

MINING

ARTIFACT

COLLECTOR

Issue Number 7 Spring 1990



NEW MEXICO ARIZONA OLD MEXICO MINING JOURNAL AN INDUSTRIAL REVIEW OF THE SOUTHWEST

Vol. VI. No. 24

PHOENIX, ARIZONA, MAY 15, 1923

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No. 87C Cap Lamp



No. 300C Inspector's Lamp



No. 100C-Cap Lamp

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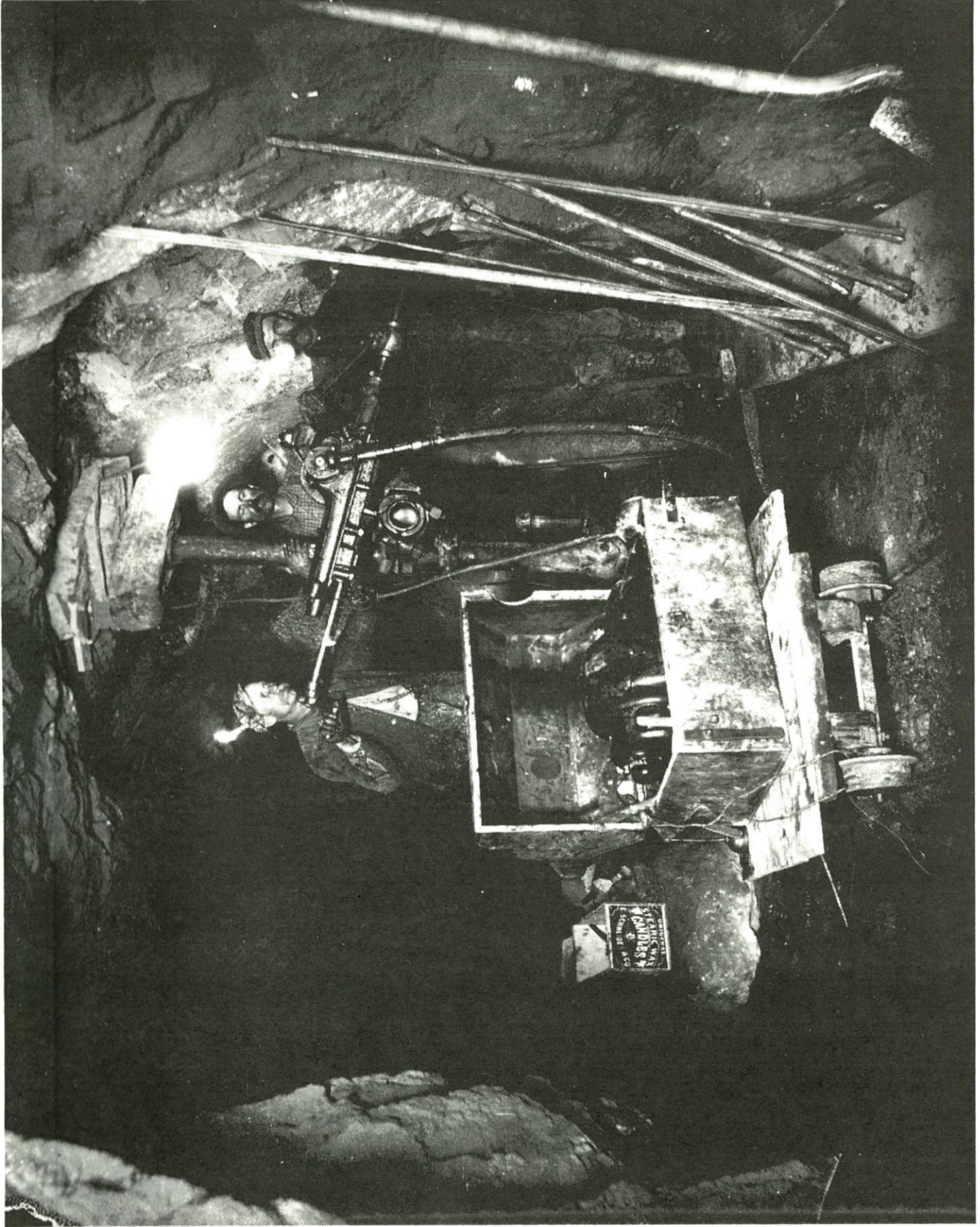
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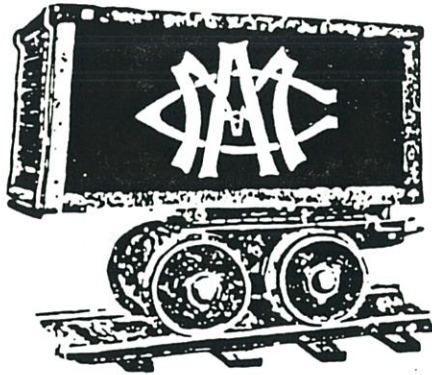
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See "Collectors Talk" in this issue.



MINING ARTIFACT COLLECTOR

On the Cover

A Grier ad from the front cover of the May 15, 1923 Arizona Mining Journal. See article on Griers in this issue.

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Subscriptions

The MAC journal is published four times a year in the months of January, April, July, and October. The rate is \$20 for domestic delivery and \$30 a year for overseas airmail delivery. We will not accept subscriptions for more than one year (4 issues) at a time.

Mail subscription requests to: Ted Bobrink, 12851 Kendall Way, Redlands, CA 92373

Back issues are available for \$6 domestic delivery and \$8.50 overseas delivery.

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Articles and other submissions should be sent to the appropriate editor. Drawings and other artwork should be of high quality and ready for reproduction. Although we cannot guarantee publication of any submission, we will make every effort to do so. Articles should be submitted early and as a general rule, should reach the editor at least six weeks before the month of publication.

Ads for trade items are free and are limited to 80 words. Continuing ads must be resubmitted for every issue.

Ads with items for sale are charged at \$5 for up to 40 words for subscribers and \$10 for non-subscribers. Four consecutive ads are charged at \$15 for subscribers and \$30 for non-subscribers. Business cards may be submitted for publication at the same rate as for sale ads. Other types of advertising are available upon inquiry. All advertising artwork must be ready for publication. The deadlines for ads are December 15, March 15, June 15, and September 15 and acceptance is subject to availability of space.

We reserve the right to refuse ads deemed objectionable or otherwise inappropriate. We are not responsible for the accuracy of any ad or the honesty of any advertiser. Please report any problems to the editor.

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All other articles that do not fall into the four main categories should be sent to Len Gaska.

The Editor's Page(s)

by Len Gaska

Staff Changes

At the bottom of our table of contents page, there are two new MAC staff members listed. First is my wife Sharon who is now officially an Editorial Assistant, a job she has been doing all along anyway. Sharon makes valuable suggestions on the wording, style, and layout of articles.

After seeing Dave Thorpe's spectacular article on Grier carbide cap lamps in this issue, what could I do except offer him the job of carbide editor? He graciously accepted, so future carbide related articles should be sent directly to him. Whew! That is one less job I have to do!

The Outlook

With the addition of two new editors, the outlook for the future of the MAC has never been better. Not only will it make all of our jobs easier, there is no doubt that the quality of the MAC will improve. With all the help we are getting, we expect to be around for quite some time.

The Fifth Annual Mining Artifact Collectors Reunion

Due to other commitments, Herb Dick is unable to host the Mining Artifact Collectors Reunion this year. We will miss Herb's gracious hospitality and the beautiful setting of the last two reunions. All of us extend our thanks to Herb.

Now for the good news. Tony Moon and family have recently moved to Walnut Creek, California. As old timers might remember, Tony hosted a reunion several years ago and has agreed to host this year's reunion. Due to the large turnout in 1989 and the small size of Tony's yard, it was necessary to rent a hall for the 1990 reunion. The Fifth Annual Mining Artifact Collectors Reunion will be held on June 9 from 10 am to 5 pm at the Sheraton Hotel and Conference Center in Concord, California. Concord is centrally located across the bay from San Francisco and is northeast of Oakland. Lunch will be provided by the hotel and there is a charge of \$20 per person for table rental, hall rental, and a buffet lunch. Reservations must be received by June 1. Late entries will be accepted by mail and at the door at the \$20 fee, but will not include the lunch. We wish to thank Mr. and Mrs. Moon and Mr. and Mrs. Yarborough for all their work in setting up the arrangements.

The enclosed flyer gives directions to the Sheraton Hotel and Conference Center in Concord, California and includes a reservation form. Send your reservations and checks to Tony Moon, 125 Brandywine Way, Walnut Creek, CA 94598 (415) 939-0522. They must be received by June 1. If for some reason your flyer is lost, you may call or write Len Gaska, 1688 E. Corson St., Pasadena, CA 91106 (818) 405-0647 to request additional copies.

For those of you who have not attended past reunions, we guarantee that you will have a great time. It is a chance to meet other collectors, learn more about what you collect, and buy, sell, and trade mining artifacts of all types. Just to tease you a bit, the following is an excerpt from the report of the 1989 reunion that appeared in MAC #4, Summer 1989.

One of the primary purposes of the reunion was to engage in trading and many people went home with new and prized items. Some of the trades we know about are as follows. Dave Thorpe traded a C. Cleaves candlestick for Ted Bobrink's early style Hughes Bros. Pathfinder carbide cap lamp. Errol Christman traded a fancy candlestick for Jim Steinberg's Pocahontas carbide cap lamp. Rick Yarborough traded a mine bell sign, a candlebox, and a rare Justrite cap lamp for a blacksmith folding candlestick from Ted Bobrink. Len Gaska traded his American carbide cap lamp for Errol Christman's Maumee Duplex carbide cap lamp. Tim Callaway traded an Argonaut mine map for two candlesticks from Jim Steinberg.

For those who only brought cash to the reunion, Dave Gresko saved the day by bringing a fairly large collection of items for sale. Sales were brisk as there was something for everyone and Dave's inventory was severely depleted by the end of the day.

Continuing a Tradition Since 1989

In the Summer 1990 issue, we will again ask our readers to participate in a survey similar to the carbide cap lamp survey we did in the Summer 1989 issue of the MAC. We will ask you all to list blasting cap tins in your collections. If you have any suggestions as to what should be included in the survey form, please contact Mark Bohannon, Ted Bobrink, or Len Gaska.

"Knowledge Isn't Knowledge Unless You Share It"

The above quote is from a recently printed interview with Stephan Hawkin, who as you may or may not know, is probably the world's most famous physicist. He was referring to his efforts to educate the public on some of his fascinating theories on the origin of the universe. But what makes the quote so appropriate is the common ground with mining artifact collecting. Sharing of information not only is beneficial to the hobby, it is by passing on the facts and theories that makes them into knowledge.

Most of you are well aware of how difficult collecting has become over the last 4 or 5 years. Sure, prices have gone up but from my vantage point, it is the simple unavailability of choice items that is most discouraging. So, to maintain our interest in the hobby, more and more of us have been learning about what is already in our collections. In the "good old days" when lamps and candlesticks were more easily obtained, we acquired a piece and then were immediately on the trail of the next item. We probably didn't pay much attention to the details and history of most of the items we had. Although most of us are still hard at work searching for that next lamp or candlestick, remember that it is also enjoyable to learn about what we already have, and to share that knowledge with other collectors.

Bill Bowman of Sonoita, Arizona, recently sent me some early Baldwin ads that will prove useful in the future. Bill also asked a question regarding identification of a lamp, and apologized for trying to use us as an information service. Well Bill, I have no objections to providing information to fellow collectors. In fact, it is a very enjoyable part of the hobby. I mention this because Bill was so kind as to provide an addressed and stamped reply envelope. That sort of thoughtfulness is appreciated.

Lampbottom Out, Collectors In

Yep, old Doc Lampbottom has retired from the expert-on-mining-artifact business. He says that too many new items are surfacing and he simply cannot keep up with the field. So, from now on, we will use the Collector's Talk section to answer questions if we can, ask our readers for help, and most importantly, function as a medium of exchange for information. We certainly appreciate the information and inquiries we have received so far and encourage you to keep them coming.

Grier Brothers Carbide Miners' Lamps

by Dave Thorpe

Introduction

A cynic might say that Grier cap lamps were no more than cheaply constructed imitations of some of the better known miners' carbide lights. But a *cynic* may not appreciate the subtleties that a collector does. It is true that the early Griers borrowed heavily in design from the Baldwin "pinchwaist" and Justrite "horizontal" cap lamps. However, the classic Grier design that evolved from these, the so-called "vertical" Grier, was entirely unique among carbides.



The classic or "vertical" style Grier

Most surviving specimens are found in horrible condition. Made with a very thin gauge brass, they were prone to stress cracks and denting. But this more malleable sheet brass also allowed for more complexities in design generally not seen in more durable lamps. Griers were adorned with bulging letters and gadgets such as hinged clip-on reflectors and push-button tip cleaners. They were, in a word, ornate. Though the lamp's wide solder seams appear sloppy on first impression, this was actually due to a solder paste technique used in tin-smithing (which had been Grier Brothers' principal business for the previous 70 years) and was in fact, very skillfully done.

Very few of these fragile lamps have survived in mint condition. Ironically, Griers, which may well have been scorned by the miner for their lack of durability, have taken on added value to the collector for just the same reason.

Early History

A Keystone Mining Catalog, 1919, is cited as claiming that Grier's first lamps were introduced in 1911.¹ Their first patent was issued April 2, 1912. In a review of one of the ongoing patent infringement lawsuits (Baldwin vs. Grier), it is stated:²

"Some time in the early part or in the middle of the year 1913, the defendant [Grier Brothers] began the manufacture and sale of its lamp,..."

As the Keystone advertisement may have erred boastfully, and the information given in the courtroom may have tended to minimized the length of time any damage was done, it may be said that the company began production of cap lamps around 1912.

The first Grier cap lamps were virtually identical to the Baldwin pinchwaist except for the stamping. At least one collector has acquired such a lamp.³ This has led some to speculate that the Simmons-Baldwin team produced the lamp for Grier.⁴ Nothing could be farther from the truth, for in 1914 Baldwin sued Grier Bros. Co. for patent infringement and unfair competition of the copycat lamp. The following excerpt from a review of this case is both amusing and informative:⁵

"As to the question of unfair competition. The evidence convinces us that [Baldwin], at the expense of much effort and money, established a large trade among coal miners by coming in contact with the individual coal miners. Being persons of limited intelligence, and probably of no close observation, as well as being unacquainted with the English language, they would depend upon the shape of the lamp to guide them in purchasing. The Baldwin lamp...is of the hour-glass shape... The [Grier] lamp is identical in shape. It is not only identical in shape, but all its accessories bear such a close resemblance to the Baldwin lamp that it requires very careful inspection to detect even a slight difference. The ordinary purchaser would be easily deceived by the similarity of appearance of the Baldwin and Grier lamps, and purchase the Grier lamp believing he was purchasing the Baldwin, unless he could read the names upon them."

Note: this unfair stereotyping of the miner in no way reflects the attitude of the authors

Grier claimed that the presence of a "sparker" attached to the conical push-on reflector differentiated their lamp from a Baldwin. The judge did not agree and the lawsuit was found in favor of Baldwin.

The Early Series

Legal considerations pending, Grier began to modify their design. Before they completely departed from the original style though, at least three different models were produced *still* resembling the Baldwin lamp to some degree. These "early series" lamps all have in common the conical push-on reflector with sparker. In one instance the water chamber was restamped to have eight sides and the top was stamped with a beautiful zig-zagging perimeter. This model is referred to by collectors as the "Octagon Grier"⁶

In another variation, the pinchwaist lamp is flared out to wider dimensions⁶ and the wire brace replaced with a flat strip. Because of its unique skirt-like base, it is known by some as the "Fat Bottom Grier". So different and primitive is this lamp relative to all other Griers, that it may actually have predated the Baldwin look-alike.

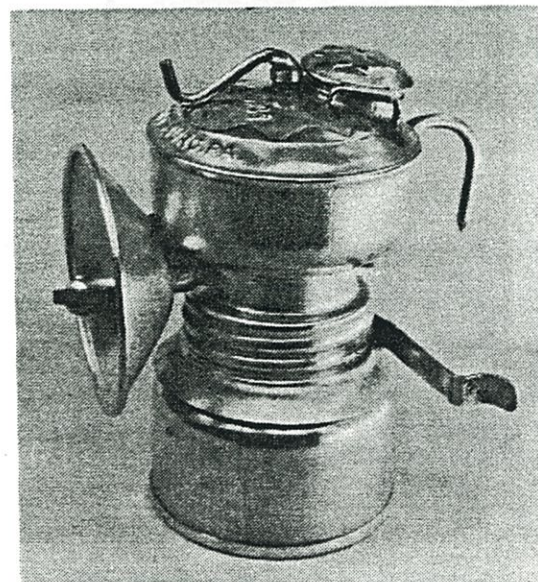
The third "early series" lamp represents a transition to the modern design. Like the Octagon, it bears the zig-zag top stamp and push-on reflector, but like the modern vertical Griers, the watertank is rounded out, the waterdoor is stamped with an ornate star, and an S-shaped waterlever replaces the Baldwin-style raking wire.



