

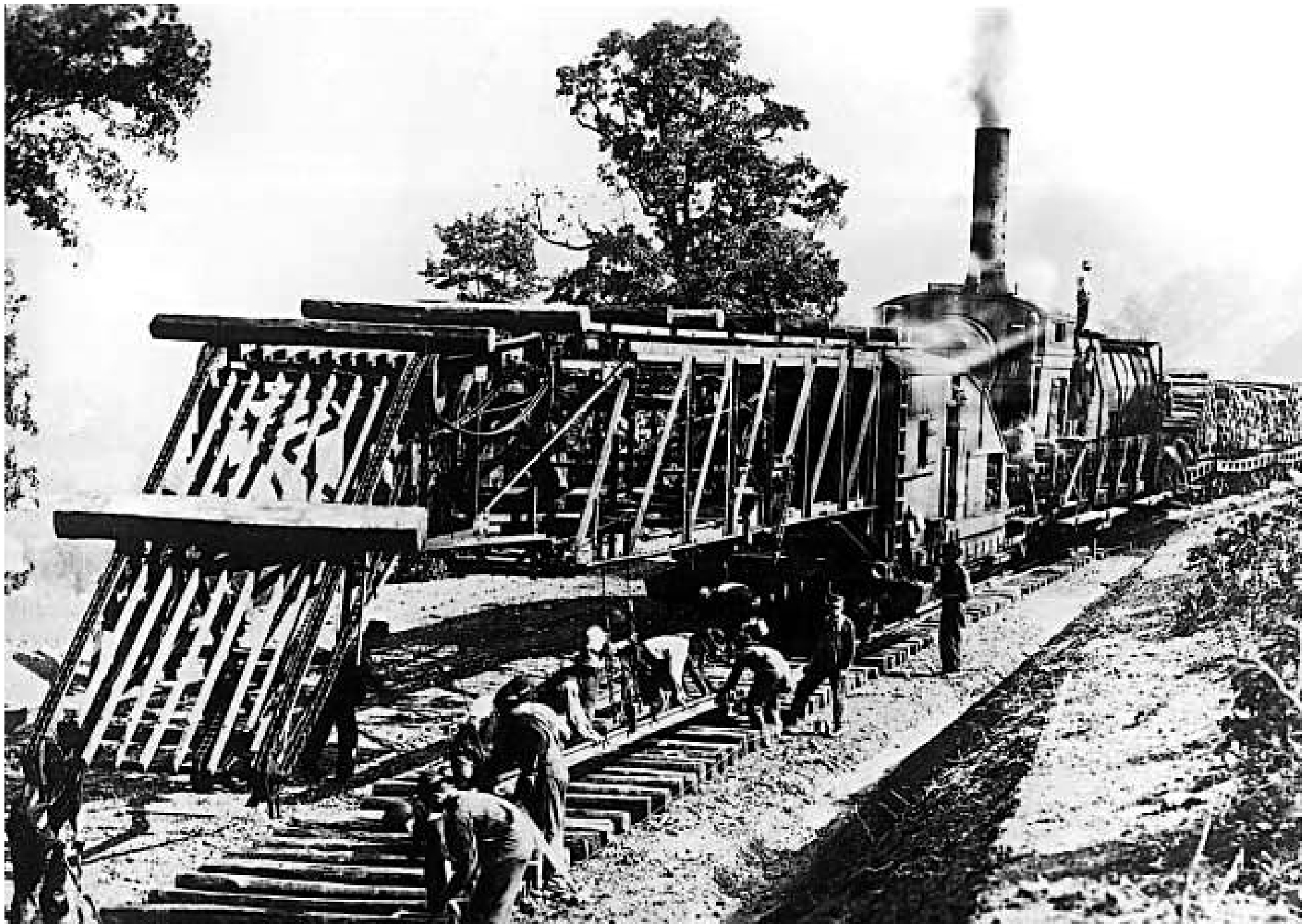
The Robertston-Whiteside Track-laying Machine

**This railroad featured one of
the first, if not the first,
machine for laying railroad
tracks.**

**A photograph of the Robert-
Whiteside machine has yet to
be found, but one of its many
later competitors, the Harley
Track Layer of 1911 shown to
the right, was similar to it.**



