

CAUSE OF BAD ROADS.

Businesslike Methods Not Used in Highway Construction.

THE RIGHT SYSTEM LACKING.

Road Bosses Should Be Removed From Politics and Made to Pass an Examination Showing Their Efficiency. Change Needed in Road Laws.

A back number—the bad country road is a back number. It is as much out of place and date as the grain cradle or flail thrasher. They had bad roads away back in grandfather's time—ever since people began to travel, to haul stuff in modern narrow tired wagons. They had good roads away back in Caesar's time in the old world. What progress have we made in road building? Very little. Over three-fourths of all the miles of country roads in the midwest are still unimproved, says the Agricultural Southwest. In most states 90 per cent would be more nearly correct. Of course every bit of road gets its annual tearing up by the road officials, who draw a salary for calling it road "improvement."

Why is it thus? There's a reason why country roads are bad. Can't lay it to the weather or the road material either. As one farmer says, "I have seen in twenty-three years hundreds of thousands of dollars of taxpayers' money expended on the roads in town and country; but, after all, our roads are still as bad as ever." As bad as ever! What a comment to make upon the appearance of country homes had it been said that the farms had not been improved in twenty-three years! But, no; the farms have improved, the towns have grown, and business places are better than they were twenty-three years ago, but the country roads are "as bad as ever" after spending fortunes upon them.

The reason is this—road building is not done in the same businesslike manner as other things are managed. We have seen the creamery come into existence. We have seen the skilled buttermaker turning out carloads of butter finer than that made by the farmers before the creameries took the job off their hands. Science and business methods have made the change in buttermaking. But the roads are "as bad as ever" because it is a farmer's job, to be done when it suits his convenience. It is done by men who have never studied the science of road building. It is done in a hit and miss method devoid of business principles. This is why hundreds of thousands of the taxpayers' money have failed to make the roads any better. And again we say it is not because of bad weather or poor road building material. The buttermaker takes bad cream and makes pretty good butter from it because he knows how. Of course he could do better with good cream. Likewise the skilled road builder can make good roads out of just plain country dirt because he knows how. Of course he could do better with crushed rock and all of that. It is not a scarcity of money or of material, but a lack of the right system, that is responsible for bad roads.

Dollar for dollar—what we want to see is a dollar's worth of good roads for a dollar spent in road tax. And why not have it? Isn't it about time to quit pouring money into a mud-hole? Most roads could have been nicely paved with the dollars they have cost since first laid out. Where has that money gone? Don't cry "graft." Of course there has been too much graft—ah, politics; there's the rub—but there has been no political graft to speak of in connection with country roads. The trouble is the system is and has been wrong. Road building is for the public good, just as mail carrying is. The mail carriers are under civil service, out of politics entirely. They are paid for knowing their business. They must give a dollar's worth of service for a dollar in pay. Why not handle the road boss problem that way? Remove the road boss from politics and make him pass an examination showing his efficiency. Keep him just as long as he does his work well. Then you will see good dirt roads wherever there is nothing better. Enough money will soon be saved in road tax to macadamize every mile of the main traveled country roads.

A farmer would be foolish to go ahead with a large job of tiling without having the whole thing mapped out and levels established by some one capable of doing it. Then he would be equally foolish should he not study the capacity of tile needed to drain the area intended. It is good business sense for him to hire a competent surveyor or ditcher. Just one tile put in wrong will ruin the whole plan of drainage. But that same farmer will pay money every year in road tax and let men who know nothing about road building squander the money. It is time this foolishness was stopped.

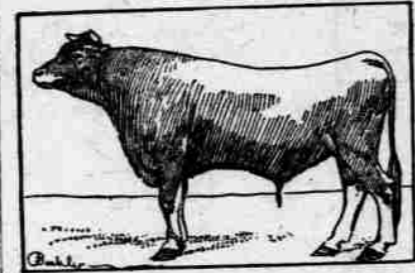
It will be stopped when the farmers who pay the money and who use the roads get together and demand a change of system, demand that it be eliminated from politics, demand that the road laws be changed from antiquated forms to suit the needs of a progressive age of business sense.

Good Road Requisites.
D. Ward King, the original road drag man, says there are three requisites for a good road—it must be oval, hard and smooth, because all three of these conditions are necessary to secure drainage. Without drainage the best road soon goes to pieces.

SELECTING THE BULL.

As a rule, less attention is given to selecting a bull than a cow. There is a very general desire to possess superior cows, but judging from the fear-some looking specimens one frequently sees doing duty as bulls it is quite evident that there are plenty who do not care what breed, form, size or other points they own so long as they can do their work.

