

Patent Oil Wick Lamps From The Smithsonian Institution

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In November of 1991 I had the opportunity to visit the Smithsonian Institution and to view part of their mining collection. The Smithsonian has many artifacts, but unfortunately limited display space, so many of the mining artifacts are stored in obscure parts of the museum. Fortunately, at the Museum of American History the curators and museum specialists are eager to help you in your interest.

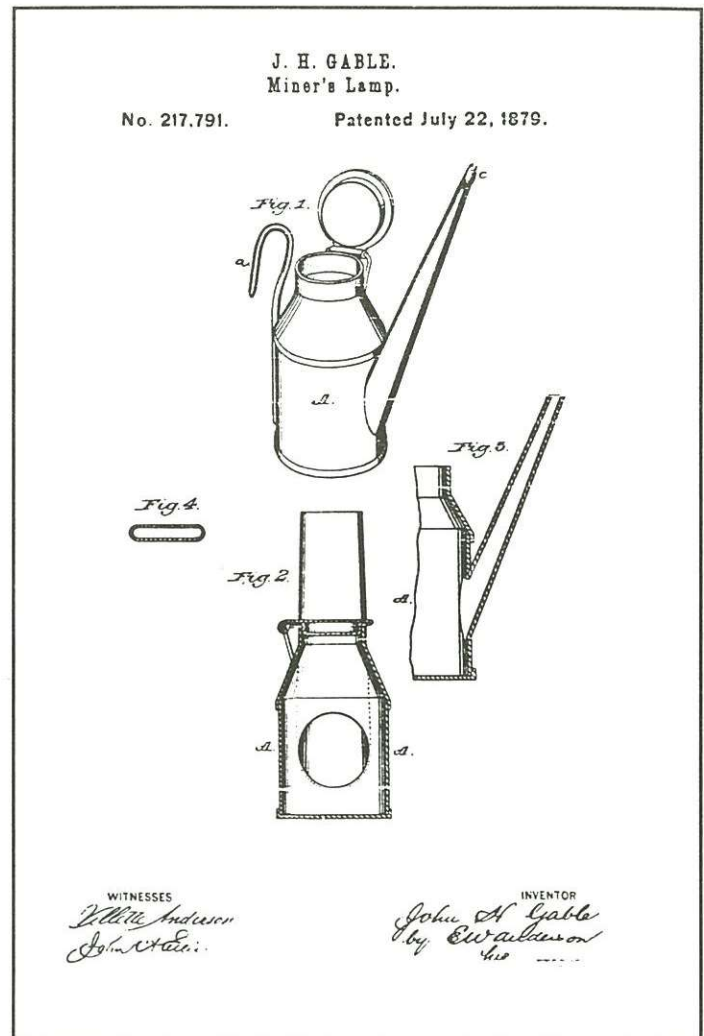
Prior to my visit, I called for an appointment with Francis Gadson, a Museum specialist at the Museum of American History. He took my wife Jan and I into the catacombs to search through the storage bins and drawers. Since Jim Van Fleet had already written about carbide lamps in the collection, I thought I would attempt to catalog the oil wick lamps and maybe the candleholders. ¹

Jan and I began by using a copy of the oil wick lamp survey from the recent *EUREKA!* issue. ² We soon found many lamps that were not on the survey list. We also found a number of oil wicks that had old white tags with strange printing on them. These were the lamps as they were originally submitted for patent. Since my time was limited, I decided to look through the patent lamps and pick out several to write about, and this forms the body of my report.

I am indebted to Mr. Gadson who helped with the two days of searching, the photography and obtaining the patent information. I am also indebted to my wife for her help, advice, and patience in pursuing this endeavor. It is difficult to maintain your concentration on a few lamps when there are so many that you have never seen before. I do not claim to be an expert in oil wicks but hope this report will stimulate some comments or articles from anyone knowledgeable about or having some of these lamps in their collection.

One of the more interesting lamps was patent #217,791 dated July 22, 1879 issued to John H. Gable of Shamokin, PA. By this time miners were searching for ways to improve the flow of oil in the wick tube.

Patterning his "improvement" after the common kerosene lantern Mr. Gable described a flattened wick spout. He claimed in his invention ". . . the flow of oil is better controlled and the light very much enhanced." ³



John H. Gable patent.

