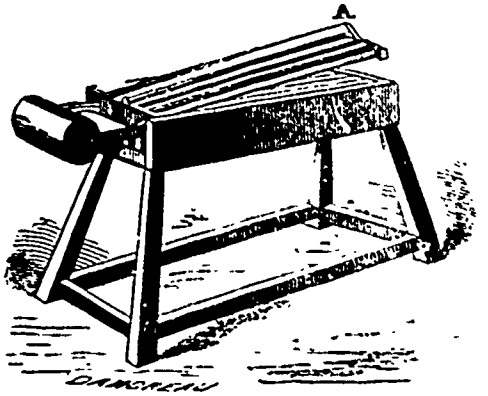
has been found to improve its colour. It will be sufficiently steeped, in an average time, from eight to fourteen days, according to the heat of the weather and the nature of the water. Every grower should learn to know when the flax has had enough of the



water, as a few hours too much may injure it. It is, however, much more frequently *under*-watered than *over*-watered. The best test is the following:—Try some stalks, of average thickness, by breaking the *shove*, or woody part, in two places, about six or eight inches apart, at the middle of the stalk; catch the broken bit of wood, and if it *will pull freely out, downwards, for that length, without breaking or tearing the fibre and with none of the fibre adhering to it*, it is ready to take out. Make this trial every six hours after fermentation subsides, for sometimes the change is rapid. Never lift the flax roughly from the pool, with forks or grapes, but have it carefully handed out of the flax drain by men standing in the water. It is advantageous to let the flax drain twelve to twenty-four hours after being taken from the pool, by placing the bundles on their root ends, close together, or on the flat, with the slope, but the heaps should not be too large, otherwise the flax will be injured by heating.

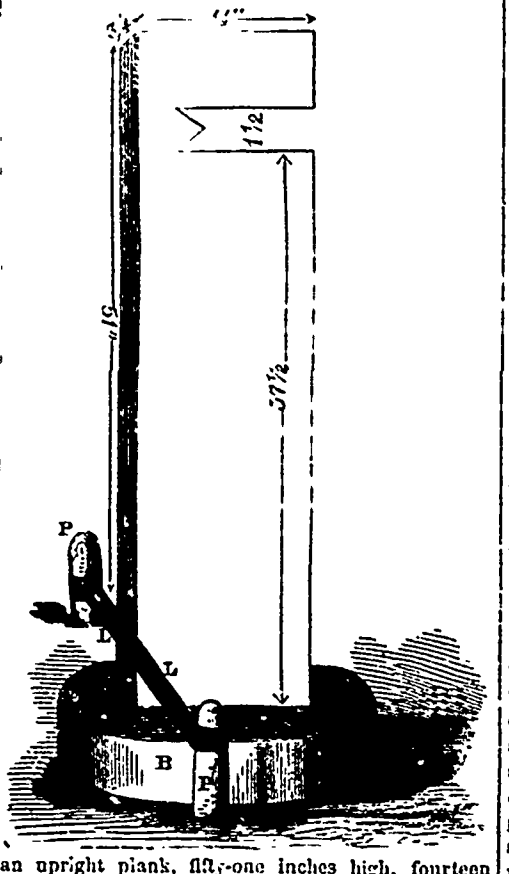
"The flax water can be either used as liquid manure for meadows, or kept in the pool till the first flood—it should not be run off into the river when the water is very low, as the odour is very unpleasant."

The flax is next spread on a clean, short, thick pasture ground, taking care previously to mow down and remove any weeds that rise above the surface of the sward. Lay the flax evenly on the grass and spread it thin and very equally. In ordinary weather ten days, more or less, will be about the time that it should lie on the grass. "A good test of its being ready to lift is to rub a few stalks from the top to the bottom; and when the wood breaks easily, and separates from the fibre, leaving it sound, it has had enough of the grass. Also when a large proportion of the stalks are perceived to form a *bow and string* from the fibre contracting and separating from the woody stalk" In lifting, be careful to keep the lengths straight, and the ends even, otherwise much loss will be occasioned during the breaking and scutching processes. Let it be set up to dry for a few hours, and afterwards tie it up in small bundles If not intended to be scutched at the time, it will be much improved by being put up in small stacks loosely built, with wood and branches in the bottom to keep it dry, and allow a free circulation of air. Of course stacks built on pillars would be still more suitable.

Dew Rotting.—In this process, decomposition, instead of being produced by the flax being submerged in water, is effected by its exposure on a meadow to the rains and dews. This course has the advantage of being more generally feasible than that just *described*; *but as its* efficacy and duration are dependent on that very fickle agent—the weather—it is often very tedious and uncertain A long continuation of drouth materially injures the quality of the sample; and hence when convenience will admit of the flax being steeped, it is advisable to immerse it in water as before directed.

