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We are the oldest RAW FUR HOUSE, as well as the largest collectors of CANADIAN RAW FURS in Canada. That means larger experience, larger markets and a LARGER PRICE to you. Ship direct to us. Returns made same day furs are received. Shipments held separate on request. Fall price list now ready. Write for it.

HIRAM JOHNSON LIMITED
494 St. Paul St., Montreal
Mail Dept. "D"

Royalton Stock Farm Holsteins
Herd headed by Royalton Korndyke Major, (Imp.) whose dam gave 111.1 lbs milk in one day, 3 months after freshening. We are offering a few young cows (2 years and up) bred to the above bull and due to freshen from now on. One young bull calf 5 months old from above bull. Also four young bulls fit for service, sired by Sir Abbecker Paul De Kol (my former herd bull) and from R. O. P. Cows.
E. C. GILBERT,
R. R. No. 7 St. Thomas, Ontario

HOLSTEINS FOR SALE

Ten females, all ages, one bull, 3 years old, owned by the David Rife Estate.
The above stock have been placed in my hands for sale, and will be sold reasonable to anyone taking the lot. Will not be sold separate. For particulars, apply to
WM. A. RIFE, Hespeler, Ont.
Nine miles south of Guelph.

The Maples Holstein Herd

Headed by Prince Aaggie Mechthilde. Present offering: Bull calves and bulls fit for service, from Record of Merit dams, with records up to 20 lbs. butter in 7 days. Prices reasonable.

WALBURN RIVERS
R. R. No. 5 Ingersoll, Ont.

Glenwood Stock Farm 2 YEARLING HOLSTEINS SALE, out of big milking strains; at low figure for quick sale.
THOS. B. CARLAW & SON, WAREWORTH, ONT. Campbellford Station.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA
Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding the farmer's most profitable cow should be sent to the secretary of the Association.
W. A. CLEMONS, St. George, Ont.

DON JERSEY HERD Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.
D. DUNCAN, DON, ONTARIO.
Phone L-D. Agincourt. Duncan Stn. C. N. R.

Questions and Answers. Miscellaneous.

Hydro for Farm Purposes.

I note with interest the price hydro will cost the farmer per horse power. The question naturally arises: Will it pay the farmer to pay \$50 per horse power, as we know that a two-horse power will only do a part of our work? I admit two horse power may do our light work, but when it comes to sawing wood, you couldn't crowd your work, and it would be nowhere in grinding. You say with a ten-inch plate they ground one bushel of barley in ten minutes fine enough for cattle. This would be too slow for the average farmer. Five times the amount should be run through for the money invested. For lighting, I think it would do; also for a few other small jobs. You do not state how much the motor would cost the farmer. In my humble opinion the gas engine is more suitable up to the present, but, of course, with the advance of gasoline in price, the cost of operating naturally rises, as all gas engines, when in order, are supposed to consume one-tenth of a gallon per horse power per hour. But what I would like to have answered is the difference in a steam horse power and any other mechanical horse powers of 33,000 lbs., one foot of a lift to the minute, which, as I understand, refers to the lift of a cage in a mine. How do the steam engineers claim their surplus power? A steam engineer once told me that my engine, which is a twelve-horse gas engine, with an eight-inch bore, and a twelve-inch stroke, would develop nineteen horse power in steam, but to come back to the question of time, which is an important factor on the farm, I don't see that we can wait on the power that a two-horse motor would develop.