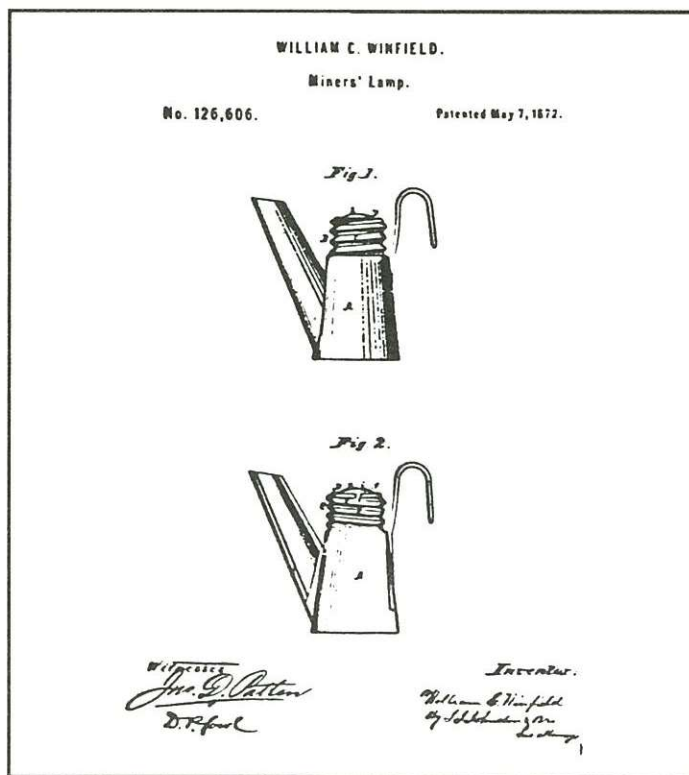
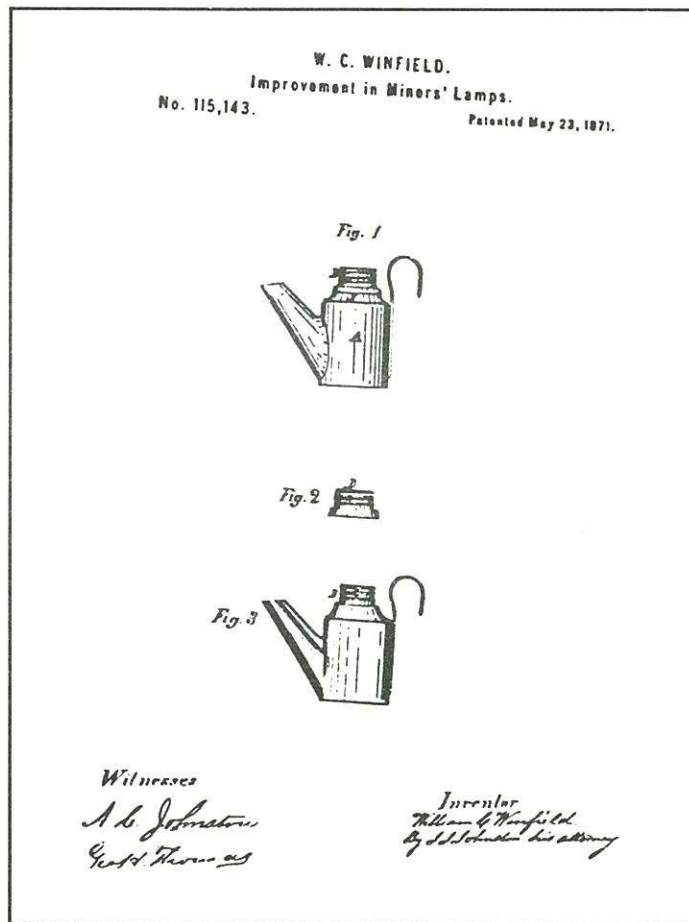
The lamp in the Smithsonian is all tin, with a single-walled spout. I don't know if these inventions worked or not, but this certainly wasn't in mass production.



