

# COUNTRY HIGHWAYS.

Some Points by Horatio S. Earle on Their Improvement.

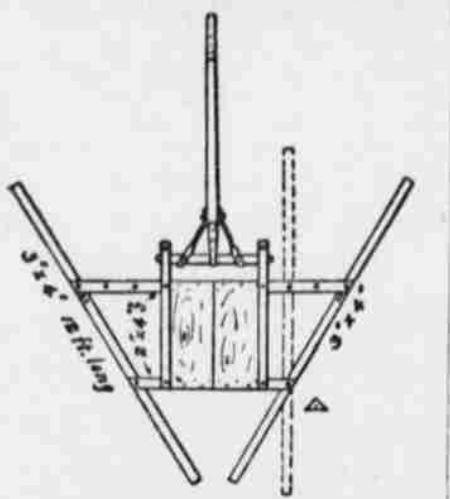
## DRAGS AND COMBES

Not All Roads Can Be Improved by This Method, He Says—Locates the Trouble First—A Michigan Invention, the Grant Rut-out, For Dragging.

In his biennial report Horatio S. Earle, state highway commissioner of Michigan, says regarding the improvement of earth roads:

No road, no matter of what material, built in our climate can be good all the year around unless the water is off from the surface, out from the sub-grade and away through the ditches to the natural water courses. It can only be off when the road is sufficiently crowned so it can run off. This does not mean that the slope from the center of the road to the side ditches should be so steep as to make it impossible for the rider in a carriage going north to see the driver of the team going south over the central hump of the road, but it does mean that the road should have a crown of about one inch to the foot from the center to the side ditches. This may seem to be too much, but each year the center lowers a little by wear and wash, and a portion of this substance so worn off lodges at the sides, so that the steepness grows less each year. Then the humps help to raise the sides to some extent. A road must be kept clear of ruts. It must be smooth. This can best be accomplished by the frequent use of the Grant rut-out.

It isn't enough to get the water off the road, and all the drags in Christendom cannot make a good road out of a road that is chock full of water, even though it be smooth on top so that the



THE GRANT RUT-OUT.

surface water can run off. Water must be out. This is done by open ditches or some one of the many kinds of under-drainage. Open ditches are the cheapest and for that reason most prevalent.

The idea prevails that if the ditches are deep and the road grade high, even though the ditches are chock full of water, there is no water in the sub-grade, but any one who thinks for a moment knows that by capillary attraction the road is just as full of water as the ground is capable of holding. If the water stands in the ditches, and being full of water, it is soft and the wheels quickly rut the surface, and then water begins to seep in from the top, so it is absolutely necessary to have the water "away"—that is, out of the ditches. If I could have but one grade established, that of the road or the ditch, I would by all means choose that the ditches should have a true grade and that as often as possible outlets should be made for carrying the water entirely away from the road.

I would as soon think of curing a horse of the stomach ache by patting him on the head as I would of making a good road out of a sand road by dragging it. Then we must drag in some common sense. The man at the road must have his common sense along with him and do what needs doing to cure the road of its disease. After it is cured protect it from all further inclement weather by a covering of stone if you can afford it; if not, gravel, and if that is too expensive, then, if it's sand, clay it; if it is clay, sand it, and after the sand and clay are well mixed in either case it will improve that road to keep it smooth with a drag. And the drag used by Hon. L. D. Watkins of Manchester, Mich., and many other pioneers, made of three planks, each plank being twelve inches wide and ten feet long, the head plank lapped on the second one and the second on the third three inches and finally bolted, with staples for chains in the head one, to be dragged along a road at an angle of about fifteen degrees will make the road smoother, so drier and harder and much better, provided the road is in condition to be dragged.

The best road drag I have yet seen is the invention of W. J. Grant of Au-sable, Mich., which I have named the "Grant rut-out." It can be used in more different ways and with better effect than any other so far designed.

The three inch by four inch by twelve foot wings should have steel faces to make them last longer and do better work. Either wing can be placed on a parallel line with the tongue and so act as a landslide to hold the drag from skewing and also to keep it from bobbing up and down.

This "rut-out" can be used on snow to good effect, of course with the other end forward, which can be easily brought about by turning the wings around so as to get the steel faces to the front, then unbolt the side pieces which hold the tongue roll, turn the tongue around, put on whatever weight is needed and you have a very good clean snowplow.

