GOOD ROADS.

Some Advice on Operating the Statute Labor System-The Commuted Statute Labor System in Barton Township. stion of good roads is of more

The question of good roads is of more than passing interest just now when the time for performing the statute labor is at hand. Below we publish extracts from the bylaws of a township where the statute labor has been commuted, showing what method of procedure it is following in maintaining and improving the roads. But, as nearly all the roadmaking in this received is done on the statute labor. province is done on the statute labor



▲ CONCRETE CULVERT, WITH WING WALLS
OF CONCRETE.

plan, particular attention should be given to having the work planned and done in the very best way. The great drawback to the system is that no definite or uniform method of doing the work is followed. As many different systems of roadmaking are to be found, as there are different pathmasters. This has resulted in good and bad kinds of roads in very short distances, and, instead of procuring permanent roads, outlined after some definite and durable plan, has furnished as with a kind of patchwork roadmaking that is unsightly to begin with and totally bereft of staying power.

Mr. A. W. Campbell, provincial road instructor, recently addressed a meeting at Oakwood, Ont., and gave some sound advice to the farmers present on the working of the statute labor system and

instructor, recently addressed a meeting at Oakwood, Ont., and gave some sound advice to the farmers present on the working of the statute labor system and general roadmaking. From his address we take the following:

"The great majority of the roads in Canada are under the control of township councils, and are built by statute labor, supplemented by money grants. The statute labor system is suited to a pioneer age. It suits the abilities of the people making a home in a new country, and it suits the spirit of their circumstances. They feel keenly the need of improving their roads, and work with a will earnestly and faithfully. That was the history of statute labor in the pioneer days of what are now the populous districts of Canada. But, where the townships have grown wealthy and well-populated, a different condition exists. To such an extent has statute labor degenerated that some townships find that they can do more work by commuting all the labor at 35 cents per day. If statute labor has not outgrown its usefulness, there is certainly need for reform when a man's labor is worth less than 35 cents per day. A feeling in favor of statute labor still labor is worth less than 35 cents per day.

A feeling in favor of statute labor still holds in some localities, but is growing weaker. There is not another country in the world, characterized by good roads, where a system of statute labor is in use.

To a slight but ware clight extent it may

"Councils commonly appropriate an amount of money each year to be spent on the roads. If this money were spent in making complete and durable work it would be of the greatest assistance in improving the roads. We find, however, that the money is distributed in small sums among the pathmasters, is spent in small sums for repairing temporary culverts; in doing a little drainage in front of the farm of some discontented rate-payer to appease him; in doing no particular work at all, but merely to give some yoter an opportunity to earn a



roads and bridges, and who should be required to report to the council at each meeting. Road divisions or beats should be from three to four miles in length, and the pathmasters should be permanent officers. The changing of pathmasters every year is one of the great drawbacks to the system. Statute labor can best be utilized in hauling gravel. In this work there is less opportunity for wasting there is less opportunity for wasting time. For the grading and ditching there is machinery made, which every township should have. Special attention should be given to the drainage and crowning of the road. A great deal of money is wasted by building culverts of timber. A cement-concrete pipe is an excellent thing for a culvert, and can be made in any gravel pit under the direction of the municipal engineer. Wider tion of the municipal engineer. Wider tires should be used on wagons. By the use of six-inch tires the roadway will support, without yielding, twice the load which it could support with a three-inch

Commuted Statute Labor System. Every farmer in this country has had some practical experience with the working of the statute labor system of roadmaking and should be able to judge as to its good and bad points. There can be to its good and bad points. There can be no doubt that the system in many ways can be made to do effective work in improving the roadways in our rural districts. But the system has undoubtedly got into disrepute because of the slipshod and unsatisfactory way in which it has been managed and the careless way in which the statute labor has been performed. Under the plan in which the which the statute labor has been per-formed. Under the plan in which the statute labor in this country is perform-ed, there has been no uniformity of method or definite scheme for permanent roadmaking. This being so some municipalities have been looking out for some better and more effective method of road-making, and have found it in what is known as the Commuted Statute Labor

System.

