactured in England. The water door diameter varies according to styles. This is probably due to wear and tear on the manufacturing dies.

Reflectors have only been found in unplated brass, with diameters of 2 1/2 and 3 inches. The bases are generally the same from variation to variation. The only difference found so far was in the earliest model. This base had a reinforced bottom.

## Variant One: Top Mark 1, TA1, SSF, BA:

This lamp I believe to be the earliest variation and the same as all hook styles due to the presence of a soldering recess behind where the blade is mounted, just like the hook style Guy's Droppers. TA1 has cut outs for a Guy's Dropper style clip on hat brace. The base of the water tank is sharp and unbeaded. The top of the water tank has twenty-two click stops. The lamp was found with a 3 inch reflector.

## Variant Two: Top Mark 1, TA2, SSF, BB:

This lamp also has twenty-two click stops, and was found with a 2 1/2 inch reflector. It is more or less like variant one, except that the base is not reinforced.

## Variant Two (B): Top Mark 2, TA2, SSF, BB:

This lamp is essentially the same as variant two except that it has a very unusual, almost "Asian" style insignia stamped on the top, which leaves me wondering "was the DSL made in the Orient?" The insignia itself is very professional although it is partly blurred. In my opinion it was stamped at the factory in the die and not by the miner, as there are no surrounding stress marks or dents. Only one example has been noted. Water tank base beaded.

## Variant Three: Top Mark 3, TA2, SSF, BB:

This is the latest and last style known. It has twenty-nine click stops, the top of the water tank has a squarer profile than previous lamps, it too was found with a 2 1/2 inch reflector. The base of the water tank, like variant two (B), is beaded.

As yet the only DSL accessory I have found is a spare base (BB) with lid. The lid only extends the length of the thread and is unbeaded and rough. This would have made it very difficult for the miner to carry a reserve gasket.

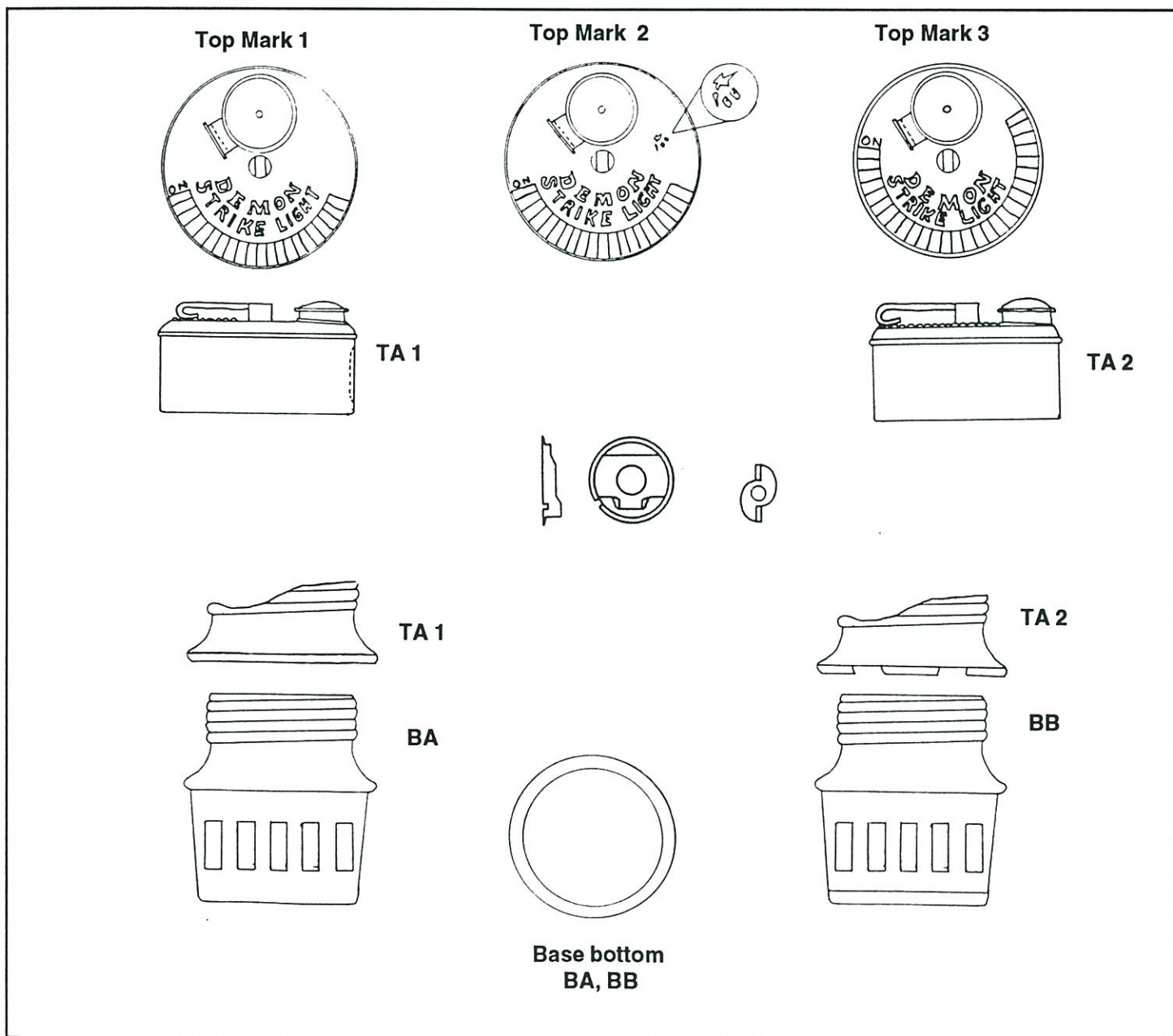


The origin of the DSL still remains a great mystery both in Australia and overseas. Recently I found a copy of a mining candle report, Tests of Mine Candles, Victoria, 1910, which stated the existence of a "Demon Brand" mine candle. Are they related? Perhaps in the near future we may find a mint condition Demon Strike Light in its original box and be able to solve the puzzle!

