

FIRST TRIAL OF THE TROLLEY

Difficulties Encountered and Overcome by the Inventor of the System.

FINAL SUCCESS OF THE EXPERIMENTS

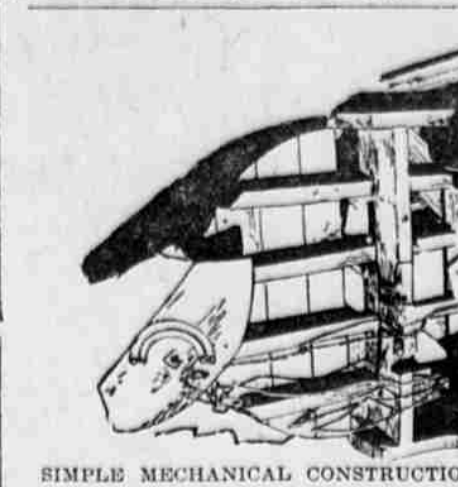
Built a Model Road in the Basement of a College and Installed the Underground System in Denver in 1885.

The first electric road in the United States, built in Denver in 1885, was, strangely enough, an underground trolley system, almost exactly like the one now adopted as the last development of electric railroading in 1899.

I was led to a different conclusion, although I was then only twenty-seven years of age, and by no means willing to pit myself against practical railroad experts.

Soon after my matriculation in the Ohio State university in 1875 I was fortunate enough to make a friend of the manager of the Western Union telegraph office in Columbus.

company was at once organized. A closed conduit system was thereupon installed in Tremont street, and in Fifteenth street from Capital Hill to North Denver, in the summer of 1885.



SIMPLE MECHANICAL CONSTRUCTION OF THE FIRST CAR. BOTTOM VIEW.

an inch wide and in the extreme cold winters of the Rocky mountains this slot would contract until it almost closed, thus interfering seriously with traffic.

Nor is it strange that a Rocky mountain city should have been the first American community to use electric traction.

batteries, at the rate of four miles an hour. In 1879 at the Berlin industrial exhibition, Siemens & Halske exhibited an electrical railroad. In 1882 Leo Darré operated an electrical locomotive called the Ampere, on the little railroad up Mt. McGregor, New York.

The result of my own investigations has inclined me toward the separate equipment of each car with electric motors, according to what is now called the multiple-control system, rather than to the construction of a heavy electrical locomotive, which should draw a number of uncoupled cars.

The next or second conduit road constructed in the United States was laid on the Bentley-Knight system in Allegheny, Pa., and in 1887 the third commercial electrical railway was installed by F. J. Sprague in Richmond.

In 1890 the Edison General company absorbed the Sprague interests and the Westinghouse Electric and Manufacturing company took up railway work.

The Short company was the first to use electric light was generally in use in Rocky mountain towns long before it was introduced in the middle and eastern states.

any's cast-off apparatus and I became an expert in telegraphy. Model Road in a Basement. In the basement of the college building, Denver, I constructed from my own designs an electric railroad.

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Since that time I have devoted myself especially to electrical railroading and have constructed trolley lines in St. Louis, Cleveland, Los Angeles, Buffalo, Cincinnati, Pittsburg, New Orleans, Boston, Kansas City, Rochester, Muskegon, Johnston, Norfolk and San Francisco.

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The problem is a fascinating one, involving almost a revolution in our social life. So great is the gulf between fifty and 150 miles an hour. This would be the crowning achievement, or rather the supreme result of the labors of those pioneers who, like Robert Davidson, foreshadowed as long ago as 1838 what might some day be realized.

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opened the door, when the train stopped, evidently as a sliding door. The wheels were near a station. We bumped about a bit and I took a double wrap on the mule's ears; then we stood still while some other cars were bumped about, and then I heard two short toots of the whistle and a rattle that gradually grew fainter.