## Breeding Clay And Morgan Types.

Writing in Country Gentleman on Clay and Morgan types, a well known New Jersey breeder says:

"I send you a photo of my stallion American with six close crosses of Henry Clay. His get are satisfactory as roadsters and saddle horses of great endurance, spirit, cheerfulness and tractability, which I consider of greater worth than the sprinting ability for which high figures are often paid. In a very few years these are among the 'have-beens.' Then what have you for the years to come?"

"The most inbred family in this country is the Morgan. Because of this close breeding they have a dis-

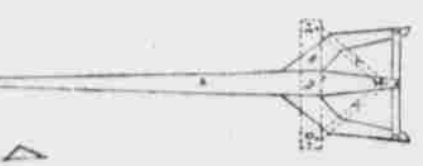


CLAY STALLION AMERICAN.

tinued, fixed type, as have also the Clays, but not so marked, as they have not been so much inbred. To fix a type inbreeding must be resorted to. A union of Clay and Morgan blood, with an infusion of Arab, would, I think, produce such horses as the government needs more surely than any other combination. By careful selection of sires and dams the requisite size of the product, according to the uses assigned them, could be had. The Percheron was a large, ill formed horse until a little Arab blood was introduced. He is now an attractive animal, of better disposition, more spirit, more endurance and not reduced in size. This has been brought about by inbreeding from careful selections, exercising judgment in the use of sires and dams in the breeding stock.

"The types above mentioned are undeniably good. Why not use them, rather than throw them away and lose with it what the country has been nearly a century in securing?"

**Device For a Three Horse Hitch.**  
The three horse hitch here described has proved very satisfactory for hauling heavy loads on an ordinary wagon says a writer in Breeder's Gazette Chicago. A is an ordinary wagon tongue. B is a piece of wagon tire four or five inches wide and about twenty inches long, with a hole at F to correspond in size with a hole in the tongue. C are strong iron straps fastened to the back end of the tongue with a bolt and nut to B with strong rivets. Drill holes through it and the straps C at E and D, making them eight inches from the hole F. Counter-sink the hole F and have an iron pin to go through B and A, with the head made to fit and not project



A THREE HORSE HITCH.

any about B. Put a hammer strap on one of the straps C. Now cut the evener as long as will work between the wheels of the wagon and divide it in the ordinary way. Place it on the plate B and fasten at either E or D, as you may desire, using a bolt and hammer strap. Use singletrees about thirty inches long and a doubletree to correspond.

By working the evener at E or D the middle horse is placed far enough on one side so the tongue does not interfere with it in any way. There is no side draft to speak of, and the plate B keeps the evener balanced nicely and up to its place at all times. Use an ordinary neck yoke on the two horses next the tongue and arrange lines on the third horse any convenient way. The scheme is all right. You have to get to one side to hitch or then use an evener so long that it will not work between the wheels. I have used this to haul hay with loader and on manure spreader, and it is all right. Take off the three horse evener and take out the pin in the plate, and it is ready for an ordinary two horse doubletree.

**Keep Lambs From Their Dams.**  
"In feeding I have had best results from beginning to feed a grain ration when the young lambs were about a week or ten days old," writes a breeder in American Agriculturist. "Adjoining or in the sheep barn there should be an apartment where the lambs may be fed by themselves. It should be separated from the apartment where the breeding flocks are kept by a lamb creep, made by nailing narrow strips or bars with rounded edges perpendicularly and having them just far enough apart so that the young lambs can pass readily through, but through which the old sheep cannot pass. If the sheep has no milk for the lamb, three times out of four she will care nothing for the lamb, and if a lamb is not hungry it will care no more for its own mother than for any sheep in the flock, and the lambs will always do better if this feeding room, separated from the main flock, is large enough so that they can spend a large part of their time by themselves."

**Cottonwood In Nebraska.**  
Cottonwood deserves a prominent place in Nebraska tree planting. It grows very rapidly and can be propagated easily and cheaply, and the wood is coming into wide use. It is planted principally for fuel and lumber, but in the sand hills and sometimes elsewhere it is used extensively for fence posts. A cottonwood post lasts about three years or five in exceptional cases. Posts are usually set out when green, with the bark on, which in part accounts for their short life.—Forest Service.

**New Strawberry Plants.**  
On new beds all flower stalks should be removed to save all the strength of plants for their own development; also keep runners off for some weeks. Pull up or hoe out any stray weeds appearing in the patch. Mulching around the plants before the fruiting season is a commendable practice. It keeps the ground cool and moist and the fruit clean.