*Editors Note: This article appeared originally in the Newsletter of Australian Mining Collectibles, Volume 1, number 2, Winter 1992 issue. Stephen and Megan McCabe and Graham McCrohon are publishing the quarterly newsletter for their fellow collectors "down under." Interested collectors this side of the world might consider writing to Stephen at 22 Gowlland Pde., Panania 2213, Sydney, N.S.W., Australia. "Donations of paper, postage stamps, envelopes, and even articles would be greatly appreciated."*

**Carbide Lamp Reference System Used in This Article:**

- T = lamp top (water reservoir)
- A1 = first style (solder recess for hook, and hat brace cut outs)
- A2 = second style
- SSF = soldered wide spade mount, with flat surfaces
- B = base (carbide receptacle)
- A = first style (reinforced base)
- B = second style (standard base)
- Top Mark 1 = twenty-two click stops
- Top Mark 2 = twenty-two click stops, with insignia
- Top Mark 3 = twenty-nine click stops





# History of the Hammond Safety Explosives Box

J. Roger Mitchell

With the advance of permissible blasting in the form of dynamite sticks and the use of electric detonation, the miner became faced with a new dilemma; how to carry his dynamite safely. He was no longer able to transport his blasting supplies in convenient tin containers or small kegs. In the bituminous mining region of western Pennsylvania, miners overcame this problem by using a small wooden carrier which would hold the daily allotment of permissible explosive safely and conveniently.

blasting supplies. A miner's daily supply of permissible explosive was not to exceed five pounds, as dictated by Pennsylvania Law. Upon receiving his dynamite, the miner would place it in his wooden carrier and descend into the mine for the work shift.

The reason the hand-held wooden dynamite carrier was so popular in western PA, and common throughout the northeastern coal regions, was simple. They were invented, patented, and produced commercially by the Hammond family located in Spangler, Cambria County, Pennsylvania, just north of Altoona. Not much is known about the origins of the business, but it was started by George Washington Hammond, (born 1827, died 1897) who was associated with the lumber industry.

The business was passed on to a son, Laurence Vincent Hammond (1866—1934), who operated a carriage repair business and lumber company around the turn of the century. Having a wood working facility at his disposal, Laurence produced a number of products for the local mines including large quantities of conveyor rollers made from gumwood, pick handles, trolley poles, and tamping poles.

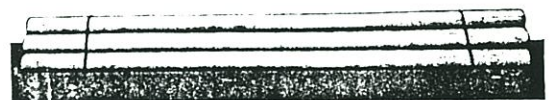


Typical Hammond Safety Explosive Boxes.  
Photo by R. Pearle.

Above ground, the dynamite cartridges were stored by the case away from the mine in buildings called "magazines." These were built at a distance, or with some natural obstruction such as a hill between the magazine and the mine, so that an accidental explosion would not damage the mining town or the surface equipment. Near the mine was a smaller magazine called the "powder house" to which the day's supply of dynamite was taken from the main magazine, and where it was handed out to the miners individually.

At some mines, the men purchased in advance several dollars worth of powder checks or scrip which were exchanged at the powder house for explosives or other

## WOOD TAMPING POLES



For tamping explosive shots: Poles are round and made of hardwoods. Sizes to 10 ft. long.

1" diameter	7c per lineal foot.
1 1/4" diameter	10c " " "
1 1/2" diameter	12c " " "
1 3/4" diameter	14c " " "
1 7/8" diameter	16c " " "
2" diameter	24c " " "
2 1/4" diameter	30c " " "

Special diameters and lengths can be furnished . . . write for prices.  
These poles meet the requirements of the New Federal Mine Safety Code.

## SECTIONAL TAMPING POLES

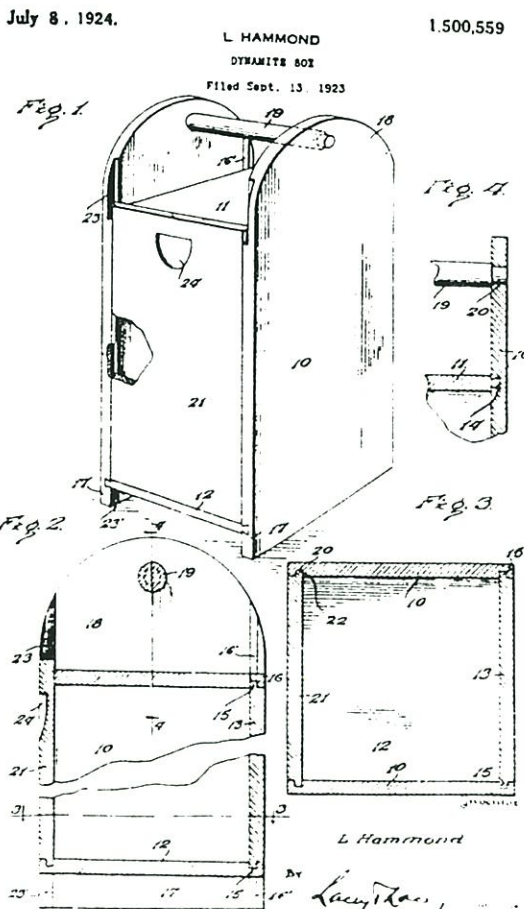


These poles are made of straight grained wood and are coupled together with removable wood pins held in place in recessed grooves by a rubber band and can be quickly connected to make any desired length.

Head Blocks can be furnished in 5, 6 and 7 inch diameters.



When the first dynamite carrying boxes were produced is uncertain, but Laurence Hammond was producing them in large quantities by the early 1920's. On July 8, 1924, Laurence was granted the first known patent for the boxes. As the patent stated, "This invention relates to an improved box for carrying dynamite and which, when constructed in reduced size, may also be employed for carrying caps and fuses. The inventor seeks to provide a strong tight wooden box wherein nails or other metal parts will be absent. The inventor seeks, as a further object, to provide a box embodying interfitting joints throughout, so that moisture will be excluded." Perhaps the most unique feature was the vertically sliding door, which gravitated to a closed position. This part of the invention was mandated by mining laws which required that any dynamite box remain closed while being transported.

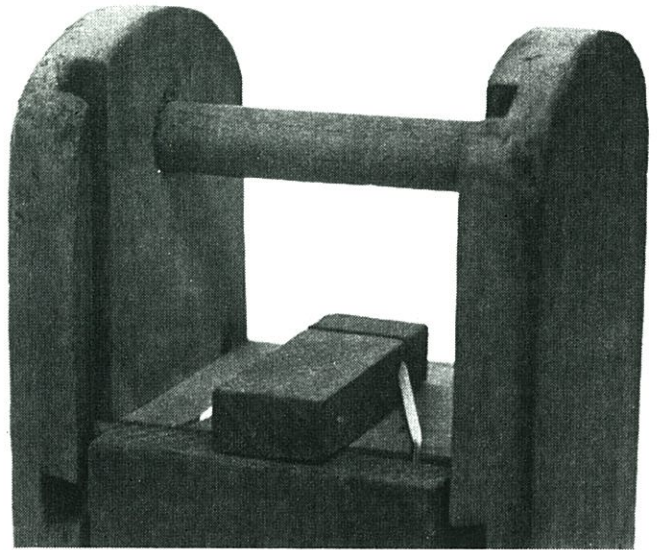


**The Hammond Patent Dynamite Box**

By the time the patent was issued, the boxes were already being distributed throughout several neighboring states. Laurence not only traveled to the mines promoting their use, but had a number of jobbers and dynamite companies distributing them for him. Among these jobbers was Jimmy Stewart from nearby Indiana, PA, father of the movie star. In some of the smaller mines, the boxes were

marketed as squib carriers, although the majority of them were sold as dynamite and blasting cap carriers in various sizes.

