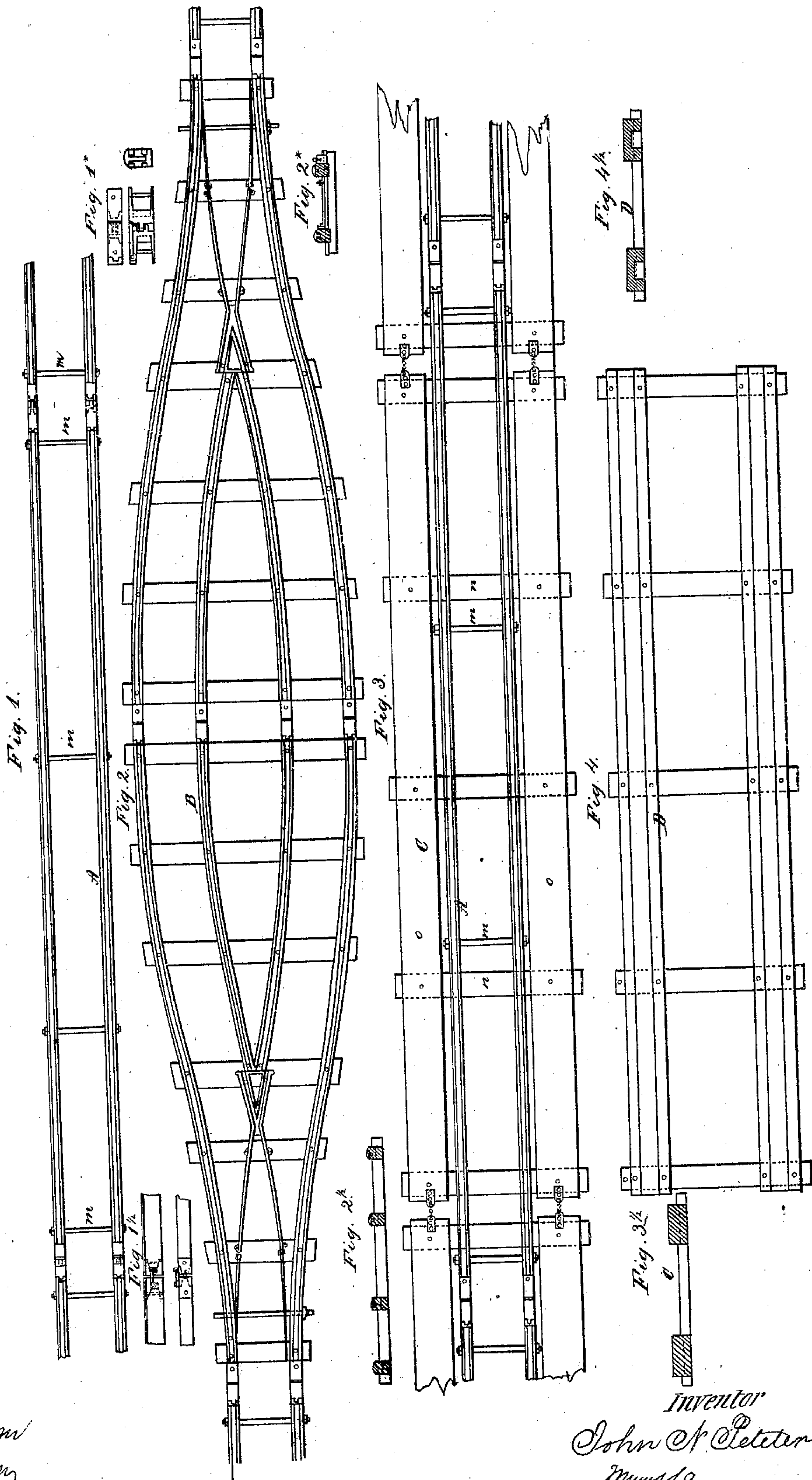


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