

AGRICULTURAL HINTS

PERMANENT ROADS.

How to Build Them and the Materials to Be Used.

The best road construction requires right material. The three principal things are stones, gravel and clay. Each town where suitable stones are plenty should own one or more stone crushers. Crushed stone forms the very best material for the foundation of a good road. Gravel is next in importance, and clay can be profitably used on sand, and in some instances sand on clay formation.

The lack of proper drainage in the roadbed is the cause of a large part of the poor roads in the country. Good drainage of the roadbed is as important as the use of good material. A substratum constantly gorged with water from hidden springs can never be depended upon to build on and afford a dry and solid road. The first essential is to get rid of the water on the surface and below it.

The right policy of road improvement contemplates more or less permanent improvements upon town and county roads each year. The fault of the district system and the appropriated labor method is that only

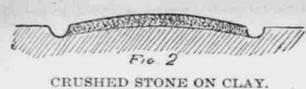


CROSS SECTION OF DRAIN.

temporary work is done, so, by the time the annual round of repairs is gone through with, the money appropriated is so far exhausted that an outlay for permanent improvements is not warranted; whereas if a competent commissioner had the roads in charge, certain portions of the worst places which now call for annual repairs should be permanently made over, even if it takes a higher appropriation yearly for a few years. Take, for instance, a stretch of road where the soil is springy, or for any cause the drainage is imperfect. No permanent improvements can be made in such places without proper drainage is effected.

To do this adequately open a ditch four feet or more wide and three and a half to four feet deep in the center of the travel. Fill this with rough stones, placing the first ones thrown in so as to form an open drain; fill in the stone till within a foot of the top, using the smallest stones for the top; if a crusher is in use the coarser of these, which is best, then cover with evergreen boughs or straw and finish with gravel. The idea is shown in Fig. 1. The important thing is that these drains always lead to and end at an open culvert. This is an effectual remedy for "honey pots" or slough holes when the frost is leaving the ground in spring.

The town of Winthrop, in this state, is noted for its good roads. Nearly



CRUSHED STONE ON CLAY.

30 years ago the town discarded the district system, and elected a road commissioner who has held the place to the present time. From almost impassable highways in the spring of the year, that is, over certain portions, these 65 miles of highway have been transformed into smooth and dry roads. Nearly four miles of stone drains have been put in, varying from four or five rods in length to over 100 rods long.

Gravel forms the best material for road surface. Sand has no use in the roadbed except in clay or kindred formation. A clay foundation is one of the worst for good and permanent road building. Clay packs in dry weather but softens up easily during



STONE ON UNDRAINED CLAY.

rainfall. Successful work in making a solid and durable roadbed on a clay foundation has been done in this town. The first section was put down two years ago and thus far affords a dry, solid, and apparently durable roadbed. For years the practice had been, annually and as often as rains and large amount of travel rendered the road muddy and uneven, to haul on crushed stone and keep the surface fairly smooth and even. Two years ago the surface was covered with crushed stone three or four inches deep, and thoroughly pressed down with the steam roller. On top of this screened stone and coarse gravel was placed two inches deep and rolled. A finishing coat of ground granite, an inch or more in depth when rolled, gave a hard and even surface. The roadway is some 30 feet from ditch to ditch. Such roads are costly to build, of course, but the universal opinion among men of good judgment in these matters seems to be that such thorough work pays, and is the cheapest in the end. See Fig. 2.

In using the road machine on the country roads the proper thing to do is, first, to run the plow along the outer limit of the gutter or ditch. This gives a straight ditch and loosens up the soil so that two horses will carry the machine about as easily as four will without the plowing. As a rule, the travel of the road should not be disturbed by plow or machine where a fairly good roadbed has previously been secured. Neither should the soil and wash of the ditches be carried up by the machine and placed on the surface. Soil makes soft road. This should always be covered in deeply in some way, and let the hard pan or substratum form the top.

In some places it is necessary to remove the top soil a foot or more in depth and fill in stone. Such places frequent-

ly occur where it is not practicable to drain otherwise, and when the soil is retentive and heavy, freezing deeply gives a soft and muddy surface in spring. It is well to cut down squarely just beyond the wheel ruts, a foot or more and let the soil form a shoulder to hold the stone. Form the ditches upon the sides rather shallow so as not to remove the support to the shoulder which holds the stone from sliding from the roadbed. See Fig. 3.

Stones from the fields and useless wall upon the roadside may be used at the bottom, finishing off with small cobbles and crushed stone with a good coat of gravel over all.

