

## TOUR OF INSPECTION.

Value of a Day Spent With a State Highway Commissioner.

### ROADMAKING POINTS GAINED.

Right Way to Sprinkle a Macadam Roadway—Three Wise Drainage Rules—Forming a Subgrade—Gravel and Telford Road Construction.

"We start every morning at exactly half past 7 o'clock," said State Highway Commissioner James H. Macdonald of Connecticut on a recent evening when the writer was arranging for a day's trip in the official automobile over the highways which have made that state famous for its good roads. It was then 9 o'clock or later, and the commissioner had just returned home, so we anticipated a strenuous tomorrow. Promptly at the hour appointed all were ready for the start.

The improved roads over which we traveled have moderate grades and smooth surfaces. Though some of them were built a dozen years ago and have never been treated with oil or tar or any special preparation, they were in perfect condition except for some few spots where the autos are doing their destructive work, and the need of a little trap rock dust to protect the second course of stone is apparent.

One of the first points noticed on this trip was that the state roads outside of the villages were smoother than those connecting with them that are under the care of the municipalities, says Charles S. Long in the Good Roads Magazine. Within one town the commissioner called attention to a sprinkling wagon that was fogging the water down on the macadam and flushing the fine dust to the gutters instead of spraying it gently and leaving it to form a binder to the road. That kind of sprinkling tends to ruin a macadam roadway by removing the surfacing material, just as the motor car and the wind remove it.

Speaking of a stretch of road that extended like a ribbon of asphalt until the perspective brought it to a point at the farthest limit of vision, the commissioner explained that it was constructed of gravel and had been surfaced with trap rock dust. Many of the dirt and gravel roads of the state are being treated in this way. They are graded and rolled and then, after a year or so, are given a surfacing of trap rock splinters and dust, which abound in the state. The state furnishes annually a certain amount of broken stone or screenings to each town, and along the sides of the roads are to be seen piles of this material surmounted by signboards bearing the words "State Property."

When a road of whatever kind of construction is to be built with state aid in Connecticut the plans are drawn in the commissioner's office in the capitol building at Hartford. An engineer is then sent to establish the grades along the proposed road. These grades are verified from time to time by the engineer, and stakes which may have been displaced in the prosecution of the work by the contractor are reset, so that the finished road shall conform exactly to the original specifications.

Drainage is attended to first on the principle of the commissioner's famous three "keeps"—viz, "Keep the water off the road, keep it out of the road, keep it from under the road." This having been attended to, the necessary bridges and culverts are arranged for. These are being constructed of concrete as fast as possible.

Then comes the forming of the subgrade. The contractor is required in building any kind of road to remove all loam, roots and vegetable matter from the proposed travel way of the road and also everything of a spongy nature. If there is not material enough to bring the subgrade to the height required the contractor must supply the deficiency. If there is an overplus from cuts it must be disposed of according to directions. The subgrade is rolled thoroughly with a ten ton steam roller and brought to the exact contour of the finished road surface. Importance is laid upon the manner of building the shoulder. In fact, importance is laid upon every step in the progress of construction, for the commissioner says that there are no "little things" in roadmaking, and the contractor is required to extend the shoulder several inches on to the travel way and thoroughly roll or ram the material down to the established grade and then cut it back to the line. This renders it firm and unyielding to the metaling.

In the construction of a gravel road it is specified that "the first course shall consist of good, clean gravel, not less than 80 per cent of gravel, the balance material that will bind. No loam will be allowed."

"The gravel shall range from pea stone to three inches at its longest diameter. Care must be taken to have the gravel as near uniform in quality as possible, avoiding sand, the small sizes to predominate. The gravel shall be spread on uniformly and rolled down, after which a sprinkler shall be used and this course wet down and then rolled again and continue rolling until it is firm and thoroughly compacted. This course shall be three inches in depth when complete after rolling."

"After the first course the second course shall be put on, and the same method shall be pursued in its treatment in every particular as described for the first course, except that the size of the gravel shall not be larger than will go through a two inch

screen. This course shall be three inches in depth after rolling.

"After the contractor has taken out all wheel and foot marks on the second course and has finished rolling he shall then put on the last or finishing course, which shall consist of 60 per cent of stone and 40 per cent of binding material. No stone shall exceed one inch longest diameter. This course must be spread with shovels either from the wagon or from the gravel dumped on the shoulders. The contractor must not dump the loads of gravel on the road proper. This course after being spread uniformly shall be wet down and rolled, and the wetting and rolling shall be continued until the road is solid and firm and will not show the mark of hoof or wheel while driving over it."

There are many miles of gravel roads within the state of Connecticut which are as smooth—to use a term that is becoming familiar as applied to improved roads—as a billiard table, and when, after a year or so of traffic, they are given the surfacing of trap rock splinters it is difficult to note the difference in appearance from macadam. This construction affords a hard, smooth and durable surface.

