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## RAIL-ROAD NEWS.

### Railroad Crossings.

The number of accidents which occur on our railroads is very great in comparison with the accidents which take place on the railroads of Europe. This is not owing to the recklessness, as some would be apt to term it, of engineers or conductors; it is the fault of our railroad system. On Monday evening last week a terrible accident took place at the Waverly crossing, West Cambridge, on the Boston and Fitchburg Railroad. William Sawyer, his daughter, a young lady, and John Gibbs were killed, and Mrs. Sawyer dangerously injured. They were crossing the track in Mr. Sawyer's carriage, when the train came upon them at the rate of 40 miles per hour. It is not long since a Mrs. Eden and her daughter were killed in the same manner near Lexington, Ky. A great many such accidents have taken place during the past six months. All our common roads, which intersect our railroads, have no provision made against such accidents excepting the whistle of the locomotive, or the ringing of the engineers' bell. In England the railroads are well hedged in against such accidents; no common road being allowed openly to traverse a railroad. The fault of such accidents on our railroads belong to our railway system, not the management of the trains. It might do to prevent such evils to erect gates on the crossings, and to have them attended by guardsmen. This would be a very expensive system. Another plan is to have gates worked by self-acting rods and springs to be operated by the approaching train to close a gate and then to throw it open after the train had passed. There is a patent in existence for such an invention. Something at least should be done for an improvement of our railway system, and we think, if all the railroad companies in our country were to hold a convention this summer or next fall, and discuss such matters, great good would result from it.

### A Convention of Railroad Directors.

A convention of Railroad Directors and Bridge Companies was held at Niagara Falls, two weeks ago, to settle permanently their plans for the construction of the Great Western and Rochester, Lockport and Niagara Falls Roads, and for building immediately a new and greatly enlarged suspension bridge, which is to connect these two great thoroughfares. It is not supposed that it is the intention of the companies to build this bridge for the passage of locomotive trains. Rail tracks will, however, be laid over it, on which will be passed baggage and freight cars by horses or stationary steam power. Its length will only be about 800 feet, and it is to be presumed that railway passengers will much prefer crossing it on foot to any other mode, because of the more satisfactory opportunity thereby afforded of contemplating the sublimity of the structure, and the magnificent gorge and torrent spanned by it.

Jenny Lind sailed from this city in the Atlantic, for Europe. We shall no more hear the song of the Nightingale of the North.

USHER'S ROTARY STEAM PLOW....Fig. 1.