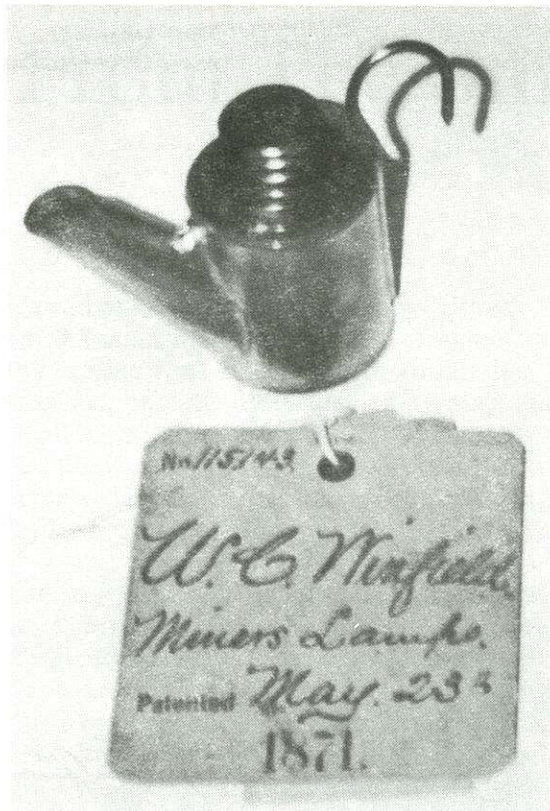
The Gable oil wick lamp.

Two patents were issued under the name of Winfield. I think these were the two original patents for the screw tops on the oil wick lamp. Patent #115,143 dated May 23, 1871, was granted to William C. Winfield of Hubbard Ohio. In his accompanying letter, Winfield claims the addition of a screw top cap "prevents all leakage of oil, which is a very valuable consideration in a miner's lamp." Evidently, his invention didn't work as well as he anticipated because a year later William, John and Thomas Winfield were granted patent #126,606 dated May 7, 1872.

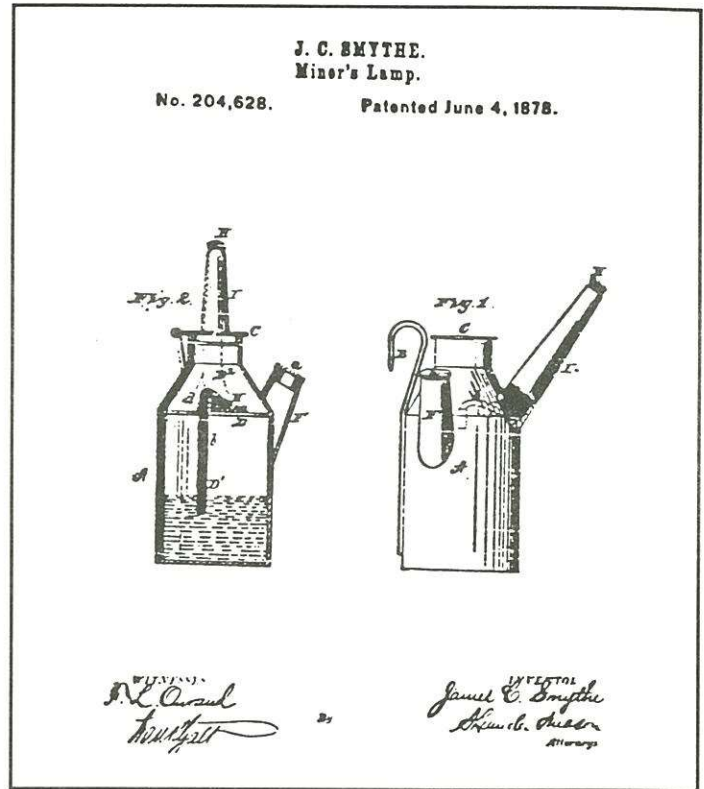
This modification further improved the miner's lamp by providing the cap with an elastic packing-disc combined with the screw threads of the cap and a vent hole in the cap.⁴ These two patents eventually formed the basis for a number of screw-top lamps produced by several manufacturers.



The Winfield patents.