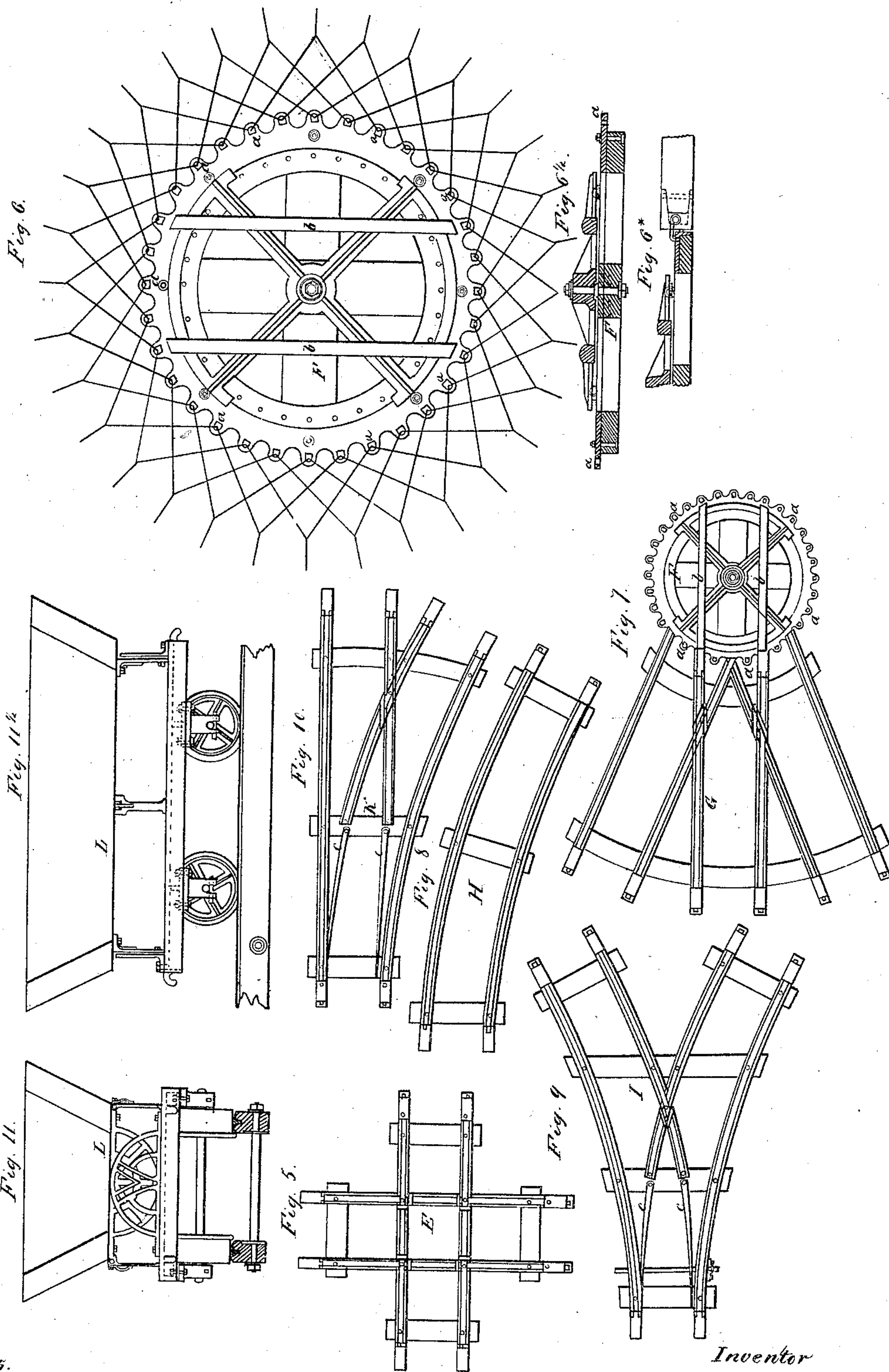
J. N. Peteler
Railway Track.
N^o 57,826. Patented Sept. 4, 1866.



