

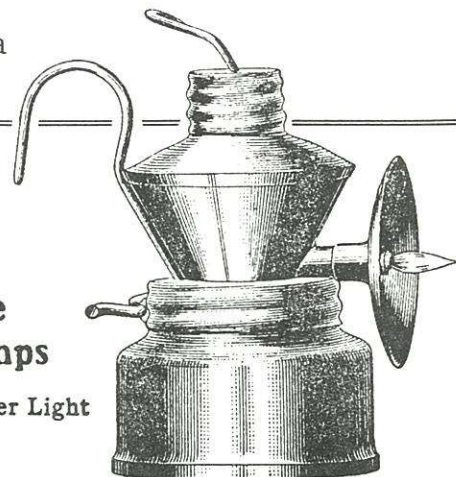
THE BALDWIN "PINCHWAIST" CARBIDE LAMPS

by Mark Bohannon
Oro Grande, California

Frederic Baldwin was probably the pre-eminent designer and inventor of acetylene mine lamps. In the early 1900s, Baldwin began manufacturing small carbide lamps for miners. All of these early Baldwin lamps are extremely hard to find. The early years and associations of Frederic Baldwin are obscure with what little is known being gathered together by Paul Kouts and Gregg Clemmer.

It appears that the first lamps--except for the patent models--were manufactured and marketed by Albert H. Funke in the spring of 1900. This relationship did not last very long, and soon Baldwin's lamps were being sold by the Ingersoll-Sergeant Drill Corporation and the A. L. Derry & Company.

In 1906, Baldwin entered into a marketing and manufacturing agreement with the John Simmons Company. This was to become one of the most profitable ventures in the history of early carbide mine lamps.



Baldwin Acetylene Mine Lamps

10 Candle Power Light

The John Simmons Company was a large manufacturer of plumbing fixtures, gas and steam fittings, machinery and tools with the means, knowledge and reputation to successfully market Baldwin's lamps. Over the next eight years, the Baldwin Pit Lamp enjoyed a growing popularity with the miners in both metal and coal mines. According to a December 21, 1912, ad, the John Simmons Company was exulting that "Every Year The Sales Are Greater" and that "Four-Fifths of all Carbide Lamps at present in use are BALDWIN MINE LAMPS."

As the popularity of the Baldwin Pit Lamp increased, Frederic Baldwin and the John Simmons Company began marketing a larger variety of mine lamps to meet with every mining need. They offered a selection of 15 different reflector styles and finishes to meet the requirements of all branches of mine work. A sparker lighter could also be attached to all of the reflectors.

The Baldwin Mine Lamp



Is an Acetylene Gas Lamp

It can be worn in the cap like an ordinary miner's lamp, but

It Gives Five Times as Much Light

The gas is made from carbide and water and costs less than oil.

Write for free circular.

A. L. Derry & Co., Sales Agts., Connell Building
SCRANTON, PA.

One of the earliest advertisements for the Baldwin pinchwaist mine lamp sold by the A. L. Derry & Company of Scranton, Pennsylvania. Note: The ad mentions that the lamp "can be worn in the cap like an ordinary miner's lamp." This was at a time (1905-08) when the merits of carbide lamps were beginning to compete against the long standing miners' oil lamps.

At right, a 1908 advertisement from *Mines and Minerals*, advertising the Baldwin pinchwaist Pit Lamp with the very rare flat, slip-on tin reflector.

