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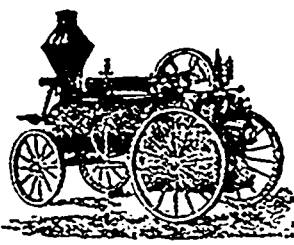
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For Catalogue C and prices.

Chemical Laboratory, Dalhousie College,  
Halifax, N. S., July 31st, 1891.

Within the last few months I have purchased promiscuously, at RETAIL GROCERY STORES in this City, packages of

**WOODILL'S**  
**GERMAN BAKING POWDER,**

and have subjected same to Chemical Analysis. The samples were found to consist of Fresh, Wholesome Materials, properly proportioned. This Baking Powder is well suited for family use, and has been employed, when required, in my own house for many years.

**GEORGE LAWSON, Ph. D., L. L. D.**  
Fellow of the Institute of Chemistry of  
Great Britain and Ireland.

## MINING.

### SAFETY IN COAL MINING.

From the Engineering and Mining Journal.

Last winter, when the explosion occurred in the Mammoth mine, Westmoreland County, Pa. (*Engineering and Mining Journal*, February 7th, 1891), the *Pittsburg Times* offered a prize of \$100 for the best suggestions for prevention of mine disasters. The committee appointed to judge the papers submitted was composed of Messrs. M. P. Kane, John F. Farrell, and Thomas Lynch, whose names are well known throughout the bituminous coal fields of western Pennsylvania. There were 272 contestants for the prize, which was awarded on the 9th inst. to Mr. Austin King, of Houtzdale, Pa., his suggestions being the best in the opinion of the judges, considered from point of "cheapness, certainty, and practicability." Mr. King's suggestions are as follows:—

The services of a superintendent and of a mine boss should be secured, both of whom should have a practical and theoretical knowledge of mining in all the phases likely to be presented or circumstances likely to occur in the particular coalfield operated in; they should also be men of integrity, sobriety, tact, and executive ability, to enable them to manage successfully any difficulty that might arise in the operation of the mines—other than professional work—or one of dealing with men and enforcing obedience to such rules and regulations as the best practice and theory suggest for the safety of men and property. The superintendent should be a man of attainments, superior to those of the mining boss, so that should an unusual occurrence arise in the mine the latter could, if unable to cope with it alone, seek the superintendent's counsel and implicitly rely on his judgment when giving instructions.

The mine boss in a gaseous mine should pay special attention to the reports of the fire bosses, and note in his travels through the workings whether the places show evidence of the regular visits of the fire boss whose duty it is to examine them daily. He should also give particular attention to any violations, by those under him, of the regulations or laws governing the working of the mine, and administer for such violations the penalties as prescribed by the mine rules or, in the absence of such provision, as recommended by the superintendent or mine inspector of the district. He should be unceasing in his vigilance and endeavor to foresee any possible danger, and thus be prepared to prevent rather than remedy the evil.

#### ACCIDENTS IN SHAFTS.

Accidents in shafts should be guarded against by the use of the different safety appliances now prescribed by law, such as (1) safety gates at top landings, safety catches and good overhead cover on cages, good ropes and chains; (2) timbering shaft from top to bottom with timber of suitable size, strength, and durability; (3) a reversible fan for ventilating purposes and making the hoisting shaft the upcast, so that it may not form in it; if it forms in downcast or fan shaft, the fan can be reversed long enough to throw it out; (4) careful daily examination of hoisting machinery and of ropes, and shortening the latter at proper intervals so as to remove that part of rope bearing most strain, because resting on the pulley, and daily examination of clevises and bridle chains and the annealing of same at proper intervals; (5) prohibiting the carrying of mining tools on cages by persons ascending or descending; (6) the construction of safety blocks so arranged that cars cannot be pushed into shaft accidentally; (7) keeping copy of code of signals printed in large type in engine-room and top and bottom of shaft, and so placed as to be always in full view of persons required to use them, and employing no person at top or bottom of shaft not understanding English "as she is spoke"; (8) refusing to employ any person as hoisting engineer unless well and favorably known; and (9) using an automatic steam brake on winding drum, safety hooks and catches fixed to head frame to prevent overwinding.

#### ACCIDENTS IN SLOPES.

There are but few slopes in bituminous coal mines of Pennsylvania through which persons are lowered or hoisted, but where this is done there should be (1) the same careful examination of ropes and chains and hoisting machinery as suggested for shafts; (2) persons should be carefully lowered and raised and the tracks should be kept clean and in good order; (3) roof and timbers should be regularly and properly inspected by mine boss; (4) whitewashed shelter holes, not exceeding 30 ft. apart, should be provided for the use of those whose labor requires their presence on the slope; and (5) the same precautions as to signals and safety blocks should be adopted as at shafts. Where persons are not lowered into or hoisted out of slope mines a separate traveling way should be provided, which should be well drained and free from all steam or discharge pipes.

#### ACCIDENTS IN DRIFT OPENINGS.

Accidents in drift openings may be guarded against (1) by compulsory inspection of roof and sides in all hauling roads and pillars if known to be weak—at least three times a week, (2) by provision of a separate traveling way where hauling is done by machinery or inclined planes are used; where this is not feasible, whitewashed shelter holes should be provided every 30 feet; where mules or horses are used for hauling purposes shelter holes should be provided at distances not exceeding 60 ft. apart; the shelter holes in both cases to be made in the rib regardless of the distance of the rib from the track; and (3) by prohibition of the use of a steam locomotive in places used by persons to travel into or out of a mine.

(To be continued.)