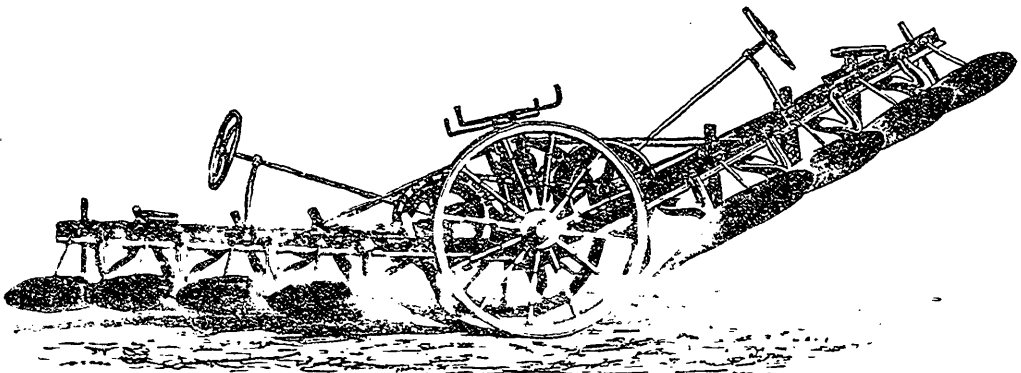


riggers, the latter being on the engine crank shaft. It is obvious that the use of a belt which depends upon very nice adjustment of the riggers round which it passes would be quite inadmissible. Everybody in such circumstances suggests a pitch chain, but Mr. Fowler has devised a chain which will work in V shaped riggers, without slipping, made of a compound of iron and leather. This windlass is anchored forward, and gradually coils up the rope which fastens it, and so moves forward in the same way as the anchorage on the opposing headland, the plough or grubber working between.

On Thursday little was done at Farningham. The new implements were tested; there was a great loss of time. On Friday the work done by Fowler and Howard was splendid. The plowing of Fowler we never saw excelled by any team work for regularity and precision of cut. He was at work upon a piece of tare land trampled by sheep. We made several observations upon the amount of work being done. They were not of the most satisfactory kind, because no trial properly speaking, was going forward, and the implements were constantly

being checked by the crowd of people who paved the way, or required answers to questions. Fowler's 14 horse power, with steam pressure from 40lb. to 50lb. was pulling the 4 furrow plough, which inverted a slip of soil each about 40 inches wide, to a depth of from seven to eight inches. This operation was performed at the rate of $3\frac{1}{2}$ roods per hour, or $9\frac{1}{2}$ acres per day of ten hours. This large tackle, with the 7-tined grubber, taking $6\frac{1}{2}$ feet on the following day, did keep work at the rate it is said, of three acres a day. Such an achievement is perfectly unprecedented, but as we did not ourself make the observation we will not vouch for the fact, though we believe it to be perfectly reliable. Should it be true the fact may be again repeated, and we shall then hear more about it. Mr. Fowler's small tackle, adapted to portable engines of a small power was at work at a short distance from the above. The engine was a single cylinder portable 10-horse, running with 60lb. or 70lb. steam pressure, and the implement was a 4 furrow balance plough, with digging breasts. Each plough lifted a furrow 10 inches by $7\frac{1}{2}$. The rate of work was a little more than one acre per hour.



Fowler's Patent Balance Plough.

Some part of the time a harrow was drawn on the side of the plough, but as this hid the true nature of the work, it was removed. Nothing certainly could be more complete and perfect than this operation, which fairly astonished all beholders. It required the labour of three men and two boys, and this work, be it remembered, was upon land where the turning of a furrow of the same size could scarcely be effected with less than three horses. Some calculations with respect to the other sets of tackle were made. One or two concerning the Howard's we now give, and these for the same reasons as we have stated above, must be received with considerable allowances. This firm worked the grubber with ten horse power double cylinder engine, at 75lb. taking 30 inches at the rate of nine acres in ten hours. The land was well cut and broken to a depth of seven inches. An engine of the same power, hauling the three furrow plough, which carried three furrows, 10 inches by 7 each, with 70lb. pressure, got over three rods an hour, or seven acres and a half a day. The new implement is certain-

ly a capital one, and made regular, beautiful work, with the Kent breasts. The field operated upon was clover lea, good three horse ploughing. The novel features of these two sets of course attracted a great deal of scrutiny. Every one wished to see how the Howards had surmounted the difficulty which acted against them at Leeds. Some said that the new snatch block perfectly economised the power lost in holding up and dragging out the slack rope, while others considered that the rope must needs be much worn and bent in passing through it. As this is a question which will be decided in a very short time by experience there is not much need for an opinion. The wear, at any rate, cannot be so great in the case of the travelling windlass with the eight hundred yards of endless rope making a half turn round two sheaves. A good deal is said because Fowler does not plough his headlands. The fact is, not that he cannot do so, but that it proves to be most economical to let the tackle go on to another field rather than be filing about a little bit of land which can