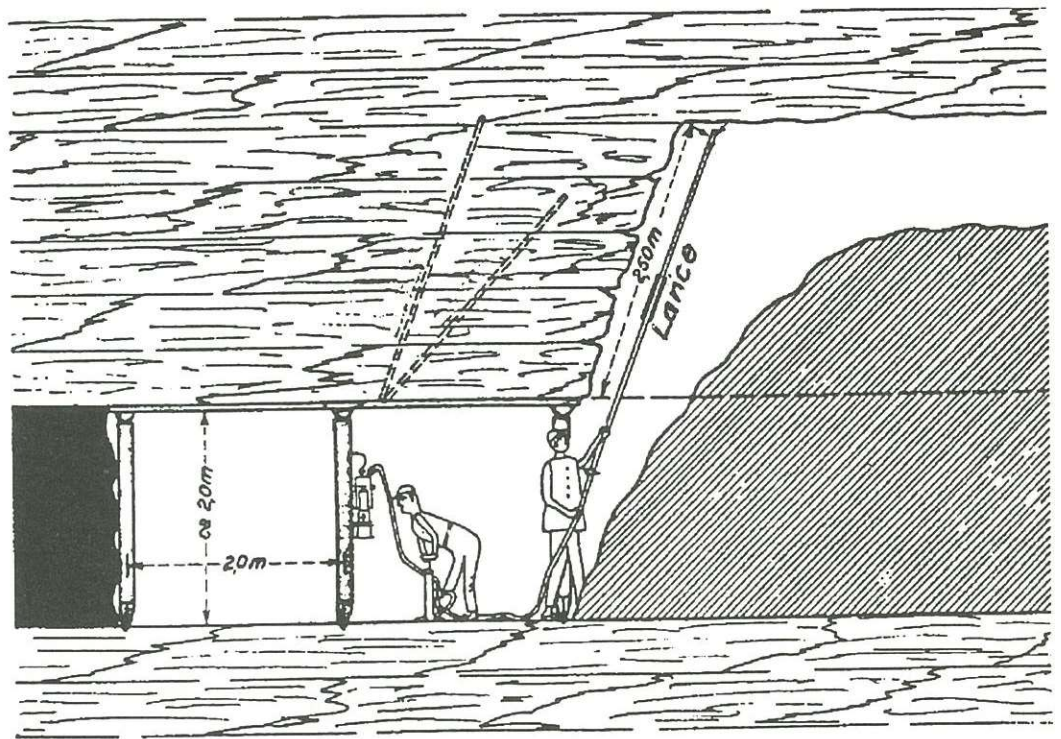


A Special Lamp for Gas Detecting in High Working Places

by Werner Horning

At the Niederberg colliery near Moers/Lower-Rhine, Germany a back-filling method with dirt from inside the mine was used. By this method, the air within the mine was displaced to high points within the passages. This method came to be known as "Niederrhein". However, when an explosion of fire-damp occurred in 1936, the mine office began to discuss the possibility of using dirt from outside the mine for back-filling. Mining director Schweitzer was able to satisfy the objections of the mine office by inventing a special lamp for detecting gas at high points. The detecting end of the lamp was held high by means of a lance. On account of these improvements, the mine office abandoned the demand of using back-fill material from outside of the mine.



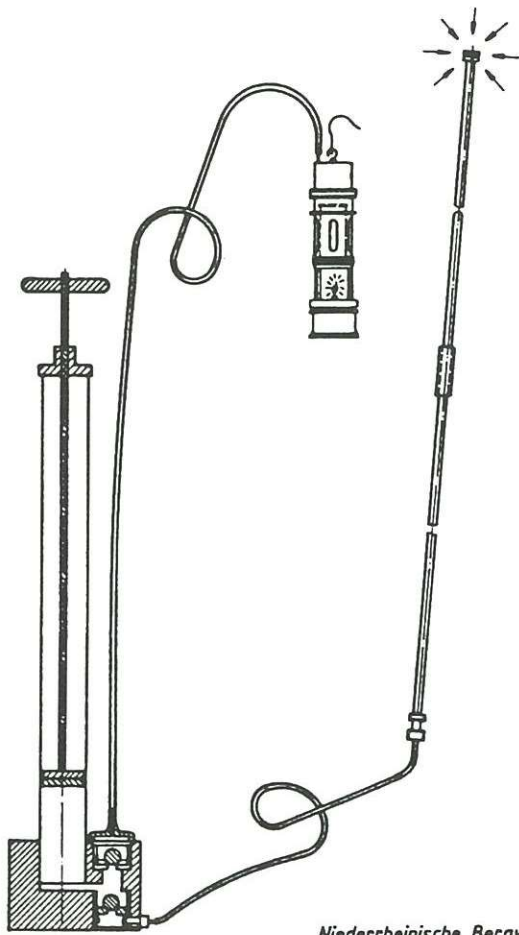
The gas detecting lamp invented by Mr. Schweitzer consisted of a normal safety lamp from "Friemann & Wolf", which, in this case

Niederrh. Bergwerks A-G.

Gas detecting
in high mine openings
and backfilling with
own dirt

was so reconstructed, that a bonnet with slots could be opened in normal air, and were closed for gas detection. Above this, an additional chamber was connected with an inlet tube. From high points in the mine, air was drawn in by a foot-operated pump that would draw air down through flexible tubing connected to the inlet tube. The intake of the tubing was held high in the passage by a lance. The operators had the ability to watch the flame at eye level, and to read the percentage of methane from the highest recesses of the mine. The Mine Office accepted the procedure, and it was used for some years with success.

This lamp belongs to the collection of Mr. Ernst Kausen (a collector friend in Moers, Germany). He was kind enough to give me the history of this lamp.



Niederrheinische Bergwerks A.G.

Suction device
for examination of
fire-damp in high
mine openings