Breaking.—The simplest form of break is a flat-headed mallet like the "beater" with its face or under surface fluted. The flax is broken by repeated blows from its serrated surface. Another form of hand-break is represented by our cut, which consists mainly of two sparred frames, the upper moveable on its axis and the lower fixed. "It is so constructed that the bars in the lower frame fit between those of the upper. The operator takes hold of the implement by the left hand, at A., and with the right places some flax over the lower frame; the upper frame is then lowered, thereby breaking the woody portion of the stems." Its construction, as will be observed, is quite simple, and any ordinary mechanic could easily construct such a break.

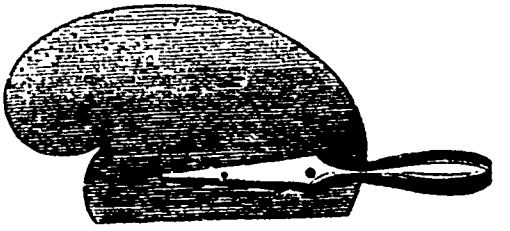
Scutching.—This operation has for its object the separation of the fibre of the bark from the woody portions of the straw or stem If a stem of reed is taken in the hand and crushed regularly from one end to the other, nothing is left but a handful of fragments. Treat flax in the same manner, and after the brittle part is broken and fallen to the ground, a small band of strong fine threads will remain. This, in fact, is the textile portion of the flax, and consequently the scutchers get rid of the rest as completely as they can by thumping and crunching. The scutching board, as shown in our next cut, is merely



an upright plank, fifty-one inches high, fourteen broad, and of the uniform thickness of three-quarters of an inch throughout It is firmly fixed in a solid block of wood, and at the height of thirty-seven and a half inches from the foot is a horizontal slit an inch and a half broad "With his left hand the scutcher introduces into the slit a handful of broken flax, so that it hangs down on the side of the scutching board, which faces the reader in the cut. With his right hand he scrapes and chops at the flax with a tool called a scutch, (to be immediately described), something like a battle-door or a monstrous wooden butter-knife." A leather strap, L. L., an inch in breadth, stretches between two low posts P P, at the height of nineteen inches from the ground, just before the operator's legs, at the lower part of the scutching board, in order that he may not bark his own shins while scutching the flax. The elasticity of the strap also causes the blow to rebound, and so aids the operator in his work. By these means, and by turning it about, the woody fibre and refuse are got rid of and little else but the pure fibre remains.

Our last cut shows the scutching blade, which is formed of thin, even grained wood, without knots or twists, generally of sycamore or beech. Its length from the end of the handle to the tip of the blade, is about two feet; and the greatest thickness of the blade at its upper part is a trifle over an eighth of an inch.

We have thus minutely described the scutching implements, because the operation itself is a most



important one, and requires careful manipulation to perform it successfully. In proportion to the skill and care of the operator will the value of the article produced, and the amount of waste made be determined. With a skilled workman the loss from the latter source is estimated at one-fourth less than when a scutching machine, such as Rowan's or Friedlander's is used. When the flax is of good quality and the scutching well done, there is just as ready a sale for it as the mill-scutched. Machines like those just named, to be profitable, must be in the hands of a capitalist, and be moreover pretty generally diffused throughout the country, if the cultivation of flax is to be an agricultural institution in Canada.

In the meantime, we strongly recommend the producers to take immediate steps to provide simple but effective implements for hand scutching, such as we have described, and set to work, with a will, during the coming winter. There is nothing unwholesome or laborious about the business, but on the contrary, a great deal of cheerfulness and merriment are evoked during the operation. By following the course which it has been our purpose in this article to indicate, the flax producer, we are persuaded, will be consulting his best interests, and will be encouraged to persevere in growing this important and valuable farm product.

The Proper Quantity of Seed.

Experiment and experience have taught me that the fulness of a crop does not depend upon the quantity of seed sown, but on the quality and condition of the soil; and, in a more limited degree, on climate and the period of sowing. Every agriculturist should, as a question of profit to himself, try on a small scale comparative quantities of seed, and if this were done generally (which I am sure it is not), a vast aggregate saving would accrue to the country at large, and a proportionate gain to the farmer himself. We often hear complaints of losses by a thin crop, but never by a thick one, although the latter too often subtracts considerably from the farmer's profit. I related last year that a peck of seed wheat per acre, dibbled at intervals of about 4½ inches, one kernel in a hole, produced 52 bushels of heavy wheat per acre, and 2¾ tons of straw; in fact, the thickest and heaviest crop of corn and straw on my farm. It was seen at various periods of its growth by many agricultural and other visitors. During winter, a single stem only having appeared from each kernel, the land at a distance appeared as if unsown, and we were often asked why we had omitted to drill that particular portion of the field. In the spring each stem radiated its shoots horizontally, to the extent in some instances of 30 to 48 stems, and ultimately became the best crop on the farm, and, which is often convenient in harvesting, about four days later than the thick-sown put in in October, at the same time as the rest of the field was drilled with one bushel per acre. In October last, rather late in the month, we repeated the experiment