

AUTOMOBILES, FARM MOTORS AND FARM MACHINERY.

Hints for Tractor Operators.

Old operators need no advice about the disadvantages of letting the engine race when it becomes stuck by the plow in a low spot, but a word in this regard to new owners may be timely and is sure to be appreciated. The more the engine races

in one spot the harder it will be for the tractor to force itself out of the holes which the drivers have dug. As soon as the engine begins to race, lighten the load by raising the bottoms a little. If the engine still cannot free itself, detach it from the gang, run it ahead a few feet on to unbroken surface, and then connect it to the gang by a chain. After the plow has been pulled through the troublesome spot, the two implements can be recoupled and plowing continued at a reduced depth until there is no further danger. On the next round, the careful operator will raise the bottoms slightly as the troublesome spot is approached.

A good system of laying out fields is one in which loss of time in turning is reduced to a minimum and as little unplowed ground as possible is left at the fence corners. The old system of starting at the centre of the field and plowing around and around toward the outside is still in vogue where large outfits are used in large fields. It reduces loss of time to the minimum, but it also leaves a large amount of unplowed ground at the corners.

Plowing the field out in lands is the best system to be used with small outfits. Advise the operator to set a row of stakes around the entire field from twenty to thirty paces from the fence. At each end of the field a guide furrow should be plowed along the line of stakes and a strip the full width of the gang can be plowed along the row of stakes at each side of the field. The centre area should then be plowed out in lands of convenient width, the headlands and side strips being left to be turned last by running the outfit around the centre area. This system will be found applicable to triangular and irregular-shaped fields as well as to rectangular fields, and the next season the soil can be thrown in the opposite direction if desired.

A NEW MOTOR FUEL.

The "Coal Age" says: "Ethyl alcohol and its derivatives have been extracted successfully and on a commercial scale from coke-oven gas by Ernest Bury, of the Skinningrove Iron and Steel Works, in Great Britain. A perfect motor fuel has been produced, and as the adoption of the internal-combustion engine is rapidly extending, the importance of this development is apparent. The liquid fuel resources of the world are strictly limited, but the consumption of these fuels is growing by leaps and bounds.

"The practical working of Mr. Bury's process at the Skinningrove works, where 5,800 tons of coal are carbonized per week, has revealed an average yield of 1.6 gallons of alcohol per ton of coal carbonized, and as the total weight of coal which was reduced to coke in Great Britain in 1918 was 14,635,000 tons, the application of this process to the whole of this coal would yield 23,416,640 gallons of alcohol representing, at 2s. per gallon, a sum of £2,341,664.

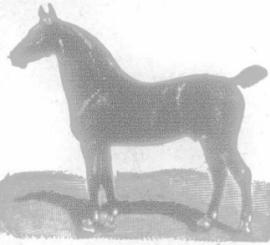
"Having regard to the scarcity of liquid fuel that production in itself is important; it is national suicide for Great Britain or any other country to continue to burn any substance which might be converted into liquid fuel. The recovery of alcohol at the gas works of Great Britain would yield a further 27,000,000 gallons, or taking alcohol and benzol together, the total quantity of liquid fuel available for extraction through the carbonizing of coal would be 114,000,000 gallons, as against a present total consumption of 160,000,000 gallons per annum.

"The process of extraction by contract with sulphuric acid is not a new discovery, but Mr. Bury was the first to establish it as a commercial proposition. The best results are achieved at a temperature of 60 to 80 degrees C., and in his process Mr. Bury carried utilization of the heat from the coke-oven plant to the utmost limit. Ether, chloroform, idioform, acetic and acetone are among the derivatives which were obtained from this coke-oven gas after the benzol had been extracted.

"Skinningrove was the only iron works

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20 Bulls—SPRUCE LAWN—100 Females—Clydesdales, Shorthorns, Yorkshires. Herd headed by imported Golden Challenger 122384, a Rubyhill, bred by Earl of Northbrook, by Ascott Challenger, bred by L. De Rothchild. Special bargains in farmer's bulls. Cows and heifers in calf, yearling and heifer calves. Yorkshires either sex

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Newcastle Herd of Shorthorns and Tamworths for Sale—Three nice bulls, 11 to 13 months old, and several yearling heifers and cows with calves at foot, both sexes, all splendid milking strain. Several Tamworth sows due to farrow in May, June, July. Young stock, both sexes, at weaning up to six months old. All from prize-winning stock.

