"From this ore-bin the ore was fed by an automatic feeder to a pair of Hadfield rolls, which discharged into the boot of a second bucket elevator, by which it was again elevated to the top of the mill. This second elevator discharged into a series of four trommels with 12, 8, 4, and 2-mm. screens, respectively, the undersize of each passing to the next of the series, and from the 2-mm. on to a Culver classifier, which, in turn, discharged into a settler 40 ft. long. The overflow from the settler went to the tailing-dump and the settlings to the tables, of which there are two Wilfleys and six Luhrig vanners of a type selected by Mr. Fernau. It is said that there were formerly 18 of these vanners.

"The oversizes of the 12, 8, and 4-mm. trommels each passed on to a 4-compartment jig; the oversize from the 2-mm. trommel and from the three compartments of the Culver classifier each passed on to a 5-compartment jig. The middling of all the jigs was sent to the bucket elevator and returned to the rolls and trommels. The products of the jigs and tables passed to a 3-compartment bucket-elevator and were hoisted and deposited in bins.

"The power for the mill is provided by water-wheels, a 5-ft. Pelton driving the rough crushing plant and another the remainder of the machinery.

"The object of the plant was to make a separation of galena, zinc-blende, and iron-pyrites, making a zinc-blende product that would be sufficiently high grade to be marketable."

Changes made by Mr. Keane provide for the discharge of the ore from hopper-bottom railway cars on to a floor on a level with the top of the jaw-crusher, so that it is easily shovelled into the crusher; also the substitution of six Wilfley tables for the Luhrig vanners. Other improvements include the putting in of a small Pelton wheel for driving the dynamo for providing for electric lighting of the mill, and of large stoves and drums for heating purposes in cold weather.

It is of interest to add that the first car of concentrate, containing 42 per cent. zinc, was loaded and billed out on October 30th, consigned to zinc smelting works at Kenosha, Kansas, U.S.A.

MONARCH MINE

The Golden Star, published at Golden, Northeast Kootenay, British Columbia, recently printed the following information relative to the Monarch lead-zinc mine, on Mt. Stephen, near Field:

As soon as the steam plant is completed at the Monarch mine 60 tons of ore will be treated daily. This plant will be of 100 h.p. and will take the place of the hydro power used heretofore.

It is hoped with this improvement to be able to ship high-grade concentrates regularly, and work is progressing with a view to opening new ore bodies and keeping a good reserve blocked out. The mine and mill employ about 25 men and this number will soon be added to.

The Monarch has been worked with indifferent success for a number of years and appears now to be coming into its own.

The region in which the mine is situated gives promise of developing other good properties, included among which is that of W. T. Oke, located three-quarters of a mile across the Kicking Horse river. This property has a tunnel about 100 ft. into the hill, which has disclosed some high-grade ore. Picked samples from the dump run 70 per cent in lead and 20 per cent in zinc. The material is a good concentrating ore, and may be put through the same process as that of the Monarch using Huntington mills and Wilfley tables.

PROFIT SHARING

Charles M. Schwab is a great believer in profit sharing as between money power and brain power. Capital is much more in need of brain power than brain power is of capital.

It was brain power, and capital sharing with brain power, that drove the Carnegie Steel Co. to the head of the steel industry of the world, under Andrew Carnegie and Charles M. Schwab, in a comparatively few years. Carnegie was the salesman and financier. Schwab was the ever-expanding maker of steel. Carnegie and Schwab so thoroughly understood each other in constructive development and profit-sharing that it was not necessary for them to confer more than once or twice a year.

Schwab planned the Homestead steel works, to cost $10,000,000, an enormous undertaking for that period. The first that Carnegie heard of it was when he arrived in Pittsburgh from Scotland one morning and Schwab laid the plans before him.

"Charlie," he gasped, "where would we ever sell the entire output of such a plant?"

"Look here, Mr. Carnegie, at these statistics showing the annual consumption of steel in this country. See in how few years the demand doubles."

"Never in the world could we sell such an output," responded Mr. Carnegie. "Charlie, put those plans right in your drawer and keep them there. Don't show them to anybody.'

The great general is first a great soldier and Schwab was Carnegie's most loyal soldier. Without a word those plans were laid away and soon forgotten. Within two years the cable came from Scotland: "I have borrowed the money here. Build the Homestead."

It took all the organization ability of Schwab to rush those works to completion in time to meet the rising American demand for steel. In a few years the Homestead was but a small part of the Carnegie works whose total annual net earnings were four times the construction cost of the Homestead. Today the entire Carnegie works are but a minority in the United States Steel Corporation where the units of construction are now $100,000,000 as in the Gary plant at Chicago.

But Schwab never could be converted by Morgan or his associates in the United States Steel from the profit sharing plan—the union of brain and capital—that made the Carnegie works. He was never again comfortable in the steel business until he had the Bethlehem Corporation well in hand, and a free field on the old Carnegie basis.

Schwab's system is quite the reverse of the usual division. If a manager gets 5% of the gain in his department he does not get a lessened proportion for any additional gains; he gets an added proportion on the whole. Where there is a million dollars gain and a manager gets 5%, or $50,000, if he makes a $2,000,000 gain he may get 7½% upon the total, or $150,000. In some cases this bonus starting at 5% runs in increasing ratio to 15% on the entire gain, so that the manager has the stimulus, not of working for the first gain and being satisfied, but the stimulus of burning his brain tissue every day and every minute of the day from the beginning to the end of the year, for an ever increasing percentage of reward.

Last January Mr. Schwab sent his engineers from the Bethlehem Company's works in California, Massachusetts and Pennsylvania over the Canadian line to do a rush order for the British government. The bonus on the time contract was one million dollars divided between the Electric Boat Co. and Bethlehem. That bonus was won in a few months and the men who directed the work in Canada got the Bethlehem half of it.—Boston News Bureau.