Electric Mine Locomotives.

As in other forms of electric transmission, mine haulage is progressive. The first electric mine locomotive was put in use in 1888, and in the twelve years there is a notable advance in such application. Where min: conditions are such as to admit of mechanical haulage, the electric locomotive presents many features of economical efficiency that commend it to public consideration. The first cost is necessarily high; but, figuring on the matter as an investment proposition where a degree of permanence obtains, the consequent saving in operation and maintenance brings into view its economical features. Among other claims in that regard are brought forward the statements that the use of an electric haulage plant is economical because of freedom from complicated mechanism in the locomotive; small friction loss; power consumed only when doing work, and then in proportion to the work done; absence of heat, smoke, gas and steam; inexpensive line construction; size of locomotive needing no extraordinary enlargement of vertical entry section; locomotive wheel base, admitting of operation on curves of radii as short as 15 feet; light weight of locomotive for given tractive duty and capability of operating on heavy grades; adaptability of the electric power to pumping, hoisting, lighting and other mine duties besides haulage.

On this page appear illustrations of various types of locomotives built by the General Electric Co. Fig. 1 is of their standard mine locomotive, equipped with cab and special draw-bars for surface work. This locomotive, as portrayed herewith, is used by the Minnesota Iron & Steel Co., Minneapolis, Minn.; its weight is 13 tons; draw-bar pull, 4500 pounds; speed, 8 miles per hour. Fig. 2 shows an electric locomotive used by the Bunker Hill & Sullivan M. & C. Co., Kellogg, Idaho. Supt. Barbridge says this locomotive hauled a train of twenty cars, each weighing, when loaded, about 3500 pounds. Its drawbar pull is 1000 pounds; speed, 6 miles per hour. Fig. 3 is of an industrial locomotive for inter-factory transportation, used by Balfour & Guthrie of San Francisco. Its weight is 4000 pounds; draw-bar pull, 500 pounds; speed, 8 miles per hour.

In the issue of Nov. 25, 1899, was given a description of the electric traction at the Hidden Treasure mine, Placer Co., Cal., with illustrations specially engraved for this paper. Regarding the operation of this locomotive, Harold T. Power, president of the company, says that, when operating by animal traction, not over l80 tons of gravel could on an average be hauled in two shifts of ten hours each; with the electric locomotive an average of 350 tons of material was handled; during the same period of time. With animal traction it required 30 minutes to take in the men; the electric locomotive made the trip in 8 minutes. The locomotive runs steadily 20 hours a day, 6 days in the week. The issue referred to has detailed figures comparing electric with animal traction at the last named mine, which are of value to any one interested therein.

Note: see: California Drift Mining, 1899 (Hidden Treasure)

Mining and Scientific Press, V. 81, 12/8/1900, p. 566

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FIG. 1.

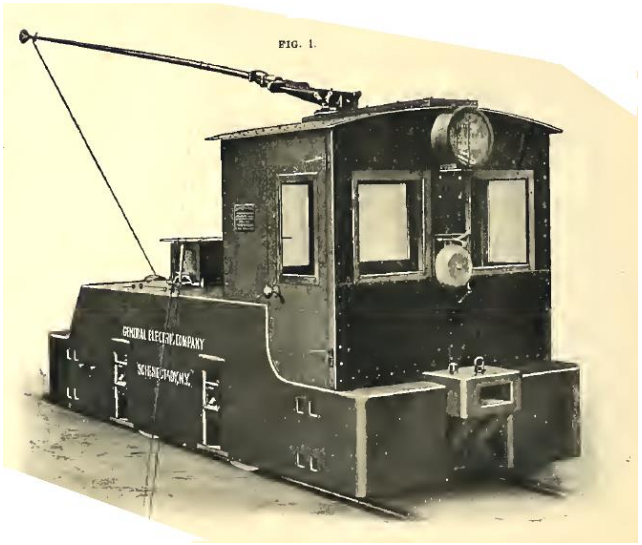

FIG. 2.

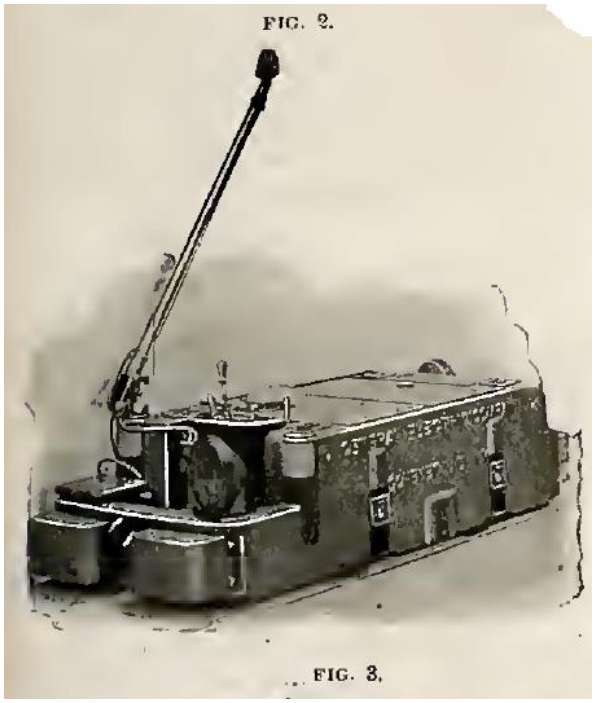

FIG. 3.