

road has also been renewed, the side walls enlarged, and rolled steel girders, with pitch pine supports, have been substituted for the oak stringers hitherto used.

One breakage occurred during the season to our main pumps. One of the large pine spears broke in the lower set of pumps, which, after a few days' work, we got successfully replaced by a new spear.

A number of the sleepers on our railroad have been renewed; the locomotives and rolling stock have been kept in repair, as also the several stationary engines. Considerable repairs had to be done to a number of our boilers, some of which have been in use for a number of years.

The colliery plant generally, may be said to be in very good working order.

The accounts for the year are:—

LIABILITIES.

	£	s.	d.	£	s.	d.
To share capital, viz., 27,469 shares of £5 10s. each.				151,079	10	0
" Sundry creditors—						
At the mines	3,162	18	5			
At Halifax	1,899	17	7			
In England	979	11	11			
Unclaimed dividends	329	6	0			
" return of capital	709	0	0			
				7,080	13	11
" Reserve—						
Per last account	£29,850	0	0			
Added this year	1,550	0	0			
				31,400	0	0
Maintenance and Renewal Account—						
From 1894	£40,250	0	0			
Sydney mines for current year	1,500	0	0			
				41,750	0	0
				73,150	0	0
Low Point, Barrasois and Lingan Mining Co., balance subject to collection of book debts				2,032	2	5
" Profit and Loss—						
Balance from 1894	459	1	0			
Profit this year, per account B	17,040	15	7			
				17,499	16	7
				£250,842	2	11

ASSETS.

	£	s.	d.	£	s.	d.
By Property of the Association, viz—						
Pits, railways, engines, wharves, buildings, machinery, &c.	124,595	7	0			
Other property, including real estate, stores, mining implements, &c., valued per inventory	43,172	18	6			
				167,768	5	6
" Sundry Debtors—						
At Halifax	20,874	3	3			
At the mines	2,722	2	7			
				23,596	5	10
" Bills Receivable—						
In England	8,000	0	0			
In Halifax	7,441	6	1			
				15,441	6	1
" Government and Indian Securities	38,438	4	3			
Accrued interest thereon	432	13	1			
				38,870	17	4
" Cash—						
At Halifax	1,152	7	2			
At the mines	402	18	10			
At London bankers and office	3,610	2	2			
				5,165	8	2
				£250,842	2	11

PROFIT AND LOSS ACCOUNT.

Dr.

	£	s.	d.	£	s.	d.
To Coal stock on hand 1st January, 1895				267	16	3
" Sydney colliery general working expenses, railroad expenses, shipping charges, royalty, &c.				63,999	15	8
" Maintenance and renewal of plant, railroad, wharves, &c.				1,500	0	0
" Management expenses at Sydney mines				1,697	9	10
" Income tax (average of three years)				368	12	0
" Expenses of management in London—						
Directors' salaries	900	0	0			
Secretary, clerks and auditors' salaries	720	0	0			
Office rent, printing, advertising, stationery, telegrams, postages, travelling and petty expenses	360	11	1			
				1,980	11	1
" Legal expenses				70	19	2
" Balance—profit carried to account A				17,040	15	7
				£87,125	19	7

Cr.

	£	s.	d.	£	s.	d.
By Proceeds of sale of 223,645 tons of coal and miscellaneous receipts at Sydney colliery				83,514	5	3
" Rents of cottages and lands				1,264	8	11
" Interest	1,889	11	7			
Less interest paid and exchange	385	3	4			
				1,504	8	3
" Transfer and other fees				5	7	6
" Profit on real estate sales				94	11	1
" Stock of coal 31st December, 1895				742	18	7
				£87,125	19	7

California Gold Mining Co. has been formed with an authorized capital of \$2,500,000, to acquire and work the California mineral claim in the Trail Creek gold mining district of British Columbia. Officers: Rufus H. Pope, M.P., President; O. C. Labaree, Rossland, Vice-President; J. P. Graves, Spokane, Sec.-Treasurer; Trustees: Hon. W. B. Ives, M.P., R. H. Pope, M.P., O. G. Labaree, J. P. Graves, W. A. McDonald. The property contains about fifty acres, and is situated on the south slope of Red Mountain, Trail Creek.

Notes on Dynamite.

Mr. Harry A. Lee, Commissioner of Mines of the State of Colorado, contributes the following:—

Under the most favorable conditions the manufacture of dynamite is a hazardous business, safety being entirely dependent upon the purity of materials used and the skill and care of the workmen employed. In the manufacture of explosives, as in all lines backed by American ideas and energy, the American product stands pre-eminent. Although the first plant was established in this country only a little over twenty years ago, the art has to-day reached that point of perfection, brought feats of engineering within the range of possibility and exerted an influence upon modern civilization, which entitles it to take rank with the application of steam power.

