

# Home Course In Road Making

## IV.—State Aid In Road Improvement.

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THE principle of state aid and state supervision seems to offer the best solution of the road problem. The first state to adopt state aid was New Jersey, a law having been passed by the legislature of that state in 1891. Since that time about two-thirds of the states of the Union have adopted some form of state aid or state supervision.

In order to receive the aid of the state the counties or townships are required to pay a portion of the cost. This amount varies in the different states from 25 to 50 per cent, but in some of the states the whole cost of



A STATE AID ROAD IN NEW JERSEY.

certain trunk line roads is paid by the state. The principle of state aid is that the state contribute to road improvement out of a general fund to which all taxpayers contribute. The fund does not come from farmers alone, but from all the people, and especially from those that are more abundantly able to bear the burden of taxation. A great injustice has been done the farmers of this country in exacting them alone to shoulder the en-

tire expense and responsibility of building country roads. The residents of cities have signified a greater willingness to contribute to this fund than those who live in the rural districts, notwithstanding the fact that practically all the state aid laws prohibit the use of the money within the limits of cities and towns. State aid tends to equalize the burden of taxation.

Every one who uses a highway or receives any benefit from it should contribute to the cost of its improvement. The farmer is not the only one who uses the country roads or receives benefit from them. They are also used by the country merchant, the lumber dealer, the itinerant peddler, the village doctor, the commercial salesman, by the wheelman and the automobilist, and to a greater or lesser extent by the entire people. The city dweller cannot live without his daily supplies from the farm, and he must pay daily and in cash the greater share of all extra cost attending their transportation.

Some of the state highway departments are operated on a purely political basis, and it very frequently happens that the highway commissioners, as well as their subordinates, are removed from office for purely political reasons, no matter how efficient or competent they may be. This is the most serious defect in our state aid system.

Any law providing for state supervision and state aid should be so framed as to remove its administration as far as possible from the influence of partisan politics. A plan that seems to be meeting with general approval is one which provides for a nonpaid, nonpartisan and technically competent commission that consists, for instance, of a professor of civil engineering from one of the leading universities or colleges of the state, the state geologist and one civilian member to be appointed by the governor. A commission thus constituted has a majority of its members selected because of their training and ability and without reference to their political affiliations. The civilian member appointed by the governor should bring to the commission the business ability essential to the proper and economic organization and prosecution of its work. At the same time, so long as the governor could appoint only the minority of the commission and the same being nonpaid, there would be little inducement to make the position one of political preferment.

The actual work of a state highway department should be under the direction of one man possessing technical qualifications, experience and executive ability. This official should be appointed by the commission. He should be a civil engineer, skilled and experienced in road construction and maintenance, and his salary should be fixed by the commission. His position should be permanent, and he should not be removed except for incompetence or malfeasance in office.

The state highway engineer should be empowered to appoint all of his assistants after proper examination and with the advice and consent of the commission, to receive all bids and to award contracts, to supervise the work of construction and maintenance, and, in fact, he should be given full authority in all executive work of the department. The state highway engineer should prepare a map of such of the main highways of the state as should most properly constitute a system of state or trunk line roads to be improved either in part or wholly by the state. State road improvement should be carried forward with the ultimate idea of developing a continuous system of trunk lines running throughout the state and connecting, if possible, with similar trunk line roads in adjacent states and with the necessary lateral roads in each county.

The state highway engineer should be given authority to call on county or township road officials for information concerning the roads under their supervision, and it should be made mandatory on such officials to furnish such information upon request. This is very desirable, as it is necessary for the state highway department to keep posted as to conditions existing in different counties.

In most of the state aid laws the initiative in obtaining state aid rests with the county or township authorities. This is a wise provision, because, in the first place, the local authorities are in better position to know what roads it will be to the greatest advantage of the county or township to improve, and, in the second place, they are best able to determine the extent of the county's ability to share in the expense of such an improvement. Another consideration of great importance in this connection is that if the initiative were to rest entirely with the state there would be a certainty of conflict of authority between the state and the counties, resulting in the ultimate failure of the state aid plan.

