

RENNIE'S DITCHING MACHINE.

UNDERDRAINING.

The practice of underdraining has received considerable attention during late years, and is no longer an experiment. The fact has been proved beyond question that nearly all our land requires more or less underdraining to ensure good crops. The advantages are so numerous that all cannot be mentioned here. On underdrained land seeding can be done much earlier in the spring, and the soil is in much better condition for receiving the seed than on land which has not been underdrained. The seed would germinate well, and the plants when once started would be healthy and continue to grow whether the season be wet or dry. On land which has not been underdrained, and more especially clay soils, the grain would perish in a wet season, and in a dry season the surface will "cake" so hard as to prevent many of the plants from making their appearance. When the stronger growing cereals fail to germinate, is it a wonder

cured, a covering of straw before filling in the earth is advised. The size of tiles for lateral drains should not be less than two and a half inches, while for the main drains, the farmer must be governed by the quantity of water to be carried off. Either four, five, or six inch tile will usually answer. The cost of underdraining clay soils is about as follows:

Cost of tiles \$15 to \$17 per acre, including the mains, and the cost of digging the ditches with one of Rennie's Ditching Machines (see illustration), which are becoming so popular, is \$3 per acre, making a total of less than \$20 per acre. In localities where it is difficult to procure tiles, wood can be used to good advantage by nailing two pieces, say five inches by one and-a-quarter, thus A. This method of draining is cheaper than tiles, and will last forty to fifty years, provided the ten or fifteen feet nearest to the opening of the drain are built of stone, brick or tiles, as wood will decay soon when exposed to the air.

There is certainly no investment that can be made on a farm which will bring better or surer returns than a complete system of underdraining.

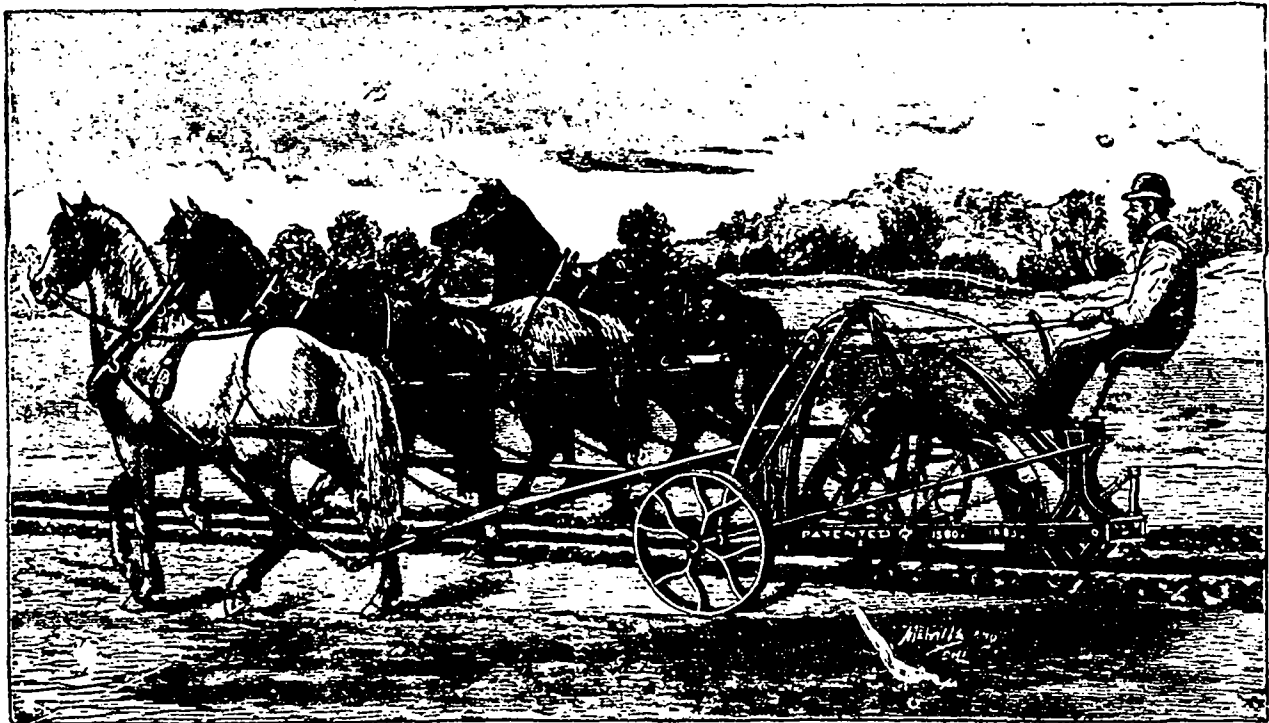
HOUSEHOLD HINTS.

