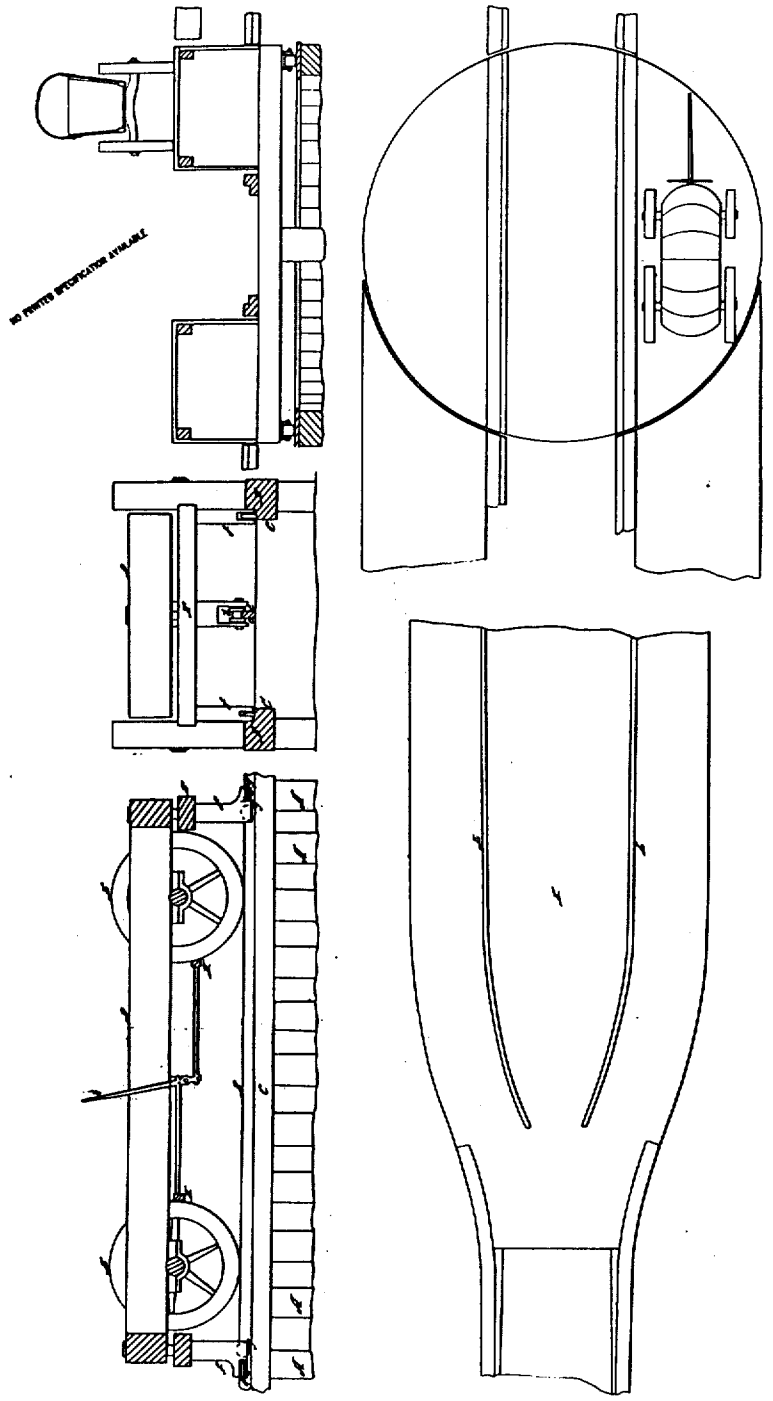
6611½X

A. McGrew,

Railroad and Car,

Patented June 30, 1831.



June 30, 1831 177.