"Octagon Grier"



"Fat Bottom Grier"



Intermediate Style

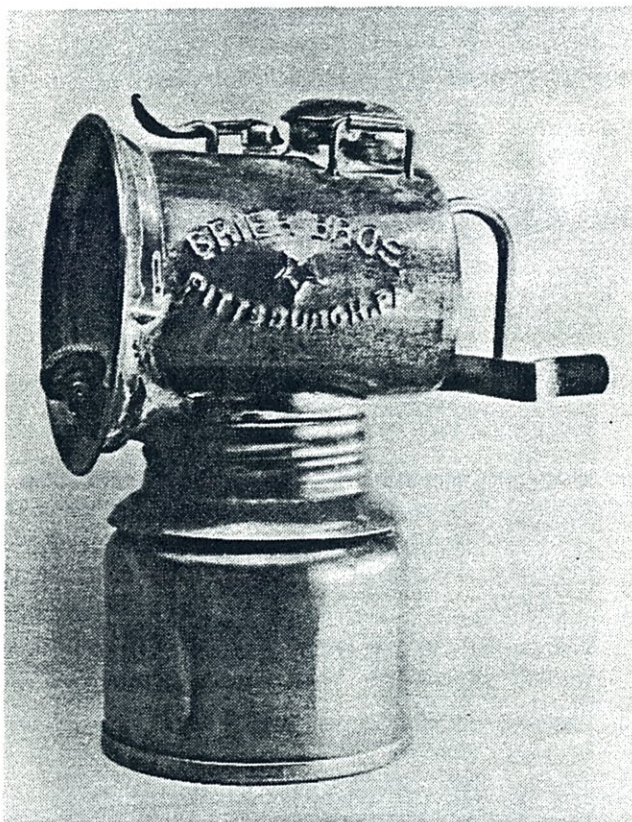
Late model Griers: Horizontal

Grier Bros.' first true departure in design from the Baldwin-style lamps was the so-called "Horizontal Grier". This, of course grossly resembled Justrite's popular lamp design. The waterchamber was a horizontal cylinder, flattened on the bottom, and soldered onto a threaded screwcap...a much less sophisticated construction than its Justrite counterpart.

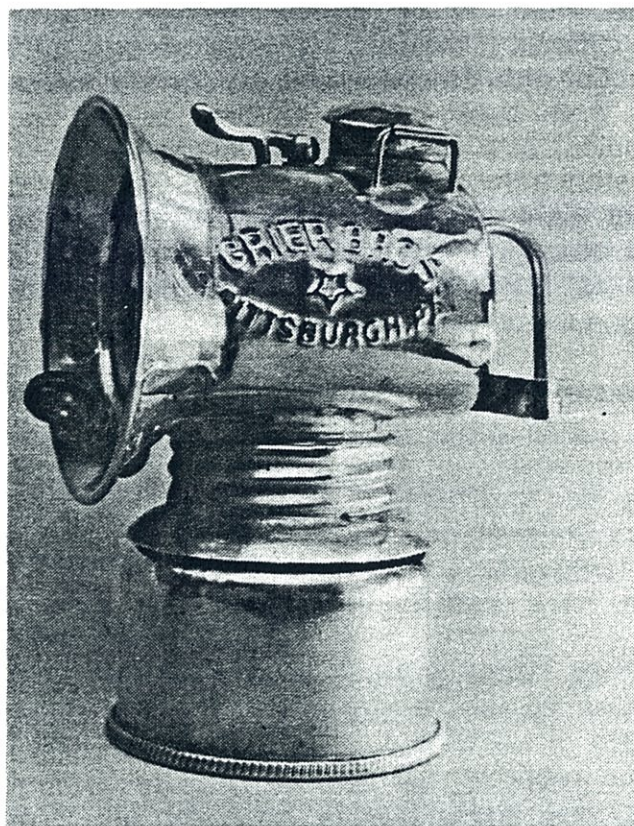
The reflector, like Justrite's, was double-concave, with the inner concavity soldered into the front of the watertank. The reflector was available 2 1/4", 2 1/2", and 3" diameters. On earlier models, the rear of the reflector was reinforced with an extra piece of sheet brass, a fact that was highly touted in Grier advertisements. This was deleted in later models. Horizontal Griers are found in three general tank styles. They are described in chronologic order below with the base that usually accompanies.

Style #1

This earliest horizontal was the most prone of all Griers to stress cracking. The side stamp lettering is raised. The tank is most easily identified by the waterlever which folds back upon itself and down into dimpled notches. The reflector is reinforced. An eight pointed star is sharply stamped into the waterdoor. It is found only with bottom seamed bases which are unstamped. Base A has a smooth bottom seam and three faint ribs stamped into the side. Base B has crude knurling stamped into the bottom seam and has smooth unribbed sides. The earliest base (A) will not fit any of the more recent tanks as the threaded neck is slightly wider. Interestingly, this is the only base that fits the rare triangle spare base carrier. This carrier has a waterdoor with a similar, sharply stamped, eight pointed star. The stamping of the star became increasingly indistinct on all later style Griers. The triangle carrier can therefore be linked in time to the earliest horizontal Griers (pre-1918).



Horizontal style #1, Base A, 2 1/4" refl



Horizontal style #1, Base B, 2 1/2" refl

Style #2

This style is identified by the wire waterlever which bends under itself and rides over raised bump notches. The star stamping in the waterdoor is now becoming indistinct. During the production of this lamp, the reinforcement behind the reflector was dropped, so it is found both ways. The base was upgraded to one with a seam at the top and high quality fine tall knurling at the bottom. They were stamped with either two or three patent dates on the bottom (see index):



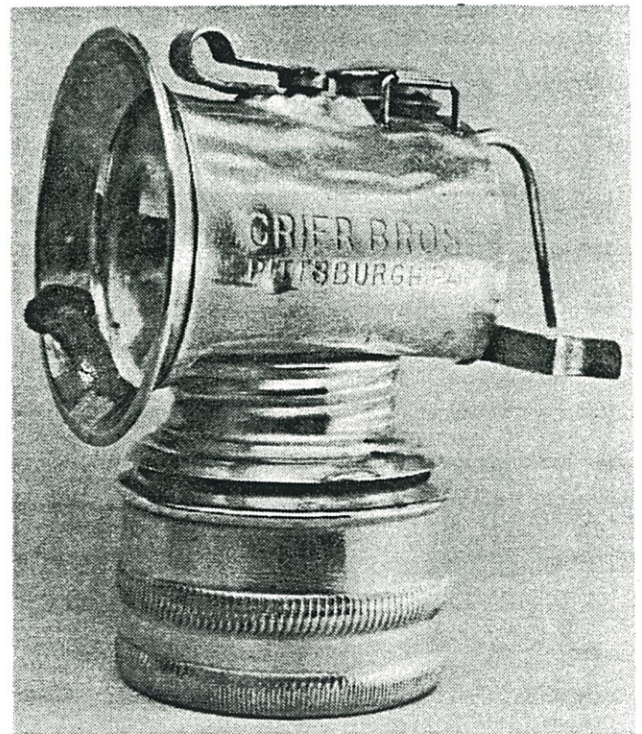
Horizontal style #2, base C, 2 1/4"



Horizontal style #2, base C, 3" (unreinforced)

Style #3

This latest style is also the rarest. It is identified by the flat strip waterlever, the incuse side stamping, and the unique double knurled base. The reflector is unreinforced and the bottom unstamped. The waterdoor is of new design: smaller and unstamped as seen on the Gee Bee and Gem.



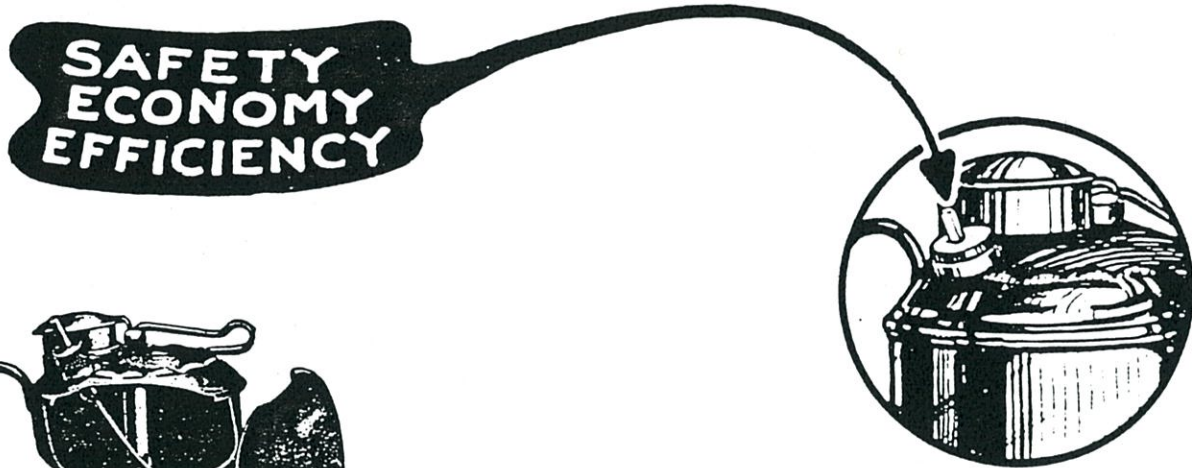
Horizontal style #3, Base D, 2 1/2"

Late model Griers: Vertical

The so-called "vertical" Griers were manufactured concurrently with the horizontal series. They represent a natural transition in design away from the "early series" lamps. Instead of the push-on Baldwin-like reflector, they simply borrowed the double concave reflector which was originally designed for the horizontal cap lamps.

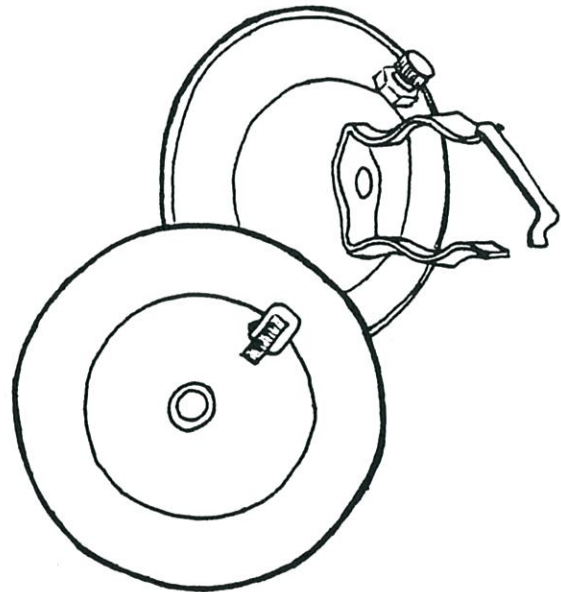
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Two mechanical gadgets appear on some vertical Griers. One was the 1922 patented push-button "**J&T**" cleaner (Jacobsen & Turga). By simply pushing a lamp mounted plunger button, the burner tip was cleaned by an internal wire *without extinguishing the flame*. It is found in both high profile (early) and low profile (late) styles.



High profile J & T with cutaway

Later low profile J & T (advertised 1923)



The Loc-on reflector

Also available as an option on vertical Griers was the "**Loc-on**" reflector. Available in the usual sizes, this device allowed one to easily remove and replace reflectors which, like all Grier products, sustained rough use poorly.

Late model Griers: Vertical

Like the horizontals, these are grouped into three broad styles, based on tank design.

Style #1

This was the daintiest in design. The waterlever follows a graceful S-shape and slides over a notched wire that is soldered onto the tank top. The double concave reflector was soldered to the tank from behind via two brass arm braces. Like the Style #1 horizontal, two bottom seam bases are found on this vertical Grier, one with three ribs for gripping, and the other with crude knurling stamped into the seam. The J & T tip cleaner is not seen with this style.



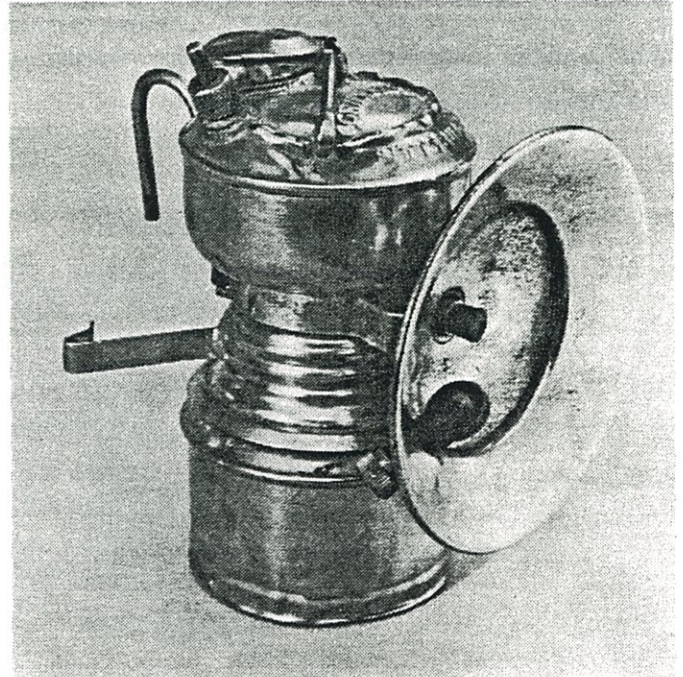
Vertical style #1, base B, 2 1/4 "

Style #2

This style was heavily promoted in advertisements along with the optional J & T cleaner and "Loc-on" reflector. It is found with bottom seam base with crude knurling (B) and, more commonly, with top seam base with fine tall knurling (C). Like its horizontal counterpart the water lever is changed to a simple wire that bends under itself. There is no longer a notched wire for the lever to ride over. Instead, notched segments are raised up from the tank top.



Vertical style #2, base C, 2 1/4"
(low profile J & T)



Vertical style #2, base C, 3"
(high profile J & T)

Late model Griers: Vertical

Style #3

This most recent tank style of the vertical Griers, differed from its predecessor only in that raised dots formed the notches for the waterlever. Its production, however, was a bit peculiar. While catalog illustrations show the lamp with the J&T cleaner, it is displayed with the earlier style soldered on reflector. In fact, all style #3 lamps known to the authors are of the soldered reflector type. The Loc-on reflector was apparently phased out with the earlier style #2 lamps.

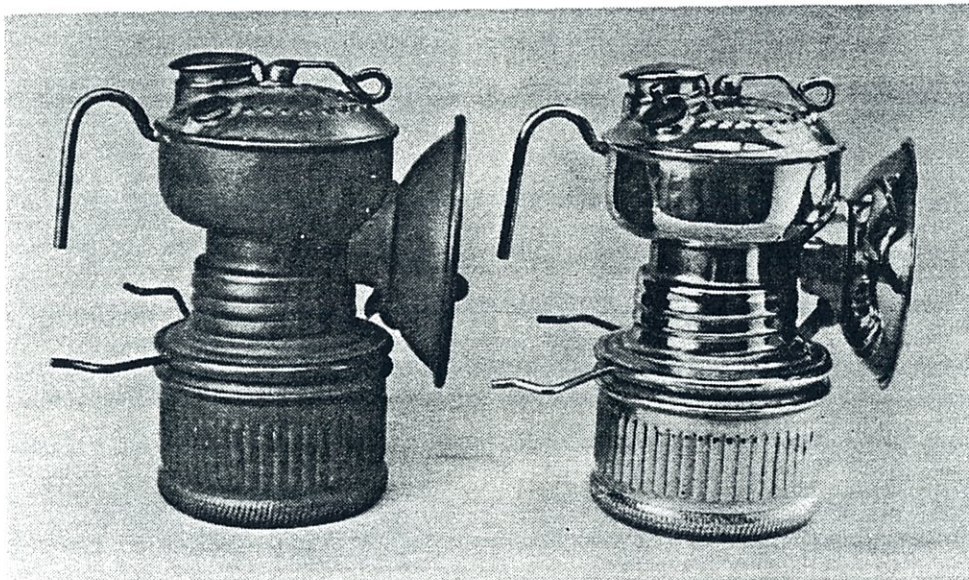


Vertical style #3, base A, 3"

Since the top stamp is quite similar to the Gee Bee, a lamp equipped with a detachable reflector, it may have been the company's intention to slate all of this new tank design for Gee Bee production if the reflector was to be removable. This lamp is frequently found with old style bottoms (see photo), possibly to use up old stock and make way for the Gee Bee. This style is found not only with the double concave reflectors, but with simple concave reflectors as well (see example in above photo).

GEE BEE

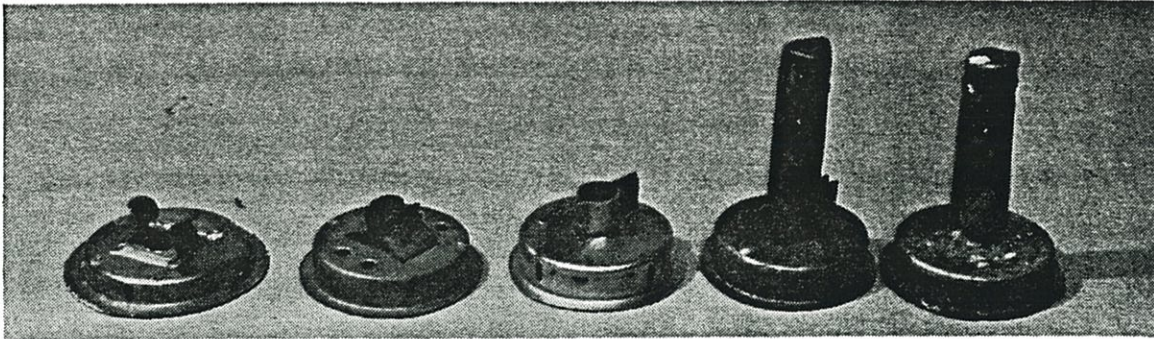
The GEE BEE was Grier Brothers' last and most magnificent product. Quality of construction was far superior to any predecessor's. The hook penetrates the tank and is riveted inside to the base. Like conventional Griers, some early GEE BEE lamps are found with both soldered-on and "Loc-on" reflectors. The cap brace is a flat strip. The later, and more common GEE BEE, had a threaded gas tube with a hex nut holding the reflector against a unique brace. A small dimple in the reflector seats it in alignment. Reflectors are usually 2 1/2" on brass lamps and 2 1/4" on nickle plated models. On this model, the cap brace is a removable wire. Early GEE BEE bases were smooth sided (Grier base C), while the later base picked up fine ribs, as shown below. The nickle plating is outstanding in quality. Most examples have the J&T cleaner, while others have a professionally soldered in plug.