O. W.

Ans.—There is no difference in the standard horse power used in rating steam and gasoline engines. They are both rated in terms of mechanical horse power of 33,000 pounds, lifted one foot high in one minute. The difference in size of cylinder for steam and gasoline engines arises from two or three causes: 1st. The average pressure throughout the power stroke is different in the two kinds of engines; and 2nd, in the steam engine the pressure acts on the piston, during both the forward and the backward strokes, thus the piston receives pressure practically all the time. In a four-cycle gasoline engine, however, the piston just receives pressure once in four strokes. The four-cycle engines are used almost exclusively for stationary purposes. Thus the piston of the gasoline engine receives pressure only one-quarter of the time, while in the steam engine the pressure acts nearly all the time. From this fact alone, if the pressure in the two cases were the same, the steam cylinder could be just one-half the diameter of the gasoline cylinder, provided, of course, that the number and length of strokes were the same in the two. However, the pressure is not the same. In steam, it generally runs in the neighborhood of 100 pounds, although by heavy firing it may be increased. In the steam engine, the work would be 100 pounds working through four strokes, which is the same as 400 pounds working through one stroke. In the gasoline engine, the work would be 300 pounds working through one stroke. Thus, it would appear off-hand that the area of the gasoline cylinder should be 4-3 the area of the steam cylinder for the same horse power. In the argument thus far, we have assumed that the two engines were running at the same speed, and that the strokes were the same length. Now, it is a general impression that a twelve-horse-power steam engine will do more work than a twelve-horse-power gasoline engine. Probably the strongest reason for this impression is that the steam engine will take an over-load better than a gasoline engine, and, consequently, pull itself through a severe trial better than a gasoline. The ability of the steam engine to take an over-load arises from three facts: 1st. By heavy firing the steam pressure can be considerably increased, and, of course, the higher the pressure the greater the power. 2nd. The steam engine may be speeded up by adjusting the governor. 3rd. Steam engines are usually provided with a boiler of several horse power greater

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FAIRVIEW FARMS HERD

Offers For Sale

A son of PONTIAC KORNDYKE, out of a cow with a record of over 31 pounds in 7 days. Calf is nearly ready for service. Have only a few sons of this great sire left, and remember these are the last. LOOK UP THE RECORD OF SONS OF PONTIAC KORNDYKE, AND SEE WHAT THEY ARE PRODUCING.

E. H. DOLLAR :: :: HEUVELTON, NEW YORK

LAKEVIEW HOLSTEINS

Herd headed by Count Hengerveld Fayne De Kol, by Pietertje Hengerveld's Count De Kol out of Grace Fayne 2nd. He has 12 daughters already in the Record of Merit and many more to follow. Junior sire, Dutchland Colantha Sir Mema, by Colantha Johanna Lad out of Mona Pauline de Kol (27.18 butter) the dam of one daughter over 30-lbs. and one over 27-lbs; also the dam of the World's champion junior three-year-old for milk production. A few bull calves for sale. **E. F. OSLER, Bronte, Ont.**

Riverside Holsteins

Herd headed by King Johanna Pontiac Korndyke whose near dams and sisters, 12 in all, average 29.77 lbs. butter in 7 days. His sister, Pontiac Lady Korndyke, has a record of 38.02 lbs. butter in 7 days, 156.92 lbs. in 30 days—world's records when made. We are offering several females bred to this bull also a few bull calves.

J. W. RICHARDSON,
R. R. No. 2, Caledonia, Ont.



Beaver Creek Holsteins and Percherons

When wanting some right nice Holsteins of any age, workers and bred from workers, also young bulls, write me. One 4-year-old and one yearling Percheron Stallions for sale, also Buff Orpington, Cockerels and Pullets.

A. MITTFELDT, ELCHO P.O., SMITHVILLE STATION

HOLSTEIN - FRIESIANS

Bulls ready for Service. Prices from \$75 to \$150, according to dam's Record. A few fine Bull Calves also. Prices \$25 to \$75. One with dam's Record 16.46 Butter at 2 years.

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Evergreen Stock Farm High Class Registered Holsteins

Winners of 80% all first prize at the Canadian National Exhibition 1913. For Sale—a few choice females all ages and are booking orders for what bull calves will be dropped during Nov. and Dec. I will also buy on commission anything in pure-bred or grade Holsteins, singly or car lots. Bell 'phone **A. E. HULET, NORWICH, ONT. R. R. 2**

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We are doing the largest business we ever did, chiefly with our old customers; young bulls and heifers from area with tested daughters. Several imported cows and bulls for sale. Canada's Greatest Jersey Herd. **B.H. Bull & Son, Brampton, Ont.**