

"Peter, you may fire up the barn engine, and see that the hoisting machine is all right on both sides of the floor, for I shall bring two tons at a load, and while one ton is going up into the right-hand mow we can hitch on to the other, and have that up directly, so it will not take over fifteen minutes to get off a load. In the intervals between loads, keep the engine at work filling the great water tank; that last planting of potatoes needs watering, and as soon as the water is warmed in the sun a little, we will give them a shower. Ah, boys, this is the age of steam; you don't have to work to cure hay as I used to when I was a boy; when we used to cut all the grass with a scythe—" "By hand, father?"

"Yes, my son, by hand, slow, hard labor; and then we had to spread the grass dry, and then turn it over and over in the sun, with sticks and wooden forks, or clumsy iron ones; we had no steel ones then; and then we raked it by hand, and made it up in cocks, which had to be opened and spread out to dry again, and again raked up; then we pitched it on and off of the waggon, and sometimes it was a fortnight after it was cut before we could get it cured enough to stack or put in the barn."

"And all that by hand-labor?"

"Yes, hand-labor and hard-labor."

"Well, father, it does appear to me as though people must have been very stupid when you were a boy, not to have any steam-engines on their farms."

"No, not stupid exactly, but very hard to believe, or make improvements, or farm their land any way but just as did their fathers and grandfathers."

STEAM AMONG THE FARMERS.

From Chambers's Journal.

Those who visit Christmas cattle-shows, simply in a grazing frame of mind, do justice neither to themselves nor to the show. There is something more to do than to admire fat pigs which cannot see out of their eyes, and fat sheep which look more silly even than lean sheep, and fat bullocks which measure an unlimited number of yards round the body. Unless a man roams also among the agricultural implements, he cannot rightly judge a matter which is well worthy of attention—the wonderful energy and activity of the farmers since the repeal of the corn-laws. It is no part of our business to dilate upon political combats, but it is unquestionably a part of every Englishman's business to know that the agriculturists are bravely 'putting their shoulders to the wheel,' and applying all modern improvements in furtherance of their labors.—The gradual spread in the use of steam-power is not among the least remarkable of these appliances. A year or two ago, we happened to meet with a 'Song of Steam' in an American newspaper; the name of the writer does not appear; but we feel inclined to reprint here three of the stanzas, partly because there is really a dash of sparkle and spirit about them, and partly because

we must beg that farming operations should in future be included in some measure among the labors of steam.

In the darksome depths of the fathomless mine
My tireless arm doth play.
Where the rocks never saw the sun decline,
Or the dawn of the glorious day,
I bring earth's glittering jewels up
From the hidden cave below.
And I make the fountain's granite cup
With a crystal gush overflow.

I blow the bellows, I forge the steel,
In all the shops of trade;
I hammer the ore and turn the wheel
Where my arms of strength are made.
I manage the furnace, the mill, the mill;
I carry, I spin, I weave;
And all my doings I put into print
On every Saturday eve.

I've no muscle to weary, no breast to decay,
No bones to be laid on the shelf;
And soon I intend you may all go and play
While I manage the world by myself.
But harness me down with your iron bands,
Be sure of your curb and rein;
For I scorn the strength of your puny hands,
As the tempest scorns a chain.

Without going so far as to expect that we may all 'go and play,' while steam manages the world by itself, we may undoubtedly expect that many hard and laborious kinds of field-labor will, more and more every year, be effected by steam, which has 'no muscle to weary, no breast to decay.' We have only to look at the groups of implements and machines proceeding from the well-known firms of Ransome, Wedlake, Garrett, Crosskill, Hornsby, Dray, &c.; or to look through the lists and catalogues of those manufacturers: the evidence of the fact becomes then very apparent. Let us very briefly glance at the matter.

Here are the productions of Messrs. Claydon and Shuttleworth, of Lincoln, among which a three horse-power portable steam-engine is conspicuous. This compact affair is shaped something like a locomotive; it weighs about a ton and a half, and its provender consists of three hundredweights of coal, and 270 gallons of water per day of ten hours. With this moving power, it will thrash out twenty quarters of corn per day, and when it has done its work in one barn or thrashing-floor, a horse will easily draw it to another. Similar engines are made of four, five, six, seven, eight, and nine horse-power, all presenting this analogy—that the number of horse-power produced is about equal to the number of hundredweights of coal consumed in a working-day of ten hours—a convenient rule for estimating the efficiency of the power. The larger of these portable steam-engines require two horses to draw them from place to place; but in return for this, they will thrash out a larger quantity of corn per day, and become applicable also to grinding, sowing, pumping, and other operations necessary on a large farm. The seventy-horse engine is large enough to be made available for a remarkable system which has sprung up in some districts—namely, the *letting out of steam-power*: a portable steam-engine travels about from farm to farm, doing the thrashing and sowing, and grinding and pumping for each in succession—a system susceptible of wonderful expansion. Then there are fixed steam-engines