

77 a ton for them. I think rural delivery is one of the finest things out. We are able to take a daily paper and to keep posted in regard to what is going on. I used to get my mail about twice a week at Phelps, which is some two miles from here. Now that I have my mail delivered daily I find that I have been benefited in several ways. My farm now can be sold for more than it would have brought formerly. If I want to mail a letter I can do it without leaving the place. On a stormy day it is a nice thing to have your paper and mail delivered to you without having to leave home."

When told that the Canadian Postmaster General was afraid to introduce free rural delivery in Canada because it would cost too much, Mr. Lally replied, "Perhaps it does cost a great deal but the benefits derived are greater than the cost. There is not a farmer in this section who will not tell you the same thing."—H. B. C.

Bridge Construction

Bridge construction is a department of road building in which much permanency is being produced, says A. W. Campbell, deputy minister of agriculture, in "Highway Improvement." In place of timber structures used so largely in the past, steel and concrete are being widely employed. For long spans, concrete abutments and piers with steel superstructures are being used by all municipalities. For shorter spans up to 80 feet and even 100 feet in length, concrete arches reinforced with steel have been employed in Ontario. For short spans up to forty feet, concrete reinforced with steel, either in the form of an arch or with a flat top, is growing in favor. For small waterways, box culverts of concrete, small arches and concrete tile, are displacing other materials. The construction of bridges in this permanent manner will, in the course of a few years, largely overcome this outlay and the cost of road construction and maintenance will be thereby much reduced. At the present time a vast number of old wooden structures are in a state of decay and demand early attention.

Bridges are subjected to a much greater strain to-day than they were a few years ago, and this feature is likely to become greater rather than less. Traction engines with threshing outfits, weighing six and eight tons are commonly seen on the highways. That steam road rollers weighing ten to fifteen tons will be generally used in the course of a few years, is a certainty. Motor wagons and trains are a possibility in connection with farm traffic, such as will be a matter for early consideration. The bridges being built to day must be strong for present traffic, and future needs cannot be overlooked, except as a very short-sighted policy.

A very slightly increased expenditure, will supply much greater durability than is ordinarily sought. We of to-day owe much to our forefathers who opened the early roads, cleared the farms, and rendered possible the advanced Ontario as we find it. It is for us to build for the future, and in bridge building there is possible much that is creditable—much that may be creditable.

When you sell butter fat you are selling sun-shine; when you sell grain you are selling the fertility of your soil.—W. F. Stephen, Huntingdon Co., Que.

Saving Labour on Hay Making

Joseph H. Wood, Waterloo County, Ont.

That, which at one time was looked upon as the hardest work on the farm, has now become quite easy by means of our modern hay-making machinery. There are men to-day who still look with vain superstition upon this line of work and uphold the idea that first class hay cannot be made except by the old "Armstrong" way of coiling in the field for a few days to sweat. This is a fast age, an age of progress, and antiquated methods must go "away back and sit down."

A hard and fast rule for dates to commence cutting cannot be given, but there is little doubt but that earlier cutting especially in Alfalfa and Red Clover make a more appetizing, more digestible and also a more nutritious fodder. As soon as a field of clover is seen to shade a little from its red bloom it is ready for the mower. I prefer starting to cut as soon as the dew is off, but sometimes when rushed and the ground is dry I commence sooner, for while clover is in its first bloom, a little dew cuts no figure. I have never used a tedder although I harvest considerable over a hundred tons of hay a season. It is claimed that hay can be cured in a shorter period, when the tedder is used, and I think the idea is right, but the side-delivery rake fills the bill to that claim and does considerable more.



Brandon's Bridge on Lennox and Addington County road system—steel with stone abutments.

There is an old maxim which reads "Make hay while the sun shines" and is all very true, but it takes a nice drying wind with a fair amount of sun to cure hay right, and not take from it that valuable protein and carbo-hydrates which are so essential for beefing cattle, and for feeding the dairy cow. I have used an Elmira side-delivery rake for quite a number of years with the very best results. It leaves the hay piled up very loose in rows where both the wind and sun can do their work. I have at times, when everything was favorable, started the wagons and loader the same day at 4 o'clock, as too much sun will take from the clover its natural moisture.

I firmly believe that a side-delivery rake will pay for itself in handling 125 tons of hay for when about half dried it can be turned into windrows to dry with the wind as well as the sun, making the hay worth so much more. In ordinary seasons with a two ton to the acre crop two swaths of the mower make a fair sized windrow. If so unfortunate as to be caught by a shower these rows can be moved again with the rake.

I also use a loader and could not think of piling hay. With two teams on the wagons and one team cutting and raking, an extra man at the loader and one in the barn, and a boy at the rope in the barn, it is only the matter of a few days to store away large mows full of choice hay. I consider a hay loader a great labor

saver and almost invaluable in this day of competition and progress.

A team will soon learn to straddle the rows, and two men with a steady team will load easily from three to four loads an hour. I use wide tire truck wagons with sixteen foot racks. If managed right a load can be lifted in the barn from five to six drafts of the fork.

I prefer the fork for unloading hay, especially where the crops are heavy and the hay long. Every season, especially of late years, since labor has been at a premium, those whom I see using the modern hay making tools, not only put up as good if not superior quality of hay to those who stand by the older process, but haying is sooner over with them. Then the teams can be turned to plowing up the stubble for wheat, and the spare men sent to the root and corn fields to keep the never ending ball a rolling.

Hay Loader Strongly Endorsed

The photo on the front cover of this issue was taken from a scene on the farm of Mr. Peter Miller adjoining the village of Elmira. Mr. Miller is one of the progressive and up-to-date farmers for which Woolwich Township, "The garden of Ontario," is noted. As shown by the cut he has his farm well supplied with modern, labor-saving machinery, none of which he values more highly than his hay-making machines. The following is what Mr. Miller has to say regarding these—

"I wish to say that I have used a hay-loader for sixteen years and a fork side-delivery rake for nine years and would not do without these implements for twice the cost of them. Besides the saving of labor I consider the quality of the hay is improved, if these machines are properly used."

"I generally start cutting as soon as the dew is off in the morning and then start the side delivery rake at about 10 o'clock. It will then be ready to draw in the afternoon, when the crop is not too heavy and the weather is good. I consider it a mistake to start the mower as long as there is dew on the grass, as it will then lay for hours before the dew dries out. Formerly I coiled my hay and thought that was the only way to make good clover hay. However, since using the loader and side delivery rake I can make just as good clover hay as if it were coiled."

Make the Cows Keep You

To carry on dairying successfully you must have the right kind of cows. You must have a cow that will give you fair returns for her feed and care. You don't want to be a keeper of cows; you want the cows to keep you. The only sure way of knowing this is by weighing and testing each cow's milk separately. If you find a cow is not a paying proposition, fatten her up and send her to the butcher. Keep the heifers from your good cows and get a pure bred sire and be sure that he is from a good milking strain. Look up his pedigree and see what his dam was and what her record was at the pail; also his grand dam. On his sire's side, look up his dam and his grand dam. The further you trace them the better. You would then be able to get a good one. Such an animal might cost a little more but it will pay you in a few years because of the improved condition of his get. If you don't want to or can't bear the expense yourself, get a few of your neighbors and club together and buy one. Charge a small fee for each cow served and you will pay for your bull in two years. Then dispose of this one and get a new one, so the first one won't be used on his own get.—N. J. Kuneman, Man. Agricultural College.