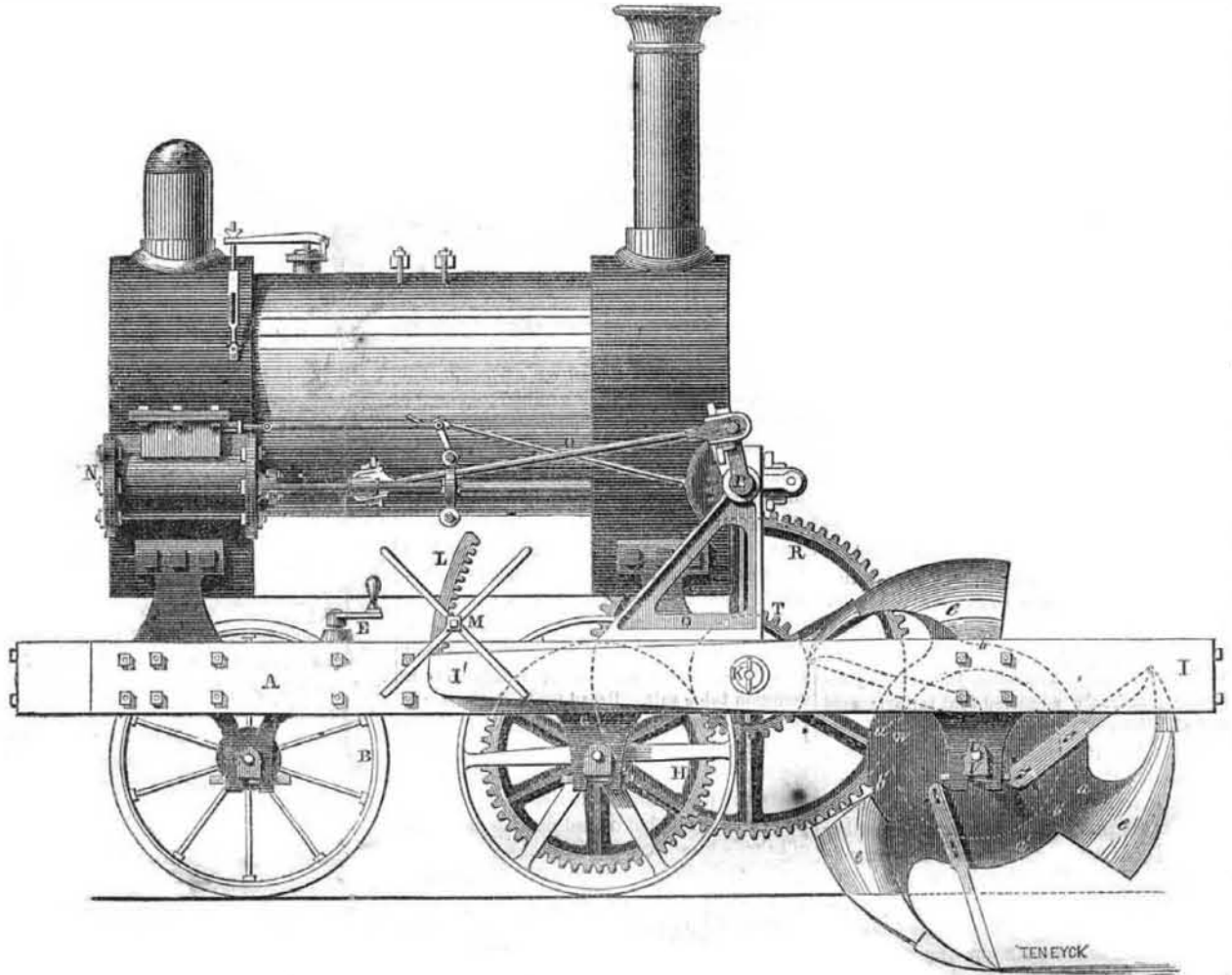


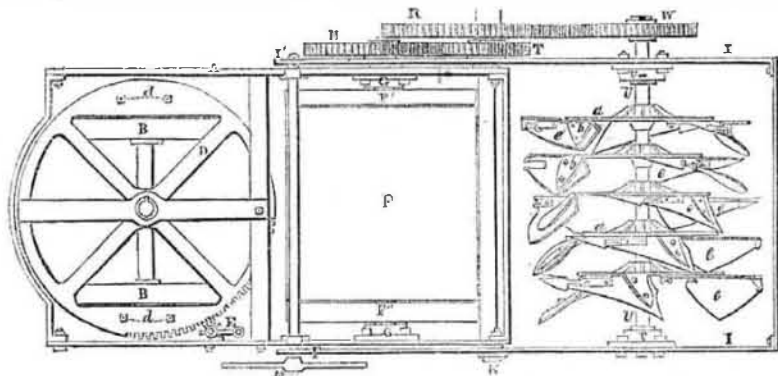
Figure 1 is a side elevation, with the nigh wheels removed, and figure 2 is a plan view with the engine and boiler removed, of the Rotary Steam Plow of James Usher, of Edinburgh, Scotland. It has been the subject of considerable eulogy in some of the foreign periodicals, and has been illustrated (on a much smaller scale, however, than we have done) in the "Illustrated London News," and the "Artizan;" and it has been fully described in the "Scottish Press." In this one machine there are five acting plows, as is represented in figure 2. Each plow, to act continuously, has three mould-boards and coulter on its axis, the one taking into the soil as the preceding one is rising out. The whole five plows are on one strong rotary shaft. A is the bed frame or carriage part; B represents the fore

wheels, which revolve in bearings, C, attached to the swivel frame, D, fig. 2, which moves on the bolts, d, to make the machine turn round in a small space. A portion of the swivel frame, D, is toothed, and this is acted upon by the winch, E. The hind part of the carriage is supported upon the hollow cylinder, F, having wheels, F' F', similar to B B. The axle of this cylinder is supported in the bearings, G. This axle also carries at one extremity the large toothed wheel, H. I I is a movable lever frame supported on the shaft, K, as a fulcrum. The free ends of this lever frame are made with racks, L, which are concentric with K; these segments are acted upon by toothed pinions on the spindle, M, which, by the arms, elevates or depresses the hind part of the lever frame, and all that it carries, at the plea-

U, are secured a series of plates, b' b', which are formed in such a manner as to have affixed several plows to them. Each is formed with a strong boss at the centre, by which it is securely fixed to the shaft, U. Each plate has three projections a, which terminate radially, as shown. Upon the plates and projections thus shown, the tilting parts are secured. e e e are the mould-boards for turning the furrows; they are secured by screw bolts to the projections of the plates. Plow-points or shares are attached by bolts to the extremities of the mould-boards. A coulter is also set before each plow point. These plows are moved in a rotary direction by the wheel, R driving the pinion on shaft U.

This rotary steam plow shows at once the great difference between the farmers in Britain and our agriculturists. This plow weighs five tons, and the engines are nominally ten horse-power; it can be worked with five, four, three, or two plows. When worked with four plows, it turned over a breadth of three feet at once, and stirred the ground so as to make it resemble spaded earth; it moves at a good pace, being no less a velocity than 2,550 yards per hour, plowing about six acres in one day. The price of it was £300, or \$1,455. It requires an engineer and two laborers to attend it. Such a plow will not be introduced into America; it is too large and too expensive, but it will show our farmers what is doing in some other parts of the world to make steam power subservient to man in tilling the earth. It will, no doubt, also afford many good hints to some of our inventors, for steam power will yet be employed more extensively for agricultural purposes in our country than it is at present, especially in the West and South West regions. This plow, when not tilling, can be thrown out of gear with the engine, which can then be made, by pulley and belt, to drive a threshing machine and many other machines.

Figure 2.



shaft. This pinion takes into the cog wheel, H, and gives action to the wheels of the carriage, thus moving the plow by a rotary progressive motion. The pinion, T, is made so as to be thrown out of gear with the driving wheel, H. W is a pinion (seen in dotted lines) which is driven by the cog wheel, R. This pinion is on the shaft, U, which is set in bearings, V, secured to the movable frame. On this shaft,

sure of the conductor. On the carriage is placed the locomotive boiler with its cylinders (one seen), N. The power of the engine is applied, through the rods, O, to the crank shaft, P, which is supported in standards, Q. On the shaft, P, there is a spur pinion, P'; this pinion, by taking into the teeth of the wheel, R, which is mounted on shaft K, gives motion to pinion T, on the sam-