Late model GEE BEE lamps in brass and nickle. (Note difference in reflector sizes.)

Felt Holders

Shown below, in rough chonologic order, are the varieties of Grier felt holders. Curiously, the second in line is also used on the most modern GEE BEE and GEM lamps.



Spare bottom carriers

Two Grier bottom carriers are shown below. The triangle is the earlier. So far, only bottom style A has been found with unused carriers.



Pittsburg or Pittsburgh?

Grier lamps are stamped with both spellings. It is oft rumored that Pittsburgh changed its name and that this accounts for the stamp variations. A review of history books at any library establishes one fact: Pittsburgh has always been "Pittsburgh".

At the Pittsburgh History and Landmark Society, historian Walter Kitney provides some clues. Pittsburgh with an "H" is the Scottish spelling. Between the years 1891 and 1911, due to imigrant German influence, the Post Office officially recognized both the German "-burg" and "-burgh".⁷

Why the Griers (a family of German descent) used "-burg" on their vertical lamps and "-burgh" on the horizontal and "Fat Bottom" styles follows no obvious logic, especially in light of the fact that their first carbide lamp was manufactured *after* 1911.

Closing History

While Grier's home office and factory was located in Pittsburgh, they opened a western branch in Hancock, Michigan sometime around 1923. Too costly or too late, this was to be Grier Brothers' last year of operation. In 1924 the Gem Manufacturing Company had announced themselves as "Successors to The Grier Brother Co." and advertised Grier lamps with J & T cleaners. One year later they advertised their own GEM cap lamp, a small model resembling the GEE BEE. Sale of the lamp was discontinued by 1930.⁸

Collecting Grier Bros. Lamps

The preceding article certainly does not cover all variations of the Grier carbides. We have not covered the supervisor's style lamps or their taller bottoms. We are also sure that several other variations of the "Early series" exist.

Most Griers are still found in Pennsylvania. Their western branch office in Michigan, open for one year in 1923, arrived too late for nationwide distribution. The lamps were supposedly marketed in eastern Europe and South America...possible hunting grounds for the more avid.

Although the lamp is not difficult to obtain, it is almost always found in appallingly poor condition. Significant stress cracks are common even in unfired examples. Any complete and excellent condition Grier is highly collectable.

Bottom styles A and B (the earliest of the modern series) seem to be most common. They are the usual styles found as spares and on carriers. They are also commonly found on vertical style #3, suggesting that many of these were stockpiled as spares.

"Early series" lamps, in any condition, are extremely rare. The "late series" can be obtained with some diligence and luck. In that category, horizontal tank styles are rarer than vertical by about 2:1. Probably the most desirable of the late series lamps would be a vertical style with the high profile J & T and a small size (2 1/4") Loc-on reflector, however personal preference varies. Some consider the GEE BEE to be the most valuable, due to its quality of construction and relative rarity. Others feel it is too generic looking to take seriously. Now *that* is getting a little picky!

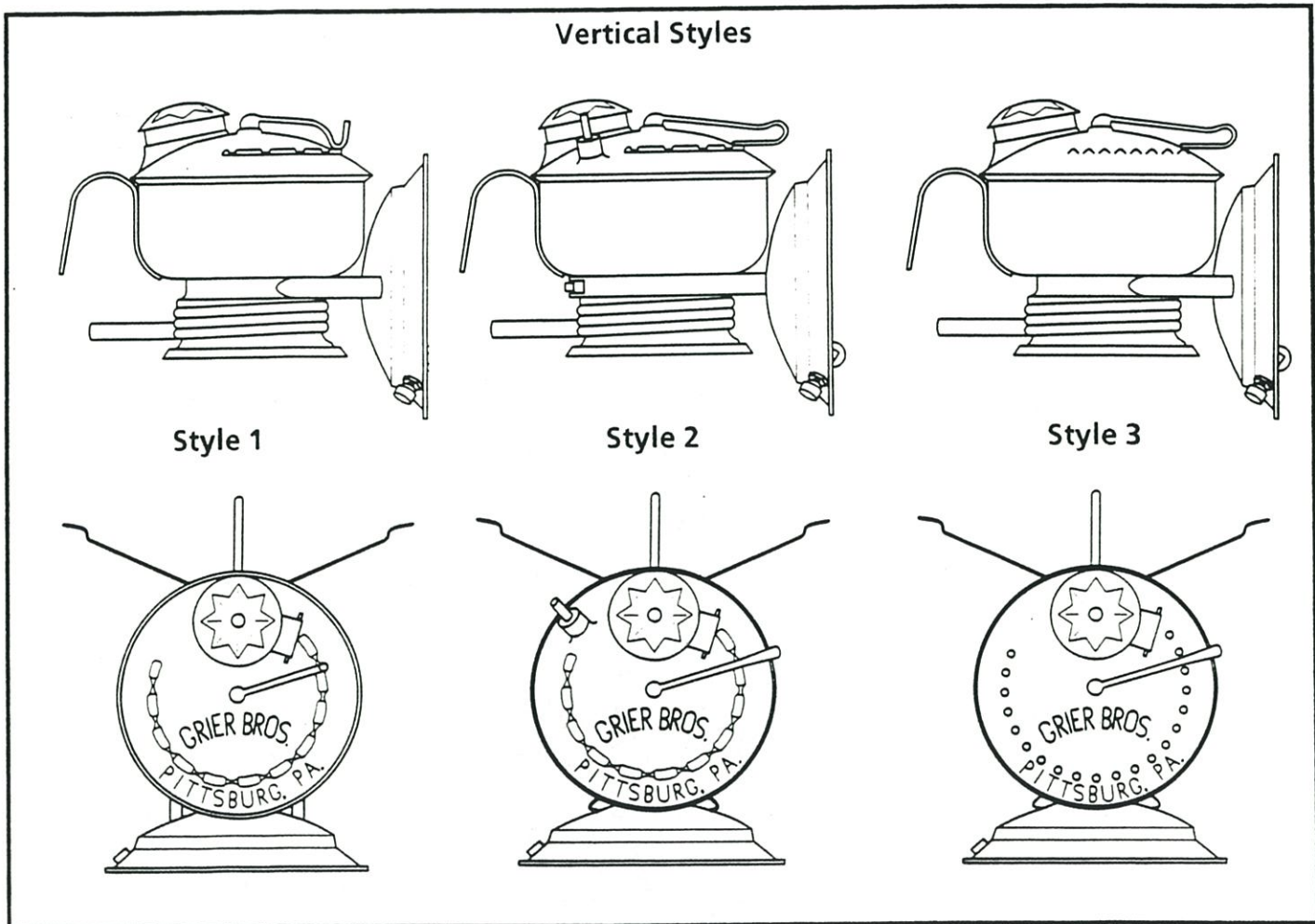
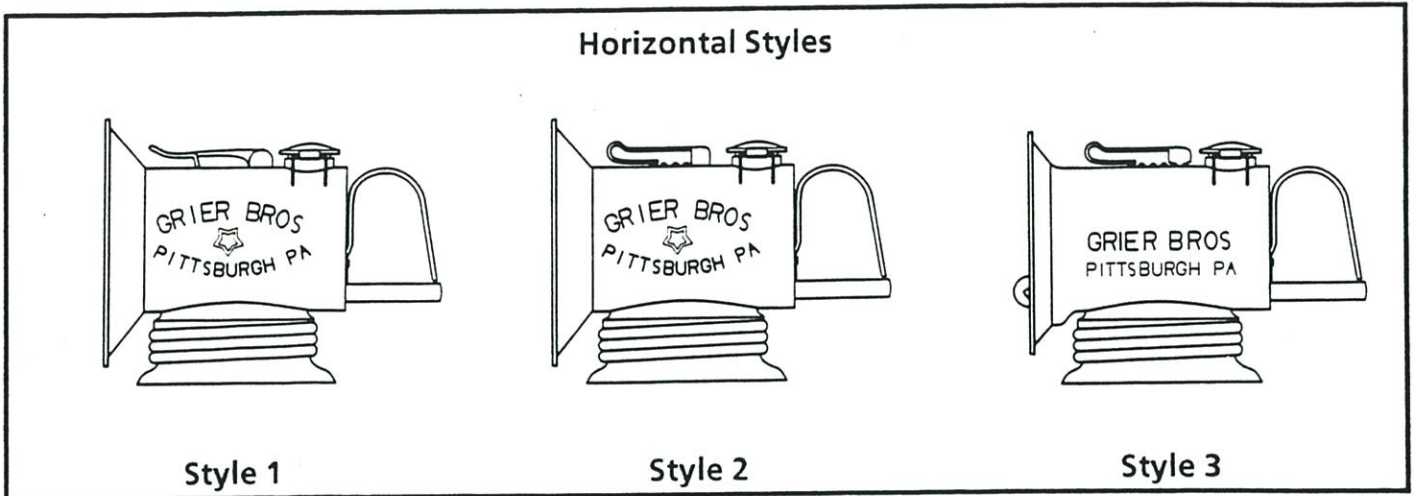
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1. Clemmer G S, American Miners' Lamps, Westernlore Press 1987, page 71
2. Baldwin et al v. Grier Bros. Co., 215 Federal Reporter, No. 26, July 7, 1914, page 736
3. Personal communication with Chuck Young 1982
4. Clemmer G S, American Miners' Lamps, Westernlore Press 1987, page 71
5. Baldwin v. Grier Bros. Co., 210 Federal Reporter, No. 26, Jan 3, 1914, page 54
6. David Thorpe, Mining Artifact Collector, Issue Number 3, Spring 1989, page 8
7. Personal communication with Walter Kitney, Pittsburgh History and Landmark Society, tel: 412-255-2100, Jan 1990
8. 1925 Gem Manufacturing Co. catalog showing lamps with "Discontinued" stamped over them. An enclosed letter from James A. Fownes, Vice President is dated September 24, 1930.

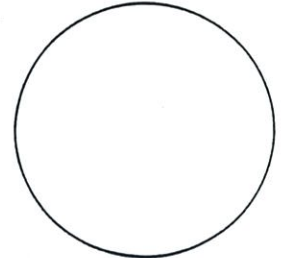
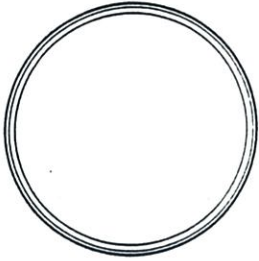
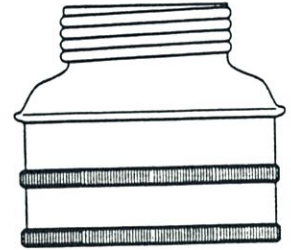
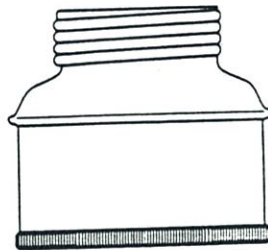
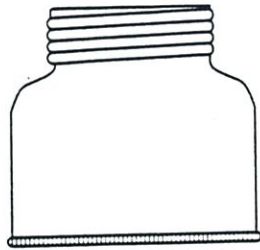
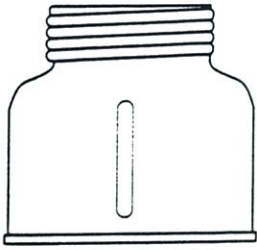
Illustrations of Late Model Grier Lamps

by Len Gaska

On the following two pages are illustrations of the major varieties of Grier lamps referenced in the preceding article by Dave Thorpe. On the second page is an illustration of the inside label of a Grier Bros. parts repair kit from the collection of Len Gaska.



Bases



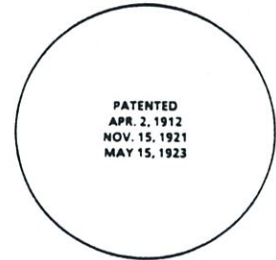
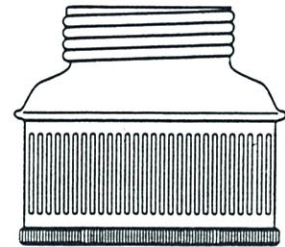
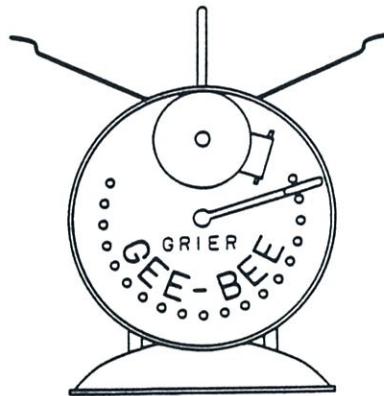
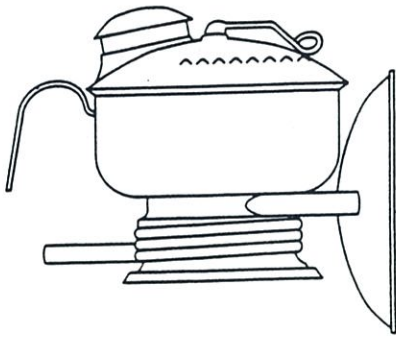
Style A

Style B

Style C

Style D

The Gee-Bee



REPAIR PARTS FOR
GRIER CARBIDE LAMPS

WILL FIT ALL CARBIDE LAMPS

CONTENTS

PRICE

3 Doz. Gaskets.....	
6 .. Felts.....	
2 .. Lava Tips.....	
3 .. Brass Tips.....	
14 .. Flints.....	
1 .. Sparkers Complete.....	



CONTENTS

PRICE

2 Doz. Sparker Springs.....	
1 .. Sparker Caps.....	
1 .. Sparker Nuts.....	
1 .. J. & T. Cleaning Wires.....	
1 .. J. & T. Brass Springs.....	
1 .. J. & T. Caps.....	

Lu-Mi-Num Carbide Lamps

by Len Gaska

Of all the American made carbide cap lamps, the Lu-Mi-Num is probably one of the least appealing in terms of esthetics. Dave Thorpe, in his article entitled *Cap Lamp Value: Not Just a Function of Rarity* (MAC, Issue 5, Fall 1989), likened it to a hand grenade in appearance! Despite its purely functional appearance, the Lu-Mi-Num has some unique and unusual features. It stands alone as the only American carbide cap lamp made of aluminum. Even the reflector on most models is made of aluminum. Its ribbed design is also unique and most likely was implemented to save weight, dissipate heat, and to increase strength and durability. Although virtually all other American made carbide cap lamps used screw threads to join the bottom and top, the Lu-Mi-Num insisted on being different by utilizing a bayonet cam-lock. A few models have turned up with screw threads, but they are quite rare and probably represent an early or trial design.

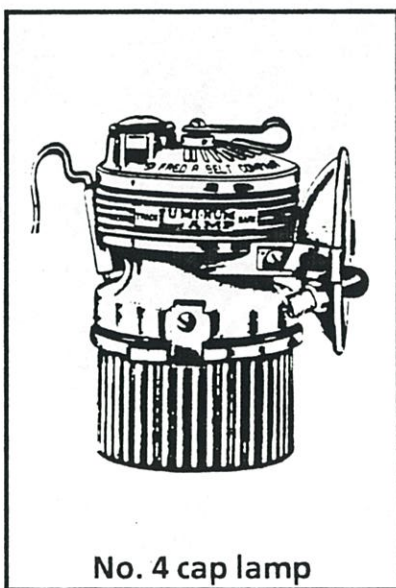
Another slightly unusual feature is that the Lu-Mi-Num cap lamp was made without hat braces. Absence of hat braces is not unusual for early lamps, but is certainly unusual for a lamp that started production in the mid-1920's. A few examples are found with a clip on "stabilizing" bar which attached to the lamp below the hook. A sketch of the clip is illustrated to the right. The water door on the Lu-Mi-Num is unusual in that it contains a one-way valve. Air can enter the water chamber, but the one-way valve prevents air or water from leaving. This feature was recently brought to my attention by Dave Thorpe.



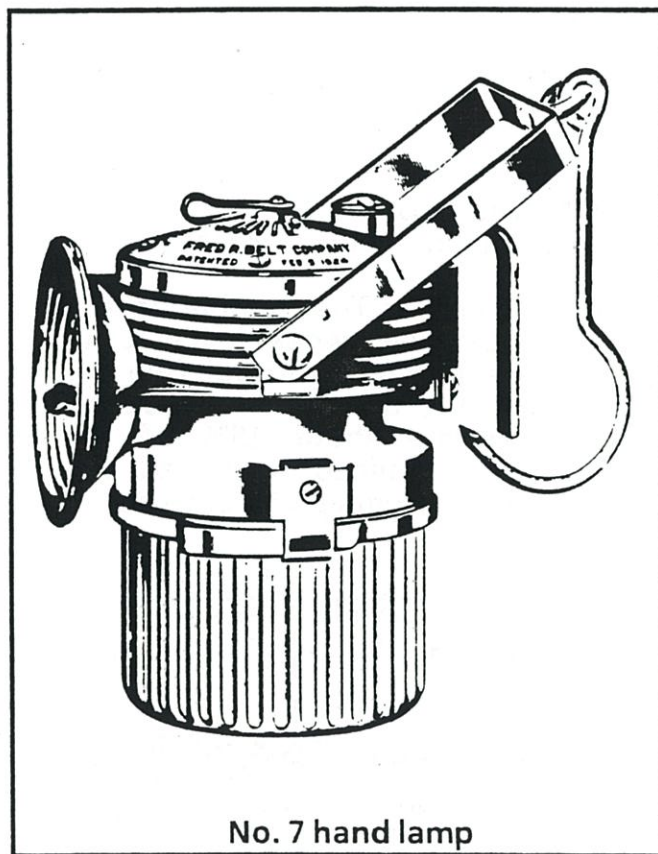
The Lu-Mi-Num cap lamp and its big brother, an 8 hour hand lamp, are virtually identical in design and make an attractive display pair. The identical styling is unusual for companies that made both cap and hand lamps. Finally, although the Lu-Mi-Num was produced for about 10 years, it underwent virtually no design changes. Only a few varieties of cap lamps are known. Besides the screw thread model, the only other known variety is the narrow spade "Michigan" mount model.