Over the years as carriages were replaced by cars, the Hammond business evolved into solely a lumber business, that supplied a wide range of wooden mining supplies to the area's mines. The business was taken over by Laurence's son John Vincent Hammond (1903—1992) in October 1934. John would later improve on his father's invention, as seen in the patent issued on April 7, 1942.



**Patented locking mechanism for the dynamite boxes. Photo by R. Pearle.**

Basically the patent was identical to his father's, but sought to employ a lock to keep the door shut. As stated; "A further object of the invention is to provide a dynamite box having an improved latch for the front closure wall thereof, said latch employing a nonmetallic tensioning means" ie: a rubber band to help spring the latch forward to a locked position.

Another interesting aspect of the patent is that it was recommended that "the entire surface of my improved dynamite box be covered with a coating of paraffin or other protective substance." This may have been suggested for two reasons, the first being to shed any water encountered in the wet mines. The second may have been to prevent the absorption of nitroglycerin that may have seeped from the dynamite sticks themselves while being stored in a vertical position within the boxes. The practice of storing dynamite vertically was not recommended for safety reasons, but made it practical for transportation.



# J. V. HAMMOND

*Manufacturer of*

## SAFETY EXPLOSIVE BOXES

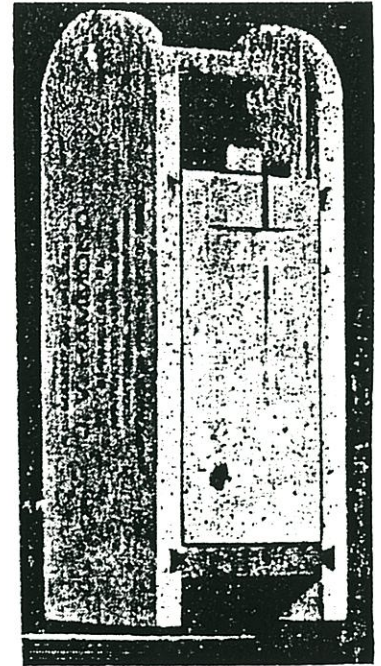
*Approved By Pennsylvania Department of Mines*

WOOD MINE ROLLERS, TROLLEY POLES, HANDLES, INSULATION BLOCKS

**JOBBER OF HARDWARE SPECIALTIES.**

**SPANGLER, PENNA.**

7-29-40



These improvements to the original design had long been realized. The first indication that a door lock was needed was pointed out to Laurence Hammond in 1929 by a jobber from the Clinchfield Coal Corporation. In their letter, it was suggested that a 1/4" dowel be used to slide through the side walls of the box and pass through the door to secure it shut while the miners rode the trip down into the mine. This idea was probably ignored at the time to keep costs down as the Clinchfield order for boxes was small.

The boxes themselves were made from white pine, ash, and basswood. Judging by company receipts, most of the wood used to make the boxes was purchased in rough sizes, although advertisements stated they also purchased logs. Each box made under the improved patent was treated by dipping them in paraffin and sealing them with orange shellac. Some were also treated with General Electric glyptal insulating varnish. Several other options were considered as alternatives to this process. The United States Plywood Company was contacted and asked about a fireproof paint and a non-conductive, moisture-proof sealer. The request was obviously not fulfilled as the boxes continued to be wax coated and sealed with shellac. Initially the paraffin and shellac were purchased in small quantities from local hardware stores and later purchased in bulk from major oil companies such as Gulf Oil.

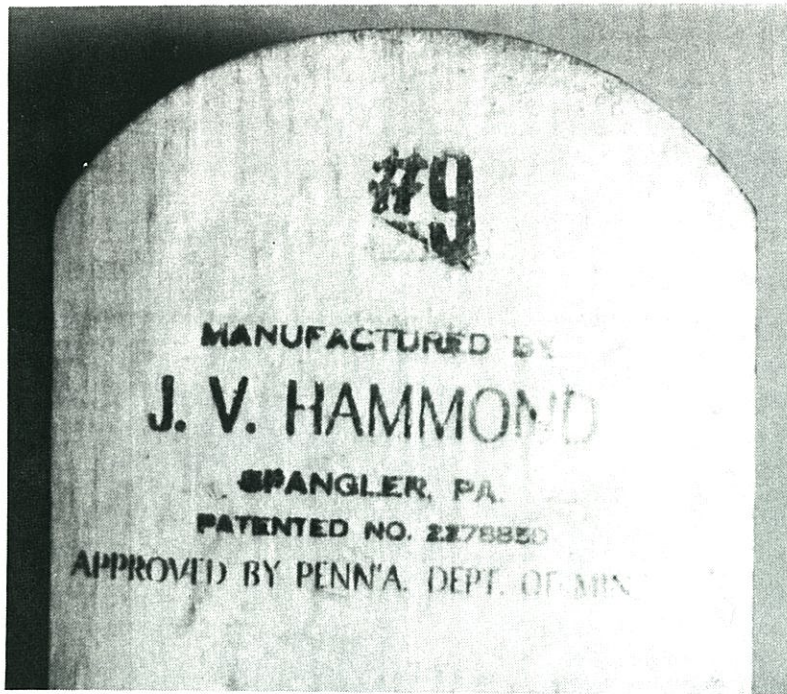
Alternative ways of fabricating the dynamite boxes were considered from time to time. In 1937, John Hammond contacted the General Electric Company asking for quotes to manufacture a similar box out of molded plastic with a hardness similar to bakelite. He also requested if he could purchase the material to mold them himself. The sketches he provided suggested that the dynamite would have been stored horizontally.

The idea of horizontally storing the dynamite was also suggested by one of John Hammond's sales agents in 1940. The agent requested that the box be modified for a client in Ohio. Obviously neither of these ideas were fruitful as no examples are known to exist. During the era of the Great Depression and the second World War, cost was always a concern. For this reason, John probably stayed with a proven product.

