

UNITED STATES PATENT OFFICE.

THOMAS DARK, OF BUFFALO, NEW YORK.

COMBINED PORTABLE RAILWAY AND WORKING-CAR.

SPECIFICATION forming part of Letters Patent No. 280,802, dated July 10, 1883.

Application filed February 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS DARK, a citizen of the United States of America, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in a Combined Portable Railway and Working-Car, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to devices used in work on excavations, digging long trenches for sewers, deep cuttings, &c., the object being to facilitate such work by providing not only the usual steam excavating appliances on a flat
15 car, but also avoiding having to build a removable railway for such car or cars to run on, by combining therewith a portable railway-track on which the car runs, and which is moved, when desired, by the car thereon and
20 by its own appliances, all as fully hereinafter explained.

In making excavations for long sewers, &c., usually a track, on which the working-car runs, is built on trestles for a certain distance, and
25 after the work is done in that spot the trestle and track have to be taken down and apart, and carried ahead and there again built up, thereby consuming a great deal of valuable time and labor and wear and tear of material.
30 By my simple devices the car and a track—say of fifty-feet lengths or sections, or more—are drawn ahead to any required distance by merely putting or having rollers in suitable journals under the car-track, and running the whole
35 on a plank road laid on the ground by the side of the trench, which is done by simply carrying a rope or cable ahead as many feet as it is desired to move the car and track, and attaching it to an anchor, and the end on the drum on the
40 car. The working-engine on the car is then started, and the cable winds around the drum and draws the car and track ahead, the whole running on the planking or plank road beneath till stopped. Then the plank road is readily
45 taken up from behind and relaid ahead for the next move forward. As soon as the car and track are at rest, the engine, which is disconnected from the wheels and connected only to the derrick, is set at work and the excavation
50 begins. When the scoop is filled, (not shown,) it is swung around out of the way, and the en-

gine again connected to the car-axle and the car moved back, and the dirt, &c., dumped as desired; or, if a car is used behind the working-car, it is loaded, then run back, and unloaded. The engine-car is kept on the track
55 at the front end of the track by a strong bulwark or beam fastened to the extreme end of the track. This also keeps the car from running off, and holds it on while the car and track
60 are being drawn ahead, all as more particularly hereinafter described.

In the drawings, Figure 1 is a side elevation of a working-car with engine and derrick thereon, and standing on its own track, this in turn
65 standing on the plank roadway beneath. Fig. 2 is a cross-section through the car and track, and shows the end of the plank road, the rollers thereon, and their journals in connection with the track above. Fig. 3 is a plan of the
70 railroad and plank road.

A represents a working excavating-car provided with the usual engine, B, and derrick, C. The details of their construction are not shown or described as they form no special part of my
75 invention, but work in connection therewith. Neither are the devices for connecting or disconnecting the engine from the car-axle and wheels shown, as such are old and well known. This car rests on an iron track fastened to the
80 usual wooden side pieces and held by the usual cross-pieces, &c., the whole forming a section of a railroad-track, E, built light but strong, and which is independent of any ground-connection by reason of having journals *bb*, properly
85 attached to the under side of the track E, with rounded-out bearings for the shaft or central part of large wooden rollers *c c* to run therein. (See Figs. 1 and 2.) Below these rollers, and on the surface of the ground, are laid
90 sleepers F F, on which lengths of pine-planking G are laid, and breaking joints on each side of the track. On these planks the above-described rollers *b b*, carrying the track E and car A, run, as well as rest thereon.

95 H is a strong beam or bulwark fastened to the end of the track E, against which the front wheels of the car rest, (see Fig. 1,) which gives the resistance when the car and its track are drawn forward over the plank road, as before
100 described. The rollers *c c* are set about fifty feet apart, and to support the intermediate

track I arrange under track E a rest, *d*, which is a leg hinged to the under side of the track, and held up by a hook when not used. (See Fig. 1 at E'.) By this hinge it is always in its proper place, ready for use.

This railroad may be built of any length, usually from four hundred feet to six hundred feet being enough. The engine is so constructed as to be used for hoisting in connection with the derrick, which has, when in use, a large excavating-scoop or iron bucket for hoisting dirt, gravel, &c., from the trench or cut, and which is then swung around to the rear, and then either dumped on a car, or the engine is connected to its wheels and the car run back and the scoop dumped into that part of the trench where the brick-work is completed, if in the case of a sewer. This saves greatly in time and labor of men working with shovels filling a car with the dirt, &c., excavated, and also prevents blocking the road or street with the stuff excavated, as usually only one side of the street will be occupied by the track, &c., when my device is used.

The plank road upon which the railroad runs requires to be built about one hundred feet ahead, so that when one part of the excavation has been finished, an anchor is set ahead, with a rope connected to the drum *f*, and the engine draws the car and railroad E thereby up to the point desired. This is accomplished in a very short space of time—usually done while the men are at dinner. The plank road passed over is then taken up and laid down ahead.

The railroad-track will be in lengths of fifty feet, and these lengths fastened together or taken apart, as desired, those behind hauled up to those in front, and all jointed together. This labor-saving device has been in operation in Buffalo, N. Y., three months in digging a sewer-cut eighteen feet six inches deep, and has been found to be of great utility, as well as working admirably. When work is done at one place, the car can be mounted on road-wheels and drawn away, and the railroad-sections and the plank road all carted off until needed in another spot.

I do not claim the working-car or its appliances of themselves.

I claim—

The combination of a working-car, A, (comprising usually an engine and derrick,) with a portable railroad-track, E, the working car or cars running on said road, the latter moving forward or back with the car, when desired, by means of rollers *c c*, running in suitable journals, *b*, and on a removable plank or other road, F G, all arranged and operating substantially in the manner and for the purpose specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 1st day of February, 1883.

THOMAS DARK.

Witnesses:

J. R. DRAKE,
GEORGE DARK.