The Lu-Mi-Num was manufactured by the Fred R. Belt Company of Chicago, Illinois. The "Lu-Mi-Num" name was trademarked on May 20, 1924 and a patent was granted on February 5, 1924. According to Clemmer¹, the Lu-Mi-Num was manufactured from about 1923 to 1933.

The illustrations are from The Mine and Smelter Supply Co. catalog No. 92, dated 1937. Although the date of the catalog conflicts with Clemmer's report of cessation of production in 1933 or so, the advertised lamps may well have been existing stock.



No. 4 cap lamp



No. 7 hand lamp

(1) Clemmer, Gregg, *American Miners' Carbide Lamps*, 1987, Westernlore Press, Tucson, AZ.

The John B. Lindahl Patented Match Safe Candlestick

by Ted Bobrink

One of the most, if not **THE MOST** sought after manufactured candlesticks today, is the brass handled match safe candlestick patented by John Bernt Lindahl of Denver, Colorado, in 1905.

Recently, I had the good fortune to receive a letter from Mrs. R. A. Michelson of Colorado Springs, Colorado, daughter of John B. Lindahl. Mrs. Michelson shared with me some interesting details about how her father invented the Lindahl candlestick.

After hearing about mining opportunities in the United States, John B. Lindahl left Frillesas, Sweden in 1887 for the Rocky Mountains of Colorado. While working underground in a silver mine in Aspen, he was in an explosion and realized the danger of suddenly being without light or dry matches in a wet and dark mine. He used an old miner's pick for a model and invented a miner's candlestick with a place in the handle to store and keep matches dry. His new invention caught on and he peddled them across the west for one dollar each. One day he called his wife and told her he could sell his invention for five hundred dollars. She said: "Sell it and come home!"


The most unique feature of the Lindahl candlestick is the brass tubular handle that doubles as a match safe with a water tight screw cap. Another feature is that the Lindahl can be disassembled by unscrewing the shaft from the handle and removing the hook and thimble so it could be carried in a pocket. There are three basic styles of Lindahl known. The earliest has a large hex nut directly in front of the hook (see Fig. 2) and has **PAT. APLD. FOR** stamped on the hook. Some of these early Lindahls have a brass thimble. The next style has a smaller round spacer replacing the hex nut, and a stamping on the back side of the brass cap that reads (**PATENT NO. 801465 LINDAHL MFG. CO. DENVER COLO. U.S.A.**). The latest style has a cut-out in the thimble (see Fig. 3).

Warning to collectors: The thimble on the Lindahl candlestick was a weak design at the point where the shaft goes through (see Fig. 1), thus causing the thimble to frequently snap off. Therefore about 25% of the Lindahls I have examined have had the thimbles repaired or completely replaced.



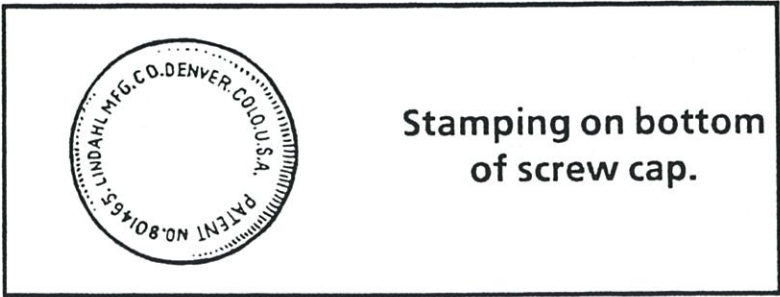
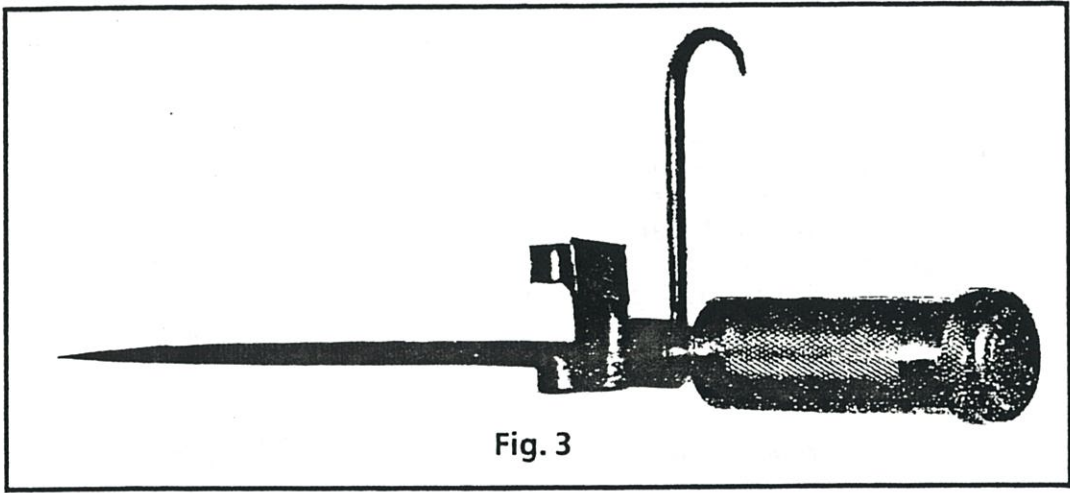
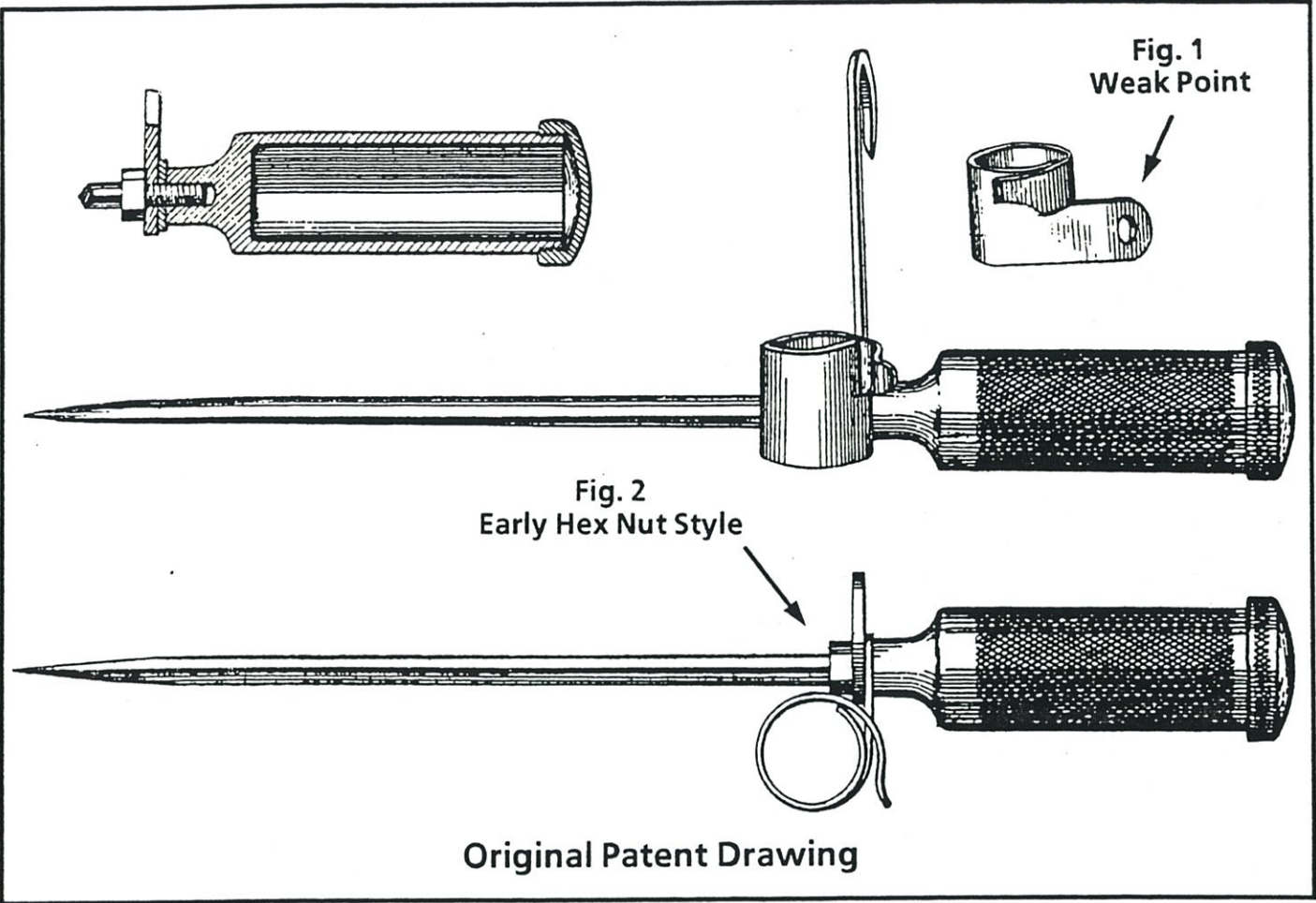
Original photo of John Bernt Lindahl circa 1900 from the Mrs. R. A. Michelson collection.

SEND ONE DOLLAR IN STAMPS FOR
MINER'S PATENT CANDLESTICK. *Insures*
[Delivered Free] *Dry Matches*
Handle is a
Polished Brass Match-box.



Money back if not pleased.
LINDAHL MFG. CO., 601 SYMES BLDG., DENVER, COLORADO.

Advertisement (1908) from a mining journal.



Husson Candleholders and Sticks

by Robert L. Fox Jr.

I have been fascinated with candleholders ever since I learned that the Husson candleholders were manufactured in my home town, Oshkosh, Wisconsin. The candleholders were manufactured by Knippenberg Manufacturing Company, headed by Phillip Knippenberg. The company was eventually sold to Oshkosh Metal Products Company.

The candleholder is really an intriguing product when you realize that 90 patents were issued for a device that is made up of approximately eight components. Phillip Knippenberg received Patent No. 820, 209 on a Candle Holder and Stick, dated May 8, 1906.

Knippenberg produced a quality product that was well received by both his dealers and the miners using the candleholders. Several mining regions that were important customers of Knippenberg included the iron and copper mines of Upper Michigan as well as the iron mines of Minnesota and Wisconsin.

One of the more interesting advertisements that Knippenberg featured described his candleholder as the only solid steel tube candleholder made, while he also claimed to produce the only detachable and interchangeable candleholder or lamp stick.

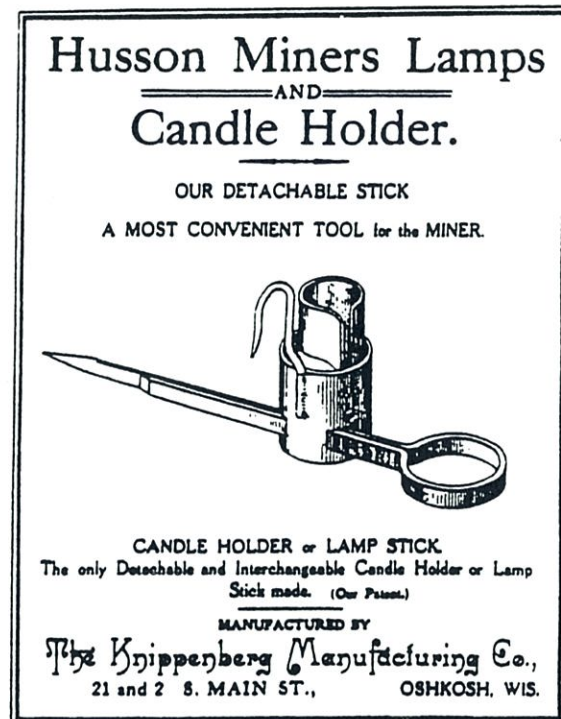
It is interesting to note that at least one of the Husson candleholders claimed to be patented, but there appears to be no record of the patent. The wire candleholder shown in Fig. 6 is an example of this. Of all the Husson candlesticks, only the IXL and the patented detachable model were stamped. One of my favorite designs is that of the Husson No. 22 Peg Lamp. Old-time miners were said to be more resistant to change than the average person, especially when the change affected their work, a fact which led to the overlapping of new and old methods in mine lighting.

The Peg Lamp was an oil-wick spout lamp with a "peg" 3/4 inch in diameter attached to the flat underside of the font (fuel reservoir). This enabled the miner who was reluctant to give up his favorite candleholder to insert the Peg Lamp instead of the traditional candle in the clip of his regulation candleholder.

It is my opinion that the Husson candleholders and sticks were well received by the miners due to the variety of candleholders available, the quality of the product, as well as the manufacturers understanding of what men toiling in underground mines desired in their lighting products.

References:

1. Fox, Robert L. Jr., **Husson Miner's Lamps Manufactured in Oshkosh**, 1985.
2. Fox, Robert L. Jr., **Husson Oil Lamps**, Mining Artifact Collector, No. 6, Winter 1990.
3. Pohs, Henry A., **Early Underground Mine Lamps**, Museum Monograph No. 6, 1984, Arizona Historical Society, Tucson, Arizona
4. Wilson, W. E., **Miner's Candlestick Patents**, 1983, Mineralogical Record Inc., Tucson, Arizona
5. Wilson, W. E. and Bobrink, T., **A Collector's Guide to Antique Miners' Candlesticks**, 1984, Mineralogical Record Inc., Tucson, Arizona



From a brochure distributed by the Knippenberg Manufacturing Company (ca 1911)

Fig. 1
 Type: Standard
 Stamping: I.X.L. (inside the handle)
 Length: 9"
 Workmanship: Very Good
 Rarity: Rare
 Owner: Dave Johnson

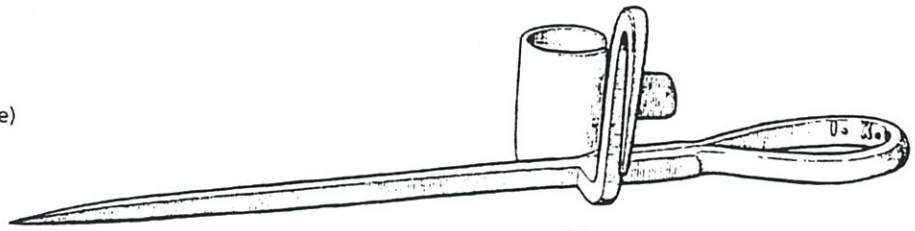


Fig. 1

Fig. 2
 Type: Standard
 Stamping: None
 Length: 12"
 Workmanship: Very Good
 Rarity: Uncommon
 Owner: Nancy Hyatt

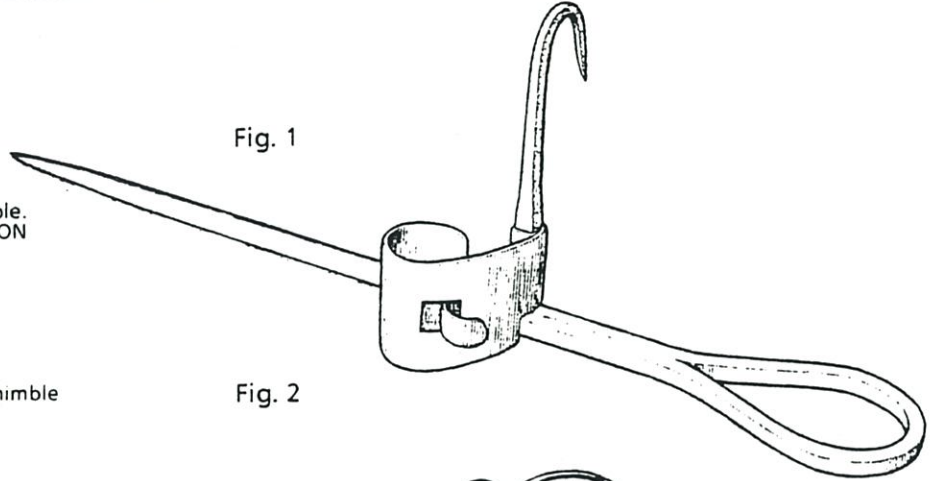


Fig. 2

Fig. 3
 Type: Detachable
 Stamping: PAT PEND on thimble. Some stamped HUSSON on back of handle.
 Length: 9"
 Workmanship: Very Good
 Rarity: Rare
 Owner: Norm Wagner

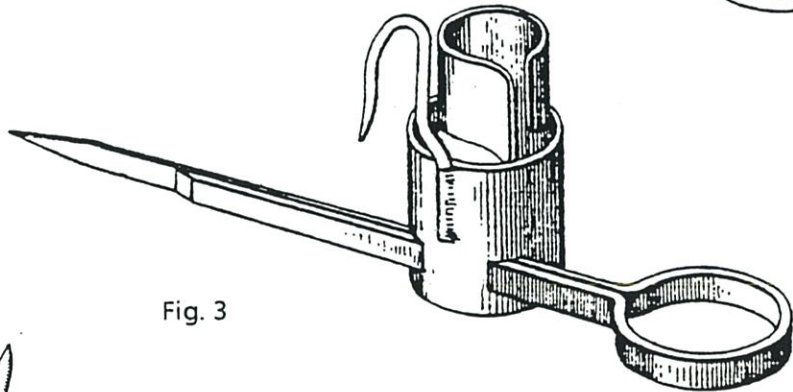


Fig. 3

Fig. 4
 Type: Wire with sheet steel thimble
 Stamping: None
 Length: 8"
 Workmanship: Very Good
 Rarity: Uncommon
 Owner: Phil Casdorff