Alexander Mc. Grew of Cincinnati Ohio.
Letters Patent 6611/2 X

The schedule referred to in these Letters Patent and making part of the same, containing a description in the words of the said Alexander Mc. Grew, himself, of his improvement in railways, and in the carriages for the same called the safety Rail way & Car —

Be it known that I Alexander Mc. Grew of Cincinnati, in the County of Hamilton & State of Ohio, have made an improvement in Rail ways, and in the carriages for the same called the safety rail way Car; which is described as follows.. The Rail way is constructed by placing posts firmly in the ground of a proper degree of strength at any convenient distances, and so as to produce a plane to receive the rails to be next described. When the earth is not sufficiently firm to receive and secure the posts, stones may be put at the bottom of the holes. The rails may be of wood or iron, of a suitable size and strength: having a projection or rib rabbited out or fastened on near the top against which the friction rollers of the guard arm of the carriage (to be hereafter described) turn; these rails are fastened firmly on the tops of the posts. —

The carriage is adapted to the width of the rail way: and consists of a frame in which four or more plain wheels, with their axles, are made to turn in boxes. At each end of the carriage is constructed another frame, having two arms with knees or angles, turning on an axle fixed in the first mentioned frame. At the extremity of each of these arms are fixed two friction wheels or rollers, one turning horizontally against the sides of the rails and the other vertically against the guard projection, or bar on the rails before mentioned to prevent the carriage from flying off the rails — —

Between the wheels of the carriage, and in the centre, are placed two spring steps, turning on an axle and having a bar or lever for turning them and causing them to grip or impinge against the wheels, for regulating their speed or stopping them altogether: by which means all the wheels are pressed against by means of the same lever —

To enable carriages to pass each other on the rail way, an intermediate platform about [illegible] the width of the rail way is supported by posts in the manner before

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described. At the commencement of it is an inclined plane against which the vertical friction wheels, placed at each end of the carriage, Turn, and ascend the platform. On the top of the platform is a guide rail, upon and against which a grooved wheel and friction rollers Turn and which serve to guide the carriage on the platform whilst Turning out. This platform may be of any convenient length and immerges into a double track — —

To suffer carts and carriages to cross the rail way; and also for loading the carriage, a turning platform is erected, by first driving a number of posts in the ground forming a circle and having a post in the middle forming a centre, on which the revolving platform is to rest and Turn —

The revolving platform is made sufficiently strong & thick to bear the weight of a loaded waggon &c to be in the same plane with the bed of the carriage. On the underside of the revolving platform are placed friction rollers, revolving on a board fixed on the heads of the posts, forming the circle round the centre post on which the revolving platform Turns. Aprons hung on hinges, will be attached to this revolving platform, or the rail way carriage, to cover the opening if any left between it & the revolving platform — — —

The Rail way carriage will have a bed erected upon it of sufficient size and strength to receive waggons loaded with hay or any other article without derangement of the load — Operation — —

The carriage having been placed on the rail-way, and the load placed on the platform, the propelling power is applied, and the carriage moved forward; the main plain wheels turning on the top of the rails. —

The small horizontal friction wheels below, turning against the sides of the rails; and the smaller vertical friction wheels Turning against the guard projection or bars on the rails when necessary; thus the carriage would be kept on the rails and moved forward in a straight line with much ease velocity and security —

When it is required to let waggons, or any other carriages, cross the rail-way then they drive up an inclined plane upon the revolving platform, and are thus Turned round until they come to the other inclined plane connected with the other side of the road, and there descend and pursue their journey along the common road —

Also when it is required to load the rail-way carriage it is

only necessary to drive the load up the inclined plane upon the revolving platform: the platform is then turned and the carriage, together with the load is transferred to the rail-road carriage —

What I claim as my invention is the construction of the rail way with a guard or projecting piece — the vertical friction wheels: the guard arms of the carriage — the turning out platform: and the revolving platform for crossing roads & loading the rail-way carriage.

In testimony that the foregoing is a full and true description of my invention, I hereunto subscribe my name in presence of two witnesses — —

Witnesses,

William P. Elliot

L. Warren Ruggles

Alex. McGrew

Recd

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