

# KEEPING UP HIGHWAYS

## Government Bureau's Sound Advice on Road Drainage.

### REMOVE ALL WATER QUICKLY.

That on Surface and Underground as Well—Center of Highway Should Be Raised—Slope of Tiles and Laying Them Matters of Importance.

The United States office of public roads in Washington sent out the following bulletin regarding the proper manner of road drainage:

With an average of 27,000 tons of water falling in the form of rain on each mile of public road in the United States annually, it is scarcely to be marvelled at that the ten commandments of the road builder can be summed up succinctly in the word "drainage." The saying has truth for a basis, as good drainage is the primary requisite for all roads. Even in sand roads this holds true, for there "good drainage" means such as will safely remove the storm water without erosion or gulying and still retain the surface moisture.

To obtain good drainage one must take into consideration both the surface water and the underground water. The surface water must be removed quickly and completely and without subjecting the road to excessive scour or erosion. For this reason the center of the road should be raised, and the slope toward the side ditches should be from one-half to one inch to each foot distance, or so that the water will run freely to the side ditches and not flow down the road or remain in puddles on the roadway. The side ditches should be of ample size to care for the severest storms, with a fall of not less than six inches to each hundred feet. Frequent, ample cross drains should be constructed and every opportunity taken to get the water away from the road as quickly as possible. Any road along which you see water standing in the side ditches or on which puddles of water have collected or which has been badly gullied and eroded by the rains has poor drainage and is in need of immediate attention. In fact, earth roads nearly always require a little attention after each rain.

The split log drag is essentially a tool to maintain good drainage on our



A ROAD THAT DRAINAGE WOULD IMPROVE. earth roads and should be used after each rain. On a heavy clay or gumbo soil the drag when properly used tends to puddle the road surface, keep it free from ruts, dense, smooth and hard, thus securing the best surface drainage possible.

But in many places the underground water is too near the surface and must be removed before a good road will be possible. This means that some form of subdrainage must be resorted to, usually tile drains or clay or concrete. Water from whatever source must be got rid of effectively. As water in freezing expands one-eighth its volume, the road heaves out of shape, and when the ice melts the road disappears beneath the rising tide of mud constantly fed by rains, melting snows and underground springs.

In seepy and boggy places the subdrainage in order to be fully effective should lower the water level to not less than three feet below the road surface. If tiles are used they should be carefully laid, true to grade. Most failures in the drainage can be attributed to carelessness in laying or too flat grade. The less than four inches in diameter should rarely be used, nor should a grade of less than six inches to the hundred feet be used unless absolutely necessary. In a very dense soil it is always advisable to cover the tile to at least a depth of six to twelve inches with a coarse sand or fine gravel. Care should always be taken to procure a free outlet for the drains and to protect the outlet with a concrete bulkhead or catch basin, which can always be kept clean and the outlet free.

The kind of tile to be used depends on local conditions. Concrete tile if properly made is quite as good as clay tile. Which kind to use is entirely a local question of dollars and cents. If concrete tile can be made more cheaply than clay tile can be had, use concrete; if not, use clay tile.

Convict Labor in Building of Roads. At a recent meeting of the national good roads board, held in New York

city, Senator C. T. Lammeter of Virginia outlined the method of building roads with convicts in the Old Dominion. C. Gordon Neff, the chairman of the board, has decided to make a canvass of the entire United States to find out which states employ convicts in the building of roads. This will be followed up later with an effort to get other states to use convict labor in road building. There is a general movement to abolish convict labor in lines of the industry where it interferes with organized labor, but in no section of the country does organized labor object to the use of convicts in the building of good roads.

## ROAD WORK IN ENGLAND.

Method of Maintaining Highways and Filling Up Soft Spots.