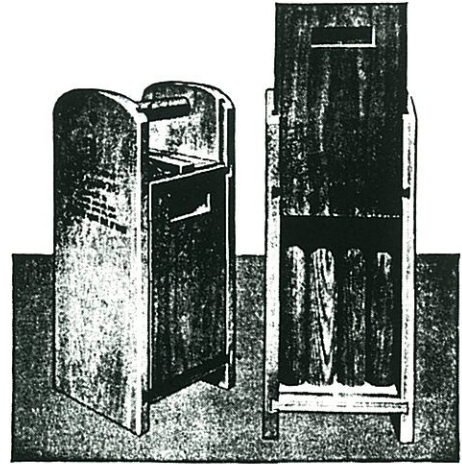
During the 1940's, as his father had done, J.V. Hammond aggressively marketed his dynamite and cap boxes by personally contacting numerous mines, mining agencies, and mine inspectors to buy his products on approval. He solicited sales in Maryland, Pennsylvania, Ohio, West Virginia, and Kentucky. Since their invention, thousands have been sold in many sizes, from the smallest cap carriers to boxes that would store a full case of dynamite. The number stamped on the side of the box indicated the number of sticks that it would hold.

Today, having survived three fires, the Hammond lumber business is in its fourth generation with Larry V. Hammond, John's son, as owner-operator. The author was saddened to learn that John Vincent Hammond died on July 5, 1992 at the age of 89. Many knew John as "Vince," or "J.V.," and he will surely be missed by all. The Company name J.V. Hammond has been retained and they are still located at 119 N. First St. in Spangler, PA. They still offer a full line of wood products used in everyday mining including eleven sizes of dynamite boxes and two sizes of cap boxes just like the originals.





**J. V. HAMMOND CO.**  
 SPANGLER, PENNA.



Hammond #9 Safety Explosive Box. Photo by John Pawloski.

**Collectors Note:** There is one way to judge the age of these boxes: if the box does not have the door lock and is not wax coated, it was made prior to 1937. If your box look unused and fairly new, it probably is!

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3. The Free Library of Philadelphia, Patent Collection.
4. Personal communication, Pennsylvania Department of Mines.
5. Personal communication, Bureau of Deep Mine Safety.
6. Personal communications, Mark Ballard, Lane Griffin, Bill Lorah, Cliff Lund, Andy Martin, Mike McLaughlin, John Podgurski, Chuck Young.
7. The Spangler Police Department, who started the ball rolling with my first lead.

*Special thanks go to Larry Hammond. Without his help and providing the company's records this article would not have been possible. Thank you Larry!*

**HAMMOND'S**

**Latest Type Safety Explosive Boxes**  
Approved by Pennsylvania Department of Mines.



Patented July 6, 1924. Additional Patent Pending.

Boxes are constructed entirely of wood having no metal parts, are of tongued grooved and dovetailed construction, have handle for carrying and are equipped with automatic lock using a rubber band for a spring.  
 Boxes are impregnated with paraffine making them moisture proof.

**BOXES MADE IN FOLLOWING SIZES**

No. 12 Powder Box	12 stick size
No. 16 " "	16 " "
No. 20 " "	20 " "
No. 26 " "	26 " "
No. 6 Detonator Box	2 1/2 x 3 x 6 inside.
No. 8 Detonator Box	2 x 2 1/2 x 8 inside.

Special Size Boxes made to order.

Prices submitted on application.

Manufactured by

**J. V. HAMMOND, SPANGLER, PA.**

**Represented by, Thomas Butterworth**  
214 South Penn St. Wheeling, W. Va.



# Buxton, Iowa 1900 -1944

## A Unique Coal Mining Town

Bob Guthrie

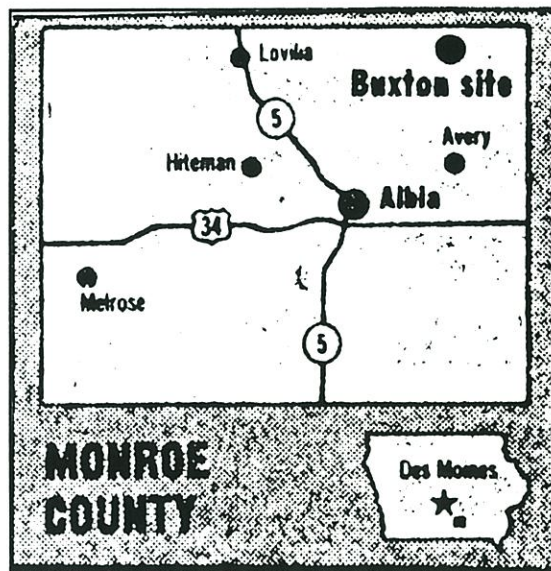
This is the story of a coal mining camp that existed in Iowa in the early 1900's, with unique sociologic and industrial characteristics. Buxton has drawn the attention of a number of historians, anthropologists, mining engineers and other scholars over the past five decades resulting in several articles, books, a TV program and an archaeological exploration.

How and why did Buxton develop? We all think of the coal mining giants of Pennsylvania, Kentucky, and West Virginia but fail to remember Iowa's importance in the early years of the coal industry. This was a time of immigration to the United States and exploration and settlement of the Western portion of our country. From 1870 to 1920, the population of the U.S. exploded to 26, 277,000 people — more than three times its growth during the previous 250 years. Iowa experienced a fifty fold increase in its population, reaching nearly 2 1/2 million.

The mass movement in settling of immigrants and the transportation of their commodities became complementary functions. The hundreds of locomotives pressed into service, especially the low efficiency varieties of the 1880's and 1890's, were voracious consumers of fuel. Iowa sat at the western edge of this expansion and became the last source of coal before locomotives started across

the Great Plains for the West. Most major railroad systems operated captive mines or contracted directly with private producers for large tonnage of coal.

In 1860 Iowa had only 500 miles of track. The spread to the Missouri flourished after the Civil War and



*Location of Buxton, Bluff Creek Township, Monroe County Iowa.*

several major lines and many branches developed creating a great need for fuel. The Chicago and Northwestern Railroad, (CNRR) one of the largest in Iowa, had 1520 miles of track by 1890. Iowa's coal production rose to 3.9 million tons in that year. The CNRR's source of fuel was the Consolidation Coal Company which it owned.

During the 1850's there was a prolif-

eration of independent small coal companies throughout south central Iowa around Albia, Ottumwa (Hardsocg Mfg. Co.) and Oskaloosa. Mahaska County became the largest coal producing county in the state, with an annual output of over one million tons by 1880. The Chicago and Northwestern opened a spur to the north from the town of Muchakinock in Mahaska County to another familiar town, What Cheer, Iowa (What Cheer Mining Tool Company). Recognizing their dependency on coal the Chicago and Northwestern Railroad bought the Muchakinock mines for \$500,000.00 and named J.E. Buxton Superintendent of the Consolidation Coal Company.