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UNITED STATES PATENT OFFICE.

JOHANN N. PETELER, OF SCHEPPACH, BAVARIA, ASSIGNOR TO ALOIS PETELER, OF NEW BRIGHTON, NEW YORK.

IMPROVEMENT IN PORTABLE RAILROADS.

Specification forming part of Letters Patent No. 57,826, dated September 4, 1866.

To all whom it may concern:

Be it known that I, JOHANN N. PETELER, of Scheppach, Bavaria, have invented a new and useful Improvement in the Construction of Portable Railroads; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a plan of the single rail. Fig. 2 is a similar view of the turn-out. Fig. 3 is a similar view of the bearers with longitudinal connections. Fig. 4 is a similar view of the bridge. Fig. 5 is a similar view of a crossing. Fig. 6 is a similar view of a turn-table. Fig. 7 shows the turn-table and connections. Figs. 8, 9, and 10 show different arrangement for curves. Figs. 11 and 11½ show an end and a side view of the car.

The remaining figures show details or sections, and will be referred to as the description progresses.

Similar letters of reference indicate like parts.

The object of this invention is a portable railroad, which can be readily transported from one place to another, and easily put down or taken up, and which can be used with great advantage for passing over marsh land, for building roads, or for engineering or building operations in general.

The rails A are made of pine wood, which is light, cheap, and somewhat flexible. Each rail is about twenty or twenty-five feet long, three and a half inches high, and two and a half inches wide, oval on the top; otherwise rectangular.

The connection between two rails is effected by means of four (more or less) cross-bars, *m*, of cast-iron or other suitable material, which are secured in position by nuts screwed on their ends or in any suitable manner. Each section being composed of two rails, which are held at the proper distance apart by the cross-bars *m*, is provided at one end with suitable dowels or hooks, and at the other with sockets or staples, so that the same can be readily and conveniently connected; or instead of the dowels and sockets any other convenient fast-

ening may be used, such, for instance, as shown in Figs. 1½ or 1*.

If the portable railroad is much used, turn-outs B are required, such as shown in Fig. 2. This turn-out is constructed of two halves, which are connected at their wide ends. It is necessary to make the same in two parts, so that they can be conveniently transported. Each half can be carried by three men.

If for particular purposes a wider or longer turn-out should be required than the one shown in the drawings, it could be made in more than two parts by cutting it up transversely or longitudinally to suit convenience.

The connections between the two halves of the turn-out and those between the turn-out and the adjoining sections of the road are effected by the same means which are used to connect the sections themselves.

By placing between the two halves of the turn-out one or more ordinary sections of rails, the turn-out can be prolonged to any desired distance. Said turn-out ought to be constructed of oak wood, and not more than a few minutes are required to put it down or take it up.

In case the railroad is to be put down on moor land or marshy ground, a supporting-frame, C, is required to prevent the rails from sinking into the ground by the weight of the cars.

The supporting-frames are constructed of a series of bearers, *n*, which extend transversely under the rails, and the ends of which are connected by boards *o*, running parallel with the rails. These longitudinal connections form the walks for the carmen, and they are united to each other by suitable fastenings similar to those described in Figs. 1, 1½, and 1*. By means of these supporting-frames the rails are enabled to support any weight to which they may be exposed, and said frames can be made so light that ten men can put down a length of one thousand feet, together with the requisite quantity of rails.

For the purpose of crossing rivers or canals I use a bridge, D, constructed as shown in Fig. 4. These bridges are similar in construction to the supporting-frames, but the longitudinal connections are stronger than those in the former case. If a canal exceeding sixteen

feet in width is to be crossed, the ends of the bridges are supported by suitable yokes, and in crossing rivers ordinary rafts are used.

Where one road crosses another, a crossing, E, is used, such as shown in Fig. 5. These crossings are so constructed that they can be easily carried by two men, and that they can be laid down and taken up without trouble or loss of time.

