### THE PATENTED OIL WICK LAMPS OF H.J. RICHARDS

by Tony Moon Sandy, Utah

Three patents for oil wick lamps have been found that were granted to Henry J. Richards of Wilkes-Barre, Pennsylvania. There could well be others as the author's oil wick patent files are far from complete. The three patents that have been found are dated and numbered as follows and the more important patent illustrations are shown in Figures 1, 6, and 7.

Application Date	Patent Date	Patent Number
Apr. 7, 1885	June 16, 1885	320,287
Nov. 23, 1885	Jan. 26, 1886	335,041
Nov. 6, 1889	Apr. 29, 1890	427,013

The earliest patent, No. 320,287 was an attempt to provide a lamp that would burn kerosene of coal oil without heating the miner's forehead. The wick tube was surrounded by an air gap which in turn was surrounded by the oil vessel.

The latest patent, No. 427,013 was another attempt to provide cooling of the lamp body by providing a space around the base of the spout which in one case had a hinged cover and could be filled with water. However, the main feature was the perpendicular or near perpendicular spout which was claimed to improve the oil flow to the wick and prevent oil from oozing out of the top of the spout and running down the outside.

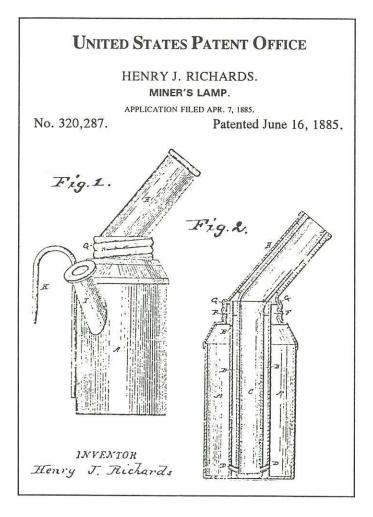




Figure 1. The patent drawings for patent No. 320,287.



Figure 2. Front view of H.J. Richards lamps showing the cooling ribs. (Author's collection)



**Figure 4.** The marking on the H.J. Richards oil wick lamps.

Figure 3. The rear view of the lamps in Figure 4. The lamp markings are in the open areas to the left of the hooks.

The author is not aware of any examples of actual lamps built to these two patents.

However, lamps were manufactured which had some of the features of patent No. 335,041. This patent again provided a means of cooling the lamp body but also had a wick pricker, a stopper or cork for a lid and a removable hood or reflector. Examples of the lamp with the cooling and pricker features have been found and are shown in Figures 2 and 3. These lamps have the marking shown in Figure 4. The main feature of the lamp that is covered in the patent is the provisions for cooling using an annular skirt around the lamp. This skirt extends approximately two-thirds around the lamp in a non-symmetrical manner and has vertical ribs with holes to allow the heat to A holder for a wick pick is also escape. provided at one end of the skirt.

Another lamp using these same two patent features is shown in Figure 5. This lamp is unmarked but was probably made by Trethaway as the base has the distinctive domed depression which is a feature of most Trethaway lamps. The wick pick itself has survived in this example.

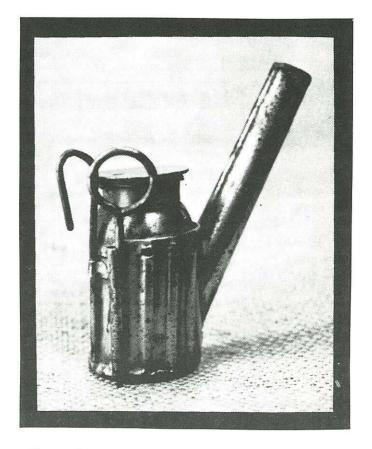


Figure 5. An unmarked drivers lamp using the H.J. Richards patented features. (Author's collection)

