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to the same level. In fact a great many of this year's makes will look so much alike that only an expert will be able to tell them apart as they pass along the road. One machine may be recognizable because of a slight peculiarity in the radiator cap, or in the high engine bonnet, or the location of the name plate, or yet again in the lower top lines of the body, but few will be distinguishable for many eccentricities. In the larger cars there seems to be a distinct trend towards sloping windshields with overlapping glass. This innovation must be commended as it is going to spell greater comfort in windy, rainy or snowy weather. A valance is being put on the back of a great many tops so that all the space below the last bow will be covered in with the effect of preventing dust from flying up from the back wheels upon the passengers in the rear seat. Locked boxes or receptacles are also being provided in many of the tonneaus as well as upon the instrument boards, and robe and foot rails are being made much more substantial with the idea of giving greater service in packing away necessary equipment. A new feature, that has been brought into general use is the apron in front of the cars to prevent the splashing of the radiators. This is not an expensive alteration but nevertheless one that adds to the appearance of a machine, and also to its efficiency.

An inside light upon the car situation comes from the wave of sentiment towards special colors. Practically all of the first cars manufactured were turned out in black with slight dashes of blue or some other heavy color. Of course freak automobiles were manufactured to special orders, but the average factory did not turn out special painting jobs with any degree of regularity. The year 1917 will see new styles of color work that are bound to start a campaign of fashion that will be as interesting and as true to form as even a feminine style standard could make it. The colors that have come into the most prominence, for the time being, are maroon, overseas blue, kahki, brewster green, light grey and aluminum. The upholstery is also being turned out in Spanish effects, and much of it, instead of being tufted, has been lapped. Some cars also show seats without tufting or lapping, but the last named idea is freakish and cannot be counted upon to find a wide popularity. As in the past, so in the present, the light-colored tops are going to command a great deal of attention. They give excellent service in the summer time especially when dust is prevalent, and are not at all difficult to clean. Many of the bows will be made of ash, maple or hickory and be finely polished, presenting a prepossessing appearance. Slip covers for the cushions will again be in vogue and if the models placed on exhibition at the shows give any sign of certain indications, they will be somewhat extravagant in color and weave.

It would take pages and pages to tell of the new accessories that have been flooded upon the market, but suffice is to say that during the coming twelve months it will be possible for any owner or driver to get almost any part that his fancy may suggest. Folding seats of one hundred styles are now available to increase the passenger space of cars, and literally thousands of appliances said to increase the mileage of gasoline, are being advertised to the public.

An Engine to do the Work of the Hired Girl.

EDITOR "THE FARMER'S ADVOCATE":

The hired-man problem has been discussed over and over again, but very little has been said about the hired girl, or about anything in the way of machinery to help the wife in the house. Everybody knows that where there are five or six in a family and only one pair of hands to do the work, there is plenty of work to be done, and I am going to describe how I harnessed a little engine up to do a few of the heavy jobs found in every farm home. "The wife" says no hired girl would do the same work as well and it does no grumbling and eats nothing when not working.

I purchased a one-and-a-half horse-power air-cooled engine, (air-cooled preferred, as there is no bother with water freezing in winter). The work is not heavy enough to heat it up. I built a cement block about eighteen inches high in the corner of the woodshed and put the engine upon it so there would be no stooping in starting engine. I then got a line shaft about twenty feet long and run it across the woodshed, with one end running into kitchen. I purchased a washing machine with wringer, (wringer run by the power of engine), and arranged them so both can be run at once or run separately, and when you lift the lid the washer part stops, and by a small lever the wringer can be run forward or backward or stopped.

I also got pulleys for the churn. They consist of a tight and loose pulley on churn, and when you want to stop the churn, you simply shift belt on the loose pulley. It is a common barrel churn. Then I got the belt attachments for cream separator. They can be obtained for a separator from the firm that makes the separator. I then put pulleys on the line shaft to suit the different machines, and belts for same and belted engine to line shaft, so all three could be run at once if need be.

I mentioned running line shaft on into kitchen; that is for winter use. We move the washing machine and churn in when the cold weather comes. We also run the grinding stone with the engine in the summer time and that is a job no small boy is fond of.