It may interest many to learn how road maintenance is carried out in Great Britain and Ireland. All roads and bridges are under the direct charge of the county surveyor, who is in all cases a qualified civil engineer, with assistants under him to see to the detail work. He divides the roads of the county into sections, as seems best to him, for maintenance purposes. These several sections are advertised locally in the newspapers and by other means, and bids are invited for their maintenance for six or twelve months, says James Johnston of Douglas county, Neb., in the Breeder's Gazette of Chicago. These bids are opened on a certain day by a board of county commissioners, assisted by the county surveyor. The lowest bidder gets the work, but no bid is accepted until the successful bidder puts up a bond signed by two solvent sureties that the work will be performed. Should the contractor fail to do the work the county surveyor can have it done and sue the bondsmen for the work and costs. All bidders for this work have specifications of the work to be done on the several sections of road. How long the section is, how many tons of metal are to be broken and put on, cleaning, keeping the water tables clear and the grass off the road—all these are specified, so that he knows exactly what he has to do. The matter of putting on the metal is looked after very closely indeed. The contractor has to put all the material on the roadside. The surveyor or his assistant comes and measures it and then marks it with slaked lime, so that it cannot be interfered with until it is put on the road. Farmers are always the contractors for this work. The roads everywhere are always in good condition. There are many soft spots over there—bog and low lands, with rain every day and sometimes twenty-four hours at a time—but the heaviest autos can spin along the bog roads and in the rainiest weather with no damage to the road.

They have no difficulty with the soft bottoms in Ireland. They simply throw in rock, and the softer the spot the bigger the rocks, until they make it a hard spot and then put the small stuff on top. A mistake will surely be made if bricks are thrown into soft spots. They are simply no good for the purpose intended.

It is to be hoped that the people of the United States will stop spending time and wasting money in shoveling dirt into the soft spots, but will go to work like men of business and build roads.

## NEW KIND OF ROAD MATERIAL.

Salt and Alkali Scale From Boilers Used in Parts of Kansas.

The farmers in central Kansas as well as the people in the towns have been interested in good roads for several years, and in Ellsworth and its vicinity one can see almost any kind of a made road.

At one or two places in Ellsworth county there are short roads where treatment has been given similar to the pavement on Douglas avenue in Ellsworth. Here there are two blocks that fool four-fifths of the visitors to the town. The treatment of this street was commenced about two or three years ago, consisting of coarse and fine cinders in layers, then a covering surface of salt and alkali scale.

The water in this country is very hard, and in all the steam boilers at the salt mills and other factories a sort of alkali forms which must be removed frequently, and this, with the salt and alkali scale that forms in the salt pans, is used on Douglas avenue. It forms a hard crust and makes a most excellent street. It is a success on the most busy thoroughfare of Ellsworth, and if the supply was not so limited the farmers would use it for the rural roads and more of the streets of Ellsworth would be paved with it. The salt and alkali crust on Douglas avenue is now about three inches thick, and this lies on three inches of coarse cinders and three inches of fine cinders. It makes a pretty street, in appearance being like an asphalt pavement before it becomes dirty.

In essentials unity, in doubtful things liberty, in all things charity.—Melancthon.

## A Bold Step.

To overcome the well-grounded and reasonable objections of the more intelligent to the use of secret medicinal compounds, Dr. R. V. Pierce, of Buffalo, N. Y., some time ago, decided to make a bold departure from the usual course pursued by the makers of put-up medicines for domestic use, and so has published broadcast and openly to the whole world, a full and complete list of all the ingredients entering into the composition of his widely celebrated medicines. Thus he has taken his numerous patrons and patients into his full confidence. Thus too he has removed his medicines from among secret nostrums of doubtful merits, and made them Remedies of Known Composition.

By this bold step Dr. Pierce has shown that his formulas are of such excellence that he is not afraid to subject them to the public scrutiny.

Not only does the wrapper of every bottle of Dr. Pierce's Golden Medical Discovery, the famous medicine for weak stomach, biliousness and all catarrhal diseases wherever located, have printed upon it, in plain English, a full and complete list of all the ingredients composing it, but a small book has been compiled from numerous standard medical works of all the different schools of practice, containing very numerous extracts from the writings of leading practitioners of medicine, endorsing in the strongest possible terms, each and every ingredient contained in Dr. Pierce's medicines. One of these little books will be mailed free to any one sending address on postal card or by letter, to Dr. R. V. Pierce, Buffalo, N. Y., and requesting the same. From this little book it will be learned that Dr. Pierce's medicines contain no alcohol, narcotics, mineral agents or other poisonous or injurious agents and that they are made from native medicinal roots of great value; also that some of the most valuable ingredients contained in Dr. Pierce's Favorite Prescription for weak, nervous, over-worked, "run-down," nervous and debilitated women, were employed, long years ago, by the Indians for similar ailments affecting their squaws. In fact, one of the most valuable medicinal plants entering into the composition of Dr. Pierce's Favorite Prescription was known to the Indians as "Square-wood." Our knowledge of the uses of not a few of our most valuable native medicinal plants was gained from the Indians. As made up by improved and exact processes, the "Favorite Prescription" is a most efficient remedy for regulating all the womanly functions, correcting displacements, as prolapsus, anteversion and retroversion, overcoming painful periods, toning up the nerves and bringing about a perfect state of health. Sold by all dealers in medicines.