It is about impossible to make satisfactory roads on clay without in some way providing drainage, so contrived that the least possible water will remain in the material which forms the travel of the road. Deep side ditches, a narrow roadbed with a high crown, thus making the water level 20 inches to two feet below the travel is one way to form a very fair road out of very poor material. This is improved by a mingling of sand, gravel or "shingle," with the clay to such proportions as the readily available supply will admit—even to one-half. This commingled gravel or other solid substance should extend at least a foot below the surface to bind the clay and withstand heavy travel.—L. F. Abbott, in Ohio Farmer.

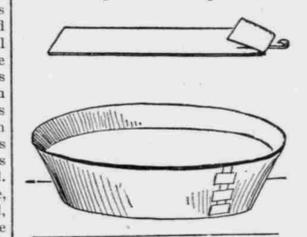
KEEPING UP CALVES.

Indoor Summering After June Has Great Advantages.

The practice of keeping calves housed the first summer of their lives is becoming more and more general each year among progressive dairymen and beef raisers. Those who are endeavoring to find profit in either of those branches of stock raising are finding out that protection from heat, flies and dried pasture is about the cheapest and most effective plan to adopt. No doubt one principal reason why more calves are not housed, says Farmers' Advocate, is that it would involve a certain amount of regular labor in the shape of "chores" which so many object to in the summer season; but unless we take a lively, practical and self-sacrificing interest in our business in these times we cannot hope to reach the goal of greater profits in our business. The wide-awake and enterprising competitors who do things because they should be done and not draw the line at a point where an undertaking adds to or takes from a little of present personal comfort, are the ones that wear the hopeful expression to-day and declare that the times are mending. There is no question in the minds of those who have tried both plans but that indoor summering has great advantages over pasturing after the third week in June. So far as turning the calves out a few weeks on the fresh pasture before the heat and flies become harmful is concerned, there can be no greater disadvantage, provided the calves are not less than six or seven weeks old and the pasture is abundant and of good quality. Perfect liberty at this time, along with fresh grass or clover, skim milk, and a lick of oat chop, oil cake, or the like, will start the youngsters in the way to be profitable feed consumers. So long as these favorable conditions exist in the pasture lot there is no advantage in making changes, but when the time comes that a cool, dark stable and mown clover or oats and tares would give the calves greater comfort, just at that time should such conditions be administered. This is more particularly applicable to calves that are to become beefers, because we want to sell for money some time in the future every pound of gain our feed has made and not allow any of it to be lost after being once beneath the skin. With dairy calves rapid development, when of a muscular character, is very important. A stunted animal is always much less profitable than it would have been had its growth been continuous, because its digestion will be stronger and it will become a larger, better-looking beast, with greater capacity for service.

MARKING THE MILK.

It Enables One to See at a Glance Just When to Skim. Where the milk is set in shallow pans it is wise to mark each day's milk, as "Tuesday morning," "Tuesday night," etc. In this way one can see at a glance just when to skim, and does not have to stop to reckon up the number



DEVICE FOR MARKING MILK.

of pans used each day. It is also often desired to mark a particular cow's milk, in order to observe its quality. A label and method of attachment is shown in the cut. A strip of pasteboard has its end bent over and wire inserted as shown. The fold is glued down, thus holding the wire. Bend the double wire and hang it over the pan's edge.—N. Y. Tribune.

ORCHARD AND GARDEN.

Two kittens in the garden are equal to a small cyclone. No top on radish or other plant, no root. At least that is our experience.

Build a structure like a corn crib, with shelves in it, for drying onions.

Apply soap to the bark of trees now and it will lessen the number of borers. Better than wrapping the ends of whiffletrees, when cultivating the orchard, is to use a gentle horse and have the whiffletrees very short.—Western Plowman.

COUNTRY ETIQUETTE.

Some Advice to Those Who Live in Suburban Districts.

There are some people who imagine that residents in the country are ignorant and indifferent to all matters connected with etiquette, that they do not trouble either to know or to do the correct thing, that they throw all ceremony to the winds and follow the dictates of their own sweet will in all social matters. This is, of course, an extreme view, but it is one that is to a certain extent held by some folks, though it is all entirely erroneous, for country folk are not only just as, but even more, particular about these matters than are the dwellers in town, for new ideas and new ways, both of manner and speech, are not so easily accepted or adopted by the former as by the latter. There is no doubt less stiffness and more sociability in the country, for people are thrown more together and are more dependent upon one another for companionship, for kindness and attention. It makes little or no difference who is one's neighbor in town, but in the country it is a most important matter. Although the rules of etiquette that govern society are the same in the country as in the town, there are one or two little customs that are dissimilar, as, for instance, the matter of first visits. The newcomer can neither call nor leave cards first. It is the residents who take the initiative in the matter, and this, whether they have a previous acquaintance with the newcomer or not, and the same rule regarding first visits holds good also in country towns and old cathedral cities.