The whole outfit can be installed for about seventy-five dollars, and less than fifteen cents a week will keep it in fuel; that is, to wash once a week, churn twice a week and run separator every morning and night.

So you see it is not an expensive machine to run; and best of all it is a satisfaction to come into the house on Monday morning and see the washing going on and no sweat lost and no elbow grease needed.

Dufferin Co., Ont.

YOUNG FARMER.

THE DAIRY.

Give the New Act a Fair Trial.

EDITOR "THE FARMER'S ADVOCATE":

Two matters of first importance to cheese factory patrons this season are the cost of making and the mode of dividing the returns—pooling by weight or payment of test in accordance with the new Dairy Standards Act of Ontario. Speaking from the standpoint of the patrons, based on many years' observation in supplying milk from a fair herd of grade Holstein and Shorthorn blood, I decidedly favor the test system, and not from a supposedly rich milk bias. Investigation after investigation for years has shown conclusively the greater value for cheese-making of milk showing a high content of fat and other solids. The excellent and impartial report of the Dairymen's Association of Eastern Ontario in "The Farmer's Advocate," furnishes clear and convincing evidence that paying by test, now in satisfactory use by ten per cent. of Ontario factories, should be extended to all. It is not exactly putting a premium upon well-cared-for milk of good quality, but it is simply giving the producer what he is entitled to, viz., a square deal. This is what the farmer very properly demands in the affairs of this country. Let us put it in practice among ourselves. The bogey has been trotted out that a few patrons opposed to the test system would break up milk routes and wreck the factories. Instances which I have in mind show that such is not the case. The milk will find its way where it is profitable to go, even though the routes disappear and patrons singly or in twos or threes co-operate hauling their own. I see this accomplished, and the output of the factory increased instead of going down. The humiliating fact was disclosed at the Napanee Convention that during the past season 62 Eastern Ontario patrons were fined for adulterating milk, sums varying from \$10 to \$50 each, and that, too, in a season when cheese was bringing more money than ever before in the history of the industry! The only and the cynical excuse offered for this scoundrelly conduct of robbing their neighbors is that "t was a dry summer!" With a properly conducted test system patrons will be paid for what will make cheese, and hauling extra water, or paying somebody else to haul it, will lose its charm. There may be difficulties in the inception and working of the new system just as there are with every other important reform. Meet them. Overcome them. Every important advance has been shown by somebody to be "impracticable and ruinous" until it was fairly tried. The cheese-maker in charge should not be asked to undertake the responsibility of making the test. Though remunerated at so much per patron, for the extra work and materials, I believe he would prefer to have this done by a qualified outsider who would be independent of local complications and under direction of the Dairymen's Association, compensation being probably provided by the Department of Agriculture. From what I have observed, frequent tests with samples in as near the condition of fresh milk as possible are fairest to the patron. With similarly trained men using a uniform method and outfits in their respective group of factories, one year's trial ought to justify the system in public confidence or disclose its weaknesses. It has been agitated and discussed for years, and the plea for another year's postponement can hardly be seriously taken as a valid one. The measure was not enacted without ample consideration, consultation and care, and the provincial authorities would assuredly be laying themselves open to lack of clear-sighted purpose and backbone to fall down in the administration of a measure designed in the interest of justice and quality, and for the security of the industry under the trying conditions likely to follow the war.

Middlesex Co., Ont.

ALHA.

Quality Cannot be Improved by Use of Scrub Sires.

The scrub bull, whether he be pure-bred or cross-bred, is a curse to the stock-raising industry, and so long as dairymen tolerate his presence at the head of their herds, they cannot expect to improve the type or production of their cows. The need for typey, high-quality, well-bred sires to head dairy herds was never greater than it is at the present time. All dairy products are high in price and indications are that they will continue high for some time. Quality is demanded in cattle, as well as in every other product placed on the market, and the purchasing public are becoming more critical each year. Dairymen who have used the best sires available for several years have greatly improved the type and productiveness of their herds.

Not only have they a larger quantity of milk per cow to market at present high prices, but the value of the offspring is much higher than those sired by a second or third-grade bull. A poor sire not only prevents improvement, but tends to give the herd a setback. A cross-bred animal is frequently spoken of as a scrub, but it is quite possible for a pedigreed animal to be a scrub, from the standpoint of conformation and breeding. Dairymen are beginning to realize that a bull from low-producing ancestors may be termed a scrub from the

production point of view, no matter how perfect he may be in the lines. The champion cows to-day possess the blood of high-producing ancestors and in many instances it is handed down through the sire.