This commuted system has been in eperation in the township of Berton.
Wentworth County, for the past two
Pears, and the clerk of the municipality,
Mr. H. Bryant, writes that it is giving

of this bylaw are as follows:

(1) That the whole of the statute labor of this municipality shall be commuted for at a rate or rates under one dollar, to be struck when the township and other rates are decided by bylaw, and such commutation tax shall be added in a separate column in the collector's rolls, and shall be collected and accounted for like other taxes.

and shall be collected and accounted for like other taxes.

(2) That the amounts received from the collector of taxes shall be kept in a separate account by the treasurer of the township, and shall be called the statute

(3) The township shall be divided into (3) The township shall be divided into as many divisions as the council from time to time may deem expedient and an overseer shall be appointed for each division, and also an engineer for road machine when deemed advisable. All moneys collected in each division shall be expended in that division under the supervision of the overseer of that divi-sion directed by the council.

(4) It shall be the duty of the overseers

that all noxious weeds are destroy ed on the highways in their respective

(i) It shall be the duty of the over-seers to repair any bridge or culvert in their division that may be dangerous without any direction of the council, but when such bridge or culvert is not in an immediate dangerous condition then

when such bridge or culvert is not in an immediate dangerous condition then the overseer shall consult the reeve or council as to the repairs necessary.

(6) For the purpose of keeping roads open during the season of sleighing in winter the overseers shall be paid ten cents per hour, and also the others employed; teams, \$2.50 per diem.

(7) It shall be the duty of the overseers each to keep an accurate account of all work done, and the amount expended, in a book supplied to him for that purpose, which book must be produced to the council must be satisfied as to the correctness of the account prior to paying any moneys.

correctness of the account prior to paying any moneys.

(8) It shall be the duty of the engineers to work the road machines when called upon to do so under the direction of the several road overseers, and each engineer shall be responsible for the safe-keeping of his road machine, and the said road machines shall not be loaned to any one without the consent of the reeve,



A GRAVEL ROADWAY WITH UNDER DRAIN. and the party to whom the machine may be learned that they can do mmuting all the labor ay. If statute labor has usefulness, there is cerreform when a man's

ly, weather permitting, until work in their several divisions is completed. In a separate bylaw the commutation tax for statute labor was fixed at 50 weaker. There is not another country in the world, characterized by good roads, where a system of statute labor is in use. To a slight, but very slight, extent it may be said to be used in France, but with very different methods of applying it. If it is to be retained in Ontario, the present feeling of the people strongly indicates that it will have to be placed on a basis whereby satisfactory results can be ebtained.

"Gouncils commonly appropriate an amount of money each year to be spent on the roads. If this money were spent in making complete and durable work it would be of the greatest assistance in improving the roads. We find, however, that the money is distributed in small sums among the nathwasters, is spent in strong argument in favor of the new method.

than the demand, and will consequently always bring a good price. The producer of these does not have to exchange them for high priced goods nor hawk them about the streets. He can have his regu-

one more difficult than another the manufacture of cheese seems to be that one. When we consider the hidden power of rennet action, the active effect of fermentation and bacterial influences, the varied unknown conditions of milk as received at cheese factories and the intricate combinations that any or all of these features that any or all of these features. at cheese factories and the intricate com-binations that any or all of these form to effect the final result, we see the many difficulties the cheesemaker must over, come.—D. M. McPherson, in Farmers' Review.

The Clover Stand. Agriculturists tell us it is best to let Agriculturists tell us it is best to let elever stand a year. Many of us cannot do this, but if one can sow clover where it can be used for pasture in the fall he can afford the seed. For a \$19 investment in seed I pasture stock in the fall to the amount of \$60. And that clover, with the manure scattered by the stock, will equal a good dressing of manure.

FOR THE POULTRY YARD. Three Feeding Contrivances the Intro duction of Which Is Recommended by Experts.

No doubt some of the readers have experienced difficulty in raising chicks in the same yard with hens, which resulted in the chicks being crowded out at meal-times and being pecked by the hens. In the illustration No. 1 is shown a box into which the chicks can go at any time to feed, and the hens cannot get at them







verts: in doing a little drainage in front of the farm of some discontented rate-payer to appease him; in doing no partioular work at all, but merely to give some voter an opportunity to earn a few collers. In such ways as these is the money which should be spent on durable important scattered, wasted and missippled."

