

'New' Acme Carbide Cap Lamp Discovered

by David J. Des Marais

As we wander through antique malls filled with dishes, dolls, toys, more dishes and other "collectibles", many of us wonder whether there really are any more rare mining lamps left "out there". The remarkable recent near-simultaneous discoveries in Kansas of eight really rare Acme lamps by Jim Talley and Larry Click assure us that, yes indeed, really rare artifacts are still to be found! Not only do the recent discoveries raise the total number of known Acmes from four to twelve, all of the newly-found lamps are unfired and all but one were found in their original boxes.

The Victor-Acme-Pathfinder Manufacturing Series

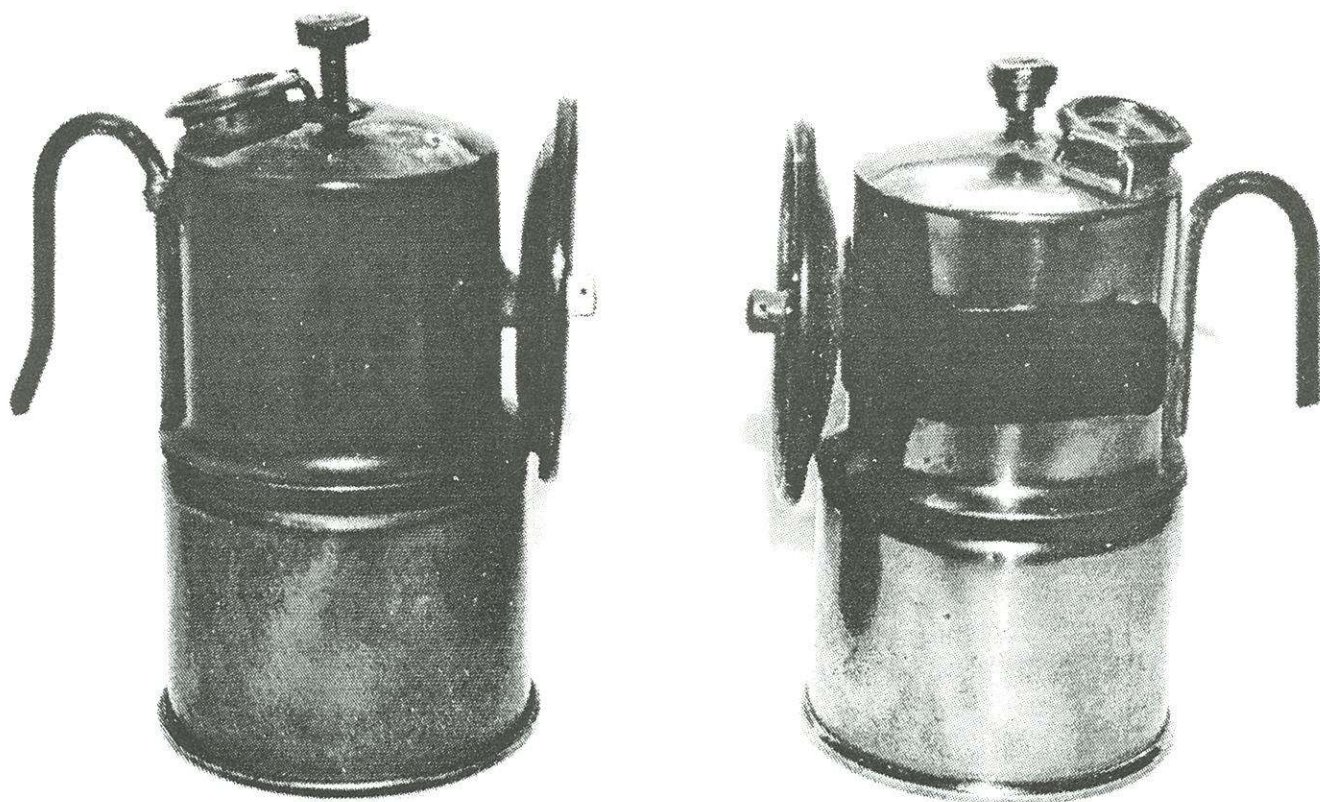
This recent discovery provides further evidence that the Acme carbide cap lamp is part of a lamp manufacturing series which includes the early (non-Justrite) Victor and the Hughes Brothers Pathfinder lamps.¹ Other examples of manufacturing series include the Drylight, Force Feed and Hansen lamps, and the Scranton and Scranto lamps. The Acme discoveries are particularly informative because, despite all of the mining equipment manufacturers that were documented to have existed in the Scranton, PA area, remarkably little is known about the makers of Scranton's carbide mining lamps.