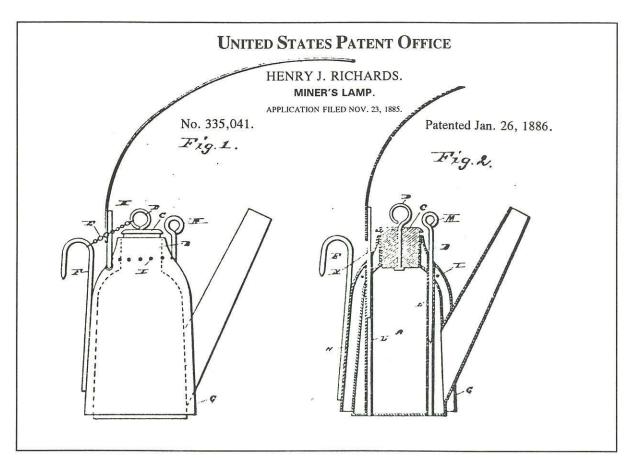
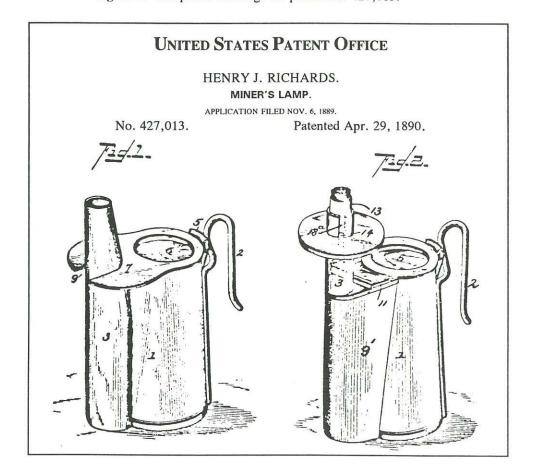


Figure 6. The patent drawings for patent No. 335,041.

Figure 7. The patent drawings for patent No. 427,013.



#### THE NORTH BUTTE MINING COMPANY

by **Joe L. Slouber**Butte, Montana

The North Butte Mining Company was a short lived operation, lasting only for nineteen years, until being taken over by the Anaconda Company. It was started in 1905 by several prominent investors, including John Ryan who was a president of the Anaconda Company, and Patrick Largey, an important Butte businessman. The North Butte Mining Company owned several valuable mines including the Speculator and the Granite Mountain. The company was a major employer in Butte, having over 1600 men working for it at one time.

The North Butte Mining Company is better known for the disasters that happened at one of its mines. On October 15, 1915, at the Granite Mountain mine, twelve cases of explosives waited to be lowered. Fifteen shift bosses were standing around also waiting to go down, when the dynamite exploded. There were several theories, but the most accepted one was that one of the other men had just picked up several tins of blasting caps and one of these had accidentally been dropped and set off the explosion.

## NORTH BUTTE MINING CO.

## **Exits**

Men should learn the various exits and raises, or winzes, leading to and from the level on which they are employed.

## Lights

Never travel without sufficient Light.

Never leave your candle, lamp or torch near timber or other inflammable material.

# NORTH BUTTE MINING CO.

### Man-Ways and Chutes

In going up or down man-ways use extreme caution and see that ladders are safe. Defective ladders should be reported. Do not dislodge rock or other material that may injure a person below. Broken chutes which allow rock to fall down manways should be reported. Openings to ore or waste chutes and to manways must be protected by a covering or by guard-rails. If necessary to remove cover from any opening, see that guard is provided.

BE CAREFUL when timber or supplies are being hoisted or lowered to keep from under same.

EMPLOYES ARE FORBIDDEN to lower or throw tools, steel or any other material down the man-way, except when a man is stationed below.

Loaders must not leave chutes until properly closed.

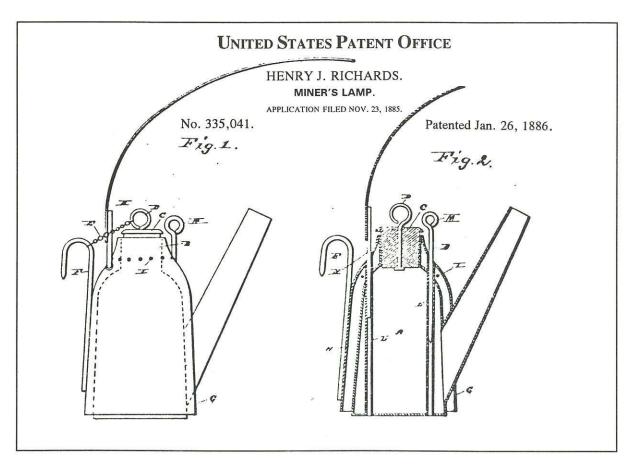


Figure 6. The patent drawings for patent No. 335,041.

Figure 7. The patent drawings for patent No. 427,013.