In order to break a strike that had idled the mines from 1878—1881, the Company recruited Negro laborers from Virginia and other southern states. The recruitment proved successful and nine different shafts and slopes developed around Muchakinock. Gradually, the output and production faltered and in 1900 the railroad purchased 8,000 acres in Monroe County and the entire population abandoned Muchakinock and moved to the woods and hills of Section 4 of Bluff Creek Township and established the new town named after their Superintendent, J.E. Buxton.

According to Dorothy Schweider, a





*Some of the residents of Buxton.*

professor of history at Iowa State University, the average life of an Iowa coal town was about 8 years. Most towns developed close to the mines in a helter-skelter fashion because of a lack of transportation to get miners to and from their work. Buxton was to have a network of trains and a service to transport miners to the coal shafts and slopes. Whether it was this transportation, the thickness of the coal seams, the benevolence and progressiveness of the Company or a combination of these factors, the Consolidation Coal Company decided to develop Buxton "right." From census figures it appears Buxton grew to about 6,000 people but some estimates run as

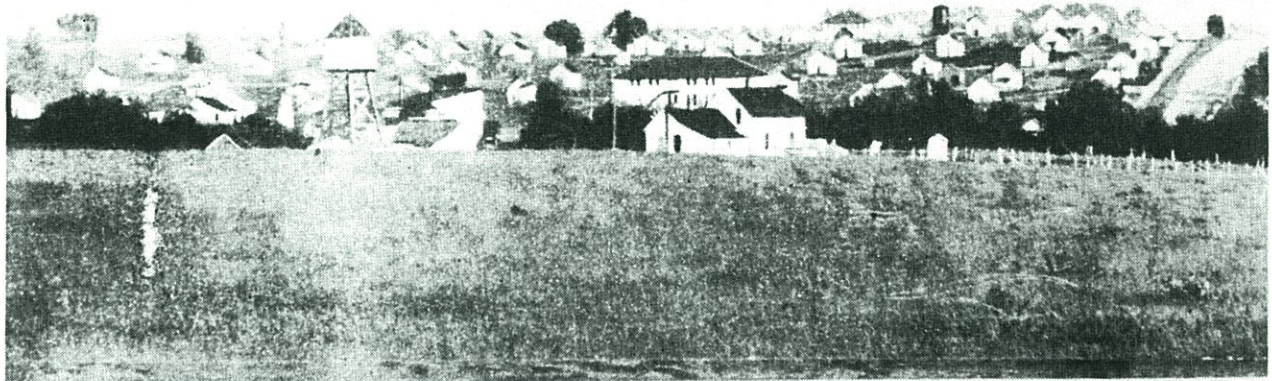
high as 12,000. The apparent inaccuracy was due to the fact that Buxton was never incorporated. Over half of the residents were black. The presence of this number of blacks was in sharp contrast to other coal towns and the State itself, which had a small black population.

Ben Buxton, J.E.'s son and successor hired well known architect Frank Wethorell to design the houses. The houses were owned by the company and rented to the miners. Each house was a comfortable 5 or 6 rooms and located on 1/4 acre, allowing room for a yard and garden. One former resident described her house as being carpeted which "wasn't unusual."

Soon three 4-room school buildings were completed and staffed with 12 competent teachers, several black. The children were expected to attend school and many went on to high school in Albia or Des Moines. Within ten years a high school was built allowing the children to complete their schooling in Buxton.

In 1903, the Company constructed the first and largest Industrial YMCA in the United States. This became the center of social and recreational activities in Buxton. Separate facilities existed for children and adults but these facilities were available to all the residents of Buxton, black or white. Lodge meetings were held in





2592 Bird's Eye View, Buxton, Iowa.

*Bird's eye view, Buxton, Iowa.*

the YMCA and appeared to be one of the segregated activities. A large auditorium (1,000 seats) was a venue for many famous speakers and entertainers. Booker T. Washington once spoke to a packed house. The building was steam heated and had electricity from the town's own generator.

Not far from the YMCA was the Monroe Mercantile Store owned by Consolidation. One hundred thirty-five clerks were needed to run the full service department store. Though company owned, the miners were not required or coerced to shop here. The Buxton business district had res-

taurants, a bank, several meat markets, a lumber yard, bakeries, two general stores, a drug store, undertaking services, an underground railroad service, beauty parlors and barber shops, livery stables and a hotel. Several of the businesses were owned by blacks. Buxton at its height was abundant with Negro professionals. There were doctors, lawyers, teachers, businessmen, ministers, a pharmacist, undertakers, and a Justice of the Peace. During the life of Buxton, there were three weekly newspapers published at different times.

The pride of Buxton was its baseball team known widely as the "Buxton

Wonders." They challenged visiting teams from Chicago, St. Paul, Kansas City and any other team that wished to try their luck at beating the "Wonders." One author theorized that many of these players could have played with Jackie Robinson had the color barrier of baseball been broken at that time.

Music was also an important part of the daily life of Buxton. The Buxton Negro Concert Band with fifty musicians had numerous engagements around the state, the heart of the band was in their home town where they played for weddings, dances, baseball games, and any other event that





*The pride of Buxton - "The Wonders".*

called for music! Music also found its way into the homes, with children being brought up with a piano or other musical instrument in the house.

To say Buxton was a place of racial harmony is probably an overstatement. One must also consider this in the context of the times (early 1900's). Blacks and whites seemed to have had a different perception of integration. They attended the same movies, YMCA activities, etc., but there were notable divisions of churches and lodges. Interviews conducted for a TV documentary in 1979 with former residents, both

black and white, noted the *lack* of segregation. Considering that this time following the Civil War was probably the nadir for fair treatment of the American Negro, Buxton was indeed an enlightened community. A former black resident summarized some of the reasons: "They all knew each other, worked the same place for the same pay, and lived in houses built to the same specifications." In Buxton, she said, we had "all white affairs, all colored affairs, and all all affairs." Many of the blacks in Buxton related that they did not experience prejudice or segregation until they moved to other cities and

towns where blacks were a minority.

Mr. George Woodson, a black Buxton attorney, became the Republican nominee for the county's seat in the Iowa House of Representatives in 1912. He defeated two white candidates in the June primary election in a county that registered a majority of white voters. He was the first black so honored by either political party in Iowa.

In a 1916 report to the Governor, Rhys T. Rhys, mine inspector for the second mining district of Iowa, editorialized about how mining life was



often misunderstood and miners regarded as vagabonds, when they actually had a strong desire for permanence and a home they could call their own where they could raise and educate their children. Rhys continued that any employer who fails to recognize these desires was blind to his *own* interests. Though he didn't mention Buxton specifically, he may have been thinking how far this community had come in avoiding the usual characteristics of a mining camp.