This is an extremely unfortunate attitude, and when put in practice, as it far too often is, it is quite certain that



JERSEY BULL OF DAIRY TYPE.

the stock produced will be of an inferior character. It is here that the mistake becomes conspicuous, and it is more noticeable later when the progeny is marketed. Superior cows are very desirable, but a first class bull is more so, and it ought to be the ambition of all to own such not only as a credit to oneself, but as a money maker.

A cow may be as good as is possible, but use an inferior bull and her calf will be moderate, to say the least, but use a substantial bull and ninety-nine chances to one the calf will be better either than the sire or dam, writes W. K. Gilbert in Field and Farm. Attempts to breed from a poor class of cows with a bull of a similar character only results in the production of a lot of weeds, but if a really good bull is used for inferior cows the stock will be improved perceptibly, both in appearance and value.

A pure bred bull of any kind is an acceptable animal, but crossbred ones are doubtful. That some are good, I admit, but the majority are rubbish. It does not matter what the object of breeding be—milk production in the extreme or beef with great development on the most valued parts—a superior bull will always make its mark and have a big share in securing all that is required, both for ornament and utility.

There are two principal influences to account for the patronage given to inferior bulls. As in so many cases, money is at the bottom of one. Some pride themselves on how cheap they can buy a bull. What a delusion to compliment oneself on!

Now for the other influence. It is indifference. It is quite extraordinary how keen, intelligent men who know quite well the great advantage of employing a good bull will introduce and retain wasters. They may say they do not rear calves and it does not matter what these are like; the cows milk as well from an inferior as a superior bull, and so on. But is this studying one's own interest to the utmost? I am sure it is not. Neither is it advancing superior stock breeding, which we all profess to take an interest in.

I am often interested in finding how soon small farmers, who do not profess to know a great deal of how to improve breeds, learn the advantage of a good bull.

They rarely keep a bull themselves, but send their cows to those of larger farmers in the district. They may hardly be able to tell from observation which is the best, but once a calf or two arrive, and they notice progress, the fine contour or the lusty quarters they soon realize where the superior bull resides, and they patronize him time after time, irrespective of fee, if that is anything within reason.

The cheapest way to secure a superior bull is to buy it as a calf and



A FINE HOLSTEIN.

rear it. The character of the sire and dam ought to be known, if possible, or in any case it should be a well set up youngster. If a more matured bull is wanted, he may be from a year to eighteen months old, for after fifteen months he can be used freely. It is always better to buy a smart young bull than a partially worn out or aged one. It is a bad plan, too, to be always chopping and changing bulls. Get a good one to start with, take a pride in him and stick to him as long as he is fit.

Cement Floors Under Cows.
Every few days we hear of the bad effects upon cows of the cold cement floor, says Hoard's Dairyman. Some of the wise ones cover over the cement with boards, but many do not. The result is garget and loss of quarters in the udder. No other portion of the cow's body takes as much blood as the udder, except it be the heart and lungs. The big veins, called milk veins, show that lying on the cold cement floor causes congestion in the udder and garget ensues. Besides garget, rheumatism is frequently caused in this way.

Fruit and Flowers

BOSTON FERNS.

They Should Be Grown in a Bright and Airy House.

Preparations for the summer crop of Boston ferns and the various other nephrolepis that are included among the florists' stock are in order. These ferns are readily multiplied by means of their many runners. Plant out the stock plants on a bench, giving them about four inches of good soil of very similar character to that one would plant roses in, and in a few weeks there are likely to be some young plants that may be taken off and potted. When first planted the nephrolepis bed will not require very frequent waterings, but as the plants become well rooted and grow freely they will take up a great deal of water, for they should be grown in a bright and airy house in order to keep the young plants short and stocky. A night temperature of 60 to 65 degrees is quite warm enough, states Gardening.

These nephrolepis are sometimes troubled with a rather flat, brown



NEPHROLEPIS SUPERBISSIMA.

scale, but the young insects are white and at first glance resemble tiny pieces of white cotton on the underside of the frond.

This insect is very destructive, and its ravages soon show in the form of light colored spots that appear on the upper side of the leaf, proving that the insects have been satisfying their appetites with the juices of the leaf. A dipping in tobacco extract will help in killing this pest, but strong tobacco solution is also liable to injure the tips of the fronds. The growing tips of the nephrolepis fronds are quite tender, and it is better to throw away a plant that is badly infested with this scale than to risk further trouble with it. Be very careful to plant out none but clean plants for stock, else the trouble will become more marked the following season.