The train pulled out and we were side-tracked. We stayed there till morning, too, and I rode that son of a jackass, with a backbone like the ridge of a church roof, up and down and around that car every weary minute of all that weary night.

LIGHTNING STRUCK HIS FOOT.

Remarkable Escape from Instant Death in East St. Louis. Jesse G. Vincent, a nephew of J. Frank Vincent of Smith, Vincent & Co., and an employe of that concern, was struck by lightning on the main side of the house.

Vincent was sent over to East St. Louis to check a shipment of hay, relates the St. Louis Republic. He had been in the warehouse about ten minutes when the storm broke over East St. Louis about 10 o'clock.

Vincent had just left the telephone and was walking across the floor when there was a blinding flash, the room was filled with a white light and there was a terrific crash.

Those who knew Vincent was in the office expected to find him dead. But he was standing against the wall trying to collect his senses. A torn trouser leg and the remains of his right shoe were the only apparent signs of injury.

He walked over to the sink, drenched water in his face, and felt that he was still there. He happened. He rolled up the torn trouser leg, removed what was left of the shoe and looked to see if his foot was still there.

"I didn't know what had happened," said Vincent, shortly after the accident. "I saw a blaze of light, as if an arc lamp had been turned on in front of my face, and then it was some minutes before I knew where I was. I felt as if I had been standing on a plank, and someone had hit it a tremendous blow. I can imagine how a man feels when a 'copper' hits him on the feet with his

The damage to the building is estimated at \$10,000. The telephone was torn from its place on the wall, and the only whole part of the stove were the two lids, which were sent whirling through a window. The bolt of lightning struck the metal top of the stove and ran down the chimney, and he was down the stove, jumped to Vincent's feet and then went through the floor.

HOW TELLER PRAYED. Florid Appeal for Salvation at a Lynching Bee. The senior senator from Colorado, with the exception of the period he served as secretary of the interior in President Arthur's cabinet, has represented his state in the senate since its admission to the union in the Centennial year.

It is told of him that on one occasion he took part in the lynching of a Mexican who was caught robbing the silver boxes. It was not the first offense, and the man had again and again been warned, but to no purpose.

THE SPOKANE REVIEW OF RECENT DATE SAYS: "The coming of the little brown men from Japan is proving a source of worry to many. In the last year or two they have been in the line of the Pacific northwest in great numbers, and the rate of their coming is constantly increasing."

"On the Pacific coast it is estimated that already 800 Japanese are employed on track work in the Pacific northwest, comparatively few white men being left. The Oregon Railway and Navigation company has a large number of Japanese section men.

"The Great Northern is in the same line of work, and is now rapidly replacing white men with Japanese. By some time in June it is thought the Great Northern will have 500 subjects of the mikado doing the work that men from the Emerald Isle, from the Scandinavian kingdoms and from Italy have been doing heretofore."

"A little inquiry among the railroads brings out the fact that it is not entirely that the Japanese will work cheaper than white men that they are being hired in such numbers, but because they are more reliable. This is a well known fact among the employers of labor that a white man will do more work in a day than a Japanese, and that the increased pay a white man demands over a Japanese laborer is fully earned, but the railroads say the men are not getting their money's worth, and will not hold a job long and are forever wanting their 'time' and the accompanying time check."

"It is stated that the Great Northern has been bothered especially in this regard, and that is the reason for doing the wholesale employment of Japanese." Said an official of the Great Northern the other day: "When we send Japs out for section work we know they will stay all winter. If we are employing say forty white men in a gang at some point, at the end of the month they will be in the line of the pay roll. Men will go out, work a day or two and then quit. This makes a vast amount of extra clerical labor, besides being an annoyance. In addition, we must be constantly passing a large number of men to the work."

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CASCARETS. REGULATE THE LIVER. PURELY VEGETABLE. CURE CONSTIPATION.



PROF. S. H. SHORT, PIONEER OF ELECTRIC ROADS.

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THE FIRST ELECTRIC CAR.