(Photo to the right from: <http://atatrail.org/pdf/WestMDRailay.pdf>. Many thanks to Solano County historian and history-activist Jerry Bowen for bringing this picture to my attention. John Lofland)

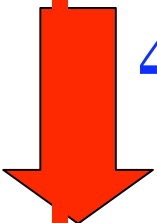


“The Track-Layer on Its Travels”

In July and August of 1868, *The Solano Press* published four background articles on the construction of the railroad. One of them described the introduction and operation of the track-laying machine. Part of it is reproduced below.

Four aspects of this report might be highlighted:

1. At first people thought the machine was useless.
2. When it did work, crowds formed to watch it.
3. It was exhausting to operate.
4. Extravagant claims for the machine's importance were made.



THE TRACK-LAYER ON ITS TRAVELS.

Robertson's track-layer, which so many in this city have looked at as an ingenious but impracticable machine, was taken up by some adventurous spirits, and conveyed to Vallejo last spring. With great hesitation and much difference of opinion among the Directors, the contract for laying the iron and ties of the permanent road was let to W. D. Robertson, the inventor of the machine, and his partner, J. M. Whiteside. The track-layer took up its station about opposite the centre of the engine-house. The people flocked around it, and laughed at the idea of this great cumbersome looking machine, that seemed unequal to the task of moving itself without equine aid on the smoothest wagon road, traveling over a roughly graded railroad bed, to say nothing of carrying heavy loads of materials, moving and laying ties and rails and performing the heavy but somewhat particular work of laying a level and straight road. Others who thought it feasible that the machine should do the work in some form, doubted whether it would lay them properly. Others objected that the same number of men which would be necessary to guide the machine, would be quite equal to doing the same amount of work without its aid. In short, the general opinion was that the machine for practical purposes was useless. Robertson, with the stout faith in the machine which he had created which all great inventors have in their work, never lost heart or bowed to the sneers and detractions of the crowd, and he was ably supported and cheered by the courage of his partner Whiteside.

On the 18th of April, the machine laid the first rail and started on the road to Sacramento. From that day to this, there has never been a day on which it could not have traveled and have laid from half to three-quarters of a mile in a day of nine working hours, and had the men drilled, been obtainable, and the supplies of rails, ties, chairs and spikes been ready. The machine has an insatiable appetite for such solid food and cleared the Company's larder at a much quicker rate than they were prepared for. Given 40 men and full supplies, it would lay at least $1\frac{1}{2}$ miles in 18 working hours; probably by adopting some improvements in the supplying trucks to facilitate the feeding of the machine it would get over two miles of ground in that time. Give it three sets of men—say 60—and the best appliances possible for supply of material, and it would lay possibly $2\frac{1}{2}$ miles a day. As the machine travels it would carry its artificial light with it, and the difference of cost between working by day and working by night would only be the cost of the oil or other combustible material.

The machine set out, as we said on April 18th, and traveled slowly at first because the men were inexperienced. Many gave up from physical incapacity or unwillingness to accept an employment that kept such a constant strain on the muscles and on their attention. New recruits came

up who set themselves to learn the "goose step" of the track-layer, and being perfected in their drill now take pride in the machine and the remarkable work they are performing. Possibly they have a glimmering of the fact that in after years, when track-laying by hand all the world over, is abandoned, except for sidings and switches, they will be able to say, with pride, I worked on the first machine, and helped to lay the first 60 miles of steam-built track ever constructed.