Instead of risking fine specimens of new sorts of nephrolepis by continued division of all the stock put a few in a bench solely for the purpose of increasing the stock and leave the others alone. Instead of mutilating good sized plants when enough small plants to increase the stock are not on hand buy small plants of some one who has them in abundance.

Transplanting Evergreens.
I have transplanted many hundreds of evergreens, and where I kept a good ball of earth about the roots and quickly got the trees from the old to the new location, so that there was no drying out of the roots, I have invariably had success, remarks a writer in Country Gentleman.

The native white spruce and the native white pine are beautiful trees, the former being found fully branched to the ground at a known age of fifty years. Many trees of this variety will be found having a decidedly bluish color—as blue as many of the sister variety, the Colorado blue spruce. I have seen quite extended areas on the coast of Maine that were a perfect mass of blue. The spruce delights in a moist soil, and this should be kept in mind when planting the trees. Sandy soil and dry sections of country are commonly associated with pine trees, and while this tree does have the ability to grow under such conditions, it does not follow that it will not do very much better as regards growth if given a moister and richer soil.

Leaf Spot of the Violet.
Circular brown spots on leaves. This and other violet diseases can best be controlled by growing only the strongest and healthiest plants that can be secured and keeping them under the best condition throughout the year, removing or burning all diseased parts and disinfecting the houses and beds.—F. B. Symons.

The Low Headed Tree.
The low headed tree is much easier pruned, sprayed, picked and the trunk protected from sun scald. Cultivation can usually be easier done with low headed trees than with high headed ones, as they are usually grown. Ordinarily the trees are not kept pruned and the limbs droop so as to hinder cultivation.

PONIES COMING ON.

Lots of Fun and Good Training For a Child in a Pony.

Every favorable day of the spring has brought evidence of the growing liking for ponies. Boys and girls on ponies or in carts are no longer the somewhat rare sight of a number of years ago. Many fortunate youngsters spend most of their leisure time in the saddle, the little girl wearing the divided skirt and riding boy fashion. Some people think a boy or girl can



SHETLAND PONY HOWARD B. [Winner of first prize in stallion class at World's fair, member of the herd of Belle Meade farm, Massachusetts.]

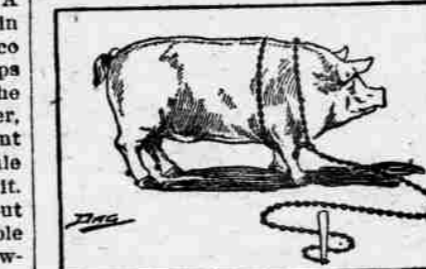
derive more fun, physical development and ruddy health to the square inch out of a Shetland pony than in any other way. In a large measure this is true, for by horseback riding every muscle in the body is brought into play, making it vastly superior to the mechanical exercise obtained from a gymnasium, and in riding and driving a pony the child readily acquires self reliance and courage, quickness of individual action and a sense of judgment.

The accompanying cut from the American Cultivator shows a notable pony, with description as follows:

Standing forty inches high, Howard B. is of remarkably good conformation, having an unusually small head, full chest, deep body, short back, excellent hind quarters and very straight legs, with good bone. Wonderful to relate, he is as vigorous and in as good condition today as when he entered the show ring at the World's fair and as a perfect specimen of the Shetland is difficult to be excelled either for beauty or speed. His color is black and white.

A Contrast.
The largest horse so far as is known was brought to Watertown, Minn., by Sylvester Dory of this city, who traded a herd of Shetland ponies for him, says the St. Paul Pioneer Press. The animal stands eighty-one inches high and weighs close to 3,000 pounds. He was raised by H. R. Carroll, a farmer living near Doland, in this state.

Staking a Hog on Pasture.
A plan for tying out male hogs, as cows are tied out on pasture or range, is shown in the accompanying illustration, which is the idea of one of our readers. A double girth of medium sized chain is made to fit the body of the hog before and directly



behind the shoulders. Below they are connected by a few links of chain, and the chain from the stake is also connected with the harness here. We are informed that this is a very satisfactory way of keeping hogs on range where it is impossible to have a special lot for their use, remarks Iowa Homestead.

