

pressure and intermediate steam cylinders have Meyer's expansion gear adjustable by hand. The low pressure cylinders have each a single side valve of the trick type. To work the valve gear of this four cylinder steam engine there are only four eccentrics, making the engine one of the simplest with regard to the moving parts of the valve motion for an engine of this description. The whole thing is of massive construction, having been specially designed for the work intended. The total length of the compressor is about 60 feet 3 inches wide. There are two steam receivers (efficiently drained by steam traps), one between the H. P. and I.M.P. cylinders and the other between the I. M. P. and L. P. cylinders. The compressor is for compressing air for working machinery on the mine including rock drills. The material and workmanship and finish of the engine is exceedingly high class. There are two Lancashire boilers, each 30 feet long by 7 feet diameter. The volume of free air this compressing engine will deal with is from 3,000 to 3,500 cubic feet per minute.

THE PELTON WATER-WHEEL COMPANY.

The Pelton Water-Wheel Company of San Francisco and New York have recently equipped the Sullivan Group Mining Co., of Marysville, B. C., with water-wheels to develop power for running their mines. The Pelton Company report numerous water-wheel plants installed by them recently in British Columbia and Alaska, among which might be mentioned plants furnished:—The Vancouver Engineering Works; Enterprise Mines, Nelson, B. C.; Alaska-Treadwell Gold Mining Co., Douglas Island, Alaska; Juneau Electric Light & Power Co., Juneau, Alaska; Payne Con. Mining Co., Cook's Inlet, Alaska; Rambler-Cariboo Mines, Ltd., Kaslo, B. C., and several others nearing completion at the company's shops.

"MODERN METHODS."

We are in receipt of a copy of Modern Methods Catalogue, No. 28, just issued by the Link-Belt Machinery Co., of Chicago, Ill., illustrating and describing types of Link-Belt elevators and conveyors for handling any class of raw and manufactured product; link-belted, special carrier chains, sprocket wheels, rope sheaves, pulleys, shafting, shaft bearings, gearing, friction clutches and general mill supplies. This catalogue also fully describes the new continuous bucket electric elevator dredge, referred to in the March issue of the MINING RECORD.

HAND AND POWER PUMPS.

Messrs. Ramsey & Co., Ltd., of Seneca Falls, N. Y., have recently brought out a 53rd edition of their illustrated catalogue dealing with hand and power pumps, and hydraulic and pumping machinery for all purposes. This edition is very handsomely bound in red and gold cloth and contains upwards of two hundred and sixty pages of descriptive matter.

MINING RETURNS AND STATISTICS.

BOUNDARY DISTRICT.

ORE shipments from the Boundary district from January 1st to May 24th, 1902, have been distributed as follows:—

Granby Mines, Phoenix	138,412
Snowshoe, "	660
Mother Lode, Deadwood	54,636
Winnipeg, Wellington	785
Golden Crown, "	625
No. 7 Mine, Central	310
Jewel, Long Lake	1,140

ROSSLAND.

Le Roi returns for April: 26,093 tons of ore were shipped to the Northport smelter, containing 8,689 ozs. of gold, 18,079 ozs. of silver and 706,224 lbs. of copper, gross value, \$268,911; average value \$10.30 per ton.

Le Roi No. 2: The manager cables, Rossland May 4th.—"Shipments last month amounted to 6,375 tons; contents, 3,687 ozs. gold, 9,546 ozs. silver, 175 tons copper. Returns from ore after making deduction of all smelting charges amount to \$66,333. Cost of mining may be taken at \$21,333. Profit for last month, \$45,000 (equivalent sterling, £9,278)."

SLOCAN.

Ore shipments from the Slocan for the five months to end of May, aggregate approximately 12,500 tons, of this 1,800 tons has been mined in the Slocan City Division.

LARDEAU.

Shipments from this district for the year to the 17th May, have been 1,117½ tons valued at \$162,887.

