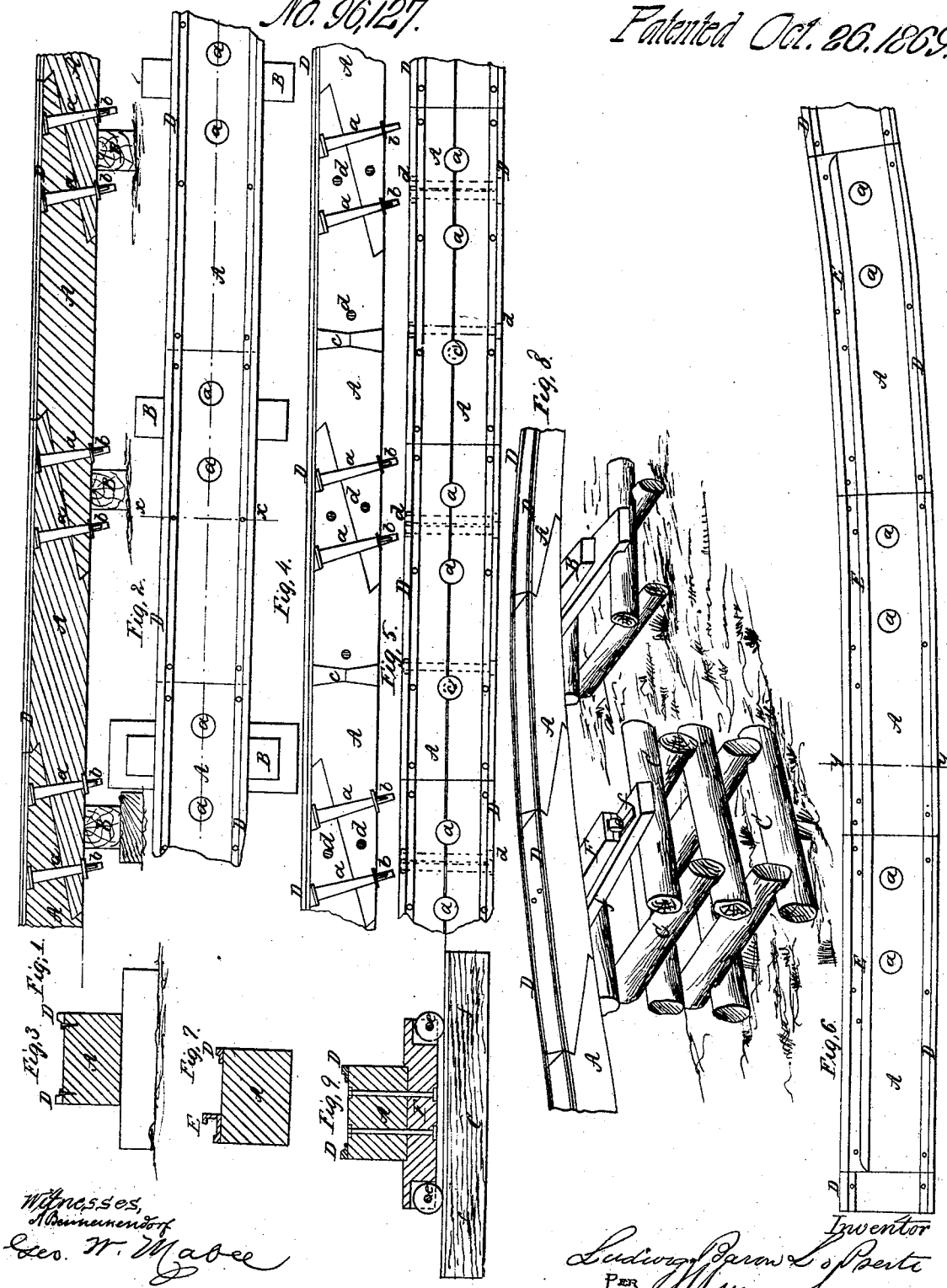
L. Lo Presti,

Railway Track.

No. 96,127. Patented Oct. 26, 1869.



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Letters Patent No. 96,127, *dated October* 26, 1869; *patented in England, October* 22, 1868.

IMPROVED RAILWAY-TRACK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, Baron LUDWIG LO PRESTI, of Vienna, in Austria, have invented a new and improved Railroad-Track; 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 part of this specification.

The object of this invention is to construct a cheap railway, which can be easily constructed, and which is capable of extended application, and of ready transfer and displacement.

In accordance with the system which I have invented, railways can be rapidly constructed, at a comparatively small cost, and without any reference to the nature and formation of the ground. The preparatory processes of digging, levelling, tunnelling, &c., which were heretofore required to construct a railway as nearly as possible level, are not required, as my track can be made to follow the natural elevations, depressions, and windings of the ground. The track itself is made to form one separate independent structure, which will in itself have all requisite resistance and strength, and which does not require to be as rigid as the anchored tracks heretofore in use.