Fig. 5
 Type: Wire with sheet steel thimble
 Stamping: None
 Length: 12"
 Workmanship: Very Good
 Rarity: Uncommon
 Owner: Randy Marcotte

Fig. 6
 Type: Wire with sheet steel thimble
 Stamping: None
 Length: 8"
 Workmanship: Very Good
 Rarity: Uncommon
 Owner: Ted Bobrink

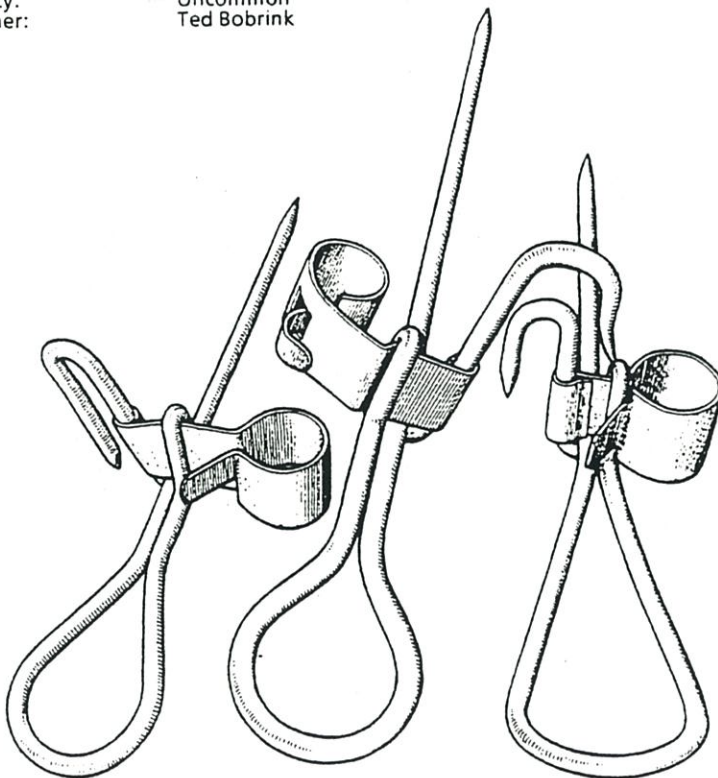
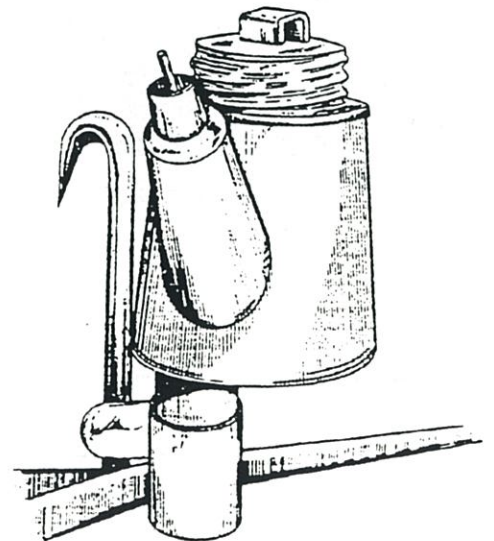


Fig. 4

Fig. 5

Fig. 6



The Peg Lamp

The Varney Clean Cut Revisted

by Tim Callaway

At a recent book show in Sacramento, CA, I picked up an old hardware catalog marked:


General Catalogue
No. 72
Dunham Carrigan & Hayden Co.
San Francisco New York
Since 1849

The catalog is circa 1922 and contains many interesting mining items. This company carried a complete hardware line marked "Clean Cut." As you can see by the illustrated ads from pages 743 (Fig. 1) and 293 (Fig. 2), the candle stick they marketed as a Clean Cut matches the Varney style Clean Cut perfectly.

Although you cannot distinguish the stamping on the stick in the ad, you can see that their trade mark stamping from page 293 matches the stamping on the Clean Cut candlestick in *A Collector's Guide to Antique Miners' Candlesticks*, Wilson/Bohrink, page 44 (Fig. 3). This, coupled with the previous article by Tony Moon (MAC, Issue 5, Fall 1989), should end any speculation about the origin of the Clean Cut candlestick with the clover leaf design.

MINERS' CANDLESTICKS

CLEAN CUT



NOS. 10 AND 12


Denver pattern. Hand made from 1/4 in. octagon tool steel.
Fully warranted.

No.	Length	Wt. per doz.	Per doz.
10	10 in.	4 lbs.	\$8.00
12	12 in.	4 1/2 lbs.	8.00

Fig. 1

SCYTHES


BUSH



CLEAN CUT
TRADE MARK

NOS. 10 AND 30

BRAMBLE OR WEED



No. 252

Hand forged, crucible steel laid blade, rustless black finish, ground sharp. Fully warranted.

No.	Wt. per doz.	Per doz.
252	37 lbs.	\$27.00

One-half dozen in burlap. Assorted 24 to 26, 26 to 28 and 28 to 32 in. long.

Fig. 2



Mining Candles

by Ted Bobrink

In the last six editions of the MAC, I have written about all the mining candle manufacturers that I know about. Until I receive new information, I am only going to do articles on candle boxes or box ends that I know of, but have no information on the companies or their candles.

Illustrated below are two candle boxes found by Andy Martin while exploring abandoned mines in Nevada. They both have their writing stamped into the wood and are considered to be very early (pre - 1900). If anyone can offer any information on these two companies or any other mining candle manufacturers, please contact me so we can continue to share this valuable information in the MAC.



Anton Oil Wick Lamps

by Bill Spence

The Antons of Monongahela, Pennsylvania were the premier wick lamp makers in the United States. Around 1874 brothers George, John, and Christopher each set up a workshop to manufacture wick lamps for local coal miners. Subsequently George and John combined their operations, marketing their lamps worldwide under the George Anton name. The STAR brand lamp, first sold in 1898, was undoubtedly the best selling mine lamp of its time, owing probably to its quality construction and attractive logo. The STAR brand is the single most commonly found wick lamp today. In 1905 George Anton withdrew from active participation in the business, and the firm's name changed to J. Anton & Son. That son's name was George T. Anton, and after his father's retirement the company name changed again to Geo. T. Anton & Bros. Although the two younger brothers tried to make the conversion to carbide lamps, the business could not survive the demise of the wick lamps, and it closed in 1918.

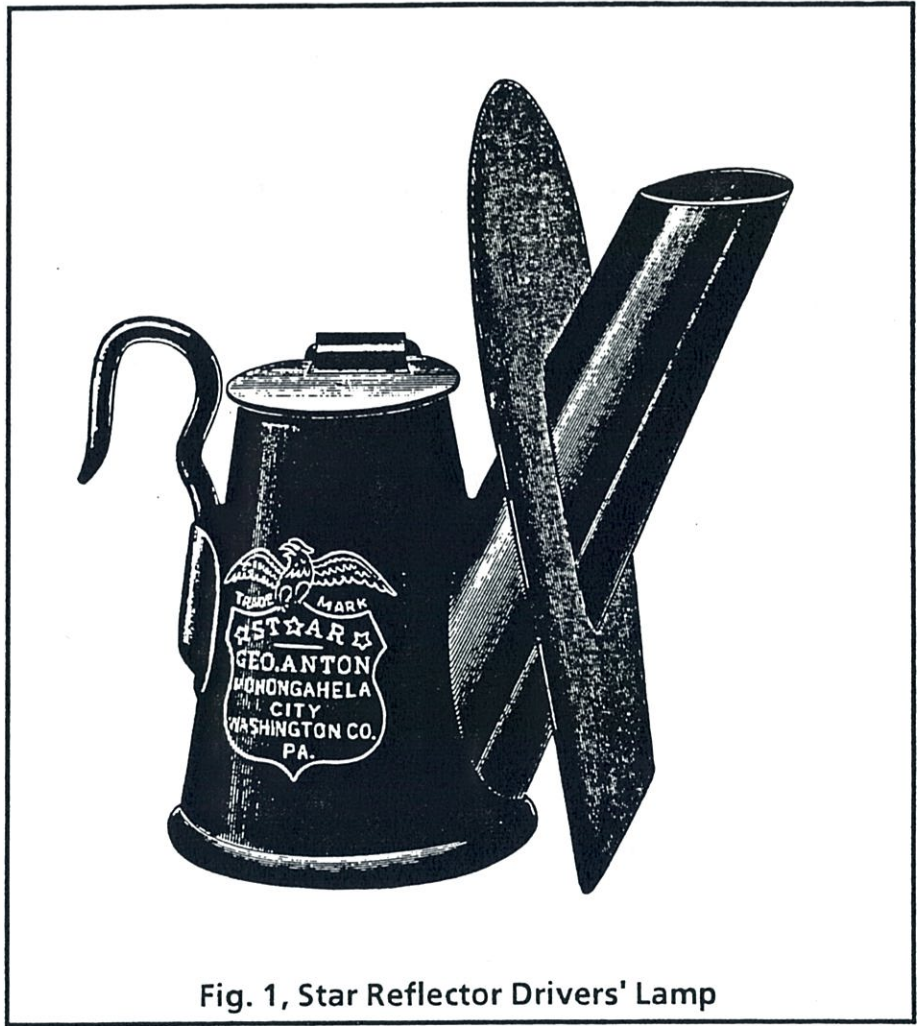


Fig. 1, Star Reflector Drivers' Lamp

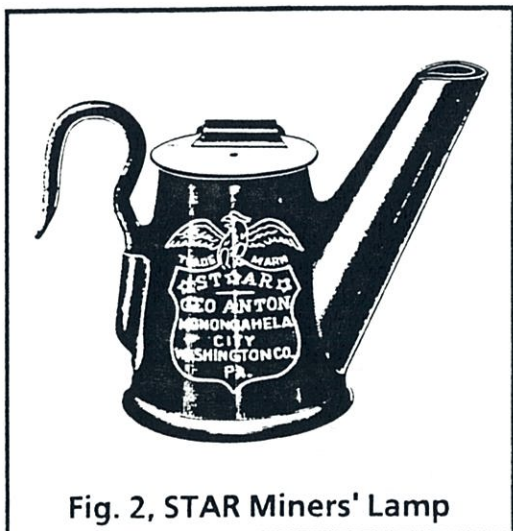


Fig. 2, STAR Miners' Lamp

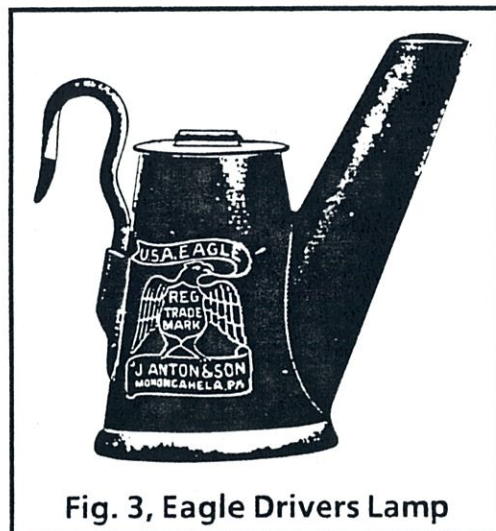


Fig. 3, Eagle Drivers Lamp

As common as the Anton oil lamps are, they are very much sought after for their attractive stampings. There are also a number of varieties that are quite unique and rare.

The most common types of Anton oil wick lamp found today are the face and drivers lamps illustrated in Fig. 2 and Fig. 3. A fair number of brass Antons were manufactured and they seem to be most commonly found in the "dome" style (Fig. 6), but with the Eagle logo stamped on the front of the spout. The Globe logo (Fig. 4) tends to be somewhat more rare and will more likely be found in the drivers size.

Any unique feature on an oil lamp makes it much more desirable. The screw top lid (Fig. 5) is a very rare feature on Anton oil wick lamps.

Antons with reflectors (Fig. 1) are very rare as are any oil lamps with reflectors. The rarity is likely due to the extra cost and the substantial added weight making it cumbersome in the low workings of a coal mine.

There are a number of other varieties of stampings and styles of Anton oil wick lamps that are not covered in this article, including the magnificent Statue of Liberty lamp that will be featured in a separate article in the near future.



Fig. 4, Globe Brass Top Drivers' Lamp

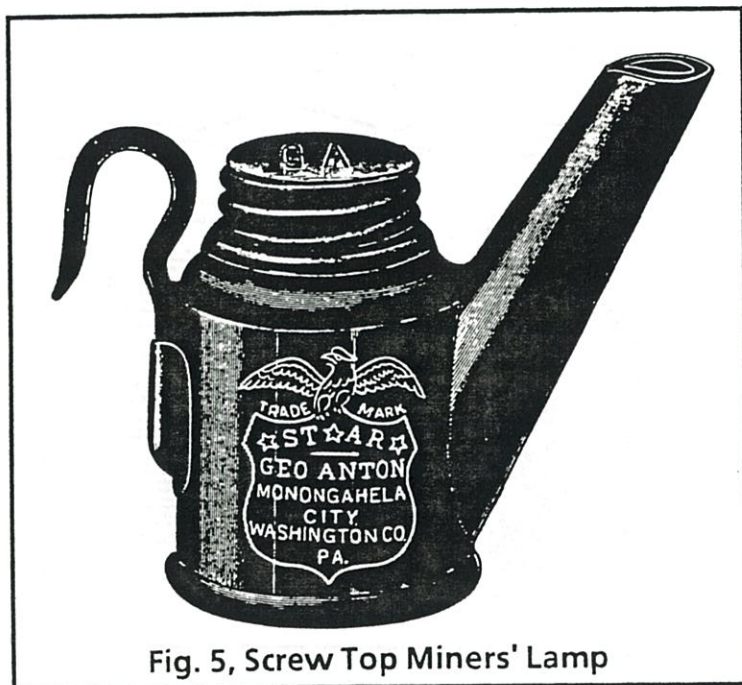


Fig. 5, Screw Top Miners' Lamp

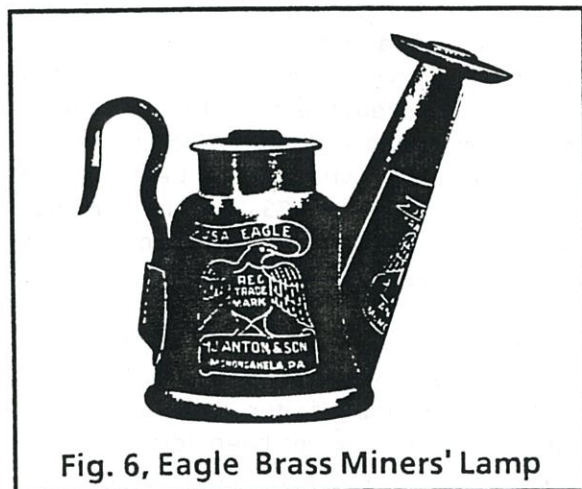


Fig. 6, Eagle Brass Miners' Lamp

Reference: Catalogue of the Star, Globe, and Eagle Miner's and Drivers' Lamps. Reprint of original catalog by Bill Spence, 1987.

Blasting Galvanometers

by Mark Bohannon

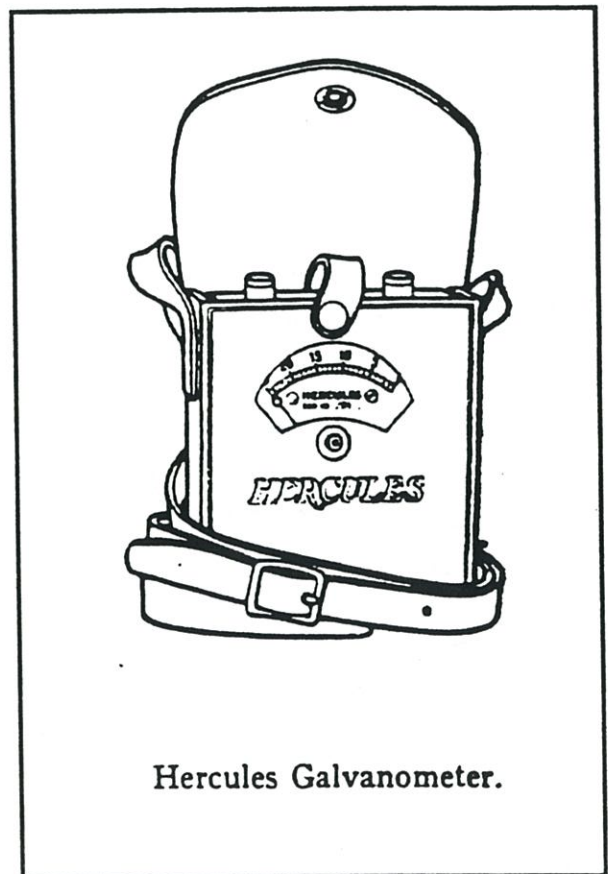
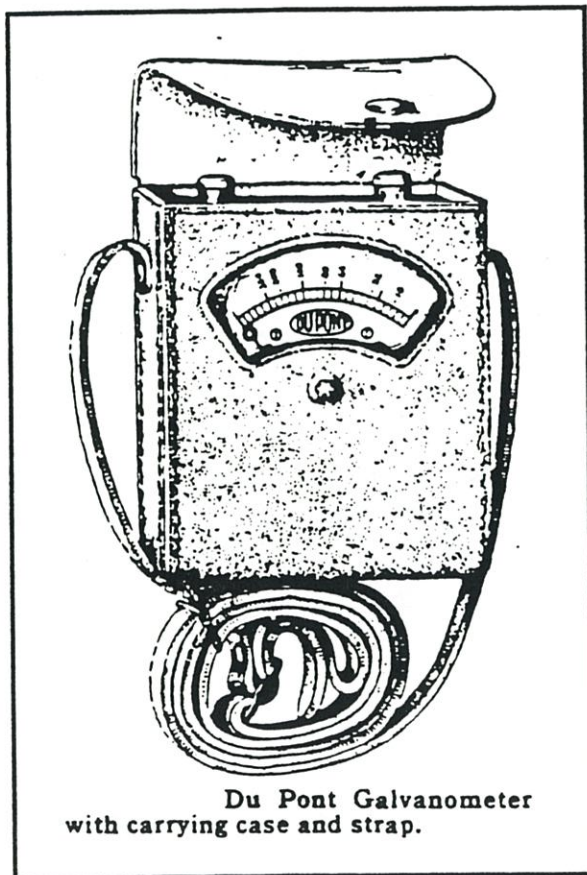
The galvanometer is an instrument used by powdermen to test electrical blasting caps and blasting circuits to determine whether or not the blasting circuit is "closed" and in the proper condition for the blast. A blasting circuit may be defective by being "open" or have a short circuit in which case the circuit is defective. Galvanometers are also used to determine the approximate resistance of a circuit.