LE ROI—THE MINE MANAGER'S MONTHLY REPORT.

The secretary of the Le Roi Mining Co., Ltd., has issued the manager's report for March as follows:—For the month ended 31st March the smelter gave the Le Roi mine credit for shipping 24,428 tons, dry weight, containing gross values as follows:—

7,522,529 ozs. gold at	\$20.00 = \$150,450 or \$6.13
16,037.82 ozs. silver at50 = 8,821 or .36
715,716 lbs. copper at12 = 85,886 or 3.50

Average per ton 245,157 \$9.99

Mine Expenditure.—The expenditure for the month on mine account was \$88,151. The cost of breaking and delivering ore on railroad cars for the month was \$2.96, and the cost including all mine expenditure other than that charged to mine machinery and surface improvements, was \$3.58.

Northport Smelter.—The expenditure for the month was \$227,125. The following statement will give details of ore received at smelter during the month and their contents:—

	Dry tons.	Ozs. Au.	Ozs. Ag.	cu. wt.	Lbs.
Le Roi Mining Co.	24,529	7,522	16,038	715	416
Public Ores	6,235	3,831	9,053	349	453
Total	40,764	11,353	25,091	1,065	1,669

The tonnage treated during the month was as follows:

	Tons.
Roasted ores	24,875
Raw ores, Re Roi	148
Raw ores, Le Roi No. 2	3,440
Raw ores R. G. W. Mines	404
Concentrates	57
Total	28,924

There were shipped during the month 15 lots of matte valued at \$172,512.

The estimated profit for the month on the gross value of the ore shipped from the mine was \$244,997, equal to a value per ton of \$9.99. From this deduct freight and treatment at \$6 per ton, \$147,172, leaves \$97,825; which, less mine expenditure, \$87,768, leaves a total estimated profit of \$22,221; of which the estimated profit to mine is \$9,957, and the estimated profit to smelter \$12,264.

LE ROI NO. 2.

Report for month ended 31st March:—The total tonnage of ore shipped from the mines amounted to 5,170.4 dry tons, which came from the different stopes in quantities as follows:—

IOSIE MINE.

	Tons.
East stope, 200-ft. level, east	342
Annie stope, 500-ft. level, west	2,157
Sill floor, Annie chute, 600 west	360
Sill floor, Annie chute, 700 west	340.4
No. 1 stope, Poorman tunnel	678
No. 2 stope, Poorman tunnel	444
Poorman winze stope, east, surface tunnel	9
Total	4,330.4

NO. 1 MINE.

	Tons.
West stope, 200-ft. level	66
West stope, 200-300-ft. level	615
Intermediate, 300-400-ft. level	129
East drift from 300 drift west	30
Total	840

GROSS VALUE IN THE 51,170.415 DRY TONS SHIPPED.

3,208,304 ozs. gold at \$20.00 = \$64,166.08 or \$12.41 per ton.
8,269,960 ozs. silver at .54 1-8 = 4,466.12 or .86 "
312,154,000 lbs. copper at .12 1-8 = 37,848.67 or 7.32 "

Making the total gross value \$106,480.87
On the average value per ton \$20.59

Stoping Operations.—Sill floors were commenced on the 600 and 700 foot levels of the Josie mine preparatory to commencing stoping operations on the Annie chute above these levels. The tonnage of ore extracted from these levels is shown above.

OUTPUT.

The output for the month averaged about 165 tons per day, being a slight increase over any previous month since the mine commenced shipments to the smelter.

Review of operations for six months ended 31st March last:—The output has been maintained at an average of 155 tons of ore per diem. The grade of the ore has steadily improved during the past six months, and notwithstanding the fall in price of copper the grade of ore has been such that a profit of \$5.44 a ton has been realized, which can be considered satisfactory, since the fall in the price of copper represents a loss of \$2.00 a ton when compared with earnings during the year ended 30th Sept., 1901. All machinery, both on surface and underground, has been maintained in first-class order, and is capable of being worked