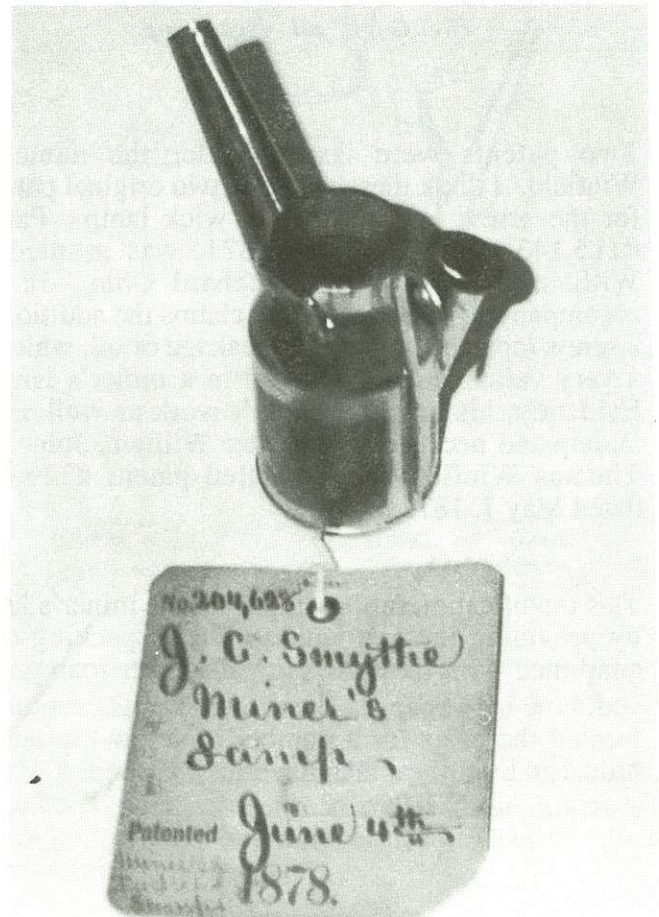
The Winfield patent oil wick of 1871.



The Smythe Patent. Notice divided chambers to control the flow of oil into the wick.



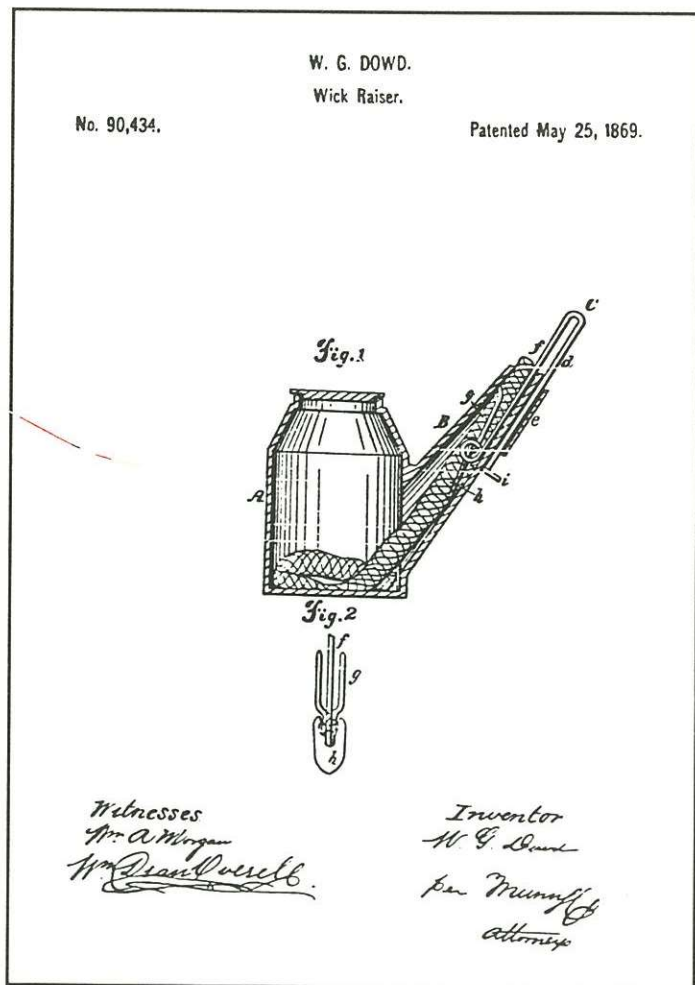
The improved Winfield lamp of 1872. Lamps were mass-produced under this patent.