The galvanometer consists of a silver chloride battery and meter contained in a case usually made of Bakelite and metal with two contact posts. This is in turn contained in a leather carrying case with a strap and measures about 3" x 4" x 2" deep. The small silver chloride dry cell battery furnishes the very weak current that is necessary to move the meter pointer across the graduated scale. The current sent through an electrical blasting cap from this battery during a test is less than one-tenth the strength required to explode it.

To make a test, the blaster touches the two ends of the wires of a cap or series of caps to the two contact posts on the galvanometer. If there is a closed circuit, the needle will immediately move over the scale. If there is a break or a bad cap, the meter needle will not move.

To test the strength of the battery, a short piece of copper wire is placed between the two contact posts. The wire having virtually no resistance, will cause the meter needle to move to its limit. If it doesn't, the battery is weak and should be replaced.

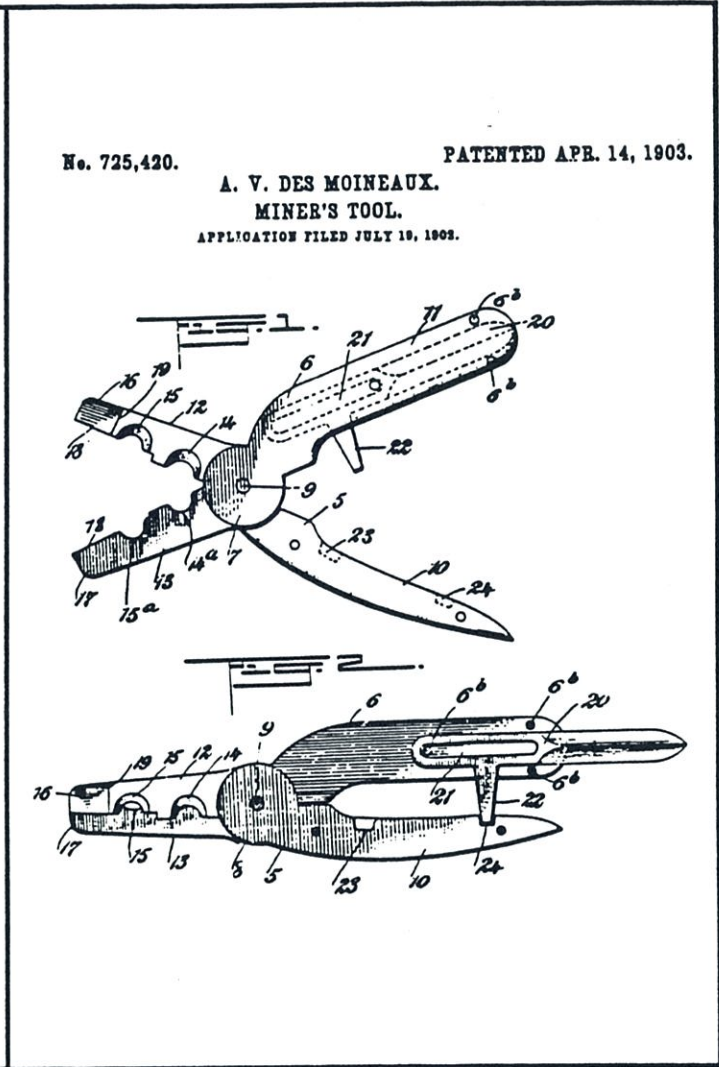
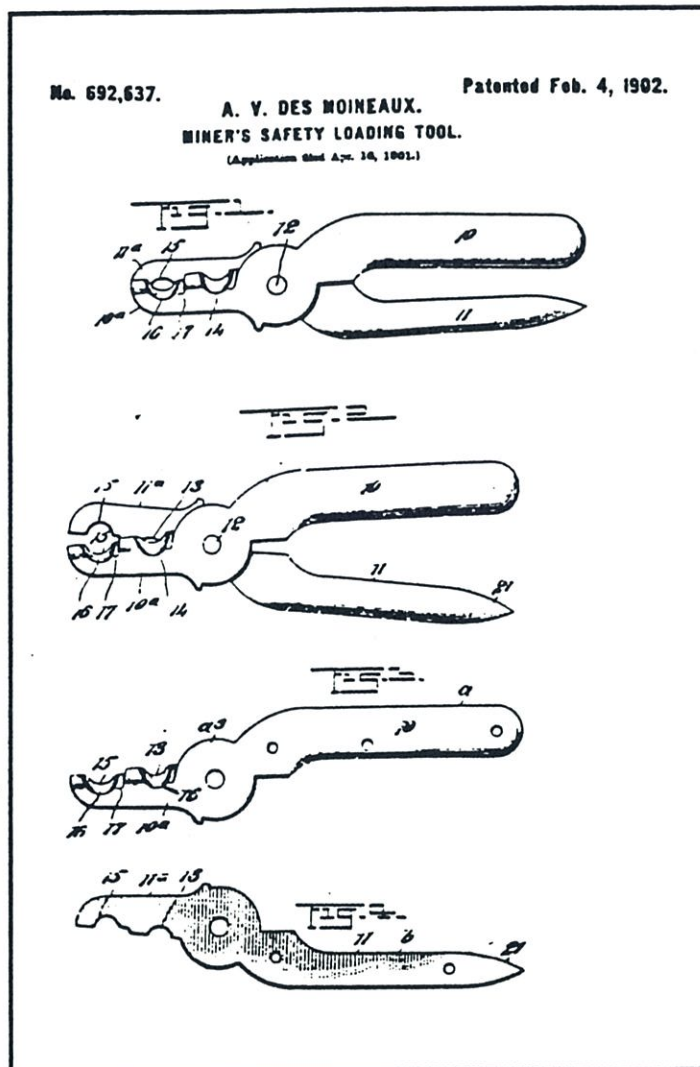
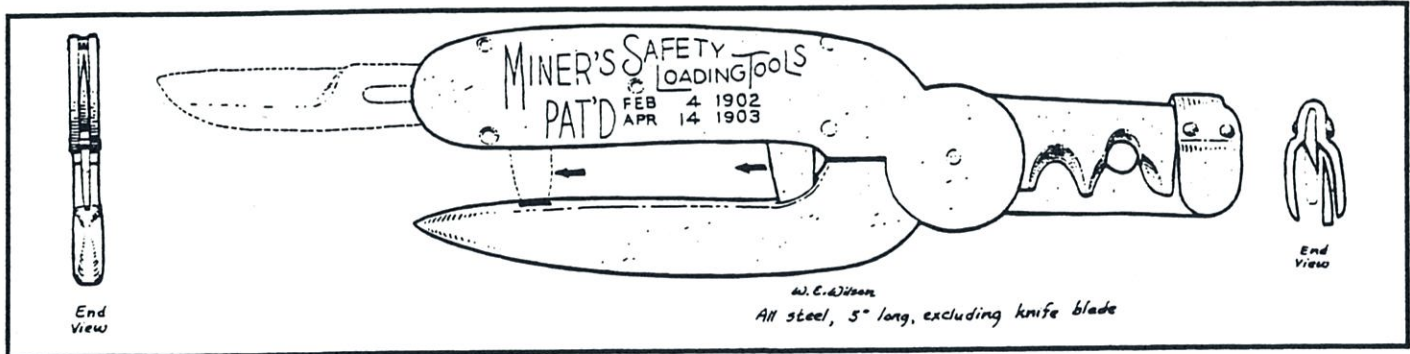
Blasting galvanometers, like most other blasting accessories, were sold by most major powder companies. Many have a brass tag on the outside leather case with the powder company's name.



Patented Cap Crimpers

by Mark Bohannan

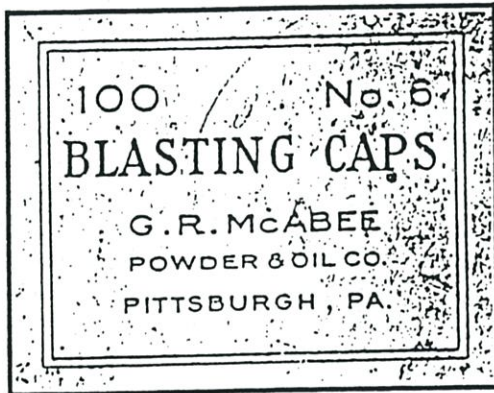
The very nicely crafted cap crimper was patented by Alfred Victor Des Moineaux of Silverplume, Colorado. Shown below are the two patents that cover this crimper along with a drawing of the actual crimper in John Coon's collection. The drawing is by Wendell Wilson. I extend my appreciation to both John and Wendell.



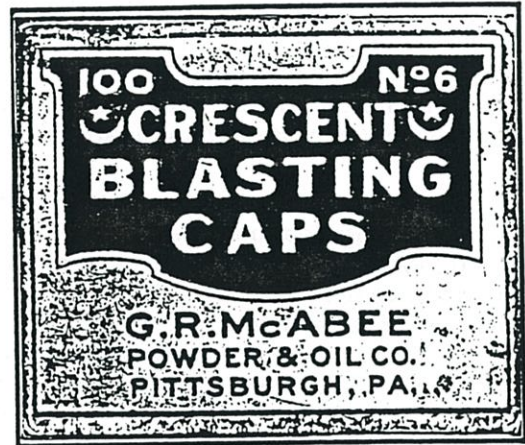
The George R. McAbee Powder and Oil Company Blasting Cap Tins

by Mark Bohannan

The George R. McAbee Powder and Oil Company was one of the many powder companies that G. R. McAbee either organized or was associated with. It was incorporated on November 17, 1904, in Pennsylvania to replace the business of the Crescent Powder Company which he had started in 1902, but was destroyed by a disastrous explosion on May 4, 1904. This new plant manufactured all the usual grades of dynamite including permissible powders for the local coal mines. In 1922, the Atlas Powder Company acquired the plant and operated it for about two years.



Metallic red with black letters.
No printing on sides or ends.
(Ted Bobrink collection)



Red orange and reddish brown
(Wendell Wilson collection)



The Consumers Powder Company

by Mark Bohannan

Very little seems to be known about the Consumers Powder Company. In 1882, the name of the company was changed from the Mutual Manufacturing Company to the Consumers Powder Company. It was bought out by DuPont in 1903. Shown to the right is a safety fuse wrapper from this company. The wrapper was found by Mark Parker in one of the mines of the Rand district near Randsburg, California. The wrapper is printed in red.



The Bunker Hill Mine by Bob Weldin

The discovery and development of silver-lead mines in the Coeur d'Alene district of Idaho began in 1882. The district quickly became Idaho's most important mining area; it rivaled Colorado's richest strikes and became one of the world's major silver strikes, even greater than the Comstock Lode in Nevada. Of the Coeur d'Alene mines, one of the most famous and for years the country's leading lead-silver producer, was the Bunker Hill and Sullivan Mine.

Historians credit Noah Kellogg with the initial discovery of the Bunker Hill claims in 1885. By 1887, the Bunker Hill and Sullivan Mining and Concentrating Company was formed. The Bunker Hill was named after the Revolutionary War battle of the same name and apparently the Sullivan after the world heavyweight boxing champion of that era. However, one of the early claim stakers was also named Sullivan. The name was shortened to Bunker Hill Company in 1956. By this time, Bunker Hill Company had outgrown its singular mining and concentrating image and had established itself as a world-class mining corporation. It built a lead smelter in 1917, an electrolytic zinc plant in 1928, acquired other mines, both inside and outside the Coeur d'Alene districts, and in general had acquired recognition if not financial interests throughout the world mining community.

The Bunker Hill mine, alone, was the largest in the state until it closed in late 1981. During its prime, the company employed 2,100 Kellogg, Idaho residents, 400 of whom worked in the Bunker Hill mine. At its peak the mine produced 2,300 short tons of ore per day, and contained more than 130 miles of underground workings, ranging from 3,600 feet above sea level to 2,000 feet below sea level. On an annual basis, the lead smelter was producing 125,000 short tons of refined lead (about 16% of the U.S. total), the zinc plant 100,000 short tons of zinc (about 14% of the U.S. total), the silver refinery about 12,000,000 troy ounces of 99.99% pure silver, 3,000 troy ounces of gold and the cadmium plant was producing 360 short tons of refined cadmium. Through 1980, the Bunker Hill mine produced over 35,000,000 tons of ore containing 3,099,878 tons of lead, 160,265,792 ounces of silver and 1,289,858 tons of zinc -- truly a world-class metal producer.

The Coeur d'Alene district and the Bunker Hill Company did not escape hard times. They suffered as well as other mining communities during the 1893 financial panic, and by that time the unions had gained control of all but the largest mine in the district, the Bunker Hill and Sullivan. The company had agreed to raise wages to union scale but refused to recognize the union. As a result, on April 29, 1899, a large group of union members seized a train, loaded it with dynamite, and blew up the Bunker Hill and Sullivan concentrator. The U.S. Army was called in to restore order and union members were denied employment anywhere in the area. Some of those responsible for dynamiting the concentrator were sent to the penitentiary and by the time the troops were withdrawn in April of 1901, the Western Federation of Miners Union was broken. With the exception of the great depression and occasional slumps in the metal prices, the Coeur d'Alene district prospered better than most, until recently.

The Bunker Hill mine and complex were closed in October 1981, reportedly because of a combination of factors: low metal prices high labor costs, lack of concentrates to feed the mill and smelter, and the high cost of compliance to environmental laws. According to the Idaho Statesman, January 28, 1990 (and other newspaper articles), environmental factors were the major reason for the shut down. As the story goes, a fire broke out in the smelter baghouse (used for air filtering) in 1974 allowing lead emission to go out into the atmosphere. Rather than going to the expense of repair and replacement, company officials allegedly continued to operate the smelter. Depending on the account one reads, the equivalent of 11 to 20 years of lead emissions came out of the stack within a year. Children living in the area contracted lead poisoning while deposits of lead, arsenic, and cadmium fouled the soil and water of Silver Valley. EPA officials have designated a 21 square mile area around the complex as a Superfund Site. To date, nearly \$20 million has reportedly been spent on the clean up.

The environmental nightmare is not over for the good people of Kellogg, Idaho, but their economic situation continues to improve along with a cleaner environment. The Bunker Hill mine, under a new limited partnership was back in production at a much reduced rate in September 1988. Reportedly 137 men were working the mine with a current production goal of 1,000 tons of ore per day and a near future projected goal of 2,000 tons per day. Other major mines in the Coeur d'Alene district have learned to adapt to the fluctuating price of silver and increasing costs associated with operating the deepest mines in the U.S.

Don't shed too many tears for these hardy hardrock miners and their descendants -- they're a resilient lot who have learned not to depend totally on mining for their livelihood. Residents of the Silver Valley are capitalizing on tourism by taking advantage of their beautiful mountainous surroundings. To supplement the area's economy

with tourism, Kellogg's City Council is leading a drive to build a \$12 million, three-mile aerial tramway to link the city (refurbished as an alpine village) with the Silverhorn Ski Area. The gondola ride should provide an excellent panoramic view of the old Bunker Hill Holdings, including the site where Noah Kellogg staked the first Bunker Hill and Sullivan claims more than 100 years ago. Half of the money to build the gondola is provided by Federal grant, the other half will come from private capital -- want to buy stock?

No. 900 INCORPORATED JULY 29TH, 1887. 1 Shares

Bunker Hill and Sullivan Mining and Concentrating Co.

OF PORTLAND, OREGON.



Capital Stock, \$3,000,000. Shares, \$10.00 Each.

This is to Certify, That J. Cameron is entitled to One 1 Share fully paid and free from assessments, in the Capital Stock of the

Bunker Hill and Sullivan Mining and Concentrating Company,

transferable on the books of the Company, in person or by attorney, upon surrender of this Certificate, and subject to the By-Laws of the Company Witness our hands, and the Corporate Seal of the Company, at Portland, San Francisco, California, this twentieth day of July 29 1907.

A.B.S. Secretary. F.W. Bradley President.

KL 7035

THE BUNKER HILL COMPANY

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE


THIS CERTIFICATE IS TRANSFERABLE IN KELLOGO, IDAHO OR IN NEW YORK CITY

is the number of

SEE REVERSE FOR CERTAIN DEFINITIONS

FULLY PAID AND NON-ASSESSABLE SHARES OF THE PAR VALUE OF \$200 EACH OF THE COMMON STOCK OF THE BUNKER HILL COMPANY, transferable on the books of the Corporation in person or by duly authorized attorney upon surrender of this Certificate properly indorsed. This Certificate shall not be valid until countersigned by the Transfer Agent and registered by the Registrar. Within the premises and of the Corporation and the premises signatures of its duly authorized officers.

Harry L. Van Eschen Secretary
C. E. Schwab President



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Mine Bell Signs

by Ted Bobrink

Brian Ross of Grass Valley, California, recently came up with this porcelain mine bell sign from New York. The sign is white with black lettering, is 31" long and 12" wide. At the top, the sign reads "Republic Steel Corporation, Adirondack Ore Mines, Mineville, N.Y."

