



From the Gardeners' Chronicle.

CHRONICLES OF A CLAY FARM.

It was urged by Mr. Brunel as a justification for more attention and expense in the laying of the Rails of the Great Western, that had been ever thought of, upon previously constructed lines; that all the embankments, and cuttings, and earth-works, and Stations, and Law and Parliamentary Expenses,—in fact, the whole of the outlay encountered in the formation of a Railway, had for its main and ultimate object, a perfectly smooth and level line of rail; that to turn stingy at this point, just when you had arrived at the great ultimatum of the whole proceedings, viz., the iron wheel-track, was a sort of saving which evinced a want of true perception of the great object aimed at by all the labour that had preceded it. It may seem curious to our more experienced senses, in these days, that such a doctrine could ever have needed to be enforced by argument, yet no one will deem it wonderful who has personally witnessed the unaccountable and ever new difficulty of getting proper attention paid to the levelling of the bottom of a drain, and the laying of the tiles in that continuous line, where one single depression or irregularity, by collecting the water at that spot, year after year, tends towards the eventual stoppage of the whole drain, through two separate causes, the softening of the foundation underneath the sole, or the tile flange, and the deposit of soil inside the tile from the water collected at the spot, and standing there after the rest has run off. Every depression, however slight, is constantly doing this mischief in every drain, where the fall is but trifling; and if to the two consequences above mentioned, we may add the decomposition of the tile itself by the action of water long stagnant within it, we may deduce that every tile-drain laid with these imperfections in the finishing of the bottom, has a tendency towards obliteration, out of all reasonable proportion with that of a well-burnt tile laid on a perfectly even inclination, which, humanly speaking, may be called a permanent thing. An open ditch cut by a skilful workman, in the summer, affords the best evident illustration of this underground mischief. Nothing can look smoother and more even than the bottom, until that unpromising test of accurate levels, the water, makes its appearance: all on a sudden the whole scene is changed, the eye-accredited level vanishes as if some earthquake had taken place: here there is a

gravelly Scour along which the stream rushes in a thousand little angry-looking ripples: there it hangs and looks as dull and heavy as if it had given up running at all, as a useless waste of energy; in another place a few dead leaves or sticks, or a morsel of soil broken from the side, dams back the water for a considerable distance, occasioning a deposit of soil along the whole reach greater in proportion to the quantity and the muddiness of the water detained. All this shews the paramount importance of perfect evenness in the bed on which the tiles are laid. *The worst-laid tile is the measure of the goodness and permanence of the whole drain,* just as the weakest link of a chain is the measure of its whole strength.

But this of course was all theory, and theory of course was all nonsense: my practical head-drainer was quite of a different way of thinking, as his *modus operandi* will exhibit. The morning after he had commenced operations I found him hard at work cutting a drain, about eighteen inches deep, *laying in the tiles one by one, and filling the earth in over them as he went!*

The field I had begun upon was very large, and very flat; and in order to increase artificially the fall, I had calculated so as to make the drain eighteen inches deeper at the mouth than at the tail. I might as well have calculated the distance of a telescopic star.

"I've been a-draining this forty year and more—I ought to know summut about it!"

Need I tell you who said this? or give you the whole of the colloquy to which it furnished the epilogue?

I had begun, something in this way—"Why, my good man! what on earth are you about? Didn't I tell you the drain was to be laid open from bottom to top, and that not a tile was to be put in till I had seen it, and tried the levels?" &c. &c.

Old as Adam—old as Adam was the whole dialogue—it is idle to go through it—Conceit versus Prejudice—the ignorance of the young against the ignorance of the old—the thing that has been, and will be, as long as "the sun and the moon endureth." It ended as I have said.

"I've been a-draining this forty year and more—I ought to know summut about it!"

Here was a staggerer. Amongst all my calculations, to think that I should never have calculated on this! I had seen the commander of a noble steamer, with one almost parenthetical point of his forefinger (caught in an instant by

the helmsman,) veer round a ship of a thousand tons burthen; I had seen the practical astronomer, with an infinitesimal touch of the directing screw of the telescope, bend his searching gaze millions of miles away from its first position; I had seen the mill-owner, with half a nod to his foreman, stop in an instant the hurly-burly of a thousand wheels while he explained to me, in comparative quiet, some little new matter of invention in the carding of the rough wood, or the rounding and hardening of the finished *Twist*. I had seen enough of the empire of mind over matter in many forms and shapes, by sea and land, to make me the devoutest of believers in modern miracles.—Under the quiet seductive brightness of the midnight lamp, I had revelled in the mysteries of number and of form; and in the working realities of daylight I had seen and stood witness to the application of those apparent mysteries to the most beautifully simple processes in the production of ordinary and universal articles of human want. It had furnished me no new or difficult gratification to level and calculate to an inch, the amount of fall to be obtained upon a field, which without this precaution might indeed be called, as it had been called, undrainable; and here I was, fairly *planted*, at the first onset. Every inch of depth was of real value at the mouth of so long a line of drain. "Three feet deep at the outlet" was the modest extent of my demand; and there I stood, watching the tiles thrown in, *pèle mèle*, to a depth of 18 inches, which I was given to understand was "about 2 feet," with as cool an indifference to *the other foot*, as if two and three had been recently determined by the common assent of mankind to mean the same thing.

"But I must have it 3 feet deep!"

"Oh, it's no use: it'll never drain so deep as that, through this here clay!"

"But I tell you it must be! There cannot be a fall without it."

"Well, I've been a-draining this forty year, and I ought to know summut about it."

From that moment I date my experience in the trials and troubles of farming: at that instant my eyes began to open to the true meaning of those "practical difficulties" which the uninitiated laugh at, because they have never encountered them; and which the manufacturer despises who has said to steam, water, and machinery, "do this," and they do it, but has never known what it is to try and guide out of the old track, a mind that