By the end of the second decade of the 1900's, the inevitable began to happen to Buxton. The coal in the mines was nearly gone and production lessened. Mines #18 and #19 were opened further south of Buxton and soon towns grew up there in Haydoc and Bucknell. By 1925 only Mines #18 and #19 were operational. Mine #20 was planned but would never open. Many miners found themselves idle and businesses began to close. The railroads had begun to switch from coal to diesel fuel, adding to the demise. On March 15, 1927 Mine #18 was closed. The final blow came just 15 days later when a strike was declared at Mine #19. The miners never returned and two years later there were still a hundred cars loaded with coal waiting to be hoisted — and never were!! The population drifted away, businesses closed and buildings were torn down. The houses were sold for \$50.00 each.

In 1944, the Hercules Powder Company set twelve pounds of dynamite at the base of the 155 foot stack of Mine #18. With a terrible roar the big mine was leveled, the concrete and steel used to seal the shaft and the last remains of what was Buxton settled into the earth. An archaeological exploration of the site of Buxton conducted by a team from Iowa State

University turned up a single mining artifact — a Justrite carbide lamp bottom. Today, though all of the buildings are gone, former residents and their descendents meet monthly at a church on the east side of Des Moines as the Buxton, Iowa Club Inc., to remember the times that were — Buxton, Iowa, 1900—1944.

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*All photos courtesy of Dorothy Schwieder, Prof. of History, I.S.U, Ames, Iowa.*



# Justrite's Jumbo

by Len Gaska



Fig. 1 Jumbo with central burner, oval door, "Patented" stamping and holes in bail for stick.

Carbide hand lamps were primarily used by western hard rock miners. The metal miner would work in one spot for a long time and preferred to hang the lamp beside him. Light weight was not a priority, rather, it was sheer candlepower, durability, and fuel capacity that served these men best.

John Leahy relates:

"When he could afford the larger, more expensive hand lamp, the miner preferred the type with a double handle - the usual swivel bail on top plus a flat, strap-type handle on the back of the lamp housing. When walking to his work station, the miner would hold the lamp by the back handle and fold the top bail down, hook his thumb over the bail, and easily control his light, shining it in any direction he wished."<sup>1</sup>

The first hand lamps manufactured by Justrite were patterned after their own cap lamps whose water tanks were in the form of a horizontal cylinder.

Of the cast aluminum hand lamps made by Justrite, the design patented Jumbo was their first. Introduced in Justrite's Catalog No. 2 (ca. 1915), the "Jumbo" (model 50) was very solidly built and quite attractive.

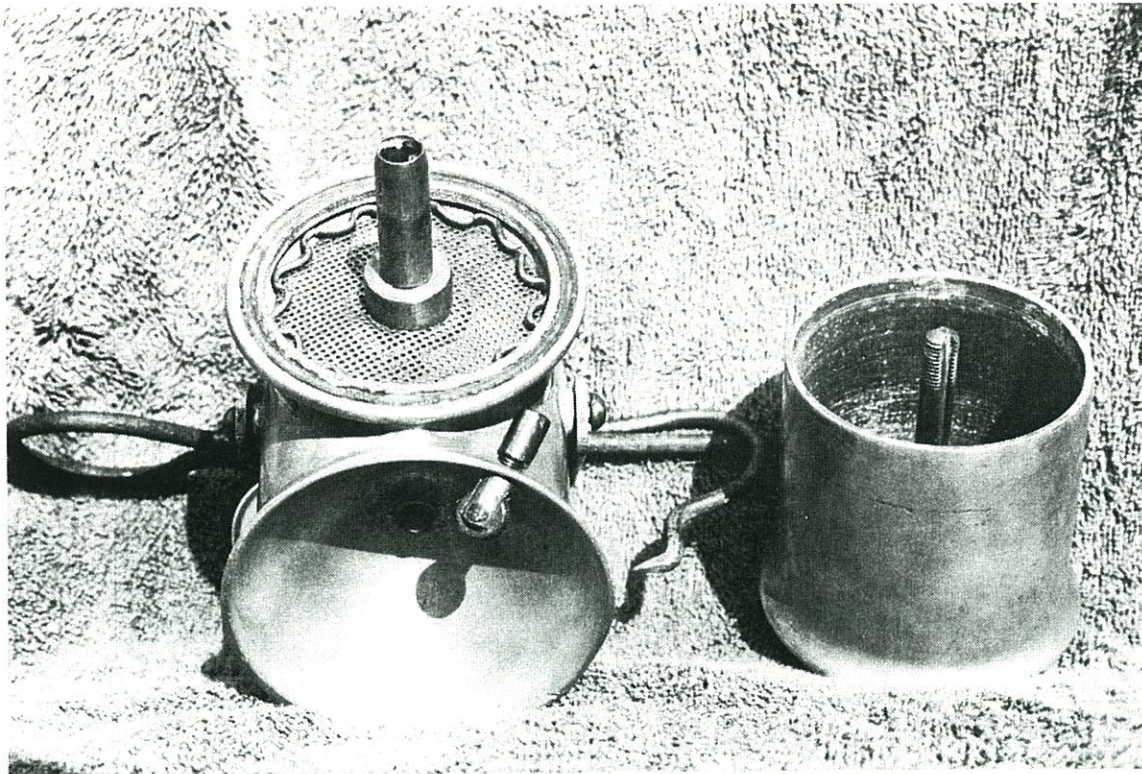
It is found in at least two variations. One model (Fig. 1 above) has the burner in the center of the reflector and has the oval water door found on the Justrite cap lamps of that era. The word "PATENTED" is cast just below the Justrite name. Its bail is somewhat rectangular and is perforated on each side for use with an accessory stick.<sup>2</sup>

The second variety appears to be a later design in that it shares some features with its successor: the Little Giant (Fig. 3, following page). Specifically, they are:

1. The burner tip emerges from the *bottom* of the reflector and points up at a slight angle.
2. A *round* water door which is secured to the inside of the lamp by a spring.
3. The bail on this model also resembles these later lamps in that it has lost its stick holes.

Also different on the later model is the location of the "PATENTED" stamping. It is on the *opposite* side from the Justrite name.





*Fig. 2  
Jumbo  
disassembled.  
Note central  
post for  
attaching  
top and  
bottom.  
The special  
candlestick  
is inserted  
through the  
bail.*

The only style of water feed I have observed on the Jumbo is what I call the "early lever feed" and is characterized by an "upturned" lever. The Jumbo is unusual among American lamps as the top and bottom were attached via a central post as shown in Fig. 2.