The individuality of the animal is not enough to consider when purchasing a herd header. The milk and butter-fat records of the ancestors determine to a large degree the real value of the bull in improving the productive qualities of the herd. Bulls with the right kind of breeding are worth considerably more than those which have no records behind them, but too many consider the dollar in the hand more than the value of the herd in five or ten years' time. Speaking at the Ottawa Winter Fair, Prof. Archibald stated that over fifty per cent. of the bulls and cows used in Ontario are scrubs as to type, breeding and production. This is not a record for breeders to be proud of. Average increase in production of milk will not be marked until the use of high-quality bulls becomes more general.

Scrub females continue to be kept on many dairy farms, and, incidentally, lower the average yield of the herd. A grade cow is not necessarily a scrub, nor are pure-breds always barred from that class. Many grade herds yield more milk and butter-fat per cow than do pure-bred herds, and individual cows have won over high-quality pure-breds under official test. A good grade cow is worth more as a producer than a medium or poor registered cow. On analyzing her breeding, it usually happens that her sire and dam's sire carried the blood of high producers, and had instilled it into their offspring. The typey, heavy-producing grade and pure-bred herds in the country to-day are the result of using high-quality sires year after year. It is the easiest and most economical method of herd improvement. If in a position to secure the right kind of pure-bred females, by all means do so, but if not, then grade up the present herd by breeding to the best bull available. Remember, conformation is not the only point to consider in a dairy animal; attention must be paid to milking propensities. When it is considered that one-half the inheritance of each young animal in the herd comes from the bull, the importance of using one of high quality can be realized. If the females in the herd are capable of producing only 200 pounds of fat in a lactation period, and they are bred to a sire from a strain of cows capable of producing 400 pounds of fat, it is reasonable to expect that heifers from this mating will produce half as much more fat than their dams, and their value to the dairyman is increased by that much. In the example cited it would be the value of 100 pounds of fat, or between \$30 and \$40. This shows why it pays to breed to the bull with the best blood available. Many scrub herds have been raised to a high standard by the continued use of good pure-bred bulls. The herd may be increased in numbers by use of a scrub sire, but it will never be improved in quality.

Do Not Overwork the Young Bull.

The general practice is to use a sire three years and then replace him with an untried youngster, which is too often over-worked during the first year of service. An observant dairyman recently remarked that in his estimation the size and stamina of many herds were being gradually reduced through the use of young sires. It stands to reason that it is barely possible for an undeveloped sire to leave as strong, thrifty calves as one which is mature. Some breeders, who always use the best bulls available make a practice of purchasing three- or four-year-old sires which have proven their ability to transmit, high producing qualities to their offspring. A dairy bull's real value is not known until his heifers are in milk. However, some animals become vicious as they grow old and on this account are marketed rather than placed at the head of a new herd, where they might be valuable for several years.

Young sires are used on many herds and their usefulness could be increased by not over-working them the first year. After a calf is one year old he may be bred to a few cows, but it is not advisable to use him on more than twenty or twenty-five the first year. The number could be increased to forty or fifty the second year and to a few more the following year, the number depending on his vigor. The reason many two- and three-year-old bulls are not sure breeders is that they were over-worked the first year in service. Proper management will go a long way in keeping him docile and good feeding will keep up his vigor. A bull in service requires as much feed as a cow in full milk.

HORTICULTURE.

Annual Convention of the Nova Scotia Fruit Growers' Association.

The annual session of the Nova Scotia Fruit Growers' Association opened in Lawrencetown on the afternoon of January 16, with a splendid attendance from the various fruit-growing sections. President F. W. Chipman, of Nictaux, outlined the peculiarities of fruit-growing conditions during the past year and made a strong appeal to the farmers to lend themselves to greater production, not only of apples, but of cereals, vegetables and live stock during the coming season. He realized that the labor situation was serious and that the prices of fertilizer had reached an exceedingly high level, but in spite of these things he believed that the farmers of the Annapolis Valley were capable of greater effort than they had yet exerted. He showed