In the absence of a printed historical record of the early Victor and Acme lamps, the best evidence of their origin lies in the details and dimensions of the lamps themselves. I have constructed a table which lists 20 features



(Above) Acme III cap lamp. This lamp is remarkably similar to the early and late Pathfinders and represents the "missing link" between them. It differs from the early Pathfinder in that its cap hook is soldered to the outside of the water tank, its reflector is smaller in diameter and it has a tighter roll on its edge and some other minor dimension changes. It differs from the late Pathfinder both in the size of the brass button located where the water feed enters the tank and in the reflector diameter and method of attachment. (Photo by David Des Marais).

about the style of construction and measured dimensions of the Acmes and Pathfinders. The newly-discovered Acme lamps are listed as "Acme III" in this table. Many of the lamps' features are visible in the accompanying photographs. Interestingly, the most substantial changes in lamp design in the Victor-Acme-Pathfinder series occurred within the evolution of the Acme lamps.

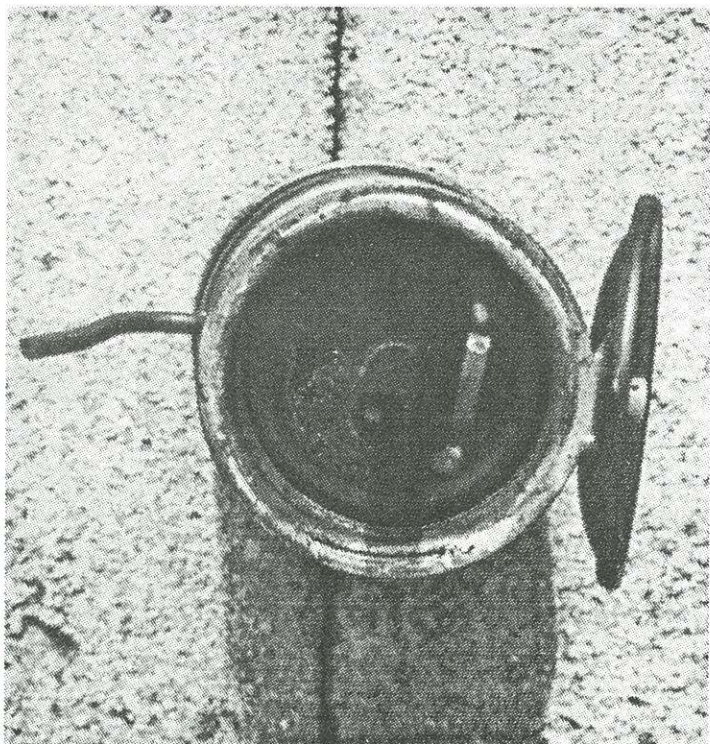


Acme III and late Pathfinder cap lamps. The late Pathfinder's reflector (clip-on attachment, variety of compositions and diameters, and striker) and it's (occasional) manufacturer's label are unique in the sequence. Otherwise, note its striking resemblance to the Acme III lamp.
Photo by David Des Marais.