"When the statute labor is followed, Mr. Campbell advised a large reduction in the number of pathmasters, and the appointing of a supervisor by the council to have the oversight of the pathmasters and all the work and expenditure on the add all the work and expenditure on the adds and bridges, and who should be quired to report to the council at each esting. Road divisions or beats should from three to four miles in length, of the pathmasters where the pathmasters was to give the pathmasters where the fine rise and kept in a clean place and turned and kept in a clean plac I received an albino queen from an Iowa breeder, but this time I made the colony queenless that was to receive the queen 48 hours before introducing, and lost my queen, I could not understand why it was that these queens, coming from a distance, were rejected by my bees when I had no trouble in introducing my own stock among my own. Maybe some one can tell. I sent south last spring for 50 queens, and when they arrived all were laid on the shelf, and 48 two-frame nuclei were made, and all shut up tight with wire screen until 48 hours had passed; then the 48 queens were laid on top of the frames, as before, and every single one was accepted. All had started cells in abundance, but when the queens were set free all cells were destroyed. I did not wait five days, either, to see what was going on, but took a look at any of them, at any time I chose. The remaining two were introduced in full colonies, but not confined with equal safety. I think I would not be afraid of introducing any number when done as above. Though others may have plans that work equally well, I am not afraid of this plan in my hands.

I received an albino queen from an Iowa in many cases appear perfect. It, therefore, the one of the same time, so that the bloom at the same time, so that the bloom at the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the same time, so that the male and female organs of the flowers on each will be in the s

Hogs Killed by Soap Suds. A recent bulletin from the Cornell experiment station shows the wastes from hotels caused deaths in swine herds, and about the streets. He can have his regular customers and a contract price, for all he can produce.—Journal of Agriculture.

Science of Cheesemaking.

There are many branches of science that are intricate and very difficult to acquire and understand, and if there is one more difficult than another the manufacture of cheese seems to be that one.

While we complain of over-production n so many lines, there is an absolute amine in some of the valuable woods

that grow, and a constantly decreasing production in others. The San Francisco Bulletin points out that the county which cannot afford schools and good roads is allowed to pass into the possession of men who want

Mildew on Geoseberries. One good remedy for mildew on goode-berries is to spray with potassium sul-phide at intervals of ten days or two weeks during the season.—St. Louis Re-public.

ISTERILE FRUIT TREES AND PLANTS. Why Some Varieties of Fruits Are Net They Save Much Heavy Lifting and Keep Productive.

The process of the pr Very few good crops of any kind of cultivated fruit are secured nowadays in Canada without much attention and in-telligent labor; and the farmer who does The old proverb, "Make your head save your heels," might well be extended to include fingers where grain bags are still held by hand, as they very generally are. There is, perhaps, no farm convenience so easy to make that will save so much lifting and so many tired hands and fingers as bag-holders. Here are several based upon the one principle.

cement, putting it about 20 inches from the back side. Fill in the cement and

GRAIN BAG HOLDERS.

Many Rands and Fingers From

Getting Tired.



F. C. HARRISON, B.S.A.

entific teachers in the Old Land. Among other things Professor Harrison will give some attention to gathering information in regard to tuberculosis and the tuberculin test, and will visit Germany, France and Great Britain in the interest of his department. Coming in contact with the great men who have devoted their lives to the study of the setences hearing upon agriculture cannot sciences bearing upon agriculture cannot help but be of great value, not only to Prof. Harrison personally, but to the agricultural interests of this province.

It is important that the cement floor be laid with a true level. It should not be too smooth on top, but very level. To secure a true level and to make sure that an even thickness of the cement is being laid on, the plan illustrated in the cut may be used to advantage. Lay down a strip of wood of the required thickness of cement, putting it about 20 inches from If food is not furnished the hen in he If food is not furnished the hen in her own domain, she will go hunting and soon find enough to keep her busy, but she is not so successful in getting water to drink. The farmer or his wife will usually provide some feed, but "biddy" many times takes her chances to find water. Yet chemists state that 84 per cent, of the egg is water. In view of water. Yet chemists state that \$4 per cent of the egg is water. In view of this, fowls to lay well must be furnished with an abundance of fresh water. Drinking vessels should be thoroughly cleansed every day, and if possible so made that the hens cannot stand in them. In winter these drinking vessels them. In winter these drinking vessels them in water or some woolen cloth the will allay fever and help to keep the found the stand of the stand of the standard them. In winter these drinking vessels should be emptied at night to prevent freezing. It is advisable to give fowls a warm drink in the morning when they first come from the roosts, as at this time they usually drink freely. If you will practice this, the hens will come for water as quickly as for feed.

