

breeder is willing to place to its debit. Nor can I reconcile myself to a large beast of any kind for profit. I will appeal to any practical breeder, who has tried the experiment of raising fat heifer calves, whether they have proved the best milkers.

Again, flesh will very much diminish the milk vessels in the early stage of their growth, from which, I feel assured they will never recover; but when a cow has been economically brought up, and the milk vessels have once been fully developed, they will never deteriorate. Such a cow will hold out much longer than the forced animal, and will give an increased quantity of milk. I hope Reviewer will try this, and then state the result of his experiment. On the other hand, a forced bull, after three or four years old, generally becomes useless for service.

The fashion, of late, for overgrown animals, has been so ragingly prevalent, that symmetry and quality have been very much overlooked, and such breeders now find themselves in a labyrinth, surrounded by a coarseness, raggedness, hardness, and shapelessness, in their animals, from which they cannot extricate themselves. I would advise such breeders to dispose of their stock, and commence a new career, by selecting a herd possessing symmetry and quality, and let size evaporate in the atmosphere with the rest of the grasses.

I was very much amused at a large calf shown last fall, at the State Fair at Buffalo, called by the owner a shorthorn. When he walked, you might have seen his shoulder blades work as loosely as possible above his crop, which was as hollow as you can imagine. He had an exorbitant paunch, was coarse in the bone, narrow at the hips, and his carcass was covered with flabby flesh of the very worst quality. Had I been a shorthorn man, I would have preferred a Buffalo amongst my herd. For then, I would have had something extraordinary. This calf was sold for \$100, and the owner was very much *offended* because he did not gain the first premium. But the judges had too much sense to notice him. He had been forced the whole of the summer entirely for the show, and to sell. It must have been an inexperienced farmer that purchased this animal, and not a shorthorn breeder. I think he will have some difficulty in disposing his offspring; and I should like to see this farmer and the calf together, after he has wintered him on hay, so that he might point out to me his beautiful symmetry. As I have said before, it takes all kinds of animals to make a world. Therefore, there must be *large calves* as well as *great men*.

W. H. SOYHAM.

Black Rock, N. Y., Feb. 18th, 1849.

DRAINING.

In digging drains, their opening at the surface of the soil should be made large enough to enable every part of the operation to be conveniently carried on. In large undertakings, it is customary to make use of a plough having a double purpose of commencing the opening of a drain. Two furrow slices are thrown off by this instrument—the one to the right, and the other to the left—and a strip of earth about 15 inches wide left between the furrows. This strip is subsequently divided with a strong plough having a double mould board. The first time this instrument passes through the soil, it is made to penetrate to the depth of about a foot, and the second time it is so arranged as to turn up the soil to at least six or eight inches lower down. The earth is immediately removed from the sides, lest it should fall back again into the ditch during the operation. The excavation is then continued with manual implements. A common spade is first made use of, which is a little narrower at the bottom than it is at the top; and subsequently another is had recourse to, the upper part of which is scarcely so wide as the lower part of the former, and its extremity not more than three inches wide. By digging successively with these two instruments, and exercising a little care and skill, the drain will speedily become properly shaped. The walls must then be united, and all the loose earth which has fallen to the bottom removed thence with a curved shovel. The part of the drain through which the water has to pass must then be lined with stones or with branches, according as the one or the other can be procured with the least trouble and expense. If the stones can be obtained from a neighbouring field, they are to be preferred. The large and small ones are mixed together; but in placing them in the drain, care must be taken to pile the largest and flattest along the sides. When branches are made use of, they are sometimes tied up in bundles: but it is much better to gather them in one by one, the largest being placed at the bottom and the smallest ones above.

Experience has proved that light, equated wood is better adapted to this purpose, and more durable than hard wood; thus the branches of alders, willows, and poplars are preferable to those of firs, the juniper and other resinous trees. It is, however, highly essential that the branches made use of shall have been fresh cut, or, in other words, green, and full of sap. It is generally found that the drains lined with branches, remain open longer and are more durable, than those in which stones have been made use of; even after the wood has rotted, the drain retains its form, if the soil be of an argillaceous nature. The stones or branches with which the drain is filled must be covered up, with smaller branches, or some other material, in order to prevent the earth from sinking in between the interstices; or they may be simply covered with the turfs raised from