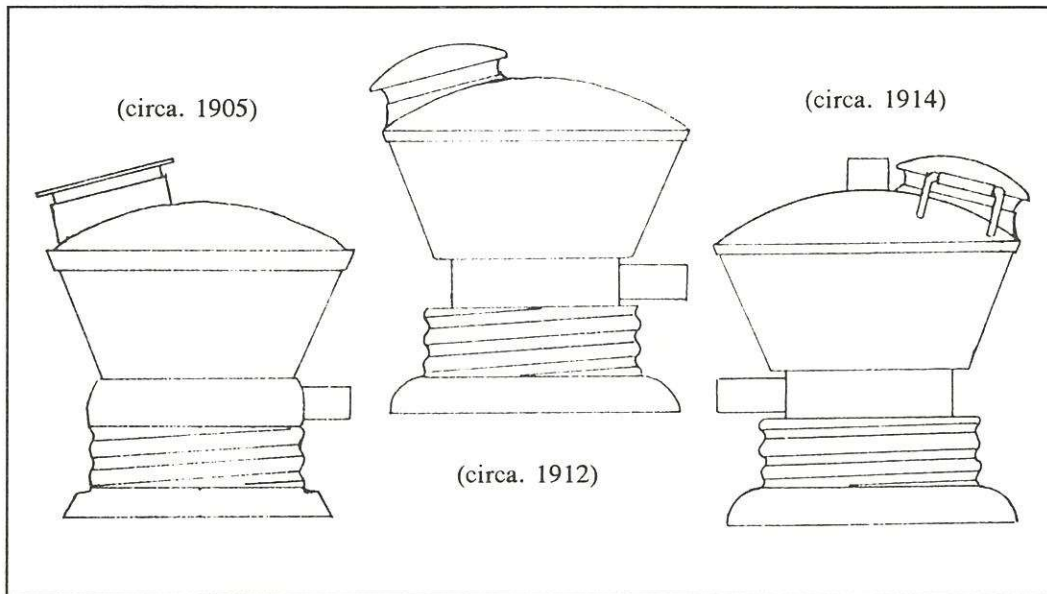


Baldwin Acetylene Pit Lamp

The Baldwin Acetylene Mine Lamps are adapted for the superintendent and Engineers as well as the man with the pick. NO DIRT — NO TROUBLE. Catalog on request.

John Simmons Co.,
102 Center Street,
NEW YORK.

Patented

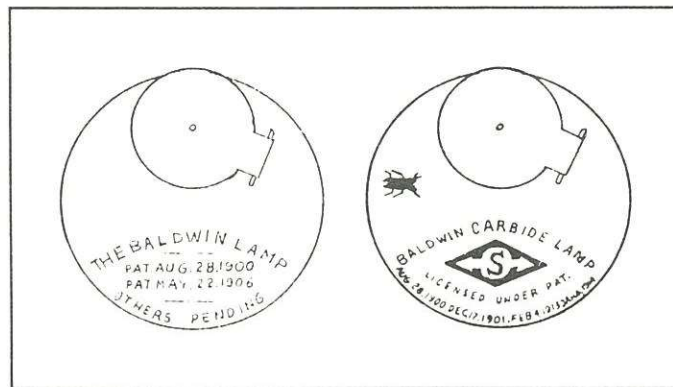


The three main styles of water tanks for the Baldwin pinchwaist lamps. The style on the left is of the earliest style. The middle style is that commonly found with just the raking wire feed. The style on the right is the latest style and incorporates the new water control valve patented on October 27, 1914 (No. 1,115,157). Drawings from Paul Kouts' *Miner's Carbide Lamp Reference, Vol. VIII.*



A photograph of a brass Baldwin pinchwaist cap lamp with the hard to find flat reflector. This lamp also came nickel plated, but is much rarer than the brass lamp.

At right, a photograph of a Baldwin pinchwaist brass cap lamp and the box that it came in. As can be seen on the end flap of the box, the lamp originally cost \$1.00. The box is 6" long by 3 1/4" wide by 2 3/8" deep and has instructions written on the sides in four different languages. The box is tan with blue printing.



The two most common top water tank markings for the Baldwin pinchwaist lamps. Both have raised letters. Drawings from Paul Kouts' *Miner's Carbide Lamp Reference, Vol. VIII.*



In 1912, the John Simmons Company introduced their New **Model No. 29** Baldwin pinchwaist mine lamp that was "particularly adapted for Superintendents and Engineers." This new style lamp was a standard pinchwaist pit lamp, but was fitted with a hook and hand handles. This is probably the most commonly found style of Baldwin lamp.

For some reason, Frederic Baldwin decided to leave the John Simmons Company in 1913 and form the Zar Manufacturing Company (see MAC Issue No. 16, Fall 1992). The reason for his departure is unknown, but all of the rights to manufacture and sell the Baldwin pinchwaist lamp remained with the John Simmons Company.

