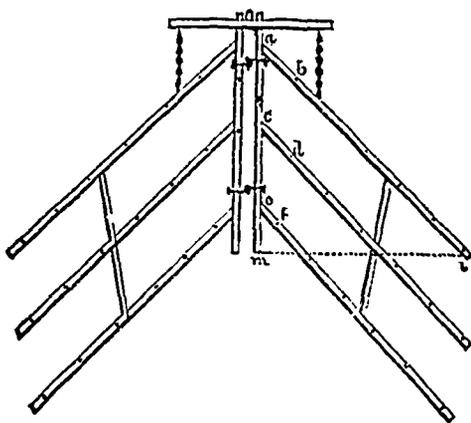


**The Field.**

**A Couple of Harrows.**

We have had on hand for some time sketches and descriptions of two harrows, which, in consequence of a large accumulation of correspondence and other matter, we have been unable to publish until now.

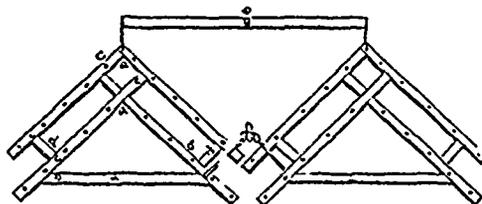


The first is furnished by Mr. M. Oliver Cole, of Orwell, East Elgin, who writes respecting the implement as follows:—

“As there is no pulverizer of more importance than a good harrow, it is decidedly to our interest to know and have the best. I herewith send you a sketch of one I made about eighteen months ago; and I am happy to say it has realized every expectation. As you recently gave a cut of Mr. Morton's, this may at first strike you as being similar; but by comparison you will see quite a difference. The teeth of this harrow cut about two inches apart, even to the extreme of the wings; and I have no doubt its work will be as superior to Morton's as is its simplicity of construction.”

**DESCRIPTION:**

From *a* to *b* 9 inches; *c* to *d* 6 inches; *e* to *f* 3 inches. The other teeth are all 9 inches apart: *a* *m* and *m* *l* should be sides of an isosceles triangle. Two teeth in the head pieces have their points inclined to the centre space—chains 3 in. spread at the whiffletree



The second harrow plan comes to us from Mr. Andrew Black of Warkworth, Percy, who thus writes in reference to it:

“I send you a sketch of a harrow which has some advantages. The great fault of the harrow shown in No. 21, volume I, is, it does not cover enough of ground, and if it were made to cover widely it would come hard on a team, as it lies so far behind. I have one of the same kind, and it was when making another to cover more ground that I hit on the plan of the one I now send. I have now the only one I ever made. I made it in the spring of 1859. In the fall of that year it took the first prize at the County show of East Northumberland, and although I have used it ever since, both among stumps and stones it is still good, in fact one of its great advantages lies in its strength and durability, for I should have used up two or three square harrows during the same time, doing the same work. Another advantage is its great ease of draught, which will be obvious to every farmer when he looks at its nearness to the team. But its great recommendation lies in the quantity and quality of the work done. It is equal if not superior to the best constructed Scotch harrow in clear fields, while on land only partially free from stumps it has no equal. It is also very simple in its construction, while the iron work is a mere nothing; both harrows can be ironed exclusive of teeth for about 60 cents, which sum includes the hinge which is of a peculiar and simple kind, invented by Mr. Robert Bell, blacksmith, Warkworth, about two years ago. It works admirably, and is easily detached by raising one of the harrows. A friend of mine, visiting from the States last winter, took a plan of it, had one made, and he wrote to me stating that it worked well. I have intended year after year to make a set to exhibit at some one of our Provincial Shows, but I always neglected it. Last winter I procured the material for a set of 3 for 3 horses so as to be able to cover a whole ridge at a time. I intended them for exhibition at Hamilton, but after cutting the scantling to the proper lengths, I did no more to it. I shall now leave it for some mechanic, and I have no doubt when this harrow comes to be known, it will soon get into favour.”

**DIRECTIONS FOR MAKING.**

Three of the outside bars are 3½ feet in length, and the fourth is four inches shorter. The inside bars are 4 feet 2 inches in length.

The joints marked *a* are half checked.

The joints marked *c* are mortise and tenon.

The pieces marked *b* are long enough to reach the mortise *c*.

The pieces marked *d* must be of the same size as the rest of the scantling, which ought to be not more than 2½ in. square, or 2½ x 2½ inches.

Teeth, ¾ in.; hinge, common horse-shoe iron.

The evener *e* to be attached to harrow with a hook or clevis.

This harrow is made at right angles, and can be made to cut any width. For every foot long, it will cut 1 foot 5 inches.

**The Greystone Turnip.**

Our attention was called the other day, by the Hon. David Christie, to this new variety of turnip, which, within the last two or three years, has become extensively cultivated in Scotland. Its produce is said to be one and a half times greater than that of ordinary varieties, and, in some instances, twice as much. This being the case, one naturally feels desirous of knowing the quality of this new accession, since that element is of essential importance in forming a correct estimate of its true value. The part just published of the *Transactions of the Highland Society*, contains an interesting paper on the composition of the Greystone, by Professor Anderson, chemist of the Society; the substance of which is subjoined.

Specimens for analysis were taken from the field, and consisted of different sizes, one weighing as much as 15 lbs. Their specific gravity was low, and, when cut across, their texture was found to be very spongy. They were grown upon two very different kinds of soil, viz., clay and sand. The results of the analyses were as follows:—

	Clay.	Sand
Water .....	93.84	94.12
O.I. ....	0.26	0.34
Soluble albuminous compounds .....	0.36	0.56
Insoluble albuminous compounds .....	0.20	0.18
Soluble respiratory matters .....	2.99	2.32
Insoluble matters, chiefly woody fibre ..	1.73	1.96
Ash .....	0.63	0.63
	100.00	100.00
Nitrogen in Juice .....	0.053	0.090
“ in insoluble matter .....	0.061	0.029
Total nitrogen .....	0.089	0.119

The ash was fully analysed, and gave:—

	Clay.	Sand.
Peroxide of Iron .....	2.01	2.14
Lime .....	11.53	9.94
Magnesia .....	1.17	1.85
Potash .....	32.71	33.67
Soda .....	2.02	2.41
Chloride of Sodium .....	7.20	7.28
Phosphoric acid .....	13.03	14.19
Sulphuric acid .....	2.19	2.72
Soluble silica .....	0.60	0.86
Sand .....	1.73	4.19
Carbonic acid .....	20.98	19.63
Charcoal .....	4.78	1.15
	103.60	100.00

The most striking fact of these analyses, is the small amount of solid nutriment contained in this kind of turnip, amounting only to about 6 per cent., the remainder being water. This is much less than what is afforded by the ordinary variety of Swede turnips, which will usually yield of solid matter, according to soil and seasons, and the kind of manure and cultivation given, from 8 to 10 per cent. The amount of solid nutritious matter in turnips is greater, per ton, in dry seasons or climates, than in moist ones; the latter, however, will generally produce a greater bulk. Our Canadian turnips usually contain a full average, at least, of nutritious matter. From the above analyses it would appear that, if the Greystone turnip will average one and a half times the weight of ordinary kinds, it is unquestionably the best