

ited, into a metal box below, which is unlocked and emptied of its contents once each round trip by the secretary or his agent, as the car passes the depot or the office. This company owns forty cars, besides a number of large, open cars for summer excursions; two hundred and twenty horses, and regularly employs thirty-five drivers, at \$2.50 per day. It sells five tickets for twenty-five cents, charges but five cents a single fare, keeps its cars cleaner and better lighted, runs them oftener and faster, and, upon the whole, pleases the general public better than any other line. During 1874 it carried about four million of passengers.

THE CLAY STREET HILL RAILROAD Co. is remarkable for combining steam and horse power in the traction of its cars. The exceeding steepness of the grade along the first seven blocks from its eastern terminus westward, in some parts exceeding one foot in eight, renders it wholly impracticable, if not quite impossible, for any ordinary span of horses to pull up any but the smallest cars and the lightest loads. In this juncture the ingenious and enterprising company, encouraged by energetic citizens living upon the adjacent heights or owning adjacent property, became the pioneers in the employment of a steam engine acting upon an endless underground steel-wire cable, by which to draw loaded cars up the grade swiftly, smoothly, and safely. At the top of the grade stands a stationary engine of thirty-five horse power. This operates heavy machinery, which steadily winds the wire cable at a uniform rate, in one direction, up one track and down the other. This rope cable is of the best steel wire, upward of three inches in circumference, about one mile and three eighths long, and weighs nearly five tons. The cars receive the motive power through tenders or dummies, coupled to them in front and provided with strong gripping-clamps or grippers which reach down through a narrow continuous slit or slot nearly under the center of the car, and firmly grip the cable which instantly communicates its motion to both tender and car. They stop by releasing their grip upon the running cable beneath and remain stationary, or avoid running down hill by four strong brakes which, instead of acting directly upon the wheels as usual, present four long, flat surfaces which, when pushed squarely down upon the track exert a friction which proves amply sufficient to hold them securely in place without the least sign of slipping under even the heaviest load. Judging by the throngs of spectators and passengers for months after the opening of this road, it was for a long time an open question whether it was the greater mechanical curiosity or municipal convenience. The steep grade, up and down which the company employs steam power, extends from the inner or city end, at the corner of Clay and Kearny streets, to Leavenworth Street, a distance of seven blocks, or nearly three quarters of a mile; thence to the outer or suburban terminus, nearly two miles, the cars are drawn by horses in the usual manner. Among the minor conveniences of this line, the public notice with pleasure that it was the first and, thus far, remains the only one which provides its cars with clocks, and keeps them, like the other equipments of the line, always in excellent running order and sharply "on time." Mechanically and financially, the road has proved a gratifying success to its ingenious and enterprising projectors and owners. This company also, as well as the Central, proposes to extend its line through Clay Street and First Avenue to the Golden Gate Park at as early a day as an obvious public demand shall justify the expense. The present working force is thirty-three men, twenty-two horses, and fourteen cars. Five tickets for a "quarter;" single fares at same rate. During the whole period of its operation, since September, 1873, the road has carried nearly two million of passengers without accident of any kind. At present its daily travel averages about four thousand, and the consumption of coal, fifteen hundred pounds. As far as known it is the only road of the kind not only in the United States but in the world.

THE MARKET STREET HORSE RAILWAY Co.'s main line begins in Market Street, near the water front, and runs along Market and Valencia streets to Twenty-sixth Street, nearly four miles, over a fine double track the whole distance. Its Hayes Valley branch runs from the junction of Market and Hayes streets, through Hayes, Laguna and five other streets, to the corner of O'Farrell and Devisadero streets, nearly two miles. Since August, 1874, the cars of this route have been running as a separate line from the water-front terminus at the foot of Market Street, direct to the terminus above named, thus avoiding the former inconvenience of changing cars at the Hayes Valley junction. Upon both lines the company now runs about thirty cars, employs ninety men, and owns two hundred and forty-five horses. It sells five tickets for twenty-five cents, pays its conductors and drivers \$2.50 a day, and during 1874 received \$163,912 for carrying three million two hundred and twenty-six thousand four hundred and twenty passengers. Its cars are chiefly remarkable for unusual width and roominess, and, consequently, superior ventilation, with greater comfort, and usually make quick time.

THE NORTH BEACH AND MISSION RAILROAD Co. runs two main, double-track lines, having a general direction at right angles to each other and intersecting at the corner of Fourth and Folsom streets, where either transfers to the other without extra charge. The one commonly called the City Route, has its southern terminus on Fourth Street, corner of Townsend, at the offices of the Central, Southern Pacific, and California Pacific Railway companies, whence it extends through Fourth and Kearny and other important streets to the junction of Mason and Francisco streets, North Beach, a distance of two and seven eighths miles. The other, more generally known as the Mission Route, runs from the corner of Kearny and California streets, down the latter to and along Battery Street, through First and along Folsom to Twenty-sixth Street. Its southerly terminus, about three miles and three quarters. Total length of both lines, all double track, six and five eighths miles. On both lines the company regularly runs between

The Type on which this Work is Printed was cast by Miller & Richard, Edinburgh, Read, Brand & Co., Agents, 310 Clay.