After the departure of Frederic Baldwin in 1913, the John Simmons Company began marketing the pinchwaist Baldwin Pit Lamp with the Simmons' logo on the top of the lamp. Simmons advertised the lamp as "the New Baldwin - The Miner's Lighting Bug." Around this same time, the John Simmons Company also began producing the "Pioneer" carbide lamp (see MAC Issue 14, Spring 1992).

UNITED STATES PATENT OFFICE

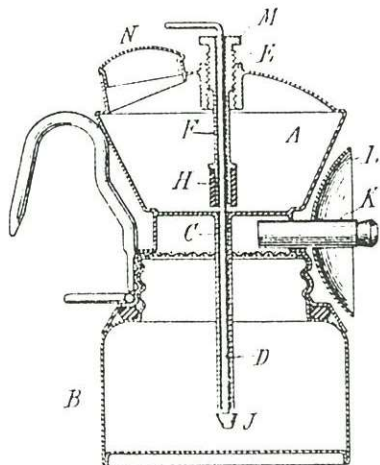
JOHN SIMMONS COMPANY
New York, New York
TRADE-MARK FOR ACETYLENE-LAMPS.
Application filed April 24, 1915
No. 105,876 Registered Aug. 24, 1915




On August 24, 1915, the lighting bug trademark was registered by the John Simmons Company. Prior to being registered, this trademark had been used by this company since June 1, 1914. An interesting note is that this trademark was filed for just fourteen days after Baldwin filled his "ZAR" trademark.

UNITED STATES PATENT OFFICE

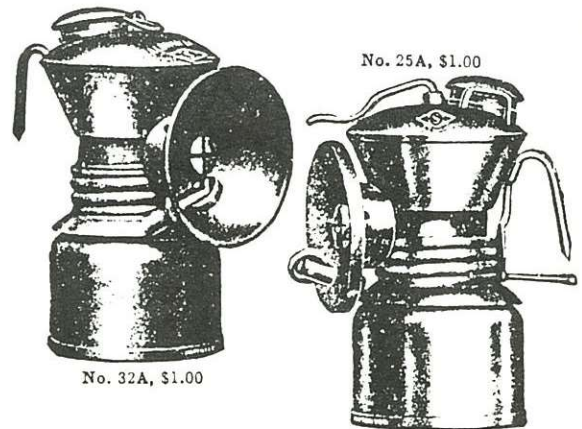
F. E. BALDWIN.
ACETYLENE GAS LAMP.
APPLICATION FILED MAR. 30, 1910.
1,115,157. Patented Oct. 27, 1914.



Patent number 1,115,157 was an improvement for controlling the flow of water. This was one area of lamp design that Baldwin was very concerned about.

BALDWIN
THE MINER'S  **LIGHTING BUG**

Rigid Removable Reflector



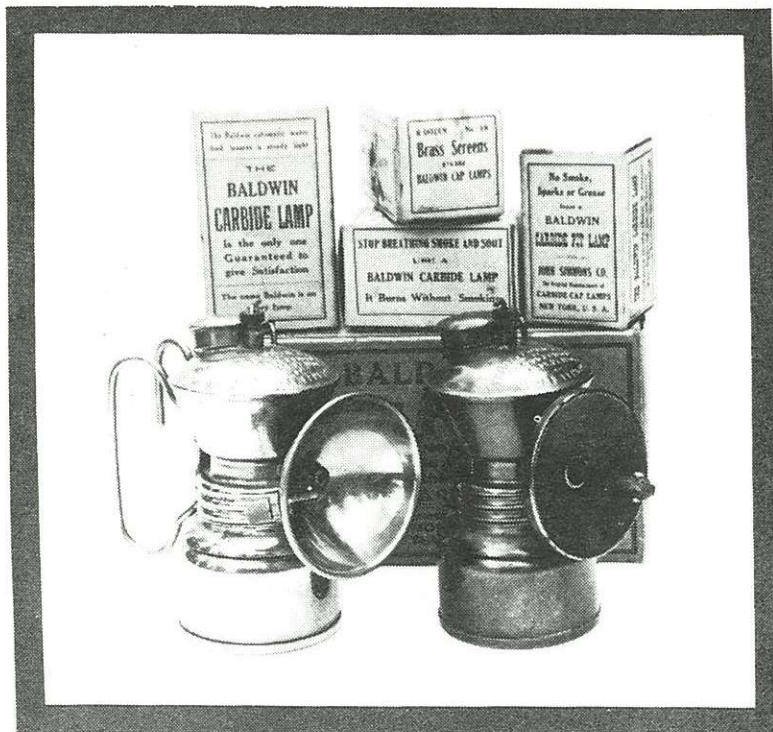
JOHN SIMMONS CO.
100 Centre St., NEW YORK

