

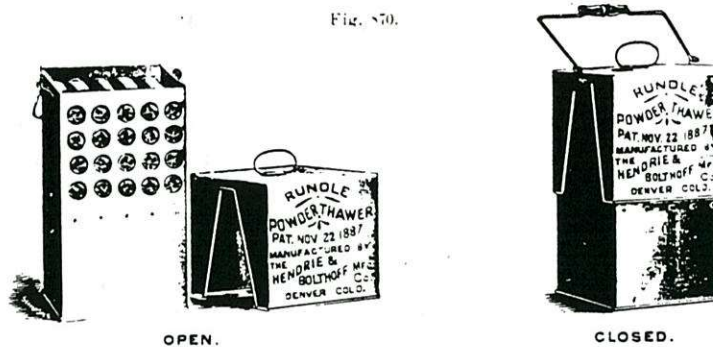
Powder Thawers and Thawing Kettles by Mark Bohannon

Powder thawers, and later, thawing kettles, were used to thaw dynamite that had been frozen. Nitroglycerin, the explosive component of dynamite, crystallizes as it freezes and consequently separates from the absorbent base as minute crystals. If thawing is done slowly with the cartridges lying flat, the nitroglycerin will be re-absorbed as fast as it liquifies. Quick thawing at high temperatures tends to cause leakage of the cartridges.

Early powder thawers such as the Rundle Powder Thawer (Fig. 1) were constructed of galvanized iron and the tubes for holding the cartridges were open at both ends. Warm water completely surrounded the tubes which held the cartridges, and a hood kept the heat contained and also prevented the cartridges from falling out when carried.

THE RUNDLE POWDER THAWER.

Fig. 570.



This Thawer is endorsed by the Colorado State Commissioner of Mines, and recommended by users generally.

We feel in presenting this Thawer to the public that it is about the only safe device made for thawing giant powder and other high explosives.

The powder is less confined, as both ends of the tubes are open, and there is no danger of a part of the stick sticking in the tubes. Warm water completely surrounds the tubes, and the powder is constantly kept in a working condition.

They are constructed of the best galvanized iron, and are very durable. They are also economical and safe. In fact, accidents are almost impossible when handling explosives in these machines.

DIRECTIONS.

Fill reservoir with water. Place the powder in the tubes and put two snuffs in bottom of can. It is a good idea to fill the bottom of candle-stick with water.

Priceeach, \$5.50

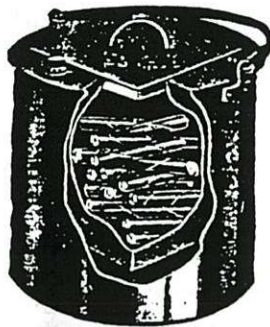
Fig. 1

From a Hendrie & Bolthoff catalog, 1901

Thawing kettles that were manufactured in later years, and often advertised for sale by DuPont, Atlas, Giant and other powder companies, were made of galvanized iron with a water-tight compartment for the cartridges. The cartridge compartment was surrounded by warm water.

DuPont advised that "under no circumstances must the water be heated in the thawing kettle itself." The water was to be heated in another container and then transferred to the thawing kettle. Before filling the dynamite compartment with cartridges, the water should be tested, and if the water was hot enough to burn the hand, the dynamite was not to be put into the kettle.

Shown below are three different styles of powder thawers, the Catasauqua Thawing Kettle (Fig. 2) was made in one piece, while the Bradford Thawing Kettle (Fig. 3) consisted of two pails. The outer container held the warm water while the inner container held the dynamite. The Miner's Thawing Kettle (Fig. 4) will better protect the dynamite from the cold and keep it in good condition longer than either of the other thawers, but its capacity was small.



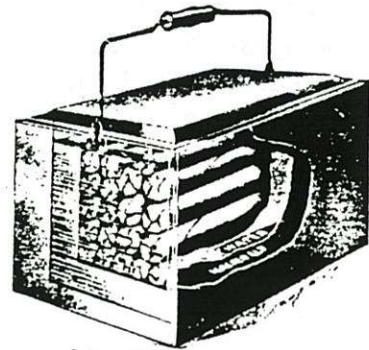
Catasauqua Thawing Kettle

Fig. 2



Bradford Thawing Kettle

Fig. 3



Miner's Thawing Kettle

Fig. 4

Most powder thawers and thawing kettles seem to have been used primarily in Colorado, Montana, and Idaho where extremely low temperatures were common for long periods of time.

With the development of low-freezing and very low-freezing explosives, the use and need for powder thawers was almost entirely eliminated.

Very few powder thawers or thawing kettles are still around in good condition. Most probably rusted away in a short period of time due to their use in cold and wet climates. A few remain in collections and museums.