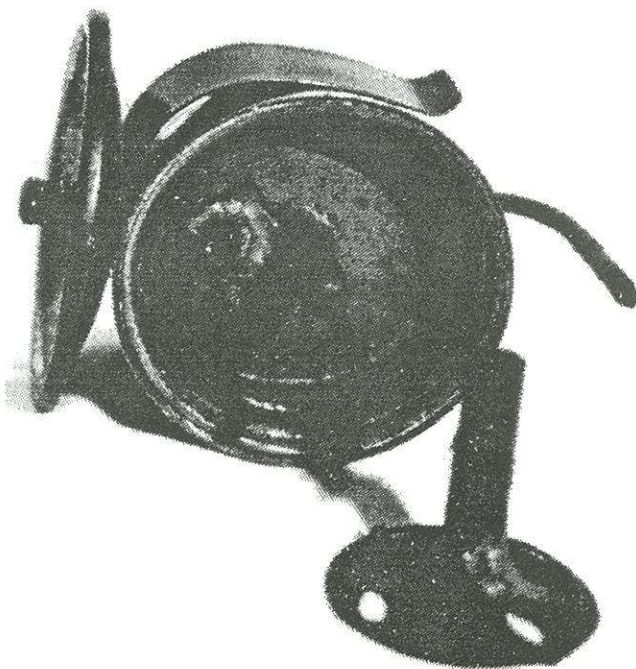
Water tank. The most substantial change in the water tank shell occurred when the Acme II was modified into the later designs. The main solder seam between the cylindrical tank shell and the threaded insert which forms the base of the water tank was moved from the side of the tank to the bottom where the seam contacts the rubber gasket. The cap hooks of the Victor, Acme I and Acme II and early Pathfinder are identical; they have the same wire diameter and hook shape, and they all penetrate the water tank. However, the hook of the newly-discovered Acme III is soldered to the tank exterior, just as with the late Pathfinder lamps. This observation is the most obvious evidence that the Acme III lamp was manufactured later than the early Pathfinder.

Water feed. The water feeds are remarkably similar across the entire lamp sequence (see Table). The Acme III's feed rod extends to the bottom of the carbide chamber, a trait that it shares with the early and late Pathfinders. The Acme III and early Pathfinder share an identical brass button which secures the water feed rod to the top of the water tank. The brass button of the late Pathfinder is significantly smaller.

Water door. The water door is hinged and is nearly identical in both design and dimensions on all of the Acme and Pathfinder lamps examined.



Acme interior. Photo by Jim Talley.



Pathfinder interior. Photo by Dave DesMarais.

Acme III (left) and late Pathfinder (right) cap lamps, view of water feeds. The water feeds are very similar. The late Pathfinder has a removable felt retainer. In contrast, the Acme III has a cylindrical shroud around the water feed which is not removable. With the Acme, a ball of felt is held over the gas intake by a metal strap.

Reflector. The reflector was changed repeatedly to strengthen it. The diameter decreased between Acme I and II and between the early Pathfinder and Acme III. The reflectors on the Acme II and early Pathfinder are identical. The reflector itself (not the method of attachment) on the Acme III is identical to the small version of the late Pathfinder reflector. For example, the edges on both reflectors are more tightly rolled than on earlier reflectors. Other features of reflector on the late Pathfinder lamp are unique in the sequence, namely its metal strap attachment and its availability in two diameters and several metal compositions (brass, steel and "pot metal").

Base. The major difference between the Acme I and II bases and the later bases lies principally in the redesigned threads which were associated with the changes in the water tank. The body diameters are identical. The bottom seam is slightly wider and the overall height

of the base is slightly shorter in the Acme III and late Pathfinder. Only the late Pathfinder is occasionally found with ornamentation, namely a stamped name on its bottom or a decorative knurling located midway down its side.

In summary, although several changes indeed occurred between the Acme and Pathfinder lamps, their similarities outweigh their differences (note the accompanying photographs). For example, of the 20 features listed in the Table, one feature changed between the Acme I and II, six features changed between the Acme II and early Pathfinder, four features changed between the early Pathfinder and the Acme III, and six features changed between the Acme III and the late Pathfinder. Thus several design changes demonstrate that the newly-discovered Acme III lamp was manufactured between the early and late Pathfinders.

WATER TANK

Solder seam: on side or bottom
 Diameter of body
 Diameter at bottom edge
 Hook attachment
 Burner tube diameter

	side	side	bottom	bottom
	1.5+	1.58	1.72	1.72
	2.059999:	2.0699:	2.04	2.00
	enters tank	enters tank	enters tank	external
	0.25	0.25	0.25	0.25

WATER FEED

Finger wheel, diameter
 Finger wheel, knurling ridges*
 Button on tank top at feed rod
 Feed tube inside carbide tank, (length)
 How far feed rod extends past tube

	0.38	0.38	0.38	0.38
	UL to LR	UL to LR	UL to LR	UL to LR or ULtoLR
	0.375	0.374	0.374	0.370 or 0.236
	0.25	0.25	0.25	not measurable
	0.1	0.1	1.3	>1
				usually 1.14

*Example: "UL to LR" indicates that, when the water feed is viewed from the side, the knurled ridges on the finger wheel are oriented from upper left to lower right. Most Pathfinder and early Victor lamps have the "UR to LL" orientation.