One of the most interesting features of this sign is that there are no level codes, just an extensive amount of unusual codes, ranging from handling explosives (3 bells, four times) to locating new marks (11 bells). What exactly is "locating a new mark?"

As unique as this sign was, I was very curious to find out what I could about Mineville, N.Y. and if possible, something about the Adirondack Ore Mines. I will have to admit I didn't even know there were underground ore mines in New York, so after making several phone calls to fellow collectors on the east coast, I located Mark DeLawyer of Syracuse, NY. Mark specializes in the history of mining in New York state and is currently writing a book on the subject. Mark graciously offered to do an article on the Republic Steel Corporation and its Adirondack mines. The article appears on the next page.

REPUBLIC STEEL CORPORATION ADIRONDACK ORE MINES MINEVILLE, N. Y.

HOISTING SIGNALS

ALL SIGNALS EXCEPT STOP BELLS TO BE REPEATED

WHEN A SIGNAL IS GIVEN TO THE HOISTMAN, HE SHALL ANSWER THE SIGNAL AND WAIT UNTIL HE HAS RECEIVED THE SIGNAL THE SECOND TIME BEFORE MOVING THE CAGE OR SKIP. HE SHALL AT NO TIME REPEAT ANY SIGNAL UNTIL HE IS READY TO OPERATE THE HOIST.

1 BELL — HOIST
2 BELLS — LOWER
3 BELLS — PRECEDING 1 OR 2 BELLS — MEN ON, RUN SLOW
1 BELL — WHILE IN MOTION — EMERGENCY STOP

WHEN THE CAGE OR SKIP STOPS AT A STATION, THE HOISTMAN SHALL SIGNAL 3 BELLS, DO NOT ENTER OR LEAVE THE CAGE OR SKIP UNTIL THIS 3 BELL SIGNAL HAS BEEN RECEIVED.

WHEN NECESSARY TO STOP CAGE OR SKIP AT A STATION, SIGNAL 3 BELLS AS THE CAGE OR SKIP APPROACHES THE STATION.

HOISTING OR LOWERING MEN

3 BELLS — 1 BELL — HOIST FROM ANY STATION TO TOP OF SLOPE
3 BELLS — 2 BELLS — LOWER FROM ANY STATION TO BOTTOM STATION

INTERMEDIATE LEVELS

3 BELLS — LEVEL SIGNAL — REGULAR SIGNAL TO HOIST OR LOWER
IN NO CASE SHALL THE HOISTMAN HOIST OR LOWER MEN WITH A LOADED SKIP ABOVE THEM.

HANDLE MATERIAL — SERVICE SKIPS

4 — 3 BELLS — READY 3 — 3 — 1 BELLS — HOIST SLOWLY
3 — 3 — 2 BELLS — LOWER SLOWLY 4 — 4 BELLS — FINISHED
HOISTMAN MUST NOT MOVE CAGE OR SKIP ON ANY SIGNAL OTHER THAN 3 — 3 — 1 BELLS OR 3 — 3 — 2 BELLS AFTER HE HAS RECEIVED 4 — 3 BELLS, UNTIL HE HAS RECEIVED 4 — 4 BELLS, MOVE VERY SLOWLY ON THESE SIGNALS.

HANDLING EXPLOSIVES

3 BELLS — FOUR (4) TIMES IN SUCCESSION FOLLOWED BY LEVEL SIGNAL WHERE EXPLOSIVES ARE GOING AND REGULAR SIGNAL TO HOIST OR LOWER.
IN NO CASE SHALL MEN RIDE WITH EXPLOSIVES.

CHANGING CAGES AND SKIPS

3 — 1 — 3 BELLS — READY TO CHANGE 3 — 3 — 1 BELLS — HOIST
3 — 3 — 2 BELLS — LOWER 1 BELL — STOP
3 — 2 — 3 BELLS — CHANGED

LOCATING NEW MARKS

11 BELLS

AFTER CAGE OR SKIP HAS BEEN STOPPED AT PROPER LOCATION, SIGNAL 11 BELLS.

LOCATING CAGE OR SKIP

ALWAYS CALL HOISTMAN ON THE TELEPHONE.
TELL HIM WHERE YOU ARE AND WHERE YOU WANT TO GO.
IF TELEPHONE IS OUT OF ORDER, SIGNAL 10 BELLS FOLLOWED BY THE LEVEL SIGNAL WHERE CAGE OR SKIP IS WANTED.

ACCIDENT SIGNAL

5 BELLS — THREE (3) TIMES IN SUCCESSION
REPEAT UNTIL ANSWERED BY HOISTMAN, THEN RING LEVEL SIGNAL WHERE CAGE OR SKIP IS WANTED.

FOR ANY UNUSUAL CONDITION, ALWAYS NOTIFY THE HOISTMAN AND MAKE A SPECIAL SIGNAL.

NO ONE SHALL RIDE A LOADED ORE SKIP.

Adirondack Ore Division, Republic Steel Corporation

by Mark W. DeLawyer SME/AIME, Industrial Historian

The iron mining operations in the eastern and northeastern Adirondack Mountain range of New York known as the Adirondack Ore Division of Republic Steel Corp., started as a collection of individual small, but important mining operations taking early advantage of the extensive high-grade iron deposits of New York.

The deposits are essentially two in number. The first, known as the Chateaugay Bed and later known as the Lyon Mountain mines, is only of passing interest here, though the mine had a phenomenal output of very high grade ore which was known throughout the world as 'Chateaugay Iron.' It is rather the other ore bed which concerns us here.

The Mineville Deposits in the eastern section of the Adirondacks have been mined since pre-revolutionary time. Prior to the second world war they were developed by the Witherbee-Sherman company in partnership with Bethlehem Steel Corporation. The mines were well known as efficient, well designed iron ore producers.

With the advent of the thirties and the gathering of war clouds in Europe, the major steel producers scrambled to consolidate their ore holdings. Each firm putting its financial resources into the ore deposits they felt would yield the highest short-term return (due to the coming emergency) as well as the best long-term investment. Bethlehem left the New York mining area to operate other ore ventures and Republic Steel, a newcomer to New York's iron industry, purchased the controlling interest in Witherbee-Sherman, which had fallen on hard financial times. Republic began the actual operation and management of the Witherbee-Sherman properties in 1937.

The mining operations, while financially strapped, were by no means out of the running. Republic found itself with several fully developed mines in Mineville, Port Henry, Ironville, and elsewhere. The Witherbee-Sherman properties also included a fully equipped concentrating/sintering plant and extensive transportation facilities.

In 1939, Republic acquired the mining rights in the Chateaugay-Lyon Mt. region via a lease agreement with the Chateaugay Ore and Iron Company. The property contained extensive facilities including a sintering plant. During the war, both properties were developed with the help of the Defense Plan Corporation and the improvements leased back to Republic. At some point during the war, the operations were streamlined and the Chateaugay-Lyon Mt. and Witherbee-Sherman operations were consolidated to form the Adirondack Ore Division, Republic Steel Corporation.

After the war, the mines were operated by Republic, but as the depth of individual mines increased, and with it the operational costs involved in ore extraction, the firm turned towards the vast iron deposits of the Midwest. While the mines of Michigan and Minnesota contain lower grade ores than those found in New York, the ease of access (most NE New York mines were underground rather than strip mines), coupled with the fact that the major iron mines in New York all lie within the Adirondack State Park caused Republic to slowly phase out its Adirondack Operations beginning in the late 1960's.

First to close was the Lyon Mountain operation which shut down in 1967. The mine equipment was sold as were the great number of "company houses" which had been leased to mine employees. In 1971, the Mineville operation was shut down under the same circumstances. Both deposits still contain vast amounts of iron ore, but economic factors and transportation costs have made the mining of iron in New York largely a thing of the past.

There is one curious footnote to the story. Some time ago, a company specializing in rare earth metals (used in the electronics and aviation industries) determined that the tailing piles at the Mineville site contain considerable amounts of very rare metal ores. It is possible that in the future, a new operation may develop wherein the mine-waste is literally re-mined.

If nothing else, it proves the mining industry in New York may not be dead since to paraphrase the old adage, "Gold (as well as iron or anything else) is where you find it!"

References:

Republic Steel Co., Port Henry, NY, 1943 War Minerals Report 169, U.S. Bureau of Mines.

Iron Ore, T.P. Thayer et al, 1955 New York/New England Interagency Committee

Recollection of Some of the Highlights In the History of The Republic Steel Corporation, 1971, Thomas F. Patton, Chairman and CEO (retired)

Collectors Talk

Mark DeLawyer, whose article entitled **Adirondack Ore Division, Republic Steel Corporation**, appears on page 30 of this issue, included the following letter with his article. As mining historians are a treasure, please help Mark with his task.

History of Mining in New York State

I have recently begun the research needed to prepare the first written history of the mining industry in New York State. As my article implies, this is a long and complicated history involving many different commodities and nearly two hundred years of industrial progress.

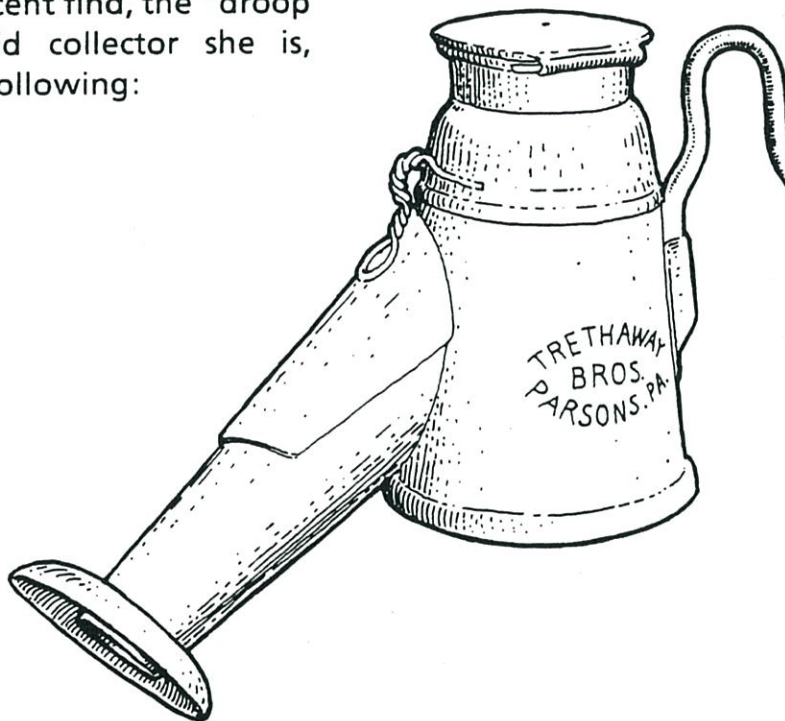
I'd appreciate hearing from anyone with any information on the mining industry in New York. Persons with background material, references, or memorabilia are also asked to please lend a hand in this important effort to document a largely unknown segment of America's mining lore and legends.

Mark W. DeLawyer
Industrial Historian
550 So. Clinton St.
Syracuse, NY 13202
(315) 422-3772



Avid readers will remember the unusual Blemus lamp featured in MAC Issue 3, Spring 1989. Ima Hokes of Goshen, Indiana, the owner of the Blemus, sent us some more remarkable information for our **April** issue. Shown to the right is an illustration of her recent find, the "droop snoot." Ms. Hokes, being the avid collector she is, researched the lamp and reports the following:

Very rare Trethaway "droop-snoot" oil-wick lamp, designed to prevent being extinguished by falling water. Patent refused. Aside from the problem that the oil tended to run out unless the wicking was packed very tightly, it failed to gain acceptance because any miner who used one was laughed out of the mine, having been made the butt of crude jokes. Nickname: "The Capon."



Larry Kuester of Yorba Linda, California sent copies of box labels that he found in a mine near the Tecopa, California area. The boxes are 5 1/2" x 7" x 2 1/2" deep. These boxes held one dozen replacement drill bits. The bits are screwed onto the end of the drill steel that miners use in their jackhammers to drill the holes for the dynamite.



Red lettering on white background

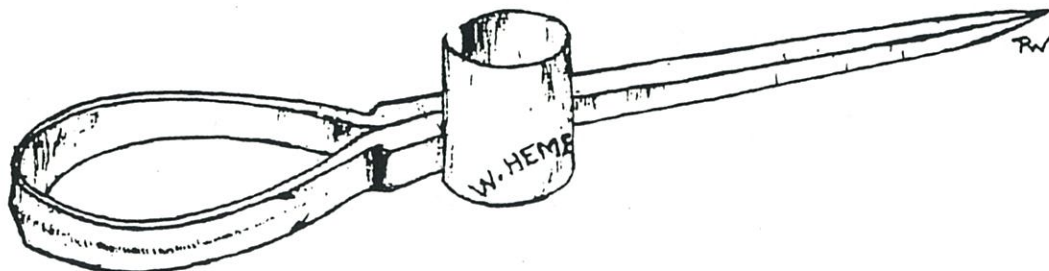


Green lettering on white background



Bob Werner of Green River, Wyoming sent us a nice drawing of a candlestick in his collection with the name "W. HEMENW" gang stamped into the thimble. Although the candlestick is simple in design and made without a hook, it is a classic example of a stick that often leads to the question: "Is the name that of the owner or the maker?" Because the candlestick is unique, there will always be a doubt until another example surfaces.

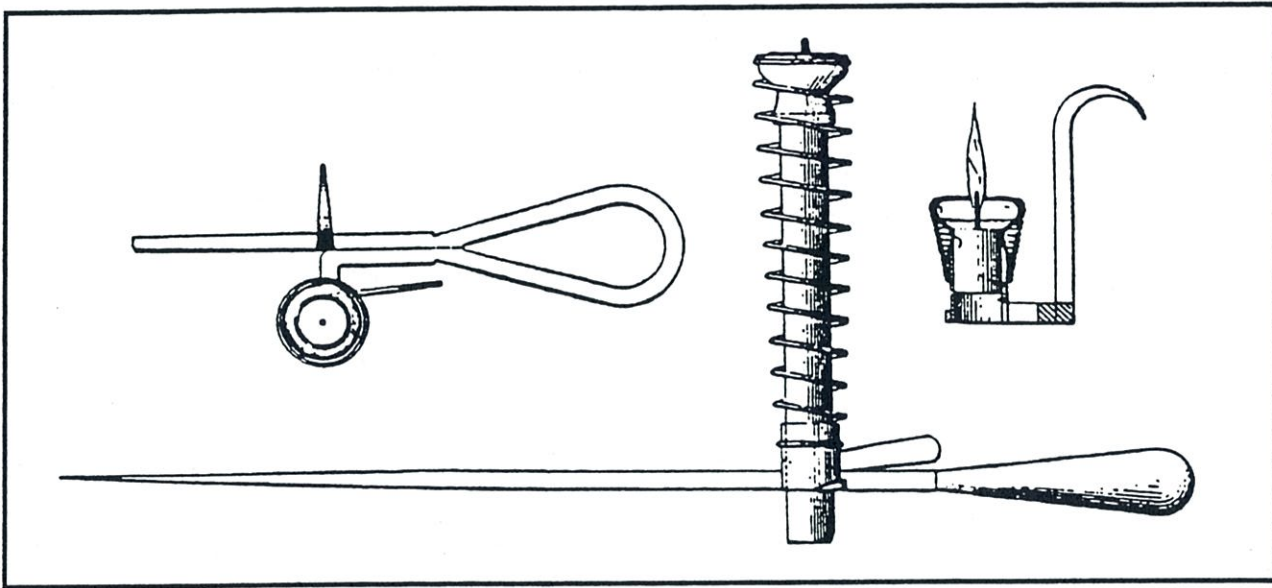
It is our belief that when the name is gang stamped in such a manner that it had to be done when the stick was being formed, it is most likely that of the maker. An example of this is the I.X.L. which is stamped on the inside of the handle (see page 18, this issue). The owner of a stick is more likely to have his name stamped onto the spike after it had been purchased.



Mark and Karen Vendl of LaGrange Park, IL sent us the underground mine photo featured on the inside of the front cover. The photo was taken by Lachlan McLean, a photographer who worked in the cities of Central City, Georgetown, and Idaho Springs, Colorado between 1876 and 1929. Underground mine photos are quite rare, and though the location of the photo and the name of the mine are unknown, it is interesting in that it is the only one we have seen with a clear shot of a Schneider candle box.



Hope Christiansen of Garden Grove, California sent in this patent drawing of an attachment for miners' candlesticks. The patent number 908,921 was granted to Sanford M. Thurman of Los Angeles, California on January 5, 1909. The device prevented the candle from dripping and thereby assured that the candle was entirely consumed. It also helped to protect the candle from breakage. Intriguing to say the least! If you have ever seen one of these devices, please let us know.



Herb Dick visited Len Gaska in early spring on his way back from the Tucson Gem and Mineral Show. Among his acquisitions was a very interesting powder flask, a sketch of which appears in Fig. 1. The flask is 12" high, 5 1/2" wide and appears to be made of wood or pressed cork. The very bottom is made of pressed paperboard and is embossed with the illustrated lettering. The stopper is missing from the flask.

Herb later sent an illustration of the bottom of a similar flask in the John Johnson collection. It is identical to Herb's flask, but does have different lettering on the bottom as shown in Fig. 2.

