DESCRIPTION OF THE SUSPENSION RAILWAY

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SUSPENSION RAILWAY

INVENTED BY

MAXWELL DICK.

WITH ENGRAVINGS.

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INTRODUCTORY REMARKS.

THE effects produced by the increase of machinery throughout Britain, during the last thirty years, are not only apparent from the facility of intercourse which has taken place between different parts of the country, but are also acknowledged to be highly beneficial in a commercial, political, and literary point of view. We do not mean to say that, prior to that period, the progress of science had been slumbering for ages.—No; the history of our country furnishes evidence sufficient to convince us, that for several centuries bygone, Science, in its multifarious ramifications, was proceeding, by successive steps, from one improvement to another; and the greatest of these improvements—because the most advantageous and interesting—appeared in the Steam-engine. By it our commercial interests are much increased—the arts and the sciences receive a new impulse in their advancement—and the general state of society and of the country is greatly ameliorated.

Let these improvements go on—let every encouragement be given to the indefatigable mechanician, who wastes his days and nights in the pursuit of his favourite schemes—not so much from a spirit of self-interest, as from a desire to promote general good—and who can tell what may be the condition of things in half a century to come? "Science, like nature," as has been well observed, "is limited neither by time nor space, but belongs to the world, and is of no country and of no age. The more we know, the more we feel how much remains unknown."

Next to the Steam-engine in commercial utility, and as the greatest security in the transport of persons and property, are Railroads. Never was there a time when the attention of the public was more directed to any undertaking than it is at the present moment to these. Whether the individuals who are thus so enthusiastic in these undertakings are speculating for the honour of the nation, or with the prospect of a profitable return for their outlay, is what we cannot determine; but we should hope that the latter is not the *primum mobile*. The learned Dr. ARNOTT, in his *Elements of Physics*, viewing the national advantages likely to result from the introduction and progress of Railroads, speaks of them in terms at once philosophical and patriotic. Speaking of the increase of civilization as taking place very much in proportion to the facilities of intercourse enjoyed, he says, "The reason is obvious. When the situation thus binds a great number

of individuals into one body, the useful thought or action of any talented individual, and which, were he in the insulated state, would soon be forgotten and lost, extends its influence immediately to the whole body, and becomes the thought or action of all who can benefit by it; it is recorded for ever, as part of the growing science or art of the community. And in a numerous society, such useful thoughts and acts are more frequent, because an emulation arises in all the pursuits that can contribute to the well-being of the society, from each individual feeling that he has the eyes of a multitude upon him, and that the rewards of excellence will be proportionally great. Men soon learn to estimate aright these and many other advantages of easy intercourse; and, after having seized with avidity all the stations naturally fitted for their purposes, they begin to make new stations themselves, and to improve upon the old; they create rivers, and shores, and plains of their own, that is, they construct canals, and basins, and roads; and thus connect regions which nature seemed to have separated for ever. In the British Isles, whose favoured children have so proudly taken the lead in showing the prodigies which wise policy may effect, the advantages arising from certain lines of canal and road first executed, soon led to numberless similar enterprizes; and, within half a century, the empire has been thus intersected in all directions: and it seems as if the noble work were now to be crowned by the substitution of

level Railways for many of the common roads and canals. Several Railways of considerable extent have already been established, and although they and the carriages upon them are far from having the perfection which philosophy says they will admit, the results have been very satisfactory. If we suppose the progress to continue, and the price of transporting things and persons to be reduced by them to a fourth of the present charge, and in many cases it may be much less; and if we suppose the time of journeying with safety also reduced in considerable degree, of which there can be as little doubt, the general adoption of them would effect an extraordinary revolution and improvement in the state of society. Without in reality changing the distances of the places, it would, in effect, bring all nearer to each other, and would give to every part of the kingdom the conveniences of town and country, of seacoast and highland district. A man, wherever residing, might consider himself virtually near to any other part; for, at the expense of the time and money which he now pays to go a short distance, he might go a long one. The overcrowded and unhealthy parts of towns would scatter their inhabitants into the country; for the man of business would be as quickly and cheaply at his post from several miles off, as he is now from an adjoining street. The present heavy charges for bringing produce to market from great distances being nearly saved, the buyer every where would purchase cheaper, and the producer would be still

better remunerated. In a word, such a change would arise as if the whole of Britain had been compressed by magic into a circle of a few miles in diameter, yet without any part losing aught of its magnitude or beauties. All this may appear visionary; but it is less so than it would have been, seventy years ago, to anticipate what has now come to pass, that the common time of travelling from London to Edinburgh would be forty-six hours."

With this learned author I do suppose that the progress of these improvements shall continue—that the price of transporting things and persons will be reduced to a fourth, or less, of the present charge—and that notwithstanding the present speed of our steam-boats, carriages, and post-coaches, the time of journeying will yet be considerably less. Who would suppose that, so late as the year 1784, letters were conveyed from the metropolis of England to distant parts of the kingdom by carts with a single horse to each, or by boys on horseback?

In making these remarks, the reader must not suppose that I consider my Suspension Railway to be the exclusive means of effecting such a mighty change in our affairs. However sanguine I may be regarding the advantages that may result from its adoption, yet I do not flatter myself that it is immediately to be put in requisition, and that by it I shall have the high honour of "seeing such a change arise as if the whole of Britain were compressed by magic into a circle of a few miles." By

no means. What I have brought forward to-day as something new or excellent, may be followed to-morrow by something better: from one quarter we may hear of an invention fraught with the most beneficial results—from another, of a similar discovery, but greatly superior. So that much as has been discovered, much more may remain for future generations to bring to light. There may be hid in the bosom of nature and of science latent sources of facilities incomprehensible to the mind of man, and reserved for his pleasure, enjoyment, and advantage in a more perfect state.

But convinced as I am of the entire practicability, the safety, speed, and other advantages which will accrue from the adoption of the Suspension Railway which I now bring before the public, I am not so far misled as to imagine that it will be viewed in all its advantages at first sight. Well am I aware of the objections and prejudices I have to contend with, and that there will be much greater difficulty in giving the mind so tangible a hold of my invention at first, than there was with the Steam-engine when it was brought forward. In fact, the strongest objection (or rather prejudice) which I can perceive to be against it lies in this—that the mind is not prepared to comply with a scheme that so far exceeds its former calculations or expectations of speedy conveyance. Tell the people of our land thirty years ago, who never had heard of a steam-boat, that you saw a 200-ton vessel in the river, going without sails or oars, and