On this official tour of inspection there was included a stretch of telford construction. Here the travel path had been excavated to a depth of a foot below grade line, and then the large stone for the first or bed course was laid. In doing this class of work the commissioner requires that "the bed stone shall be of the following dimensions: Six to ten inches in width, eight to eighteen inches in length and eight inches deep, placed by hand, broadest surface of depth of stone placed down and stones laid in courses across the road, all joints broken and all interstices chinked in and wedged with broken stone. All sharp points of stone must be broken off with the hammer to bring the surface of the bed stone true to grade. The bed stone should be laid up full and strong so as to allow for all settling in rolling. In no case will the contractor be allowed to use stone that is not up to all these requirements. After bed stone has been laid, chinked and broken off to grade the roller shall be run over the bed stone until it is firmly bedded and will not kick or rock under the roller. No nests of small stone will be allowed, nor will the contractor be allowed to use rotten stone."

"The second course shall be four inches over all after rolling and must be broken trap rock unless otherwise specified. The stone used for this course shall be from three-fourths of an inch to two inches longest diameter, mixed in the screens (not in the bins), the smaller sizes to predominate. The size of stone for this course must be strictly followed to the letter, no tallings will be allowed, and any departure from the size specified will be at the contractor's risk. The stone must be dumped on the sides of the road proper or on the bed stone foundation and be scattered with shovels to the required depth sufficient to roll down to four inches. The rolling shall be continued until the stones are thoroughly united, firm and solid under the roller."

"The top course shall be one inch thick when finished. Trap rock screenings, including dust (no screenings larger than one-half inch stone will be allowed), shall be used as a finishing course. The screenings after rolling has been done on the last course of broken stone shall be carted on the sides of the road proper and dumped at suitable intervals, after which all wheel tracks and foot marks of horses shall be carefully filled and then rolled down firmly. Then screenings shall be scattered dry over the surface so as to fill all interstices, and the roller shall be run over the surface so as to shake in the dust. Immediately after a sprinkling cart shall be used and the screenings washed in, after which more screenings must be added and sprinkled and rolled again, and the screenings, rolling and sprinkling must be continued until all the coarse stones have been covered and the interstices completely filled and the road is smooth and will shed water and measure in depth one inch of screenings for wearing surface. The contractor is not to be allowed to put on the screenings all at one time, but must spread them on as described above, and he is not allowed to deviate from the above treatment in any way. The contractor must not wet the screenings before they have been scattered on the broken stone, and, furthermore, they must be perfectly dry before they are put on the road."

It requires constant vigilance during the term of construction to insure value received in road building. And one who has traveled for a day at a time with several state highway commissioners appreciates that the office is not a sinecure.

#### Holyoke's Test of Tar Macadam.

A year's experience in the use of gas tar produced at the municipal plant in Holyoke, Mass., has increased the confidence of the members of the board of public works in the value of that material in the construction of macadam roads. The tar from the city gas plant costs only 2 cents a gallon as compared with 6 cents or more for the ordinary commercial article. Although not carefully refined and brought to a uniform standard, the material has given good results at a remarkably low cost. As laid in Holyoke a new macadam road can be laid with two pourings of tar on the surface coats for 80 cents a square yard. This year the tar macadam will be used on more heavily traveled streets than those laid last year. To get the best results experience has taught that the broken stone screenings should be free from all dust and as clean as if washed. If the fine stone on which the tar is poured is dusty the tar does not stick.

## HENRY L. STIMSON.

Federal Prosecutor Talked of as Next Attorney General.

Henry L. Stimson, who has been much talked of in connection with the post of attorney general in the cabinet of President Elect Taft, is United States district attorney for the southern district of New York and has been prominent recently in connection with the court proceedings in his district directed against the Standard Oil trust. Mr. Stimson was born in New York thirty-nine years ago and was graduated from Phillips academy, at Andover, in 1883 and from Yale university in 1888. He studied for the bar at the Harvard Law school and under Sherman Evarts in New York. Being admitted to the bar in 1891, he became two years later a member of the firm



HENRY L. STIMSON.

of Root & Clark, which afterward became Root, Howard, Winthrop & Stimson, the senior member being the present secretary of state.

### THE KING OF ITALY.

He Knows How to Act in Face of Earthquakes and Eruptions.

King Victor Emmanuel of Italy is very popular with his subjects, and his popularity is in part due to the way in which he exerts himself whenever there is any great calamity like that of the recent earthquake in Sicily and Calabria. During the last eruption of Vesuvius, when 500 people were supposed to have lost their lives, he was very energetic in devising means for the public safety or for succoring the victims of the disaster. The king even went into places of danger himself in his eagerness to see that everything possible was being done in behalf of his afflicted subjects. At the time of the recent earthquake shocks the Italian monarch was hunting in a district near Naples. He at once issued orders that preparations be made for a trip to Calabria, which is in southern Italy and with Sicily forms the center of the earthquake district. Between the earthquake of 1905 in this district, which destroyed thirty towns and cost about 3,000 lives, and the eruption of Vesuvius in the spring of 1906, the southern portion of King Victor Emmanuel's realm has in recent years been very much ill treated by the forces of nature.