## Rise Against Railroad Whistles.

Railroad whistles inflict torture on so many people that the efforts abroad to check the plague have won approval from the people. Austria has introduced a system of dumb signaling to start and stop the trains. Belgium is trying compressed air whistles instead of steam, and Germany experiments with horns.

## Three Men in One.

A witty writer has observed with much truth that every man is, in a sense, three different men. In the first place, he is the man he thinks himself to be; in the second place, he is the man other persons think him to be; and, finally, he is the man that he really is.

## Strength of Sympathy.

Sympathy is the grandest word in the world. It overcomes evil and strengthens good; it disarms resistance, melts the hardest hearts, and draws out the better part of human nature.—George Moore.

## NEW

# Meat Market.

I have opened a first-class, clean Meat Market in the Waggener old store room, corner of First and Main Streets and will try at all times to please and be accommodating to my customers; will aim to butcher nothing but the best, and will keep at all times the best of beef, mutton, fresh pork, chickens, home-made lard, salt meats of all kind. Give me your order. Both phones.

A. N. BURDETT

## Have You a Farm

Or Town Property You Wish to Sell or Exchange? Do You Want to Buy a FARM Or Town Property? If so write us at once. SHIFLET & SOMERVILLE, REAL ESTATE AGENCY, Jan. 1914 Point Pleasant, W. Va.

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Fresh Groceries, Vegetables and Produce all the time. Send in your order. We will appreciate it.

# FILSON BROS. HARDWARE.

## Professional Superiority.

The radical type of golf enthusiast is exemplified in the retort of a St. Andrews caddy to the university professor: "Onybody can teach a wheen loons Latin and Greek, but gowf, ye see, gowf requizes a held."

## A Common Cold.

We claim that if catching cold could be avoided some of the most dangerous and fatal diseases would never be heard of. A cold often forms a culture bed for germs of infectious diseases Consumption, pneumonia, diphtheria and scarlet fever, four of the most dangerous and fatal diseases, are of this class. The culture bed formed by the cold favors the development of the germs of these diseases, that would not otherwise find lodgment. There is little danger, however, of any of these diseases being contracted when a good expectorant cough medicine like Chamberlain's Cough Remedy is used. It cleans out these culture beds that favor the development of the germs of these diseases. That is why this remedy has proved so universally successful in preventing pneumonia. It not only cures your cold quickly, but minimizes the risk of contracting these dangerous diseases. For sale by J W M Hooff.

## Cupid's Opportunity.

The lights went out in the Dudley street terminal the other night about five o'clock, and everybody evidently kissed his best girl, for the air was full of screams of delight and delicate remonstrances.—Boston Record.

WANTED—Reliable, energetic man to sell lubricating oils, greases and paints in Mason and adjoining counties. Salary or commission. Fairfax Refining Co., Cleveland, Ohio. 1w

## Inundation of the Nile.

The valley of the Nile is inundated regularly every year from the 15th of June to the 17th of September. When the river subsides it leaves a rich deposit of soil for six miles on each side of the stream. Sometimes the overflow is excessive, but if the inundation falls short failure of crops results. In 1829 the flood was so great as to cause the loss of 30,000 lives and the destruction of much property.

## Chamberlain's Cough Remedy the Most Popular Because it is the Best.

"I have sold Chamberlain's Cough Remedy for the past eight years and find it to be one of the best selling medicines on the market. For babies and young children there is nothing better in the line of cough syrups," says Paul Allen, Plain Dealing, La. This remedy not only cures the coughs, colds and croup so common among young children, but is pleasant and safe for them to take. For sale by J W M Hooff.

## Pearls in Australian Waters.

The pearl is the best known of Australian gems, and for many years thousands of dollars' worth have been secured in Queensland. The oyster fisheries of Thursday Island have been the chief source of supply, but pearls are found all along the Queensland coast.

## Lame Shoulder.

This is a common form of muscular rheumatism. No internal treatment is needed. Apply Chamberlain's Liniment freely three times a day and a quick cure is certain. This liniment has proven especially valuable for muscular and chronic rheumatism. Sold by J W M Hooff.

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