Justrite also made brass hand lamps during this same time period (Arizona Special, etc.) These have also been found with both central and bottom burners. I have never seen a bottom burner lamp, other than the Little Giant, advertised in any Justrite catalog or ad. This fact, along with my perception that the bottom burner lamps are more rare, suggests that these models were interim designs en route to the Little Giant.

*Fig. 3  
Jumbo  
hand lamp.  
This variety  
has the low  
mounted  
burner, a  
conventional  
bail & hook,  
patent  
stamping on  
the opposite  
side, and a  
round spring  
loaded  
water door.*





1,230,892.

A. L. HANSEN.  
ACETYLENE LAMP.  
APPLICATION FILED MAR. 30, 1914.

Patented June 26, 1917.

Fig 1

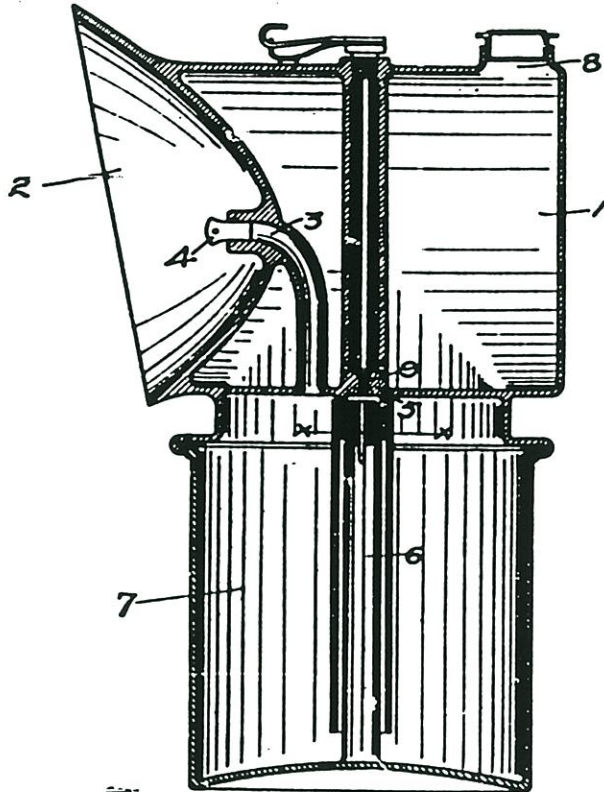


Fig 2



Fig 3



Inventor

Witness  
E. M. Baumsteter.  
V. G. Lindstrom.

By *Augus L. Hansen*  
*Harry Lee Dodson*  
Attorney

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2. Gaska, Len, Eureka!, Jan 1992, p. 9, Carbide Lamp Sticks.

Patent drawing on which the Justrite Jumbo was based.





# **BITS**



## **Bluefield Pocket Knife**

The name Bluefield is prominent in West Virginia Coal Mining. Lamp collectors are familiar with the Bluefield Hardware Co. oilwick produced by Trethaway Bros., in both tin and brass models. Another Bluefield item is this advertising pocket knife produced for the Bluefield Coal & Coke Co. This patented knife has a single steel blade in a nickel-plated brass handle and measures 2" long when folded.

Dave Johnson



## **Droop Spout Oilwick**

One can only guess what reasoning was behind the design of this unusual lamp. Highspout lamps, lamps that have wick tubes attached to the shoulder of the font rather than to the base, are quite rare. This particular example of a highspout lamp is unique.

While the lamp is unmarked, I attribute it to W. B. Bertels of Wilkes-Barre, Pennsylvania. The font, brass collar, cap and hook are identical in design and dimension of a marked Bertels lamp that is in my collection. The only difference is the unusual droop spout configuration.

Dave Johnson







## Mechanical Crimper

Along with a lamp room for distributing carbide, safety lamps, or electric lamps, many mines had a powder house for the safe, controlled distribution of explosives, blasting caps, and fuses. The mechanical fuse or cap crimper shown here must have been mounted on a bench or table, and used to prepare blasting materials before they went underground.

## What Kind of Rig is This?

Bruce Beck found this in Arizona. He doesn't quite know what it is or what it would have been used for. Well, neither do we! The bottom section is certainly derived from a safety lamp. The upper section is a separate chamber with a knurled filling cap on top. Stranger yet is the copper tubing coming from the upper chamber and directed around to aim at the wick.

Has he stumbled on a diamond in the sand or is this just another rig?





## Hardsocg Watch Fob

The Pittsburgh, Pennsylvania branch of the well-known Hardsocg Manufacturing Co. opened in 1894, with the Imperial brand name being adopted in 1898. This nickel-plated brass advertising watch fob obviously dates from this time or later.

Illustrated in relief are picks, hammer heads, a hat, a shovel, a breast drill, a drill steel, and a blasting needle. Advertising items such as this for mining equipment manufacturing firms are quite rare, especially those illustrating company products. The only exception are the watch fobs produced for Ingersoll-Rand which illustrate rock drills and are commonly seen with fob dealers.



## Oilwick Watch Fob

This watch fob, made in the shape of an oilwick lamp, is unusual since it does not advertise a lamp but rather shovels and scoops. The front reads: "The Best Scoops are marked CLAY BANK Simmons Hardware Co. U.S.A." The obverse reads: Always use Simmons Clay Bank Shovels and Scoops Because They Are The Best, Simmons Hardware Co. U.S.A." A patent date of 12/12/07 appears on the back, along with the name Whitehead & Hoag, a large manufacturer of badges and related items. One must surmise that this piece was made for distribution in a mining area hence the oilwick lamp shape. Does anyone have any information on the location of the Simmons Hardware Co., or whether they were the E.C. Simmons Hardware Co. of Philadelphia who sold a variety of mining items during the early 1900's?





## Marshall-Wells Hardware Co. Catalog 1913

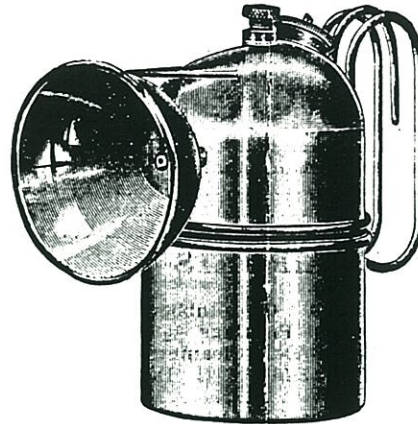
Errol Christman unearthed a few catalog pages from the Marshall-Wells Hardware Co. It is dated April 1, 1913. Of particular note is the Maple City hand lamp. Although not stamped, and not advertised by that name, it appears next to the emergency lamp flask, which is known to be a Maple City product. Additional evidence, noted by Herb Dick, is the catalog number: No. M.C. S. (Maple City Supervisor's?).

