should be distributed along the bottom and sides of the pit before the approach of winter, and during that rigid season, the dung may be accumulated without any extraordinary care, and the intensity of the cold is unfavourable to putrefaction, and little loss will be sustained from the dissipation of the gaseous matter. Such farmers as may choose to take the trouble, and have suitable convenience of covered sheds, may pile up beforehand a quantity of dry earth, which may be scattered over the dunghil in the depth of winter, on such places as indicate a strong fermentation

2d. These remarks, and general reasonings will have prepared my readers for the sentiments I must express regarding the construction of our barn floors. They are the objects of my unqualified condemnation as an agriculturist, of my sincere regret as a friend of the country, and of bitter and deep bewailing as the anxious promoter of our future and rapid advancement. Reform here cannot be effected without considerable cost; and I anticipate an obstinate adherence to existing errors, notwithstanding the soundness of the conclusions, and the manifest utility of a change. I must, however, cling to the hope of receiving at least a limited and partial obedience: and I request my well wishers, who have animated me in my course, and borne up my spirits in the midst of difficulties, to listen to the call, and set the first yielding example. The increase of valuable manure will be incalculably great; and the solid benefits will vastly outweigh the trouble and expense I see only one plan by which this evil may be effectually obviated; but as there is a choice in the materials to be employed, such may be selected as are most accessible in any particular district. After laying up the planks, and building the foundation round and round close to the sills, the void space below the flooring should then be filled and packed firm with earth. As there will be a necessity to cut away all the present sleepers or joists, which, besides supporting the planks, bind and unite the two sides of the frame, pieces of square timber may be stretched across the whole breadth and at a lower depth, and be secured to the bottom of the sills, either by a mortise, or by driving down a round iron bolt. By this means the strength of the frame will be preserved unimpaired; and the operations may proceed without endangering the structure. The earth should then be filled in, till it rises to the level of the present floor, and it should be beaten down by a heavy mallet, till it is completely consolidated. A stratum of clay should be next laid over the whole surface, by which the moisture may be retained and hindred from escaping through the earth. After divididing the interior into its respective compartments, the arrangements must proceed according to the use for which each part is designed. The stalls for the horses and cattle claims a distinguished share of attention. The forefeet of the animal should stand on higher ground than the hind, and there should be in every stall a gradual declivity backward, terminating in a gutter, in order to carry off all liquid matter. To this gutter an easy descent should be given outward, that all the urine may flow towards the pit on the outside of the building, which I have described as the great reservoir of this putrescible stream. The floor of each seperate stall, as well as the gutter, may be laid with plank while the clay is soft and yielding, and every seam and interestice may be closed up by the same substance. These planks—thus pressed and imbedded into the clay—may be nailed and secured to transverse beams running along the length of the barn, and so adjusted as to preserve a sloping direction in the feeding stalls and gutter.—But in every case where stones are within the reach of the farmer, they are decidedly superior in firmness, durability, and usefulness; and paving the floor with them, although perhaps a little more expensive in the first instance, will in the end much better answer his expectations. The stalls should be laid with them exactly in the manner, in which Water-Street here has been lately improved; and the gutter may be formed either of similar materials, or preferably of smooth flag-stones, like those forming our foot pavements.

The adoption of these improvements in the disposition of our barns will give a mighty impulse to agriculture; the urine and vegetable juices, which are now lost and dissipated, would multiply the powers of fertility; and the extended cultivation of white crops from the wonderful increase of putrescent manure, would be propelled with a celerity proportionated to the ardent hopes of the country.—*Extract from Agricola, Letter* 23.

Humility.—An humble man is like a good tree, the more full of fruit the branches are, the lower they bend themselves.

From the Farmer's Cabinet.

DIALOGUE BETWEEN A FATHER AND SON.

WATER COURSES—DRAINING—MAKING HAY.

Father.—This is the proper season for watering the meadows, and I see that our neighbor Tiley is carrying out dung on the meadow above us; we must therefore prepare the water courses, and be ready by the first rain which falls. For the same reason which I gave for delaying the ploughing of these upper fields until the spring, I consider that what he is now doing had better be delayed also; I have often told him so, but he will not be advised, although he perceives that I benefit as much by his manure as he does, for as the drainage, which passes the foot of his meadow, enters our water courses on the other side of the hedge, and passes through their whole extent, they receive the washings of the fields above them; and I have sometimes, to convince him of the fact, taken him to see the very large crops of hay which we obtain by these means; but all will not do—I shall now, therefore, open the courses, and receive with thankfulness what he is pleased to give me.

Frank.—I have heard that the ground upon which we now stand, was a swamp when you took it—how did you work such wonders?

Father.—It was indeed a swamp: a sheep could not feed on it in winter, and the grass which grew during the summer was worthless as food for cattle. After securing a lease for twenty-one years. I commenced operations by cutting a very deep drain across the top of the field, knowing that *all the water must come from the higher ground.* The former tenant had gone to great expense in underdraining in every direction, but although the drains were well made and filled with stones, they were useless, because they were not carried deep enough to touch the clay. When I had cut to the depth of five feet, I almost despaired of success, for the soil was still boggy and full of water; another foot, however, brought us to the clay, and immediately the water rose into the drain and run a strong stream, until it fell into the course, which takes it to the mill stream below. There were then a few holes bored with an auger along the bottom of the drain, and all was complete. This single cut was sufficient to drain the whole field; but I ought to say it penetrates six inches into the clay at the bottom, by which the water is prevented from overflowing on the lower side of the drain. As soon as I could get upon the land, I covered the whole surface with a thick coat of quick lime, and in six months it was so completely drained, and had become so firm, that horses and cattle pastured it until Christmas. I then determined to bring the water back over the surface by cutting rills, and conveying it by them to every part of the field; and have, as you say, "worked wonders,', for it is now the best meadow in this part of the country. I, however, attribute most of the success of the undertaking to the circumstance of laying the land dry before flooding, and making proper provision for carrying off the water as quickly as it can be brought on—a provision which is often unattended to in farming meadows of this description.

To Elkington we are indebted for the present simple and most efficacious system of draining, for the discovery of which he obtained a reward of £1000 from the British Parliament. I say discovery, for so indeed it was; he had put a man to drain a field, and passing him while at work, on his way to the sheep-fold with an iron bar on his shoulder, and seeing that what he was doing was labour in vain, he threw the bar from his shoulder, which on falling penetrated the bottom of the drain, and on pulling it out, the water immediately flowed through the hole; he had tapped the spring as well as his ideas, which, like the water, flowed out; and this was to him a source of great wealth and honor. I must get his book, which is full of interesting plates, recording and describing this circumstance, as well as very many other instances of successful drainage in various parts of the country. I knew the Chairman of the Committee of the House of Commons who voted him the reward; his name was Colquhoun; he told me that Elkington was a plain man of strong mind, but without education, and was compelled to employ others to do all his correspondence, and even the writing of his book.

But I knew another instance of recovering a swamp, still more curious: the herbage which grew upon it was of the coarsest species, and the spot had been noted for rotting all the sheep which had pastured upon it for many years. It was near a town, and the experiment was made by the owner, a man of large fortune, more for the example to others, than of benefit to himself. He regularly