In many operations, such as filling up low or marshy ground or leveling hills, &c., a turn-table, F, is required, which is constructed as shown in Figs. 6 and 7. This turn-table is constructed of a wooden rim about four feet in diameter, three inches high, and six inches wide, with a crossing of the same width.

The rim is strengthened by a cast-iron hoop, which is provided with studs *a* projecting over the circumference of the wooden rim. Said studs are provided with holes, into which the rails are hung, and by changing the rails in the various holes cars can be run in thirty-two (more or less) different directions without moving the turn-table.

By turning the table the rails which are attached to its rim may be made to radiate in any desired direction.

In order to bring the car in the desired direction, it is driven or pushed on the rails *b*, which are attached to the turn-table and revolve on its center, and said rails are turned until they point in the desired direction.

By taking up the turn-table and putting it down in another spot, backward or forward, thirty-two (more or less) new directions are obtained, and by these means every square foot of a piece of ground can be reached. The position of the turn-table in each of its directions is rendered secure by a stop applied so as to retain the rails in the required position.

The weight of the turn-table is such that the same can be conveniently carried by three men, and it can be easily laid down in any desired place.

The holes in the studs *a* may be cast in, and they may be made to extend up and down or in a horizontal direction, according to the construction of the fastenings on the several sections of rails to be connected to the rim.

The rails *b*, which revolve on the center-pin of the turn-table, must be so arranged that their surfaces are in line with the rails attached to the studs *a*.

If desired, a combination-rail, G, may be secured to the turn-table, such as shown in Fig. 7.

By the use of this combination-rail several directions, which diverge under very acute angles, can be reached without requiring any change in the position of the turn-table or of the rails.

Where the road has to be laid in curves, sections H, I, and K are used, such as shown in Figs. 8, 9, and 10. These curved sections may either be made in the simple form shown in

Fig. 8, or two curves may be combined, as shown in Fig. 9, or a curved section may be combined with an ordinary straight section, as shown in Fig. 10; and where two sections are combined suitable frogs *c* are applied, so that the cars can be readily brought from one section to the other.

It is obvious that the shape of these curves and their combination with each other or with straight sections can be changed in a great many different ways to conform to the formation of a certain tract of land, although it must be remarked that the curves shown in the drawings are sufficient for almost any emergency which may arise.

The cars L used on my portable railroad must be low, so as to prevent them from swaying to and fro, or from tumbling over, particularly where the road passes over soft or marshy ground, and great precaution must be taken in this respect, particularly because the gage of the road cannot be made to exceed fifteen inches without impairing its quality of being portable. The cars must also be so constructed that they will open from both sides, and in some cases also from the ends.

The operation of this portable road is very simple, and it saves much time and labor.

All the parts required for a line of one thousand feet can be carried by three ordinary wagons, and ten men can take up the road and lay it down in from one and a half to four hours, according to the formation of the ground.

Minor alterations in the road can be effected with little loss of time. Four men can take up and relay a turn-table in five minutes, and a turn-out in ten minutes.

The expense of a line of one thousand feet is from four hundred dollars to six hundred dollars, and it can be used in a great many operations.

In digging peat, filling up sunken or wet lands, leveling or building roads, and, in fact, in all engineering and building operations, the use of my road saves much time, labor, and expense.

What I claim as new, and desire to secure by Letters Patent, is—

1. A portable railroad composed of sections A, turn-outs B, supporting-frames C, bridges D, crossings E, and one or more turn-tables, F, all constructed, combined, and operating substantially as and for the purpose set forth.

2. The combination of the perforated studs *a* and turn-table F, provided with rails *b*, constructed and operating substantially as described, for the purpose specified.

The above specification of my invention signed by me this 30th day of September, 1865.

JOH. NEP. PETELER.

Witnesses:

JACOB NIEDNAMAYR,
ANTON HUBLER.