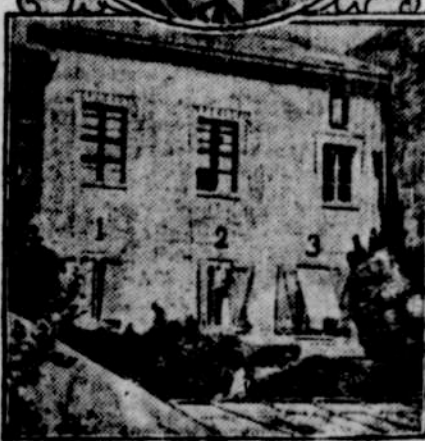


KING VICTOR EM-MANUEL.

### THE STEINHEIL CASE.

M. Steinheil and the House in Paris in Which He Lived.

The strange case of Mme. Steinheil continues to excite the interest of Paris. The woman who had so many intrigues with famous men of France



M. STEINHEIL AND HOUSE HE LIVED IN.

has retained to an unusual degree in a person of her age her remarkable beauty, and her daughter is also a handsome woman. This fact is not lost upon the French public, susceptible as it is to the romantic features of a case. The house in which M. Steinheil lived and in which he was murdered has naturally figured a good deal in the proceedings. The Parisians have studied carefully the descriptions in the newspapers of the location of his apartments, of those of his wife and her mother, Mme. Jappa, numbered in the cut 1, 2 and 3 respectively.

## Teachers' Examination

Notice is hereby given that the County Board of Examiners of Coos County Oregon will hold the regular semi-annual examination of applicants for state and county papers in the court house in Coquille beginning on Wednesday Feb. 10th, at 9 a.m., 1909, and continuing until Friday Feb. 12, at 4 p. m.

Program for County papers:

Penmanship, History, Orthography, Reading, Physical Geography, Arithmetic, Teaching, Grammar, Physiology, Geography, School Law, Civil Government, English Literature.

The program for State papers will be arranged to suit the convenience of the applicants.

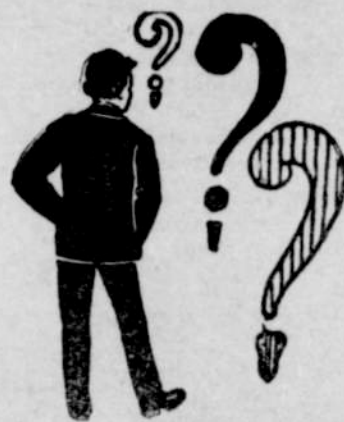
Dated at Coquille, Oregon this 25 day of January 1909.

W. H. BUNCH,  
Co. Supt.

## BLACK LEG

IN CATTLE CAN BE PREVENTED CUTLER'S BLACK LEG VACCINE California's favorite, the most successful, easiest used and lowest priced reliable vaccine made. Powder, strong or pill form. Write for free Black Leg Booklet. THE CUTLER LABORATORY BERKELEY, CAL.

If your druggist does not stock our vaccines, order direct from us.



Do You Wish to Increase Your Earning Power

The best method of doing this is to take a course in Book-keeping or Shorthand at the

Miller-Cleaver Business College

Our Students are in demand all the time and always command good salaries. Prepare yourself and we will see that you get a chance to demonstrate your ability.

MILLER - CLEAVER  
Business College  
NORTH BEND OREGON

The New, Elegantly Fitted and Speedy Steamer

## ELIZABETH

This steamer is now, is strongly built and fitted with the latest improvements and will give a regular 8 day service, for passengers and freight, between the Coquille river, Oregon.

First-class Passenger Fare, \$7.50

Freight Rates, \$3 on Up Freight

J. E. WALSTROM, Agent, Bandon, Oregon.

E. T. Kruse, managing agent, 24 California St., San Francisco.

## Hotel Gallier

Rates \$1.00 to \$2.00 per day. Special rates by

week or month. Sample Room in Connection.

Bandon

Oregon

## A. MC NAIR

THE HARDWARE MAN

BRIDGE & BEACH Stoves, Ranges and Heaters have in them so many excellencies that they are now acknowledged the greatest sellers on the coast and they are growing in favor every year. We have the exclusive agency in Bandon for these household and office necessities, and prices range exceedingly modest in either case.

TINNING AND PLUMBING A SPECIALTY.

Our Assortment of Hardware, Tinware and Edged Tools is Most Complete.

## BANDON STEAM LAUNDRY

Family Washing a Specialty.

First Class Laundry Work Guaranteed. Special attention given to fine woolen goods.

Cleaning and pressing Mens' Suits and Ladies' fine skirts given prompt attention.

F. A. BATES, Proprietor

## SHIELDS & KENNEDY

BLACKSMITHS AND WAGONMAKERS

Wagons of All Kinds Made to Order Horseshoeing a Specialty

Job Work attended to promptly and all work guaranteed to give satisfaction. Prices reasonable. Shop on Atwater Street, Bandon, Oregon.

Keep posted on the news of the community

## Read the Bandon Recorder.

The chief exponent of the merits of the Coquille Valley \$1.50 A YEAR

PRINTING THAT'S DONE RIGHT adds dignity and distinction to your business. Do all your corresponding on neatly printed letter heads. Neatly printed return envelopes are a safeguard against your letters being lost in the mails. We do your work when you want it and guarantee satisfaction.