The above directions are especially for steamtrains; fire-trains may work it successfully if The Oak the size will justify an extra fire for defecating and clarifying the juice. I am afraid that ufacture has small operators can never use lime with success. not patented. for reasons as above stated, and the quicker om the mill. they boil their juice down, the better. Central the fumes of

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The solution of superphosphate of lime mentioned above has the following formula: To ten pounds of bone-black (refiner's refuse will do) add six and one half pounds sulphuric acid, diluted with five times its weight (or four gallons) of water. It should be mixed in a wooden tank or barrel, by pouring the acid into the

factories to take their semi-sirup will be the

water, never the reverse. Let it stand thirtysix hours, with occasional stirring; then pour off and settle. It should be about 10 B. density. But unless one has a lot of refuse bone-black on hand, it is cheaper to buy it. We get it from the Sterns Fertilizer Com-

pany, of New Orleans; price twentyfive cents per gallon, by the barrel. They also make the solution, superphosphate of alumina. Both have been used by some sugar-boilers in Louisiana the past season, especially on their second sugars. Their action on the juice is to combine with any excess of lime in the juice and coloring matter; but it should be given some time in the settling-tanks to do this, otherwise it will settle the resulting phosphate of lime on the coil in the evaporator. If the coils are of copper, however, they are easily cleaned with muriatic acid and water. I have often worked cane that had grown very rank, the juice from which required a little overliming to clarify well. I think an excess of ammonia in the soil is the reason. It is on just such juice that we have to resort to a strong reaction of some kind. The superphosphate of lime is perfectly safe to use, even if a little should remain in the sirup. I have used as much as one to one and one half pints to the one hundred gallons of juice with good results; also in the cold juice, in place of the sulphur or in connection with it. Lime alone will not make a bright sirup from sorghum, unless we should get a juice nearly free from glucose. With sulphur fume or bisulphite of lime, any color may be obtained, with corresponding brightness; but the nearer it comes to New Orleans in color, the better the price it will bring in the general market. -[C. M. Schwarz, in the Farm and Fireside.

Some agricultural writer figures on muck in this way: "Ten tons of wet muck contain, at 50 cents a ton, \$5 worth of nitrogen. These ten tons wet, weigh only three tons when airdry. These three tons should take up six or seven tons of liquid manure before saturation. It then stands thus: Three tons of air-dry muck, \$5; six tons of liquid manure (urine) at \$5 a ton, \$30; making a total value of \$35. This would make the value per ton of air-dry muck \$11.67, \$10 of which would in all probability have been wasted, had not the ton of air dry muck been used as an absorbent.

Methods of Fencing.

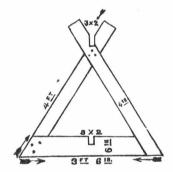
The report of the mechanical department of the Experimental Farm contains some valuable hints with regard to fencing. Mr. James Mc-Intosh, the foreman, has been making some interesting and valuable estimates. He gives the following estimate of a board fence-five boards, one 12 inches wide, two 8 inches wide, and two 7 inches, making, when complete, including face pieces and caps at joints :-

60 ft. lumber per rod, @ \$12 per m\$	72
Posts, 7 feet apart, 12½c. per rod	28
Nails, per rod	3
Cost of erecting, per rod	28
	31

12FT MOVABLE FENCE.

> These figures are then compared with a seven-wire fence, as follows: Seven rods No. 8 galvanized wire, weight $8\frac{1}{2}$ lbs., @ $6\frac{1}{2}$ c. per lb., 55\fc.; 2 posts, @ 12\frac{1}{2}c, 25c.; wire staples, 4c.; cost of erecting, 28c. per rod; total, \$1.021 per rod, or 28c. per rod less than the board

> Herewith we give a cut of a portable fence used on the Farm, which we had engraved for us on the scale of three-eighths of an inch to



the foot. Mr. McIntosh thinks that this is simpler and cheaper than the mortise hurdle fence. By attention to the cut, any farmer can construct these hurdles.

Among the varieties of sorghum competing for supremacy in northern latitudes may be mentioned the Early Amber, the Early Orange, and the Honduras. The two latter are said to flourish in all parts of the American Union, and why not so in many parts of Ontario? However, the farmers had better stick to the Early Amber until the others become better known, it being earlier, and hence better adapted to northern regions. When planted towards the end of May, it matures about the middle of September. It will do well on land which is not rich enough for corn. When used with other fodders, it is a capital thing for soiling; even when a vigorous crop is desired for making sirup, the smaller shoots may be culled out and fed to the

Sugar from Sorghum Cane.

This invention of A. J. Adamson relates to the manufacture of sirup and sugar from sorghum cane; and the invention consists in the novel process of treating the cane before the juice is ex-

Attempts heretofore to manufacture a firstclass sirup or sugar from sorghum-cane have been more or less unsuccessful, partly, no doubt, owing to the fact that sorghum juice contains a large percentage of impurities, including green vegetable matter, which cannot be easily eliminated in the process of converting the sirup or sugar. The inventor therefore provides for the separation of the pure juice and impurities before the former is expressed from the cane,

and his process consists in first roasting the cane until it throws out a gummy substance which sticks to the stalks. The cane, while warm, is then run through the mill, and the juice thus expressed is filtered through white clay to remove any particles of earth or woody

fibre it may contain. The pure juice thus obtained is then boiled down in the usual manner, which requires, however, only about half the time required when the cane is not roasted.

The sirup thus produced is much purer than that made by the usual method, and will not sour so readily. It is also devoid of the peculiar rank taste of ordinary sorghum sirup. The sirup is converted into sugar in the usual manner.-[Chemical Review.

Top-dressing Potatoes.

Some important experiments have been conducted at the Ohio Agricultural Experiment Station with different fertilizers as top-dress. ings for potatoes. The fertilizers tested were wood ashes, coal ashes, lime, gypsum, salt, hen manure, a mixture of ashes and plaster, and a mixture of ashes and lime. These were applied when the tops were about two inches from the ground. A description of the soil is not given, which detracts considerably from the value of the results. The experiment with ashes proved that it would be profitable to apply 75 bushels per acre, at a cost of 25 cents per bushel. The mixture of ashes and plaster produced about the same results. Plaster alone had no effect. The lime also proved ineffectual. With salt, quantities over 5 bushels per acre proved injurious, and rations under this quantity produced a slight profit. Hen manure, finely pulverized, gave about the same results as ashes. Judging from these results we would say that the soil was a loam containing little organic matter. It is quite likely that the ashes were purchased from Canadian farmers at two or three cents a bushel.

HORSE MANURE. - No kind of manure is so liable to injury from fire fanging, as it is called, as this. Where horses are stabled and their excrement thrown out in heaps, it rapidly heats and much of its most valuable, properties are lost. After very slight heating it should be drawn and spread on the land.