The Smythe lamp patent model.

James C. Smythe was also issued a patent, #204,628, on June 4, 1878, again tackling the problem of leakage of hot oil from the burner tube or around the filler cap, especially when the miner had to lie on his side to work a thin vein. Smythe uniquely divided the lamp into an upper and lower chamber and filled the lower chamber through a separate filler tube, with the burner tube emanating from the upper chamber. This theoretically controlled the flow of oil through a smaller wick to the larger wick in the upper chamber.

These lamps eventually met with some acceptance and were produced by J.W. Patten of Wilkes Barre, PA. The accompanying photo is of the patent specimen. I have seen examples of this lamp in several collections.



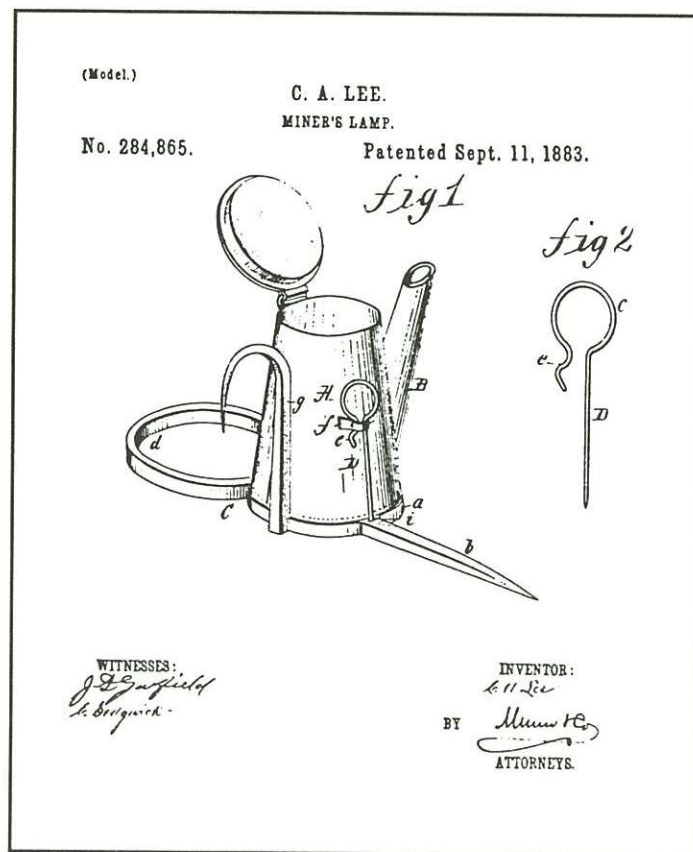
The Dowd patent. The improvement was in the device used to raise the wick.

One of the older patent lamps that I discovered was issued to W.G. Dowd of Scranton, Pa. dated May 25, 1869, #90,434. This addressed the problem of how to advance the wick while the lamp was burning.

I suspect that this invention didn't work very well as it would appear from the patent drawing that the spring wire would become very hot or probably melt entirely.

Examples of lamps manufactured by Dowd do exist, as noted in the lamp survey published in the January issue of *Eureka!* I am not sure if any of these had the patented device. ⁵

A unique and unusual invention was submitted by Charles A. Lee of Arlington, Texas in patent #284,865 dated September 11, 1883. As previously noted by Henry Pohs, miners were very reluctant to change to new forms of lighting. ⁶ Like the Husson peg lamp and a few others, the Lee patent appears to have been an attempt to adapt an oil wick lamp to use in a candlestick, or maybe it was an attempt to fashion a candlestick that would work with an oil wick lamp. The specimen is a fine one, but I could see no way of removing this lamp from the stick. Perhaps this led to the development of the familiar Knippenberg patent of May 8, 1906 for the Husson detachable stick. ⁷



The Charles Lee patent. Note the device for advancing the wick.



The Charles Lee wick lamp with stick attachment.

Such were a few of the oil wick lamps I found at the Smithsonian Institution's Museum of American History, and there were dozens more. If you visit, formulate some plan, try to limit the scope of your visit, arrange an appointment with Mr. Francis Gadson, and be prepared for a rare experience. I never did find the candlesticks but I plan to go back again.