WATER DOOR

Outer diameter of widest part
 Outer diameter of inserted part
 How attached to lamp

	0.73	0.73	0.72	0.72
	0.54	0.54	0.54	0.54
	hinged	hinged	hinged	hinged

REFLECTOR

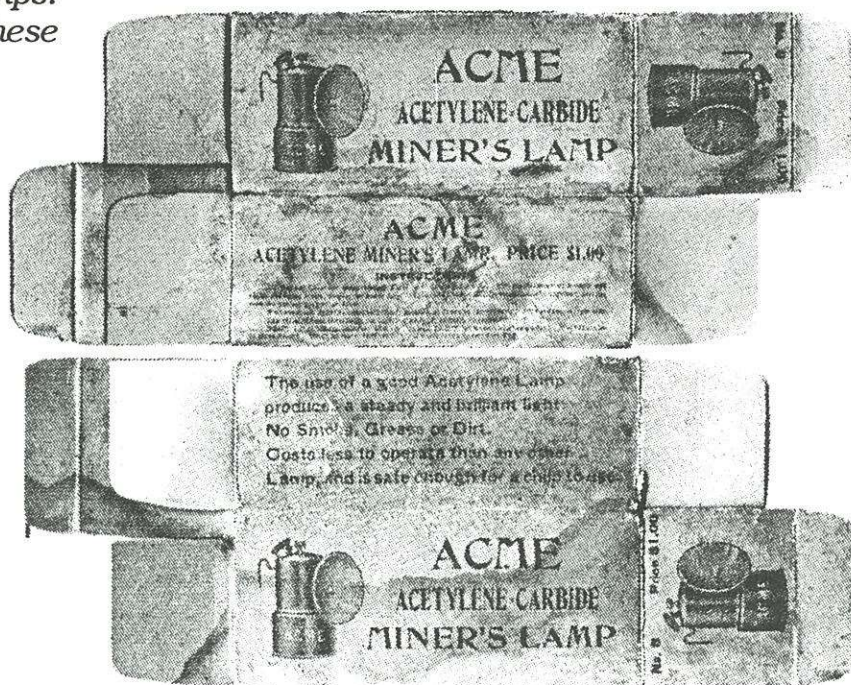
Diameter	2.38	2.2	2.2	2.1	2.1 or 2.7
Attachment to lamp	solder	solder	solder	solder	removable clip

BASE

Manufacturer's label?
 Threads, outer diameter
 Body, outer diameter
 Bottom seam, outer diameter
 Height, bottom to top of threads

	never	never	never	never	sometimes
	1.49	1.49	1.61	1.60	1.60
	2.04	2.04	2.04	2.04	2.04
	2.13	2.08	2.13	2.16	2.16
	2.04	2.04	2.18	2.15	2.15

Boxes for the Victor and Acme III cap lamps.
Note the similarities in the wording on these two boxes.



Manufacturer of the Acme lamps

The association of the Acme name with definitive illustrations of the cap lamp itself comes only from an advertisement in catalog #28 of the L. H. Smith Woodenware Company of Pittsburgh² and from the newly-discovered Acme III boxes. The similarity of the wording on the boxes for the early Victor and the Acme III further establishes the early Victor- Acme III manufacturing series (see illustrations above).

The newly-discovered Acme III lamps indicate strongly that Hughes Brothers manufactured at least the last of the Acme lamps. That the Hughes Brothers Company of Scranton, PA manufactured both the early and late Pathfinder lamps is clearly established by the name on the late Pathfinders as well as extensive advertisements of both the early and the late Pathfinders.¹ Also, Hughes Brothers existed during the period when Victor and Acme lamps were made. The detailed measurements of the Acme III lamp indicate that it was manufactured later than the early Pathfinder lamp. Apparently, Hughes Brothers marketed early Pathfinder and Acme lamps simultaneously. The reasons for this marketing strategy are unknown. Perhaps Hughes Brothers was selling the Acme III lamp to loyal buyers of the early Victor and Acme I and II lamps, whereas they were attempting to stimulate new buyers with the Pathfinder.

References

1. Des Marais, D. J. (1994) Victor, Acme, Pathfinder cap lamp series. *Eureka!* 12 , 29-35.
2. The Editors (1994) Acme cap lamp. *Eureka!* 9 , 27.