

a six-horse-power steam engine is hitched directly to a combination of ploughs turning four deep and wide furrows at once, and walking away with them as half a dozen live horses might do, performing the work more expeditiously, and in better style than the horses could do. Our readers will be interested with the following account of this new invention, which we copy from the *Globe* :—

"The 'Thomson Road Steamer' is constructed something like the Traction Engine, but instead of the surface of the driving wheels being of iron covered with protuberances to prevent slipping, they are covered with a broad and thick band of vulcanized india rubber, made so thick, and so strong, as to pass over broken stone, macadamized roads, and other rough highways with perfect ease, and without jolting or injury either to the wheels or the machinery which they carry. These elastic wheel tires have such enormous tractive power, that they never slip as iron-shod wheels do, and the india rubber is so deep and thick, that such obstructions as are usually met with in common gravel or stone roads make no permanent impression. The impediment is pressed into the surface of the elastic wheel tire, which again springs out to its first position as soon as the impediment is passed. This property enables the wheels to pass over ordinary farming land without difficulty; and although the entire engine with its attachment weighs six tons, the wheels being broad, do not sink materially in the soil, but are enabled to resist and overcome the obstructions of the ploughs, &c., which they are made to drag. The following is an excellent description of the performance. We condense it to save room.

The last, and perhaps the most remarkable performance of the road steamer, was as follows: At a trial of ploughs and moving machines at Edinburgh, on Tuesday, the 17th of August last, a good opportunity occurred of testing the engine, which was accordingly on the ground. It passed over all sorts of soil without difficulty, and while awaiting its turn, displayed its manageableness and handiness in various ways, and most strikingly when requiring water; it ran down a long steep grass hill, with gradients of 1 in 4 $\frac{1}{2}$ , to a turn (or creek), where it filled its tanks, then ran up the hill again. At last the moment came for it to engage in its new task of ploughing. Two of Power's double furrow ploughs were attached to it, and it commenced work. With these ploughs, when the handles are once set, no guidance is needed; and so four furrows were turned simultaneously without a hand being put to the plough. Arrived at the further end of the field it turned with far greater ease than horses could do, and ploughed its way back again up a hill which inclines 1 in 12. The ploughs were set as deep as possible, and the work done was quite first-rate. The contrast between the road steamer and the plough horses was most remarkable; whilst three horses were most painfully struggling along with one double furrow plough, through exceedingly hard, dry, stiff soil, the steamer was drawing its two double furrow ploughs with such facility that it was evident there was an immense supply of power to spare, and that it could have taken another couple of double furrow ploughs behind it. If ran on the unploughed land in front of the ploughs, thus avoiding all possibility of compressing or poaching the soil after it had been turned up. All present

were fully satisfied with its performance and declared its behaviour was perfect. It was at once seen that it could equally well be employed in mowing, reaping, hauling, &c., &c. It could fetch its own water and fuel, carry manure, and, in short, do every description of farm work, even to taking produce to market, for the whole affair is so compact, that it passes through towns and crowded thoroughfares with the same ease as any other vehicle, and with enormous power. It can go at eight miles an hour on any good road, and at three and a half or four miles an hour on the worst possible road, and it improves, instead of injuring the ordinary carriage track.

### WILL FARMING PAY?

Horace Greeley is writing a series of essays on "What I Know of Farming." The first topic he discusses is, "Will Farming pay?" Judging from current rumors of Mr. Greeley's farming operations, it is hardly possible that his answer to the question is based upon his own personal experience; but his essay contains some very good suggestions. We make the following extracts from it:

"I commence my essays with this question, because, when I urge the superior advantages of a rural life, I am often met by the objection that 'Farming don't pay.' That, if true, is a serious matter. Let us consider:

"I do not understand it to be urged that the farmer who owns a large, fertile estate, well fenced, well stocked, with good store of effective implements, cannot live and thrive by farming. What is meant is, that he who has little but two brown hands to depend upon, cannot make money, or can make very little by farming.

"I think those who urge this point have a very inadequate conception of the difficulty encountered by every poor young man in securing a good start in life, no matter in what pursuit. I came to New York when not quite of age, with a good constitution, a fair common-school education, good health, good habits, and a pretty fair trade—that of printing. I think my outfit for a campaign against adverse fortune was decidedly better than the average; yet ten long years elapsed before it was settled that I could remain here and make any decided headway. Meantime, I drank no liquors, used no tobacco, attended no balls or other expensive entertainments, worked hard and long whenever I could find work to do, lost less than a month altogether by sickness, and did very little in the way of helping others. I judge that quite as many did worse than I as did better; and that of the young lawyers and doctors who try to establish themselves in their professions, quite as many earn less as earn more than their board during the first ten years of their struggle."

Mr. G. mentions several instances illustrating the success that men, within his knowledge, have achieved from very small beginnings, by patient, intelligent, well-directed effort. "Depend upon it," he says, "young men, it is and must be hard work to earn honestly your first thousand dollars. The burglar, the forger, the black-leg (whether he play with cards, with dice or with stocks), may seem to have a quick and easy way of making a thousand dollars; but whoever makes that sum honestly, with