References

1. Van Fleet, James. "Museums." *Mining Artifact Collector*. Number 3, Spring 1989, pp.26-27.
2. Johnson, Dave. "Oil-Wick Lamp Brand name Survey." *EUREKA!*. Issue 1, Winter 1992, pp. 17-18.
3. U.S. Patent 217,791, July 22, 1879 issued to John H. Gable, Shamokin, PA for "Improvements in Miner's Lamps."
4. U.S. Patent 115,143, May 23, 1871 to W.C. Winfield, and U.S. Patent 126, 606, May 7, 1872 to Wm. C. Winfield, John R. Winfield, and Thomas A. Winfield of Hubbard, Ohio for "Improvement in Miner's Lamps."
5. Johnson, Dave. "Oil-Wick Lamp Survey." *EUREKA!* Issue 1, January 1992, pp. 17-18 .
6. Pohns, Henry. *Early Underground Mine Lamps*. Tucson, AZ: Arizona Historical Society, Museum Monograph No. 6, 1974.
7. Fox, Robert L. Jr. *Husson Miner's Lamps Manufactured in Oshkosh*. 1985.

Montreal Mine

by Dave Johnson

A few miles to the west of the former iron mining boom town of Hurley, Wisconsin, along State Highway 77, you will find the remains of the Montreal Iron Mine. Once the largest underground iron mine in the world, the mine operated for more than 75 years.

The Gogebic Iron Range was explored in the late 1870's and mining began by the early 1880's. The Montreal Mine, a subsidiary of Ogleby, Norton & Co. of Cleveland began operation after six smaller operations were acquired and consolidated in 1884. These six properties were the Moore, Section 33, Trimble, Jupiter, Bourne, and Ottawa Mines.

THE MONTREAL MINING COMPANY CAGE SIGNALS	
ALL MEN ARE FORBIDDEN TO RIDE ON SHIPS DURING REGULAR OPERATION. WHEN NECESSARY TO RIDE ON SHIPS FOR SHAFT INSPECTION OR IN SPECIAL CASES OF EXTREME EMERGENCY, CALL THE SKIP HOIST OPERATOR ON THE TELEPHONE. THEN RING 7 LONG BELLS FOLLOWED BY THE PROPER SIGNAL SHOWN BELOW	
NO. 6 SHAFT	
STOP	1 BELL
LOWER SLOW	2 BELLS
HOIST SLOW	4 BELLS
SURFACE	5 BELLS
4 TH LEVEL	4 SHORT 1 LONG
6 TH LEVEL	6 BELLS
8 TH LEVEL	8 BELLS
11 TH LEVEL	1 LONG 1 SHORT
12 TH LEVEL	1 LONG 2 SHORT
13 TH LEVEL	1 LONG 3 SHORT
14 TH LEVEL	1 LONG 4 SHORT
15 TH LEVEL	1 LONG 5 SHORT
17 TH LEVEL	1 LONG 7 SHORT
19 TH LEVEL	1 LONG 9 SHORT
21 ST LEVEL	2 LONG 1 SHORT
27 TH LEVEL	2 LONG 7 SHORT
29 TH LEVEL	2 LONG 8 SHORT
31 ST LEVEL	3 LONG 1 SHORT
33 RD LEVEL	3 LONG 3 SHORT
34 TH LEVEL	3 LONG 4 SHORT
35 TH LEVEL	3 LONG 5 SHORT

By 1886 the new Montreal Mine was shipping 57,000 tons of ore annually. Between 1886 and 1945 the mine produced 27 million tons of iron ore. Production over the entire working life of the mine was 45,747,708 tons of ore. For many years annual ore production exceeded one million tons. At the height of its operation the Montreal Mine employed 700 men above and below ground.

The Montreal Mine was a deep mine. The #5 shaft was 4337 vertical feet. An auxiliary hoist on the 31st level (2443 feet) raised ore from the 42nd level to the 33rd level: one 10 ton skip every 2 minutes. The #6 shaft bell signal sign pictured here is deep blue with white lettering. The sign measures 14" X 28".