In the country, when visitors call early in the afternoon, which is often the case when people live at some distance from one another and have a long drive, tea should be ordered for them by the hostess, even if it should be earlier than the usual hour for it; and, though wine is never offered to afternoon callers in towns, it is quite correct to offer the gentlemen visitors in the country. When a lady drives herself, and has no groom in attendance—for though ladies do not drive themselves in the town without being attended by the groom, they often do so in the country—the servant who opens the door for them sends for some one to hold the horse or pony. When this is done, the lady, at the conclusion of her visit, should give the man or boy who does this for her some little gratuity in return for his services. This is always expected of her, and should not be forgotten. The sum given should not be a large one—a sixpence or a shilling will be quite sufficient for the purpose. Of course, when a groom is in attendance this is not necessary. Sometimes when visitors have driven long distances—which is often the case in the country—the carriage, instead of remaining at the door, as in town, is sent round to the stables, and the horses taken out. When this has been done the visitor, before rising to take leave of her hostess, should ask if she might ring and order her carriage, and the hostess, unless a gentleman is present to do so for her, rings the bell, and when the servant enters, the visitor should ask for her carriage. When it comes around, the servant returns and announces that it is ready, and the visitor then rises and takes leave of the hostess. She does not go out and wait in the hall until the carriage comes around, but remains in the drawing-room with her hostess until its arrival is announced.—London Lady.

CUSHIONS IN HIGH FAVOR.

Americans Developing the Luxurious Taste of the Orientals. Fashion has insisted and kept on insisting that cushions and pillows should remain in style, until we are educated up to an appreciation of their needs and worth, says an eastern writer. Not only are we almost as luxurious as the orientals in our use of cushions, but there is a very general appreciation of their aesthetic value and of fitness of covering, size and shape.

Heart, crescent and other fanciful-shaped cushions are no longer in vogue, not merely because they are less practical, but because we are at length learning the beauty of simplicity. Some one has said that "a room well cushioned is a room well furnished," and surely, if one must use cheap furniture, comfort and luxury can be secured in no other way. They transform a two-dollar cot or grocery box window seat into a homelike and easy resting place; make even wood-seated rockers dreams of comfort, and may impart just the touch of color needed to harmonize a motley collection of furnishings.

The covering of cushions for general use need not be of expensive material to be pretty. There is almost no end of medium and low priced fabrics that are at once suitable, handsome and durable. Among such are Agra, art and dress linens, crash, plain and twilled, canvas yacht cloth, denim, Japanese crape, Java print, grass cloth, awning cloth and ticking. Japanese cotton rugs make charming covers for floor cushions.—St. Louis Republic.

Strawberry Meringue. One pint of milk, two teaspoonfuls corn-starch, yolks of two eggs, a pinch of salt. Boil the milk and stir in while boiling the corn-starch mixed with a little cold milk and the beaten yolks of eggs. Boil together six minutes, then cover with the whites of two eggs beaten stiff with one-half cupful powdered sugar, into which has been mixed one-half cupful of mashed ripe strawberries. Brown in the oven slightly, and serve cold sprinkled with powdered sugar.—Ladies' World.

Chocolate Iceing. Melt three tablespoonfuls of grated chocolate over steam, add three tablespoonfuls of cream and one of water, stirring well, then add a scant cupful of sugar. Boil five minutes, spread on the cake and set it in a warm oven to dry. This will not stick to the fingers.—Good Housekeeping.

AROUSED HIS CURIOSITY.

She Had Never Heard of the Cathay But It Must Be Good.