The invention consists chiefly in arranging the entire course of rails that constitutes a track on wooden beams, which are of the same length as the rails, and sufficiently strong to sustain the weight of the trains, and sufficiently wide to admit two rows of rails and to properly balance the cars. The junctions of the several beams are made strong and reliable, and so that they are all connected into one solid, substantial structure, which, although it may yield momentarily to a heavy train, will, when the same has passed, at once readjust itself to the proper position.

The invention consists, also, in a novel manner of connecting parallel pieces into substantial single beams; and, finally, in the arrangement of rollers under the beams, to allow lateral motion, without excessive friction, which is an important feature where the track is supported above ground on high trestles.

The several sections of beams are already provided with rails when they are put together, at least preferably so. The rails may, if desired, be applied when a portion of the beams have been connected.

In the accompanying sheet of drawings—

Figure 1, Sheet I, represents a vertical longitudinal section of my improved track.

Figure 2, Sheet I, is a plan or top view of the same.

Figure 3, Sheet I, is a vertical transverse section of the same, the plane of section being indicated by the line *x x*, fig. 2.

Figure 4, Sheet II, is a vertical longitudinal section of that class in which the supporting-beam is made of two or more longitudinal layers of timber.

Figure 5, Sheet II, is a plan or top view of the same.

Figure 6, Sheet III, is a plan or top view of the track, showing its construction on a curve.

Figure 7, Sheet III, is a vertical transverse section of the same, the plane of section being indicated by the line *y y*, fig. 6.

Figure 8, Sheet IV, is a perspective view of the same, showing it supported on a trestle-work.

Figure 9, Sheet IV, is a vertical transverse section of the same, showing the roller-support on the trestle.

Similar letters of reference indicate corresponding parts.

The whole track is arranged upon one row of wooden beams, A A. These beams are made of suitable size, and are connected by scarf or other suitable joint. The joint shown in the drawings, and particularly in figs. 1 and 4, is made by bevelling the contiguous ends of the beams, and fitting the bevelled faces together.

The overlapping portions of the beams are then bolted together, preferably by conical bolts *a a*, which have their heads countersunk in the upper faces of the beams, and which are locked at their lower ends by nuts, or wedges *b*.

These beams, thus connected, are placed either upon the bare ground or upon short cross-beams B, as in figs. 1, 2, and 3, or upon stones or other suitable supports.

When to be elevated a considerable distance above the ground, they are supported on trestles C, shown in fig. 8.

The string of beams thus produced carries near its sides suitable rails D, on its upper surface. Said rails are either perfectly plain L-shaped, as in fig. 3, or they are T-shaped, or sunk into the beams, as may be desired. If desired, the beams may also be grooved, or have rails at the sides to receive guide-wheels, which steady the cars that pass over them.

It may at first sight be supposed that a single beam, which is perhaps not more, perhaps even less than eighteen inches wide, would not form a track wide enough for cars of the ordinary width. This is, however, not so. The cars adapted to this track will have their upper frame-work so far lowered toward or below the axes of the wheels, that the centre of gravity of each car will be nearer to the track in the same proportion in which the bearing-surface is made narrower. The support for the cars will thus be equally secure as it was before.

The beams may either rest quite loose upon their supports, or they may, if desired, be, by suitable bolts or other devices, locked to the same.

The length of each section of beams is preferably made to correspond with the length of rails, as it is

best to fasten the rails upon each section previous to connecting the beams.

For curves, the beams can either be sawed into the proper shape, or they are bent, as in fig. 6. On curves it will be advisable to provide a guard-rail, E, near the inner edge, as shown in figs. 6 and 7.

In case the wood should not be sufficiently wide to produce beams of the requisite size, several layers may be connected, as in figs. 4 and 5, in which two longitudinal layers are shown. These several layers are connected by double conical keys *c c*, which prevent their vertical and longitudinal displacement, and by horizontal bolts *d d*, which hold them firmly together.

In case the track is supported by a trestle, as in figs. 8 and 9, the beam is fastened to a sleeper, F, which carries rollers *e e* at its ends, which rest on the upper cross-piece, or platform *f* of the trestle. By this rolling support the track is allowed some lateral play while the train is passing over it, to prevent the straining of any parts. It will at once readjust itself after the train has passed.

As has been mentioned above, this track does not require to be levelled and to have a road specially prepared for its bed. It is or can be laid upon the ground as the same is naturally formed.

By preparing a quantity of beams, with their rails, at a manufacturing-place, and transporting them to their respective places of destination, the track for a railroad can be laid with extraordinary rapidity, and railroads can, therefore, on this system, be readily arranged at short notice, wherever they may be required. When not used, the track can be as easily taken up, to be used at some other place.

Having thus described my invention,

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

1. A railway-track, consisting of beams A, rails D, and supports B, constructed and arranged as and for the purpose hereinbefore set forth.

2. The combination of vertical double-coned keys *c*, with the transverse bolts *d*, to unite the longitudinal halves of a beam, in the manner shown and described.

3. The application of the rollers *e*, between the supporting-beam and trestle, for the purpose of allowing slight lateral motion to the track, substantially as herein shown and described.

The above specification of my invention made by me, this 23d day of April, 1869.

BN. LUDWIG LO PRESTI.

Witnesses:

H. KREISMANN,

J. H. F. PRILLWITZ.