The aim of the various powder companies is to supply a product which can be transported and handled with safety, which will give uniform results in blasting, keep in good condition when properly stored, and, as far as possible, neutralize all poisonous fumes when exploded. The explosives used almost universally throughout Colorado are compounds having nitro-glycerine for a base, commonly called by the miner "30 per cent. powder" or "60 per cent. powder," according to percentage of nitro-glycerine in the mixture.

The strength of the American nitro powder is not, as is generally supposed, wholly dependent for force upon the amount of nitro-glycerine present in the mixture. The compound is composed of various elements which in manufacture not only absorb the desired amount of nitro-glycerine, but are in themselves an explosive. In blasting, the exploder or cap, which is charged with fulminate of mercury, explodes the nitro-glycerine, and the nitro-glycerine, in turn, the remainder of the mixture. A line of experiments, conducted by experts, shows that the force exerted by this combination exceeds that of the sum of the three exploded separately.

The American dynamite of to-day is not an accident, but is the result of a long line of careful experiments, conducted by eminent chemists, and demonstrated by practical tests. These tests, aided by great advances in the art of manufacturing, have demonstrated that the products can be handled with greater impunity than many other things common to transportation by common carriers. They have also demonstrated that the safety of the compound is dependent upon purity of materials used and care in mixing. During the past few years competition among various powder companies has been so keen and bitter that gradually but steadily the cost of dynamite to the consumer has been reduced. It is a dangerous contest, and a rivalry in which, sooner or later, if continued, safety will be sacrificed. To be more explicit on this point—skilled labor commands a certain price, likewise chemically pure nitro-glycerine, the two being the most expensive parts in the compound of dynamite; combined the product is a safe mixture. Unskilled labor and impure nitro-glycerine can be had for less money, but the product of this combination is a mixture subject to decomposition. Decomposition in such a compound is practically explosion. Decomposition may not set in for some time, and the great danger of the competition, in the manufacture and sale of dynamite, is that of forcing some of the competitors to use impure or cheaper materials and labor, in order to meet a lower price, and take chances upon decomposition not commencing before the stock thus manufactured is disposed of. This danger point may not as yet have been reached. The older powder companies have much invested and a reputation to maintain; the newer companies have much invested and a reputation to make. From the standpoint of safety, however, the bottom price is very little below the market price of to-day.

Powder should be stored in a dry, cool and well ventilated magazine built for that purpose. A brick or stone magazine is preferable to a frame, both on account of being affected less by sudden changes in temperature and freed from any danger of bullets from careless marksmen. When built of wood the frame or studding should be covered inside and out with boards, and so set that the air can circulate all around, and the inner boards be but little affected by the heat of the hot sun.

Caps should not be stored with powder.

Regarding the age of powder—when powder has had proper care in manufacture and storage, decomposition will not set in. If there is no decomposition there is no chemical change, and under these circumstances powder ten years old or older is just as good and safe to handle as powder ten days old.

One of the main sources of accident is from thawing powder, and the only safe plan is the use of heat from hot water. The powder should not be dipped in the water but placed in a water-tight vessel and the vessel set in hot water, or a regular powder warmer should be made. These vessels can be obtained from any of the mechanical firms or from the powder companies at nominal cost. Do not place powder under or on a stove, or in the oven. Do not lay on boiler wall or on back plate of a boiler. Do not heat around a blacksmith forge, or over a burning candle. Do not lay on hot sand, or, in short, do not thaw powder with dry heat. Do not consider these precautions unnecessary, or reason that because you have done so many times there is no danger. An explosion is usually fatal, and numberless escapes in no manner reduce the explosive force.

Powder freezes at from 40° to 44° F., explodes, when confined, at from 320° to 360° F. From a quick application of dry heat, powder is liable to explode at 120° F. A stick of powder heated to 120° F. can be held in the hand with little inconvenience, and this degree of heat is soon reached when placed under or above a stove.

That frozen dynamite is liable to explode from heat quickly applied has been demonstrated many times, and to ignorance, non-appreciation, or carelessness of this fact, most accidents are due. If you have heated powder about a stove for years without harm, consider yourself fortunate and stop it. If the warning of those who make the powder has no effect, let the accidents constantly occurring from this cause convince you. If you cannot procure a powder warmer, take a 5-lb. lard bucket, fill it with powder, and set in warm water. If you have no warm water, put some sharp rocks in the bottom of a larger vessel to keep smaller vessel off the bottom, surround the inner vessel with water and set two lighted "snuffs" about an inch long under the big can, throw an ore sack over the whole, and in a short time the powder is in good condition for use and no risk has been incurred. With slow heat thus applied, dynamite may be heated to temperature of boiling water with safety. Do not use frozen powder to load a hole. It is unfit for use. If it explodes at all it will do poor work. If it does not seemingly burn or explode, it may be smoldering or decomposing, and the dropping in of a spoon, a drill or the stroke of a pick or hammer may be sufficient to explode what is left.