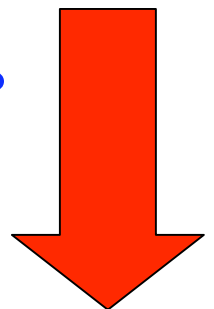
Away went the machine round the back of the town of Vallejo, where crowds of admirers watched its every revolution, along the edge of the country road towards Suscol, turned the angle safely and skillfully, and set out for the summit, up the canyon. At the rate of 60 to 90 feet to the mile, it toiled over embankments or through cuttings to the point where the pilot, standing on his raised platform, could overlook half a dozen counties. Down the Jamison canyon it rolled, never overrunning its regulated speed as it had never slackened it, when rising the steepest portion of the incline. Wherever it advanced it left behind that double iron stripe which wields so great an influence on the material development of States, and on the customs of the world. The track-layer will be the parent of many railroads yet unborn, and when they shall be completed and have affected, as all new facilities for traveling do, the mental culture as well as the material advancement of mankind, the track-layer will have a right to claim rank with the spinning-jenny, the power-loom, the locomotive and the turret ship, as one of the educators of our race; and Robertson may stand beside Arkwright, Stevenson, Ericsson, and other mechanical worthies.

Crossing the Bridgeport marsh, the track-layer rolled into the hill through the tunnel as easily as it had gone over the summit, and across the plains for Fairfield and Suisun. It passed the latter place by the Fourth of July, and great was the celebration on the occasion. The track-layer and its crew were accepted as the harbingers of a new and more prosperous life for these quiet places. The men felt good and the inhabitants felt hospitable, and so jollily was the Fourth kept, that half a week had sped before all the crew were fit again for a full day's duty. For all that, however, on the evening of the sixth working day from Independence day, last Saturday, the track-layer at 6 o'clock was over $3\frac{1}{2}$ miles from the point at which it had rested for the holidays, having laid on the last day $\frac{3}{4}$ ths of a mile between 8 o'clock and evening, one hour for meals taken out. Beside this there was some detention through the breaking of a rope and other trifles, among which must not be forgotten the loss of time while our reporter was examining the machine.

SP, 7-29-68

The New York Times Reports on the “Track-Layer”

This June 21 *Times* report taken in part from a May 13 San Francisco story suggests the importance of the machine. Grading rather than track-laying now becomes the slower part of “railroading” America.



The Railroad Track-layer in California.

From the San Francisco Alta California, May 13.

The railroad track-layer is an indubitable and decided success. It is now working along regularly at the rate of a mile a day, and it will do better when several small defects are remedied. Some of its work has been done at the rate of two miles in twelve hours, but one mile is considered as its present working capacity. The contractor and directors of the Vallejo and Sacramento Railroad, although most of them were skeptical, and some quite dissatisfied about the delays in getting it into operation, give it the highest praise, and have made their arrangements in reliance upon it.

The machine is a car 60 feet long and 10 wide. It has a small engine on board for handling the ties and rails. The ties are carried on a common freight car behind, and conveyed by an endless chain over the top of the machine, laid down in their places on the track, and when enough are laid a rail is put down on each side in proper position, and spiked down. The track-layer then advances, and keeps on its work until the load of ties and rails is exhausted, when other car loads are brought. The machine is driven ahead by a locomotive, and the work is done so rapidly that sixty men are required to wait on it, but they do more work than twice as many could do by the old system, and the work is done quite as well. The chief contractor of the road gives it as his opinion that when the machine is improved by making a few changes in the method of handling rails and ties, the necessity of which changes is now apparent, it will be able to put down five or six miles per day unquestionably. This will render it possible to lay down track twelve times as fast as the usual rate by hand, and it will do the work at less expense.

The invention will be of immense importance to the country in connection with the Pacific Railroad, which, it was calculated, could be built as fast as the track could be laid, and no faster; but hereafter the speed will be determined by the grading, which cannot advance much more than five miles a day. Thirty millions of dollars have already been invested on the Pacific Railroad, and if the time of completion is hastened one year by this track-layer, as it will be if the Central and Union Companies have money enough to grade each five miles a day, there will be a saving of \$3,000,000 on interest alone, on that one road.

The track of the Sacramento and Vallejo Road has been laid for eight miles out of Vallejo, and it is to go on directly to Susan, which is to be reached before the 1st of June, and thence to go on to the crossing of Putah Creek, where the cars are to run by the 1st July. The road passes over a good deal of tulle within fifteen miles of Sacramento, where the grading cannot be done till the Fall, so no time is fixed for the completion of that part of the work, except that it must be as soon as possible, and before

the 1st of November in any event. The Company has fifty thousand ties on hand, and has lately contracted for fifty thousand more, to be delivered as fast as needed.