Long-distance 'Phone. A. A. COLWILL, R.R. No. 2, Newcastle.

Pear Lawn Shorthorns, Hackneys and Yorkshires—One imported In-dam Miss Ramsden bull, 14 months; one Secret bull, 12 months, imp. sire and dam; one Golden Rose bull, 6 months, imp. sire and dam; one bull, a Flattery, 12 months, imp. sire. A few young cows with calves at foot. One imported Hackney stallion, Al; two Hackney stallions rising one year; one registered Clyde mare; also Yorkshires at weaning time. HERBERT J. MILLER, Keene P.O., Ont. Stations—Keene G.T.R., Indian River C.P.R. Peterborough County.

WELLAND RIVER SHORTHORN OFFERING We have at present only two young bulls in the stable, but would price within the next few weeks a half dozen or more young cows or heifers bred to our present herd sire, Sunnyside Model. This is a Cruickshank Lovely-bred son of Rightsort (imp.). The families are Killbean Beauty, Misses, Rosemary's, Seaward, Rosebud, Ballenchin Daisy, etc. 50 head to select from.

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SPRUCE GLEN SHORTHORNS We have a few choice, well bred, thick, deep level, mellow young bulls of breeding age for sale; also heifers in calf to a right good sire. Write for particulars.

JAMES McPHERSON & SONS DUNDALK, ONTARIO

Ivinedale Scotch Shorthorn Heifers—For the present we are all sold out of bulls of serviceable age, but we have the largest and strongest offering of Scotch-bred heifers and young cows we have ever had on the farm. Call and let us show you our breeding herd of cows, headed by Marquis Supreme, that great son of Gainford Marquis (imp.). Jno. Watt & Son, Elora, Ont.

Aneidia Farm Shorthorns and Shropshires We offer Five Ram Lambs, one Shearling and one 2 shears. From Imp. and home bred Ewes. Alby Imp. Buttar ram. Also three bulls of different ages, 2 pure Scotch, one Scotch topped. All of high quality and priced to sell.

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Spring Valley Shorthorns—Herd headed by Sea Gem's Pride 96365. We have a number of good bulls for sale, including the Champion Ivanhoe 122760, and his full brother also, an extra well-bred Rosewood, and others. Write for particulars.

Telephone and telegraph by Ayr. KYLE BROS., Drumbo, Ont.

Imported Scotch Shorthorns For Sale—Three imported bulls, one yearling, one two-year-old and our three-year-old herd sire; also a choice two-year-old Orange Blossom of our own breeding, and three well-bred bull calves about a year old. Would consider exchanging an imported bull for Scotch females.

R. M. MITCHELL, R.R. No. 1, Freeman, Ont.

WALNUT GROVE FARM—OXFORDS AND SHORTHORNS 2 two-year rams, also a number of ram and ewe lambs for sale at reasonable prices—in shorthorns we are offering a few young bulls of best Scotch families.

DUNCAN BROWN & SONS SHEDDEN, ONT. P. M. and M. C. R. Long distance 'phone

Factories in the War. After the beginning of the Canadian factory system was put on a war basis, and making was organized. How factories succeeded in war is illustrated by the following from the report issued by the Cabinet and presented to the Government. "The manufacturing resources in Canada have been almost entirely devoted to war production almost as those of the British Empire. Work was done chiefly under the control of the Imperial Munitions Board, which placed orders amounting to \$1,200,000,000. At the same time 250,000 workers were employed in munitions including shells, powder ships, 44 steel ships, aeroplanes. At the same time the Canadian factories largely supplied the people at home and the Canadian abroad. About half the Canadian factories came from the factories returned to the factories on the home front. If we had not built a system and allied business, manufacturing and business had been largely by other countries. Canada could not have sent to the war, could not have built ships and aeroplanes, and given large financial aid, and not have absorbed her deficiencies.

Conclusion. The course of this statement is made to show that manufacturing in Canada is inseparably connected with other industries; that two earners and dependents living through manufacturing that the most of the population derive income; that this country as a whole has made remarkable progress in its national policy of protection; the entire world swinging in the direction, Canada cannot resist that the revision of the national policy and take into account the requirements of a stable fiscal policy of some assurance of permanent need; and, finally, of the fiscal policy deterrent of this enquiry, should be Canada towards her newly developed nation within the Empire.—Advt.

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of Merit and The Market

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Conclusion

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