# FARM-FIELD AND GARDEN

## SACCHARINE SORGHUMS.

One of the Old and Early Varieties Still Popular.

The saccharine sorghums are popularly recognized by reason of their sweet sap or juice, from which sirup and sugar are made. In general they are of tall and leafy growth, branching only sparingly at the upper nodes, or joints, and not stooping much at the base under ordinary cultivation. The seed head, or panicle, varies from the close, compact "club" head of the sumac sorghum through the rather more open heads of orange, goose-neck and other varieties to the loose and often widely spreading head of the amber variety, with the lower branches often drooping as the seed ripens. The seeds are red in the sumac and reddish yellow in the orange and amber sorghums. They usually protrude somewhat from between the glumes, or chaff, which in these varieties vary from deep red to black in color.

One of the oldest of the varieties now in use, amber sorghum, is said to have been developed in Indiana from the original Chinese sorghum. It is an early variety and became very popular in the northern part of the United States because its earliness permitted it to be



A HEAD OF AMBER SORGHUM.

grown at points where other varieties failed to mature. The Early Amber sorghum and its other forms, as Improved Amber and Earliest Black, still remain the earliest varieties known in this country, where they have been cultivated for nearly forty years. They require 70 to 100 days to reach maturity, the time varying according to the latitude, season and soil.

Many different methods of preparing the soil for sorghum are practiced in various parts of the country. In general, it may be said that the land should receive essentially the same treatment as if it were to be planted to corn or cotton. The time and depth of plowing will necessarily vary, according to the climate, season and character of the soil.

As a general rule, sorghum should be sown later than corn. It should not be sown until the soil has become quite warm. Otherwise there is danger of losing much of the seed. Even if the seed remains unharmed, germination takes place only slowly and unevenly, and growth is very slow when the weather is cold. Weeds are likely to overtake the young sorghum, and where it cannot be cultivated they make replanting necessary. Uneven germination and growth mean uneven maturing, which makes it impossible to harvest the crop to the best advantage from the standpoint either of the labor required or of the quality and quantity of the resulting forage.—Carleton R. Ball.

**Spraying Potatoes.**  
As a general rule, commence spraying when the plants are six to eight inches high and give four or five sprayings at intervals of about two weeks. When the blossoms begin to come the plants should be kept covered with bordeaux mixture until they have completed their growth.

The application of bordeaux mixture, aside from preventing parasitic diseases and repelling flea beetles, causes the plants to make a better growth probably by protecting the foliage from the intense summer light and heat, and so is of value even when no disease is present.—J. B. S. Norton.

# CASTORIA

The Kind You Have Always Bought, and which has been in use for over 30 years, has borne the signature of *Chas. H. Fletcher* and has been made under his personal supervision since its infancy. Allow no one to deceive you in this. All Counterfeits, Imitations and "Just-as-good" are but Experiments that trifle with and endanger the health of Infants and Children—Experience against Experiment.

**What is CASTORIA**  
Castoria is a harmless substitute for Castor Oil, Paregoric, Drops and Soothing Syrups. It is Pleasant. It contains neither Opium, Morphine nor other Narcotic substance. Its age is its guarantee. It destroys Worms and allays Feverishness. It cures Diarrhoea and Wind Colic. It relieves Teething Troubles, cures Constipation and Flatulency. It assimilates the Food, regulates the Stomach and Bowels, giving healthy and natural sleep. The Children's Panacea—The Mother's Friend.

**GENUINE CASTORIA ALWAYS**  
Bears the Signature of *Chas. H. Fletcher*  
**The Kind You Have Always Bought**  
In Use For Over 30 Years.

Nothing has ever equalled it. Nothing can ever surpass it.

**Dr. King's New Discovery**

For CONSUMPTION, Price 50c & \$1.00  
CROUPS and COLDS

A Perfect Cure For All Throat and Lung Troubles.  
Money back if it fails. Trial Bottles free.

**MAGAZINE READERS**

SUNSET MAGAZINE  
beautifully illustrated, good stories and articles about California and all the Far West. \$1.50 a year

CAMERA CRAFT  
devoted each month to the artistic reproduction of the best work of amateur and professional photographers. \$1.00 a year

ROAD OF A THOUSAND WONDERS  
a book of 75 pages, containing 120 colored photographs of picturesque spots in California and Oregon. \$0.75

Total . . . \$3.25  
All for . . . \$1.50  
Address all orders to SUNSET MAGAZINE  
Flood Building, San Francisco

**CASTORIA**  
For Infants and Children.  
The Kind You Have Always Bought  
Bears the Signature of *Chas. H. Fletcher*

**WESTERN STAGE LINE**

Office at the Mercantile Company's Store—Lakeview, Oregon.  
Good Stock . . . New Coaches  
Daily from Lakeview to Bly, connecting with Daily Stage to the railroad.  
P. M. COREY, - - - Proprietor  
Lakeview, Oregon.