A SPECIA BULLETIN.

The O. A. C. Is Ready to Investigate Auf

The Ontario Agricultural College has sent out a special builetin to dairymen, announcing that the bacteriological department is ready to investigate any difficulties in the way of impure water, bad flavors, etc., at the factories, or bacterial infection of any kind. There can be no more important work than this done for our cheese factories and creameries. Makers frequently have difficulties in the way of bad flavors in the milk, cheese or butter, which, if placed in the hands of a skilled bacteriologist or chemist, valuable truths might be found out in addition to supplying means to remediate difficulty. It is to be hoped that out dairymen will take advantage of Prof. Harrison's offer, as work of this nature will be of great value to the industry. Bacteriological Difficulties.

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Prof. Robertsen's Work.

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Prof. Robertsen leaves for Great British about the middle of this month, it the interest of Canadian farm products where it is expected that the good work accomplished last season by him will be repeated. A few more years of such work will make Canadian food products known in every city and shire town in the United Kingdom. Prof. 'Robertson is at present visiting the Government dair stations in the Northwest Territories, where Mr. J. W. Mitchell has recently been appointed superintendent in place of J. A. Kinsells, who went to New Zealand as assistant to Mr. Ruddiols, dairy commissioner for that colony. Mr. Mitchell has efficiently filled the position of instructor in the milk testing at the Provincial Dairy Schools, Guelph, durying the past three winters, and will, no doubt, give a good account of himself in our great western country, where he has spent several summers as manager of one of the Government dairy stations.—J. W. Wheaton, in Hoard's Dairyman.

Mr. Frank T. Shutt Elected a Fellow

At the last session of the Royal Society of Canada, Mr. Frank T. Shutt, chie chemist of the Dominion Experimenta Farms, was elected a fellow of the society on the recommendation of the section of mathematical, physical and chemical sciences. This is a well-merited tribute to Mr. Shutt's ability as a scientist and to his splendid services to Canadian agriculture.

oulture.

Mr. Shutt took his degree of M. A. Toronto University in 1885 and was fell



low in chemistry at his alma mater whe low in chemistry at his alma mater when appointed to his present position in connection with the experimental farms. His a fellow of the Chemical Society (England), a fellow of the Institute of Chemistry (England), and a fellow of the American Chemical Society. He was British (professional) juror at the World Columbian Exposition in 1898—the only foreign chemists and was there engaged. foreign chemist, and was there engage on an analytical examination of cereal sent in competition from all parts of th

Mr. Shutt has contributed many valu Mr. Shutt has contributed many valuable papers in previous years to the Royal Society and is well worthy to helected to the honorable position of one of its fellows. Mr. Shutt's work at the experimental farm has been characterized throughout by accuracy and those oughness and he has furnished many results of immediate and practical importance to Canadian agriculture. portance to Canadian agriculture.

Keep Young Hogs Grewing. There is an impression among farme that hogs in summer at pasture can genough with the swill from the how and what they can get in the fields. The and what they can get in the fields. The was all right so long as skimmilk, one the best foods for growth, was partithe swill, and uneaten refuse from the table was also thrown in. But in man places the skimmed milk is now sold; some form, while a better use for the some form, while a better use for tab refuse is found in giving it to the pou try. So the pig is starved in summe which is the time he ought to grow to fastest, and is the poorest preparation f the heavy corn feeding that will beg in September and continue until the p is turned over to the butcher. A ha sturned over to the Dutcher. A hal starved animal loses the power of diges ing hearty food, for the stomach, ill every other organ of the pody. needs have something to do to keep in go health and starveth. health and strength.

Plain Horse Talk.

Every boy and girl should learn ride a horse gracefully and well. There is an increased interest in sade horse breeding, and we hope soon to a fewer misfits under the saddle. A big rolling door made of furri strips and mosquito uet does not of much, and is a great preserver of her

feet. It is much easier to keep the form than to cure them after they had become injured by neglect or carelessne.

If your horse's feet have become has soak them in water or apply a poult.

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