King Edward as Stockman.
The rich crop of prizes which the king's cattle and sheep won at the Bingley Hall show, Birmingham, is the latest demonstration of his majesty's success as a farmer, of which he is so deservedly proud. When the king began breeding nearly forty years ago the Sandringham farm lands were in an almost hopeless condition, barren and barely capable of cultivation. Today, according to Rider Haggard, "it is a wonderful farm, for nowhere is so much high bred stock to be seen on the same area." But probably nowhere will you find such an array of plates and cups won at shows as that which Sandringham boasts. At a single exhibition his majesty once won no fewer than fourteen first prizes. In 1903 he captured five first prizes and cups in addition to numerous seconds and thirds. In 1904 his prizes numbered twenty. In 1905 he won a champion plate, a challenge cup and eight other prizes, including four firsts, while last year he took at the Smithfield show ten firsts, nine breed cups and plates, six other prizes and several "highly commended," and every prize winner he has bred himself.—Westminster Gazette.

More Horse Meat.
In 1906 56,600 horses were slaughtered for food in Paris, furnishing about 12,000 tons of meat. Formerly horse meat was eaten by only the poorest classes, but now it is no longer regarded as refuse meat, and its consumption by the working classes is rapidly increasing throughout Europe.

A Bone and Muscle Maker.
While alfalfa is too rich a food for mature horses unless used in combination with some other roughness, it is an excellent feed for young horses, as it seems to contain just the elements necessary to develop bone, muscle and consequent size.

HOG CHOLERA.

Government's Plan of Combating the Disease by Immunization.

Swine producing sections of North America are keenly interested in results of the hog cholera conference held at Ames, Ia. It was called by Secretary Wilson, Dr. Melvin and Dr. Dorset of the United States department of agriculture and was attended by the veterinarian officials of the bureau of animal industry of the central western states. These men were called together by Secretary Wilson to receive instructions in the government's new and successful treatment of hog cholera.

The method of combating the disease is simply immunization. For a number of years the department attempted to produce a successful vaccine by artificial cultures, but on account of the ultra microscopic nature of the organism causing the trouble this was found to be not feasible. Since then the workers, knowing that hogs which have recovered from the disease are immune, have been immunizing the animals by means of the infected blood.

It was soon found, however, that the blood serum from these recovered swine did not contain the immunizing bodies in sufficient numbers to confer immunity to other animals when injected into their system. To render these antitoxin bodies of practical value they can be increased by feeding the heart, liver, lungs and intestines of cholera victims to these immune animals. These animals are made still



INOCULATING A PIG AGAINST HOG CHOLERA.

further immune by injections of infected blood. This hyper-immune blood from these animals is found to be protective against the disease. Dr. McNeil at the Iowa experiment station has demonstrated by a number of trials the practicability of the treatment.

After some experiments at the Missouri experiment station J. W. Conaway, D. V. S., said: "Out of fifty-six head that appeared healthy at the time of inoculation only three died. All were probably as greatly exposed as would ordinarily occur on the average stock farm, and some of these inoculated animals were very severely exposed and still proved resistant. The results of these tests are so satisfactory as to leave in every mind no doubt as to the great practical value of this method of preventing hog cholera."

THE DAIRYMAN.

Dairy farmers should retain the calves from the best milking cows. It is almost impossible to buy dairy cows as good as the calves from the best cows will make if the former are properly reared and handled. Feed the heifer calf on muscle and bone making feed to obtain a large frame. Feed plenty of roughage to develop a large stomach capacity. Do not feed fattening foods and allow the heifer to become fat. When fresh, feed well, stable well and make the first milking period as long as possible.

Experiments With Rye Meal.
The Pennsylvania experiment station has discovered that rye meal as a part of a properly balanced ration for milk cows is as efficient in milk and butter production as an equal weight of corn meal. No injurious effect upon the quality of the butter was noticed.

Treatment For Scours.
Some time ago the South Carolina experiment station recommended the use of formaldehyde as a treatment for scours in young calves. It should be fed as follows: Add one-half ounce of commercial formalin to 15.5 ounces of distilled or rain water and give one teaspoonful of this solution with each pound or pint of skim milk fed. Giving this treatment twice, say once in the morning's and once in the evening's milk, will usually cure the scours. The Virginia experiment station has recently tested this remedy quite thoroughly and reports most satisfactory results.