"No," remarked the young man who is very much given to interspersing his conversation with quotations, "I shall not go away for the summer." "That is too bad," exclaimed the young woman in the background, sympathetically. "Not at all. This thing of sitting around on piazzas and doing nothing except wishing that there was some other way of killing time faster is not at all to my taste. As a matter of fact, it isn't any warmer in the city than it is elsewhere, and there is always something going on. I like the bustle and the hurry and the hum." "But you must have rest, you know. You will wear yourself out if you don't." "Oh, well," he went on, with that contented manner which can usually be relied on to impress a very young woman, "it is better to wear out than rust out." "But there is no need of doing either, is there?" she inquired, apprehensively. "Perhaps not. But it is my disposition. My motto is to see 20 years of Europe that a cycle of Cathay." "Why, Arthur. How suddenly you change the subject!" "I wasn't aware that I had changed the subject." "Why, yes. You said: 'Better 20 years of Europe than a cycle of Cathay.'" "Aren't you familiar with that?" "No," she reluctantly confessed; "I believe you made it up." "Oh, no; that isn't mine." "Well, anyhow, I'd like to see one." "One what?" "A Cathay. I never heard of it, but it must be a very fine make of cycle to cost as much as a trip to Europe."—Washington Star.

FOR EXCHANGING THINGS.

A Mania That Affects All a Woman's Transactions.

She sat down and slowly drew off the black chiffon boa which she wore. "What a pretty—a—aw—constrictor that is," said the man, toying with its fluffiness. The girl laughed. "Well, you came pretty near it; you got as far as its last name. It is a pretty one, isn't it? I bought a white one first, and then I decided I needed a gray one much more, so I exchanged it. You know my new gray suit? Well, the gray boa looked perfectly dear with it—and—" "Gray? It's black," interrupted the man, dangling the thing before his eyes. "Of course it is," she replied; "I exchanged it again. You see, I decided that the gray one would suit easily, and besides, Margaret has a gray one, and I can—that's the nice thing about Messenger & Slinger's store; you can exchange everything, they're so accommodating. Do you know—" she continued, her mouth and eyes perked up in an expression of mystery. "No," he interposed, "I understand nothing of women's business methods; they're too complicated for my feeble brain." "I was going to say," she continued, unruffled, that if I ever have to marry I'm going to get my husband at Messenger & Slinger's, so that I can take him back if he doesn't suit."—Chicago Inter Ocean.

Queen & Crescent.

During the Tennessee Centennial and International Exposition at Nashville, Tenn., a low rate special tariff has been established for the sale of tickets from Cincinnati and other terminal points on the Queen & Crescent Route. Tickets are on sale daily until further notice to Chattanooga at \$6.75 one way or \$7.29 round trip from Cincinnati, the round trip 8-tickets being good seven days to return on other tickets, with longer return limit, at \$9.90 and at \$13.50 for the round trip. These rates enable the public to visit Nashville and other Southern points at rates never before offered. Vested trains of the finest class are at the disposal of the passenger, affording a most pleasant trip, and enabling one to visit the very interesting scenery, and important battle-grounds in and about Chattanooga, Lookout Mountain and Chickamauga National Military Park. Tickets to Nashville to visit the Centennial can be repurchased at Chattanooga for \$3.40 round trip. Ask your ticket agent for tickets via Cincinnati and the Q. & C. Route South or write to W. C. RINEARSON, Gen'l Pass'r Agent, Cincinnati, O.

A Widow's Way.

He—They say that wedding rings are going out of fashion. Oh, I don't care. If you wish to dispense with the ring, dear, it will make no difference to me. But why didn't you give me some warning of what you were about to say? This is so sudden." Then he thought of home and mother, but it was too late.—Cleveland Leader.

Highly Illustrated Publications. Descriptive of Yellowstone National Park, Black Hills, Summer Tours to the North and Northwest, Tours to Colorado, Pacific Coast and Puget Sound, Farm Lands in Northern Missouri, Nebraska and Wyoming and Homes in Washington and the Puget Sound Region will be mailed free by the undersigned. Send fifteen cents for a large color illustration of the United States, a pack of superior playing cards, W. W. Wakeley, G. P. A., Burlington Route, St. Louis, Mo.

Dear Old Boston Again.

Visitor—I hear there is sickness next door. Is it contagious? Phillips—Oh, not at all, madam; merely contagious.—N. Y. Truth.

THE MARKETS.

Table listing market prices for various goods including LIVE STOCK, CALVES, HOGS, SHEEP, LAMBS, GRAIN, FLOUR, BUTTER, POTATOES, and various oils and fats across different cities like Cincinnati, Chicago, Baltimore, and Indianapolis.

An Abominable Legacy.