**KLAMATH LAKE**

...RAILROAD...  
... TIME TABLE ...  
In Effect May 1st, 1905.

Lv. Thrall...6 A. M.	Lv. Pockegama 10.45 A. M.
Ar. Bogus...6.25	Ar. Dixie...10.55
" Steel Br'g 6.45	" K'l'h Sp'gs 11.40
" Fall Cr'k 7.05	" Fall Creek 11.45
" K'l'h Sp'gs 7.10	" Steel Br'g 12.00
" Dixie...8.10	" Bogus...12.20 P. M.
" Pockegama 8.30	" Thrall...12.45

**Klamath Springs Special.**

Lv. Thrall...1.30 P. M.	Lv. K'l'h Sp'gs 2.45 P. M.
Ar. Bogus...1.55	Ar. Fall Creek 2.50
" Steel Br'g 2.15	" Steel Br'g 3.00
" Fall Cr'k 2.35	" Bogus...3.30
" K'l'h Sp'gs 2.40	" Thrall...3.45

**THE WILLIAMSON-HAFNER ENGRAVING AND LITHOGRAPHING CO.**  
DENVER

**DIRECTORY**  
First Baptist Church of Goose Lake, at New Pine Creek, Oregon.  
Preaching services at 11:00 A. M. and 7:30 P. M. on each Sunday of every month.  
Sunday School at 10:00 A. M.  
Prayer Service at 7:30 on Wednesday evening of each week.  
All are cordially invited to attend the Services.  
J. Hayden Howard, Pastor.

**STUDY LAW AT HOME**

THE ORIGINAL SCHOOL. Instruction by mail adapted to every one. Re-organized and completely re-written. Takes spare time only. Three courses—Preparatory, Business, College. Prepares for practice. Will better your position and prospects in business. Students and graduates everywhere. Fall particulars and special offer FREE.

THE SPRAGUE CORRESPONDENCE SCHOOL OF LAW, 844 MARKET ST., DETROIT, MICH.

**PATENTS**

PROCESSED AND DEFENDED. Send model, drawing or photo. For expert search and free report. Free advice, how to obtain patents, trade marks, copyrights, etc., IN ALL COUNTRIES. Business direct with Washington saves time, money and often the patent.

Patent and Infringement Practice Exclusively. Write or come to us at 952 Ninth Street, opp. United States Patent Office, WASHINGTON, D. C.

**CA SNOW & CO.**

**ELY'S CREAM BALM**

Post & King have the best grade of liquors and cigars to be found in Oregon.

**Nasal CATARRH**  
In all its stages, Ely's Cream Balm cleanses, soothes and heals the diseased membrane. It cures catarrh and drives away a cold in the head quickly.

Cream Balm is placed into the nostrils, spreads over the membrane and is absorbed. Relief is immediate and a cure follows. It is not drying—does not produce sneezing. Large Size, 50 cents at Drug-gets or by mail; Trial Size, 10 cents.

ELY BROTHERS, 55 Warren Street, New York

**DIRECTORY.**  
First Baptist church of Lakeview Preaching services at 11: A. M., and 7:30 P. M. on each Sunday.  
Sunday School 10: A. M.  
Junior Society at 2:30 P. M.  
Baptist Young People's Union at 8:30 P. M. on each Sunday.  
Prayer meeting 7:30, P. M. on Wednesday evening.  
Everybody invited to attend all services. A. Frank Simmons, pastor

The Examiner has received a new sample book of the Wall Street line of engraved certificates of stock and bond blanks, the most up-to-date on the market. Used and endorsed by the leading financiers of America. Copyrighted. Call and see them if you need anything in this line. If

**THE LAKE COUNTY EXAMINER**

LATEST LAND AND STOCK NEWS  
EIGHT PAGES LOCAL AND COUNTY NEWS

TWO DOLLARS A YEAR.  
ESTABLISHED IN 1880.

PRINTING IS AN ART IN which THE EXAMINER excels. We have all the latest styles in type and keep in stock a large assortment of high grade stationery so that there is no delay in executing a large order. Our prices will be found to compare favorably with other prices.