These Maple City hand lamps are known in stamped and unstamped varieties.

Additionally advertised in the catalog were: Baldwin cap and hand lamps, Baldwin carbide cans and accessories, The Justrite cap lamps with stick attachments, Justrite lighter. The lighter is now referred to as the "Vest Pocket Gas Lighter", but still known as the No. 120.



### SUPERINTENDENT'S LAMPS

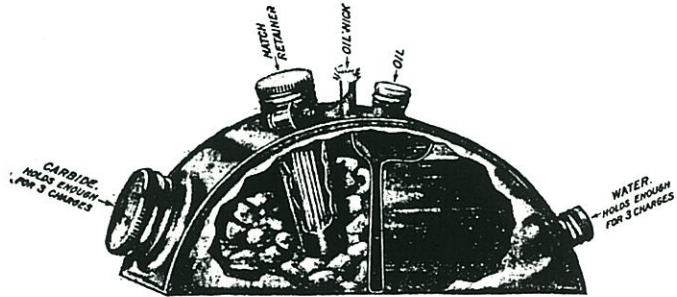


For Mine Superintendents, Sportsmen, Campers, Guides, Trappers, etc.; Handy for Motor Boating, Canoeing; Fishing, Hunting and general use on the water and in the woods; can be carried in the Hand or fastened to the Belt.

Each

No. M. C. S.—20 Ga. Drawn Brass; Burns 5 Hours with One Charge of 6 Oz. of Carbide; Height 5 in., Diam. 3 in.; Diam. of Reflector 2 7/8 in.; With One Container Only. (Use Miners' Special Carbide, Page 349).....\$2.00  
Weight 10 Lbs. per Dozen

### EMERGENCY LAMPS AND FLASKS



#### EMERGENCY LAMP AND FLASK

If the supply of Carbide in Miner's Lamp becomes exhausted the Miner simply Lights the Emergency Lamp and Recharges it; There is a Compartment for Matches; The Carbide and the Water Chamber each hold enough for three charges; there is also a Compartment for Oil and Wick, making a very Compact Outfit which the Miner wears attached to his belt; The Emergency Lamp also acts as a signal to the Miner when black damp is present.

Per Dozen

No. 45—Heavy Tin; 7 1/2 in. Long; 3 1/2 in. Thick; Weight 8 Lbs.  
per Dozen .....\$5.45  
One Dozen in a Box

————— *Marshall-Wells Hardware Co.* —————





# TRADES & SALES



## RATES

Ads up to 75 words labeled "For Trade" or "Wanted" are free to subscribers. Ads with items for sale, up to 50 words, and business cards will be published at the rate of \$6. **For subscribers**, quarter-page ads are \$25, half-page \$50, and full-page ads \$95. The fee for **non-subscribers** is \$15 for ads up to 75 words. For larger ads, add \$25 to fee for subscribers. Fee includes custom computer layout. Members of the editorial board are charged for all sales advertisements.

**Eureka! will not publish prices on items for sale. Contact seller for prices.**

**No reproductions of any type will be knowingly advertised unless so stated.**

**No member of the staff will act upon an advertisement in EUREKA! prior to its mailing.**

## CONDITIONS

Ads must be submitted for each issue in which they will appear. Send all ads to Jim Van Fleet prior to Dec 10, Mar 10, Jun 10, and Sep 10 for publication in the following issue. Ads are accepted on a space available, first-come first-served basis. We reserve the right to refuse any ad. Eureka! assumes no responsibility or liability for the contents of ads; however, every effort will be made to assure a high standard of honesty in advertising.

If any advertiser is contacted about an item in their ad prior to the publication being mailed, they are asked to report the incident to the Editor in Chief. Remember that it is to the advertiser's benefit to wait until Eureka! is in the hands of all subscribers before disposing of a trade or sale item. Please keep in mind that a trade or sale conducted through the mail is not complete until both parties are satisfied!

**Trade/Sale:** Magazine back issues: Mineralogical Record Vol. 8 no. 5 through Vol. 21 no. 1; Rocks and Minerals Vol. 54 no. 6 through Vol. 58 no. 1; Mineral Digest Vols. 1 - 4; Matrix vol. 1 no. 1 through vol. 2 no. 2; Tucson Show Catalog 1989. Willing to trade for almost any old mining items. No paper. Gordon Hills. Box 2385. Colstrip, MT 59323. (406) 748-4343

**For Sale:** A number of European 8-hr carbide lamps - Arras, La Francais, Portugal, etc. Write/call. The Irish Rovers, John Shannon, 7319 W. Cedar Circle, Lakewood, CO 80226. (303) 232-1534

**For Sale:** Send name and address for list of mining and western Americana books due out soon. Also interested in buying or trading. Send to: Mining the West, PO Box 1035, Georgetown, CO 80444.

**For Sale:** Excellent New Book: Michigan Gold Mining in the Upper Peninsula, 163 pages, photos, more than 75 gold mining ventures detailed. Write or telephone for price. Robert Fox, 1235 N. Westfield St., Oshkosh, Wisconsin 54901 (414) 235-4669

**For Sale:** Unique 1993 historical calendar "Painted Ladies & bordello: A history of old west mining town prostitution. Original rare antique photos of girls, madams, etc. Not lewd, but very interesting text & photos! \$12 ea. (10 or more: \$5 ea.) V/MC accepted. Frontier Calendars, 1750 Kent, Missoula, Montana 59801 (406) 728-1812

**Wanted:** Motorcycle or bicycle acetylene or oil wick headlights & especially tail lights. Memorabilia also welcome. John A. Schlacter, 5701 Bramble Ave., Cincinnati, Ohio 45227 (513) 271-1285

**Wanted:** Carbide cap lamps. Gee Bee (J&T cleaner), Copper Queen, Gem, EverReady, Milburn. Harriet Schon (602) 933-0212

**Wanted:** Anthracite coal carvings and jewelry. Pre-1960 only. Please include description, condition, and price. Also, anything marked Lehigh Coal and Navigation Co. Robert Gormley, 334 Brownsburg Rd., Newtown, PA 18940 (215) 598-3520

**Wanted:** Pennsylvania hard coal region post cards, breakers, workers, even mules! Have many cards - hard and soft coal to trade. Tom Stranko, 2478 Stephanie La., Binghamton, NY 13903

**New Jersey Mining Artifacts Wanted:** Stock certificates, lamps used in NJ mines, books/articles on NJ mines & mining history and mineral collecting localities. Wanted: reflector for Wolf cap lamp, Baldwin cap lamp. William B. Vis, Maison Gardens Apt. 52 Bldg. 4, Old Bridge, NJ 08857 (908) 721-1850

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