A 1914 advertisement from *The Engineering and Mining Journal* for the Baldwin Miner's Lighting Bug.

By 1918, the John Simmons Company was in the process of shutting down their carbide lamp operations. By 1921, they were almost completely out of the lamp manufacturing business, having sold some of their patents to other lamp companies.

There were many design and appearance changes during the early years (1900-1913) of the Baldwin pinchwaist lamps. One of Baldwin's great concerns throughout his involvement with carbide lamps was of maintaining a "steady, even flame at all times, whether the miner is standing still or swinging a pick." Another area of lamp design that Baldwin was very interested in was the problem of the lamp's flame going out during increased atmospheric pressure and air currents due to blasting and other sources. As can be seen, many of his patents dealt with one or both of these concerns.

Although one of the most commonly found lamps, the Baldwin "pinchwaist" carbide lamp is also one of the most unique looking carbide lamps to be found. For as common as these lamps are, they are very difficult to find in excellent shape. The design, gauge, and composition of the brass used in the manufacture of these lamps seem to made it prone to denting, especially on the very top. Because of the nature of the slip-on reflector, many Baldwin lamps are found with the reflector missing. Also, like most cap lamps, the wire hat braces were lightly soldered to the lamp resulting in many lamps being found with these wire hat braces missing.



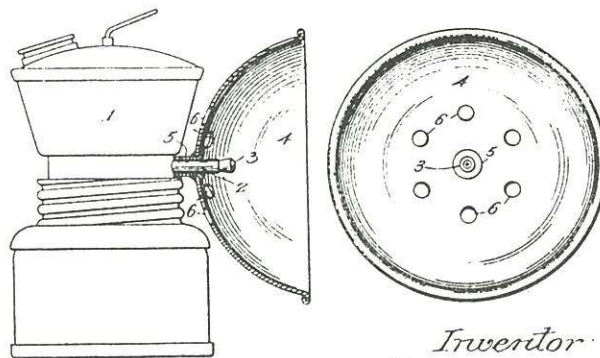
UNITED STATES PATENT OFFICE

F. E. BALDWIN
REFLECTOR FOR GAS LAMPS.

APPLICATION FILED JULY 30, 1912.

1,066,241.

Patented July 1, 1913.



Inventor
Frederic E. Baldwin
By his Attys.
Phillips, Sawyer, Rice & Kennedy

Patent number 1,066,241 was for an improvement in the cup-shaped reflector commonly found on Baldwin lamps. This improvement consisted of providing perforations in the base of the reflector "to allow the escape of some of the air collected by the reflector when the lamp is moving rapidly or is exposed to a strong wind . . . so that the luminosity of the flame is not diminished by the forcing of excess oxygen thereinto." This is also another one of the patents listed on the side of the Zar carbide lamp.

Photograph of a nickel plated Baldwin pinchwaist Superintendent's lamp with hand handles (left) and a brass Baldwin pinchwaist cap lamp (right). The lamps show the two styles of reflectors which came with the lamps. Shown behind the lamps is the box that the cap lamp came in. On top of the lamp box are four Baldwin lamp parts boxes. These boxes held six dozen, No. 10 brass screens. The box on the left is 1 7/8" by 1 1/4" by 3", while the other boxes are 1 1/2" by 1 1/2" by 2 3/8". All of the parts boxes are a light tan and are printed in red-brown.

References:

Clemmer, Gregg S., *American Miners' Carbide Lamps: A Collector's Guide to American Carbide Mine Lighting*, Westernlore Press; Tucson, Arizona, 1987.

Kouts, Paul L., *Miner's Carbide Lamp Reference*, Volume VII; Published July 1982.