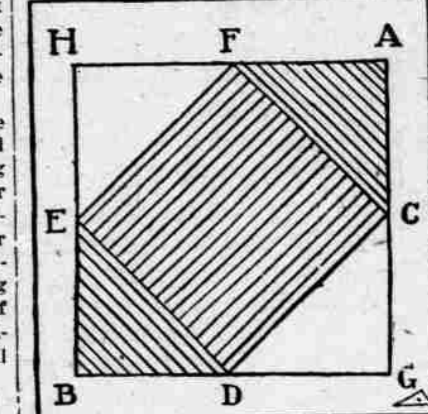
Some Good Advice.
W. F. McSparran of Pennsylvania in an address before the Vermont dairymen uttered this very sensible advice on the matter of improving the dairy qualities of farm cows: A cow may be better than she looks or worse than she looks. The only way to tell one is to live with her. Get rid of the poor ones. They take the bread out of our mouths, but the more promising ones may surprise you with judicious feeding. Put them to the test; shelter them from storms; be kind to them; don't try to half starve them on a half dry pasture, but give them the full round year ration. Send your scrub bull to the butcher and get the best bull of your breed that you can buy.

Farm and Garden

DUTCH DRAGGING.

It Makes Convenient Corners and is Really Simple.

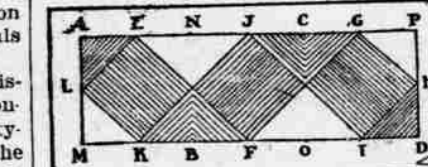
Dragging "Dutch fashion" is nothing new. I learned it more than twenty years ago. Still, it may be new to some and prove of value. Its advantages are that it drags neither lengthwise nor square across the furrows and makes easier corners than the ordinary diagonal dragging. Plain Dutch fashion is shown in diagram below. Commence by "striking out" from A to B. Turn to the right and go back on the left side of first track till you reach



PLAIN DUTCH HARROWING.

edge of field near A. Drive across the first track and back on the opposite side to the other end. Cross over and back on opposite side again.

Continue crossing over at each end inside your last track and outside the last track along the sides. When half done the piece will look like first diagram, and the next trip would be from C to D, to E, to F, to C. When done the last trip would be from G to H, and the piece will have been dragged twice diagonally in opposite directions. This works well on pieces that are nearly square or not more than twice as long as wide. Of late we have found that it is economy in plowing, cultivating, etc., to make our lands as long as possible. On these Dutch dragging did not work as well, as it was too near lengthwise the furrows, so we hit upon what we call "crazy Dutch," shown in second diagram. We "strike out" zig-zag across the piece two or three or more times, according to its length compared to width. The picture shows three times—viz: From A to B, to C, to D. Turn to the right and go back on



VARIATION ON DUTCH FASHION.

left to first track to C and drive across it. Go on right side to B, then up left side to A. Cross over and back on left side of B. Drive straight across the first two tracks, turn to the left and go on right side to C, where you will cross the two tracks again, and go on left side to D. Always go straight ahead till you get to the edge of the field before you make a turn.

When half done it will look like the picture, and the next trip would be from E to F, G, H, I, J, K, L, E. When done the last trip will be from M to N, O, P. This looks complicated, but it isn't half as hard to do it as it is to tell about it. At least it seems that way to me just now. In striking out we never measure a piece, but guess at the angles. However, the truer you get it struck out the better it works out in finishing, concludes "Uncle Reuben" in writing the foregoing to the Rural New Yorker.

Oat Byproducts.

There is a class of byproducts from the cereal mills of Iowa that merit greater attention on the part of our feeders. In this class are the oat feeds, flours, middlings, shorts, and possibly the bran, too, may be used. These feeds are well up in protein and have appreciable percentages of fat, which render them particularly desirable as hog feeds, and possibly their use may with profit be extended to horses. This is especially true of the flour, middlings and shorts. The bran, however, has too high a content of crude fiber to give it a very great value as a flesh producer or to render it palatable to the feeding animal. These are comparatively new feeds, and their practical worth has not been definitely established, but from their chemical composition it seems evident that experimentation with practical feeding tests will fully demonstrate their ranking well with similar wheat products. If not outclassing them.—Louis G. Michael.

Wood Ashes as Fertilizer.

Wood ashes are obtainable wherever wood is burned in large quantities. The potash contained in them is water soluble and easily leaches out. Wood ashes are excellent as fertilizer, and none should be allowed to go to waste. Do not apply at base of plants, but spread broadcast about bushes or trees.

Alfalfa Seeding.

Ohio authorities state that alfalfa may be seeded at any time after spring frosts are over until the middle of August, provided the seed bed is in proper condition. It was found that upland clay and sandy first and second bottom lands have produced the best alfalfa maximum and average yields.