WATER which has stood in an open dish overnight should not be used for cooking or drinking, as it will have absorbed many foul gases.

A DELICIOUS cream is made by this recipe: Mix some raspberry jam or jelly (a small cupful) with one pint of cream, and strain it into a bowl. Dissolve half an ounce of gelatine in a very little hot water, and, when just warm, stir it into the cream. Pour the mixture into a mould, set it on ice, and serve when very cold.

THERE being so much fraud and chicanery in the matter of baking powders at the present time, it is very important that a simple test be available to test occasionally. Balance two samples on the scales, carefully weigh a small glass of water, pour into one until all effervescence ceases; the loss in weight, less the water added, will give the proportion of carbonic acid gas, the active principle in all baking powder, the sample contained.

AN economical dish is made as follows: Wash a calf's liver; remove the skin and cut off the



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that the weaker clover and grass seeds, which are usually sown at the same time in the hope of getting a "catch," should not grow? Thorough underdraining prevents surface water from standing on the soil in wet seasons, and in dry seasons counteracts the tendency of clay soils to "cake." The saving of horse-flesh in ploughing and otherwise working the soil on underdrained land is considerable, as it is usually mellow and loose. The land can also be ploughed in broad ridges with very few furrows, which is a decided advantage in harvesting with either the reaper or mower.

The number and depth of the drains depend largely upon the nature of the land: In stiff clay soils the drains should be about thirty feet apart and from two and-a-half to three feet deep; in loamy soils, forty feet apart and three feet deep. Before commencing to underdrain, every farmer should make a diagram of his farm (drawn to a scale), and mark every drain, so that he or his successors can locate them at any time in case of a stoppage. It is preferable, when possible, to run the lateral drains parallel and with the fall of the land. It is not considered an advantage to run across a piece of rising ground, for while the drain will draw farther from the upper side, it will draw so much less from the lower side. Tiles are unquestionably the best material for drains. In quicksands, collars should be used to break the joints, but where these cannot be pre-

Low, wet lands can be changed from a condition of unproductiveness to the highest state of fertility, and in certain seasons the entire outlay for underdraining will be recovered.

THE *Farmers' Gazette*, of Dublin, says: "Reports to hand from all the principal hop-growing districts of Kent and Sussex represent the condition of the hop plantations as most unsatisfactory."

THE English potato crop is considered a failure. France is expecting a short crop of wheat, while accounts of Southern Russia show little to spare in that quarter. The rye crop of Russia, Germany and Austria is considerably damaged, all of which is favourable to better prices in this country.

TOP-DRESSING of fall wheat is work that may be done any time before the snow falls. The only precaution required is to use fine or well composted manure, and to spread it evenly over the surface. Coarse manure can only be used to any advantage when it is thoroughly shaken to pieces, as the effect of any lump of it would be to smother the young plants. The composted manure is speedily carried into the soil by rains, and is a source of immediate nourishment. Besides, the labour is greatly simplified now, for the manure-spreading machine does the work very satisfactorily—breaking up all lumps and scattering the manure thinly and evenly over the field.

white fat from the under side. Lard the upper side with fat salt pork. Brown in a baking pan two tablespoonfuls of flour in hot butter or dripping; place the liver in the pan and let it brown on both sides. Add one carrot cut in halves, one onion in which six cloves have been stuck, one bay-leaf and the rind of a lemon. Pour three cupfuls of water or broth in the pan and bake for half an hour, basting often. Then add one teaspoonful of vinegar and one of lemon juice and salt and pepper; baste two or three times. Strain the gravy over the liver, garnish with round slices of lemon and serve.

New and pretty house aprons to wear at high teas and the like over rich toilettes made short, are "Roman" in effect on the skirt part, and are embroidered with an edge in rich oriental colours in Roman designs. The novel feature of the apron consists of there being added a sleeveless zouave jacket, but cut away still more than even these diminutive jackets usually are. The back of the jacket reaches several inches below the waist, and joins the apron on the side seam. A rich bordering of the embroidery also finishes the zouave portion, and cream-white canvass or etamine is the chosen fabric. The garnitures are varied to suit different tastes, but arrasene is a favourite decoration. Pockets at each side are added, and butterfly bows of satin ribbon are set upon the shoulders.