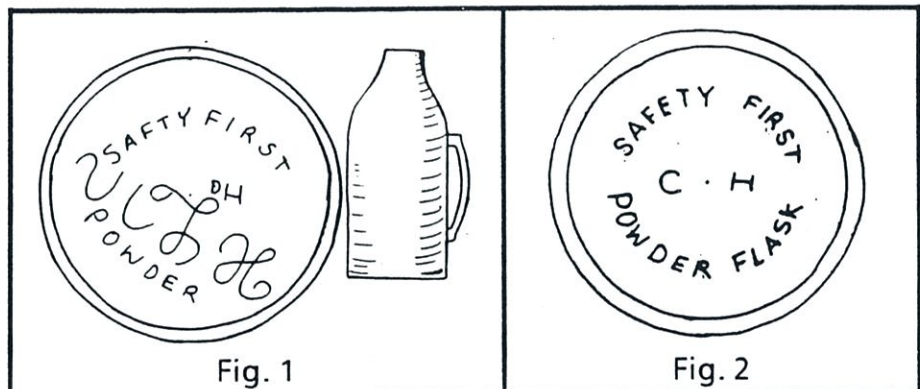


Fig. 1

Fig. 2

Sale and Trade Ads

For Sale or Trade: 7 different cap tins - \$30 to \$100. Blacksmith candlesticks - \$30 to \$150. Mining books - \$75 to \$150. Hard rock timber car - \$535. 3/4 ton ore car - \$425. Bull Frog, Nevada assayer sample bag - \$150. Also seeking fellow collectors to explore mines and caves. NSS #26249. Bob Schroth, PO Box 1258, Lake Arrowhead, CA 92353 (714) 337-7102

Trade, Sell, and Buy: Mining stock certificates. Send for free descriptive list of mining stock certificates for trade or sale. What do you have for sale or trade in non-coal issued pre-1920 mining stock certificates? Russell Filer, 13057 S. California St., Yucaipa, CA 92399. (714) 797-1650.

COLLECTOR OF MINER'S CARBIDE LAMPS



JAMES VAN FLEET
222 Market St.
Mifflinburg, PA 17844
(717) 966-3308

Note Jim Van Fleet's new address and phone number. Jim has a sales list available for the asking. There are carbides, oil wicks, safety lamps, and blasting cap tins available for sale or trade. Drop him a note or give him a call.

For Trade: Mining stock certificates from South Dakota and Montana. Some miscellaneous mining tools plus other odds and ends. Interested in trading for Justrite "Uncle Sam" reflector and bracket, carbides, candlesticks, stocks, etc. Bob Otto, 516 Miners Ave., Lead, SD 57754, (605) 584-1552

For Trade: Old (1900-1920) original engineering drawings of aerial tramway equipment. Wooden foundry patterns for old mining equipment. Pictures of old mining equipment and some catalogs and equipment name plates. Trade for lamps, candlesticks, mining equipment, catalogs, nameplates, or ?? Jim Cox, 7295 So. Xanthia St., Englewood, CO 80112

For Sale: Arizona Commercial Mining stock; 1920's, miner with drill vignettes, \$5.00 each. Phillip Zink, 7590 E. 52st. Lawrence, IN 46226

For Trade: Water vessel for wood bird cage, excellent condition. Cupel for gold assay from Haile Gold Mine, Lancaster Co. SC, lots of spare parts for Justrite and Auto-Lite lamps. Seeking cap, powder, and carbide tins. J. Roger Mitchell, 19 Eris Lane, Glen Riddle, PA 19037 (215) 891-0974

For Trade: Nevada mining stock certificates. Send S.A.S.E for list. Wm. J. Metscher, Box 664, Tonapah, NV 89049

Books: We buy and sell books, publications, and paper on mining, milling, mineralogy, prospecting, and geology. Please call or write if you have items for sale or if you want to receive bimonthly catalogs. Silia Pettem and Ed Raines, The Book Lode, 3060 15th Street, Boulder CO 80304 (303) 443-0714

Wanted: California gold rush memorabilia - "Miners Improved" and "Miners Companion" scales, pokes, belts and vests, boots, maps and photographs. Jeffrey R. Millet, PO Box 6506, Santa Ana, CA 92706 (714) 543-7255

For Sale or Trade: 25 candlesticks (Sholder, Montana, Ideal, Husson, etc.), safety lamps, carbide lamps, and paper items. Send SASE for list or call (317) 786-8667. I collect all mining related items. Dave Johnson, 6807 Homestead Dr., Indianapolis, IN 46227

For Trade: Hercules, Atlas, and Apache Powder dynamite boxes; National Carbide can; Auto-Lite carbide cap lamp; miner's lunch buckets, 1 aluminum, 1 enameled steel. Wanted: eastern or northwestern area dynamite boxes, blasting equipment, candlesticks, carbide lamps, or ?? Bob Allgood, PO Box 1368, Jamestown, CA 95327

Available: Scale collection. Assay balances, button balances, miners pocket scales, weight sets, lab equipment, specific gravity balances, lamps, tools, etc. J. Wayne Roberts, PO Box 558, Chino Valley, AZ 86323 (602) 636-2345

For Sale: An 1887 issue of 'Bunker Hill and Sullivan Mining and Concentrating Co.' stock certificate, signed by F. W. Bradley 1907, with smelter vignette; 1965 issue of 'The Bunker Hill Company' stock certificate signed by Charley Schwab, with a mine, mill, smelter, and two Spartan guardian vignettes; and a two page 1885-1990 history of the Bunker Hill Mining Company. \$25.00 postpaid for all three items. Bob Weldin, West 3015 Weile, Spokane, WA 99208, (508) 327-2897

For Trade: Safety lamps: Hughes Bros. Clanny, Hughes Bros. Davy. Carbides: brass Simmons, Np Sun-Ray, vertical Justrite, Np Wolf, Np horizontal Grier, brass Gee-Bee, Pathfinder. Oil wicks: C. George miniature, brass Crown surveyors. Blasting items: dated brass squib tin, brass cap crimpers, misc. cap tins. John Podgurski, 24 Hemlock Lane, Elysburg, PA 17824 (717) 672-9725

For Trade: Sure-Light cap lamp, unfired and complete. Cap lamp bases: Zar with lid, Lu-Mi-Num, Baldwin with lid. Oil wicks: UMWA, I. E. Swift, Magic City. Other: American Davy safety lamp, Sholder candlestick, Senior Conflow calendars 1, 2, 3, and 4. Jeff Shanks, 1351 Apple Blossom Drive, Yardley, PA 19067 (215) 493-1090

For Trade: Always available for trade: European safety lamps, carbide hand lamps, and oil lamps. Ask for details. Interested in American-made lamps. Manfred Stutzer, Madenburgstr. 6, 6700 Ludwigshafen 15, Westfalian, Germany

Antique mine lights for sale/trade

David H. Thorpe, P.O. Box 477, Peoria, AZ 85380-0477 phone: 602-978-4687 Prices on request

Cap lamps

Pioneer Excellent near mint condition, small size reflector

Pioneer Very good-excellent, few small dents, all original, small size reflector in perfect condition

Buddy Excellent, complete including wire cross-brace. Identical to lamp pictured on page 8 in MAC journal # 6.

Buddy Excellent. One side of wire brace missing. Refl. smaller than usual. Tank TA. Base BA (inset bottom).

Baldwin "Pinchwaist" with small flat push-on reflector. Excellent, complete. Small dent in waterdoor.

Baldwin "Pinchwaist" with deep dish push-on reflector. Excellent, complete. Small dent in waterdoor.

Justrite Vertical (early style) Excellent. Flat strip hat brace present. Orig. reflector w/ some denting.

Candlesticks ALL EXCELLENT CONDITION

Varney Styles: Varney 8" (Unused), Royal, Imperial, Denver, Varney 12", Triumph, Russel (unused), Unmarked,

Varney 10", L.A Sayer & Son, Sparkle, Cleancut (unused)

Name brands: Shoulder, Husson (round stock), Favorite, Montgomery Wards, "Crescent", Justrite Carbide Cap Lamp Stick ...& many blacksmith Sticks

Oilwick Trethaway (mint, brass dome), T. F. Leonard (excellent), Geo. Anton Star

Miscellaneous Justrite carbide flask (unused); Lukenheimer steam whistle 4" high from Magma mine

Wants **Reflectors:** Shanklin Metal Prod, The Buddy, Luminum (small), any set-screw reflectors **Bottoms:** Grier with tall knurling at bottom

Wanted: Mine surveying instruments of all types. Also, gimbaled plumb-bobs, assay related instruments and kits, early microscopes, and goniometers. Dale Beeks, Box 2515, Coeur d'Alene, ID 83814 (208) 667-0830

For Trade: Mining stock certificates for candleholders. Several Tom Reed Gold Mines Co. Will trade one for any style candleholder. Numerous other more common certificates. Send SASE. Fred M. Johnson, Box 2162, Durango, CO 81302

Free Service: If anyone has any black and white coal mining pictures they would like copied, they can send them to me by certified mail. I will copy them at no charge and return the original plus a copy. Jon S. Koenig, 205 South Main St., Fort Branch, IN 47648 (812) 753-4008

Wanted: Reflector and brace for 8 hour Uncle Sam, any condition. Water door for Copper Queen or Little Giant. Early Guy's Dropper square [Editors Note: six-sided (hexagonal) ??] bottom stamped "Manuf'd By Shanklin Mfg. Co., Springfield, Ill." John E. Neilsen, 33307 Willowtree Lane, Elsinore, CA 92330 (714) 674-4951

For Trade: Gold claims, ancient channel 240 acres, one 40 acre near Sierra City, CA. Also mining memorabilia, books, maps, old claim photo, crystals, etc. from California, Nevada, and Arizona. Trade for gold land, motorhome, truck, Cat, or ?? Jerry Wentling, 386 Navihopi Road, Sedona, AZ 86336 (602) 282-5433

Baskets Available (for rare carbide cap lamps)

New black neoprene, made to original specifications for:

- *Grier, (will fit Baldwin too)
- *Maple City, "Anthracite", and other Maple City lamps
- *Pathfinder

\$1.50 each postpaid (minimum order of 10)
Dave Thorpe, P.O. Box 477, Peoria AZ 85380-0477

For Sale and Trade: Copper Queen hand lamp and many other items available on my list. Drop me a note or call for a copy. Dick Sears, 4831 Vespucci Drive, Sierra Vista, AZ 85635 (602) 459-7528

For Trade: Many lamp parts, carbides, oil wicks, candleholders, and miscellaneous items on my list. Drop me a note or give me a call. Mike Puhl, 7907 Williamsburg Village Drive, Jackson, TN 38305 (901) 664-5403

Trade ads up to 80 words are free and encouraged. For-sale ads are only \$5 per issue or \$15 for four consecutive issues. Send ads to the editor: Len Gaska, 1688 E. Corson St., Pasadena, CA 91106. Continuing trade or sale ads should be resubmitted for guaranteed publication. We cannot guarantee publication of general "wanted" ads unless they are paid for at the same rate as for-sale ads.

**Ron Welch
Caves & Cliffs, Inc.**

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Lexington, Ky 40517
(606) 272-5535

The Following Are For Sale or Trade For Half-Shift Carbide Lamps:

- CHL106 Hine-Watt Columbia MDL C Belt Generator Cap Lamp, Complete, Unblemished
- CHL101 Carbide Hand Lamp, Wolf No. 856, Flat Top, No Reflector
- CHL 102 Carbide Hand Lamp, Dewar No. 11P, Complete
- CHL 107 Carbide Hand Lamp, ITP, Unfired, Boxed w/Accessories & Instructions
- PRT 102 1 Gross Box Justrite Lava Tips, No. 66 w/Air Holes, Box Contains 12 Individual Boxes of 12 Tips. Blue Ink on Tan Cardboard, DTD 1924, New

Package of Miscellaneous - A Great Starter Set! (Items will not be sold/traded Individually)

- MSC102 Koehler Safety Lamp
- MSC159 Miner's Soft Cap, "Coal King", 1906, New (but soiled)
- MSC 107 Miner's Basket, 4 Hooks, No Blemishes
- MSC104,5 & 6 3 Small Dynamite Boxes, Approximately 13" x 4" x 2.5
- MSC111 Oil/Water Canteen, Belt Loops, 3.6" Diameter, New
- MSC155 Oil Cap Lamp - Anton "Star"
- MSC110 Oil Flask, 7" High, Oval

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1 Large Triple Horn & 1 Small Triple Horn, Working, 2 Mile Range

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3-2-1 Bells General Danger and Fire Alarm

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1-1 Bells 1st Level	4-2 Bells 12th Level
1-2 2d	4-3 13th
1-3 3d	4-4 14th
1-4 4th	4-5 15th
1-5 5th	4-6 16th
1-6 6th	4-7 17th
1-7 7th	4-8 18th
1-8 8th	4-9 19th
1-9 9th	4-10 20th
1-10 10th	4-11 21st
1-11 11th	4-12 22nd
4-1 12th	4-13 23rd

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TO 1600

100 LEVEL

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All in excellent condition. Prices on request.

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6. **TO 1600** Red, black, and white 10 X 8 wood.
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MISCELLANEOUS

Just returned from a mine exploring trip from Arizona, Colorado, and New Mexico and have the following for sale.

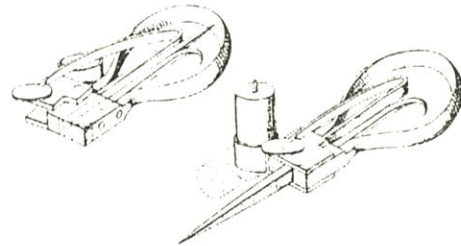
1. **MINERS'S DRILL SPOONS** 40 inches, make nice wall hangers _____ \$30.00
2. **SHAFT BUCKETS** from 18 inches to 3 feet all very nice _____ \$100.00 to \$200.00
3. **END DUMP ORE CARS** some with original tags all very nice _____ \$400.00 to \$600.00
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5. **JIM CROW RAIL BENDERS** for bending the small #18 rail _____ \$150.00

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CARBIDE CAP LAMPS

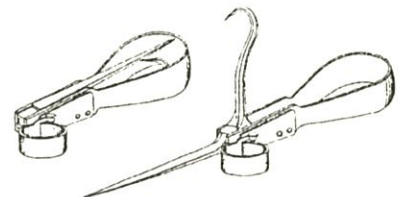
1. **GEM** Brass, complete, nice condition _____ \$350.00
2. **I.T.P** Float Feed, nickle, excellent _____ \$285.00
3. **ACME** Hand lamp very nice conditon _____ \$125.00

CANDLESTICKS

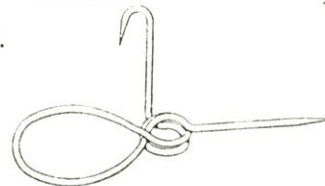


1. **HUME & TATE** Folder, Pat. Apr. 4, 1882 Leadville, Colo *best offer*

2. **RICE** Folder Pat. Mar. 29, 1881 Fairplay, Colo thimble repaired \$600.00



- 3.



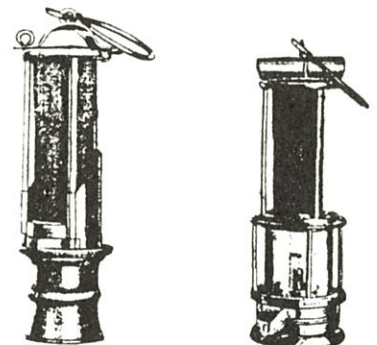
- NASH**
Pat. June 2, 1896
Georgetown, Colo
\$250.00



4. **VARNEYS** all nice, all stamped \$65.00 ea

SAFETY LAMPS

1. **HUGES BROS.** Clanny, excellent \$250.00
2. **AMERICAN** Davy flaired bottom excellent \$250.00
3. **QUEEN** Davy Fire Boss very nice \$400.00



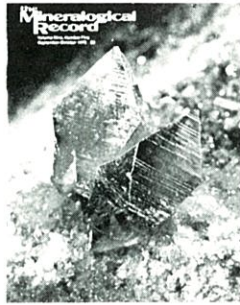
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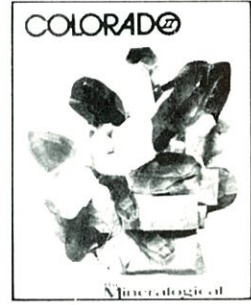
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Brazil, Bosch Coll. \$7



v.9/#5 Turkish Kämmererite,
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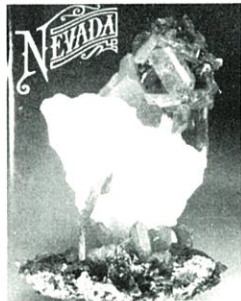
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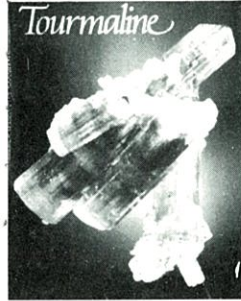
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Mineral Fraud, Leadhills-
Wanlockhead England \$7



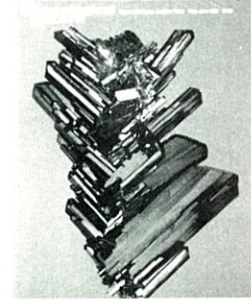
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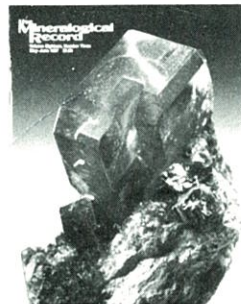
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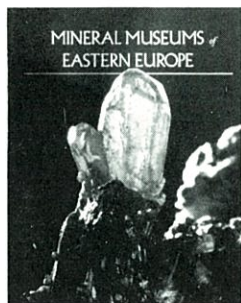
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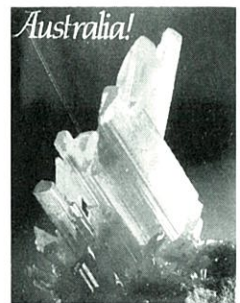
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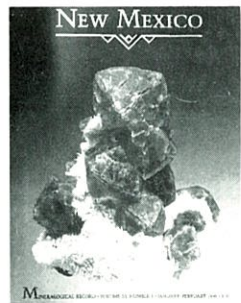
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