A tendency to rheumatism is undoubtedly inherited. Unlike many other legacies, it remains in the family. The most effectual means of checking this tendency, or of removing incipient rheumatism, whether pre-existent in the blood or not, is to resort to Hostetter's Stomach Bitters as soon as the preliminary twinges are felt. Nullifying the influences of cold, exposure and fatigue, the Bitters not only fortifies the system against their hurtful consequences, but subjugates malaria, liver and kidney complaint, dyspepsia and nerve disquietude.

Misled by the Papers.

"New, Henry," said the dear old lady, "I do hope you will never play baseball." "Why not, grandma?" asked Henry, with natural surprise. "Because it is so very dangerous." "Dangerous! Why, grandma, it isn't any more dangerous than any other game." "It is exceedingly dangerous," said the old lady, in a tone of deep conviction. "But, grandma, you never saw a game, and don't know anything about it." "Perhaps I don't, but I know it is highly dangerous. Almost every day the papers tell about men who have died on the bases."—Baltimore American.

Try Allen's Foot-Ease.

A powder to be shaken into the shoes. At this season your feet feel swollen and hot, and get tired easily. If you have smarting feet or tight shoes, try Allen's Foot-Ease. It cools the feet and makes walking easy. Cures and prevents swollen and sweating feet, blisters and callous spots. Relieves corns and bunions of all pain and gives rest and comfort. Try it to-day. Sold by all druggists and shoe stores for 25c. Trial package FREE. Address, Allen S. Olmsted, Le Roy, N. Y.

Most men have something the matter with them from some accident that occurred years ago.—Washington Democrat.

Half Rates to Indianapolis and Return.

Via the North-Western Line. Excursion tickets will be sold August 17 and 18, with extended limit to September 12, at one fare for the round trip, on account of Y. P. C. Union. Apply to agents Chicago & North-Western R'y.

The old maid's soliloquy: "At 17 years of age I inquired which is he? At 20, who is he? At 25, what has he? And now, where is he?"—Fliegende Blaetter.

All you guess about difficultly in selling Stark Trees may be wrong. If you wish to know the truth, drop postal to Stark Nursery, Louisiana, Mo., or Rockport, Ill. Name references. Cash pay to salesmen each WEEK the year round. Outfit free—takes no money to TRY the work. Also want CLUB MAKERS—get their trees free.

He—"Would you scream if I should kiss you?" She—"And if I were to allow you to, would you squeal?"—Indianapolis Journal.

Fits stopped free and permanently cured. No fits after first day's use of Dr. Kline's Great Nerve Restorer. Free \$2 trial bottle & treatise. Dr. Kline, 933 Arch st., Phila., Pa.

The worst trouble with a loafer seems to be that he doesn't know what a bore he is.—Washington Democrat.

I could not get along without Piso's Cure for Consumption. It always cures.—Mrs. E. C. Moulton, Needham, Mass., Oct. 22, '94.

There are people who think that if a girl has studied in Europe she can sing.

Hall's Catarrh Cure Is a Constitutional Cure. Price 75c.

Cold weather lasts the longest when you are out of coal.—Washington Democrat.

Advertisement for Ayer's Sarsaparilla featuring a man holding a sign that reads 'I lost my wife and two children from the effects of hereditary scrofula...' and the text 'WEIGHTY WORDS FOR Ayer's Sarsaparilla.'

Advertisement for Sapolio featuring the text 'WELL DONE OUTLIVES DEATH. YOUR MEMORY WILL SHINE IF YOU USE SAPOLIO' and 'A GUARANTEE THAT'S GOOD! We have thousands of testimonials...'.

Advertisement for Dr. Cassell's Squaw Wine Compound featuring the text 'NOTICE. MOTHERS. DR. SIMMONS' SQUAW WINE COMPOUND' and 'WILL BE FOUND ESPECIALLY BENEFICIAL TO THOSE EXPECTING TO BECOME MOTHERS.'

Advertisement for Winchester Gun featuring the text 'EDUCATIONAL. FRANKLIN COLLEGE NEW ATHENS, O.' and 'Send your name on a Postal Card and we will send you our 156 page illustrated Catalogue free.'

Advertisement for Live Stock Cuts featuring the text 'LIVE STOCK CUTS. We will furnish duplicates of LIVE STOCK CUTS or any other Cut shown in any specimen Book, at or below quoted prices for same.'

Advertisement for Drosy New Discovery featuring the text 'SILOS HOW TO BUILD ASK WILLIAMS MFG. CO., KALAMAZOO, MICH. DROPSY NEW DISCOVERY: gives relief to all cases of Dropsy, Biliousness, and Indigestion.'

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