

Fifth and Mission to Twentieth street. This road was constructed chiefly by the late R. B. Woodward, for the primary object of establishing and controlling a method of cheap conveyance to Woodward's Gardens, and its management has been economical and efficient from its inception. One-horse cars are chiefly used, making frequent trips and affording rapid transit.

THE CLAY STREET HILL RAILROAD is distinguished as being the pioneer "cable road," not only of this city, but of the world. The system is unique, and a triumph of inventive genius and engineering skill of which San Francisco has just cause to be proud. While every city is seeking to perfect and cheapen its means of transit from business centers to suburbs, none have been found so effective, cheap, safe and pleasant as the underground cable and the stationary engine. This traverses hills as well as level streets, forms no more obstruction than the ordinary track, is noiseless in its operations, and the cars are more completely under control than when attached to horses. By its means the hilly regions are made as accessible as the level portion, and as they are regarded as healthier, those localities having the greatest elevation are the most desirable for residences. The construction of the Clay street road was regarded as an experiment of a very doubtful character, and the difficulties surmounted by the originator, and the labor bestowed upon the plans and exercised upon capitalists to enlist them in the enterprise were equal to the physical work of constructing the road itself. For this San Francisco is indebted to Mr. Benjamin H. Brooks, son of the distinguished lawyer B. S. Brooks, a pioneer of 1849. Attention was early called to devise means of direct access to the northern portion of the "Western Addition," to which the high, precipitous ridge extending north from Bush street seemed an insurmountable barrier. A tunnel through the ridge along Broadway was proposed, and an Act of the Legislature was passed authorizing it. For several years this was agitated as the only feasible means, but it did not appear to fill the requirements, and the great cost forbade capital investing in it. This would have still left the elevated lands without relief, and it is fortunate that the tunnel was not undertaken. Mr. Brooks having conceived the happy idea of an endless wire cable, laid under the surface of the street and operated by a stationary engine, set his inventive genius to work to perfect the details. A year or more was spent in planning, draughting and experimenting, having in this the efficient aid of Mr. W. H. Hepburn, a very skillful civil engineer, and when fully prepared the scheme, as subsequently carried out and now in such successful operation, was presented to the Board of Supervisors and a franchise asked for. Thomas H. Selby, who was then Mayor, hesitated long and investigated the matter thoroughly before approving it, and then not until such engineers as General Alexander, of the army, B. P. Brunner, of the Rolling Mills, N. D. Arnott, of the street railroads, and others, had assured him of the feasibility of the plan and the safety of the operation as proposed. In 1869 the franchise was granted. The next great difficulty was to induce capital to invest in the enterprise. So novel was the scheme, and so poor the prospect of remuneration, that stock gambling was considered preferable, and local capital refused to touch it. A subsidy of \$30,000 was obtained from property holders along the route, but even with this help no money to do the work could be obtained. Eastern capitalists were invited to investigate it, but upon examining the locality, seeing the steep hill and the few pedestrians upon the street, declared it would never pay, and consoled the enthusiasm of the inventor by admiring the skillfulness of his plans, but declining to invest. Thus struggling for some years, the plans and franchise were in 1872 transferred to Mr. Hallidie for a nominal consideration, a new subsidy was subscribed, the great experiment undertaken, and in September, 1873, was completed from Kearny to Leavenworth street, and put in operation. Not only has it proven a mechanical success, but, contrary to the opinion of capitalists, it has been remunerative beyond all systems in use. So complete and economical has it proven that other companies have adopted it, and in all probability the underground cable will eventually supercede all other means of traction for street cars. To the traveler the sensation of ascending and descending the steep hills is most delightful, the motion being rapid and easy, undisturbed by the painful sympathy for laboring horses, or fear of danger. The cable—a wire rope three inches in circumference—runs in an iron tube laid beneath the street, midway between the rails, with an open slit three-quarters of an inch wide, on the top, through which iron arms attached to and operated in the car, or "dummy," reach and clutch the cable, which is securely grasped or instantly released, as required. Brakes which press upon the track, as well as wheels, readily and securely stop and hold the cars, however steep the grade may be, thus being better prepared to avoid accident than when horses or locomotives are used. San Francisco in adopting this system has made a progress in street railroad building which places her far in advance of all other cities, and is the advance most remarkable of the last decade. The Clay street road now runs its cable from Kearny street to Van Ness avenue, one mile, carrying near two million passengers annually; using about five hundred tons of coal screenings in the same period. From the crossing of Leavenworth, a branch operated by horses runs on that street, Vallejo, Hyde, Union and Larkin, to Chestnut street. Fair five cents.

THE CALIFORNIA STREET RAILROAD is a cable road, and is regarded as the crowning achievement of its class. The practicability of ascending the high hills by means of the endless cable having been shown by the operations of the Clay street road, and California

SAN FRANCISCO LAUNDRY WASHING DONE at SHORT NOTICE
 Office, 33 Geary Street.