The only case in which the roads can be built by the state without the full and hearty co-operation of the counties or townships is where the state pays the entire cost of building and maintaining the roads. Most of the laws provide that state aid shall not be granted until the application of the local authorities has been approved by the state engineer, which enables the engineer to exercise a sort of supervisory power over the selection of the roads to be improved, to the end that the various roads throughout the state shall conform to a general system.

All surveys, plans, specifications and estimates for state roads and bridges should be made by the state highway engineer's office, thus insuring uniformity and a high degree of excellence. All improvements to cost over, say, \$2,000 should be let to contract, as it has been found that this means economy both in time and money and with proper supervision will usually

give better results than could be obtained otherwise.

Some of the states provide that the whole cost shall be paid in the first instance by the state, the counties or townships being required to reimburse the state for their share at a fixed time after the road is improved.

Bridges and culverts should be considered as a part of the road and the state should aid in their construction within proper limitations in the same manner as for the road itself. When the work is let to contract the contractor must necessarily advance money in the performance of his contract and is therefore entitled to receive partial payments thereon as the same progresses, but not over 85 per cent of the contract price of the work should be paid in advance of its full completion and acceptance.

The state highway engineer should be required to keep all roads built by the aid of the state in proper repair, the total cost of such repairs to be paid by the state, the counties and townships to reimburse the state in the same manner as for the construction of the road. The reason for this is that road maintenance is of as great or even greater



A STATE ROAD IN CONNECTICUT.

importance than road construction, and the best roads if neglected soon go to ruin.

It is utterly useless to establish a state highway system without at the same time providing an adequate source of revenue. Unless there is a surplus in the treasury for this purpose a special tax should be levied or a state bond issue should be authorized. On the theory that automobiles are destructive to improved roads most of the state aid states provide that the proceeds of automobile licenses over and above the expenses connected with issuing such licenses be applied to the state highway fund and used for the purpose of constructing and maintaining the roads.

### FEATHERS AND EGGSHELLS.

Ireland has 24,000,000 hens and 50,000 goats and in the past year exported \$20,000,000 in poultry produce. England's egg output does not equal the consumption, and she must import \$35,000,000 worth of eggs.

Dr. Kyes of Chicago inoculated a White Leghorn rooster with a preparation obtained from a human lung involved with acute lobar pneumonia. He then secured an immune serum from the fowl that has a protective power against the disease.

Winter is not the hen's natural laying season, and this must be considered in our endeavor to make her lay those high priced eggs. A ration as near as possible to that which spring and summer furnish brings success, but stimulants, as with men, spell failure.

Many tell the sex of ducks by that pretty curl on the tail, but those who depend on that sign to select Indian Runner drakes often get left, as the male is often without that ornament. The female does all the talking in the duck tribe, as often in the human, so there's the cue for you.

One peculiarity of many amateurs is that they often select as their first breed a fowl that is very difficult to breed true to color and color markings, perhaps because such are the most beautiful. It is wiser to start with a simpler and easier breed and thus get the first principles before tackling the most difficult.

The recent invasion of locusts if it did no good to the trees, sure made a feast for the foxes, skunks, ground hogs, birds, poultry and even the pigs. But if you thought it was great to see your birds gobble the big bugs you should go to the east, where they are gathered by the ton, dried and gobbled by both hens and humans.

The farmer will tell you that the great fattener for hogs is yellow corn, and if you follow him when he feeds the hens you will likely find him feeding corn to them also. He expects those hogs to get fat and those hens to lay eggs on the same ration. "It's a poor rule that won't work both ways," and this is a poor one.

It is quite amusing to hear some of our poultry lecturers wrangling over the moist and dry mash question. The question is then generally given to the audience, and invariably the majority is for the moist mash. Try them both, and when you count the eggs and note condition of your fowls you will likely vote with the majority too.

Dr. Mary E. Pennington of the department of agriculture declares that "eggs laid in the cool days of spring and properly put away in storage are better than the eggs freshly laid in the hot weather and rushed to the city from the nest." English "eggsperts" are laughing loud at Dr. Mary's statement. Yes; mere man may safely laugh at a female with the Atlantic between.

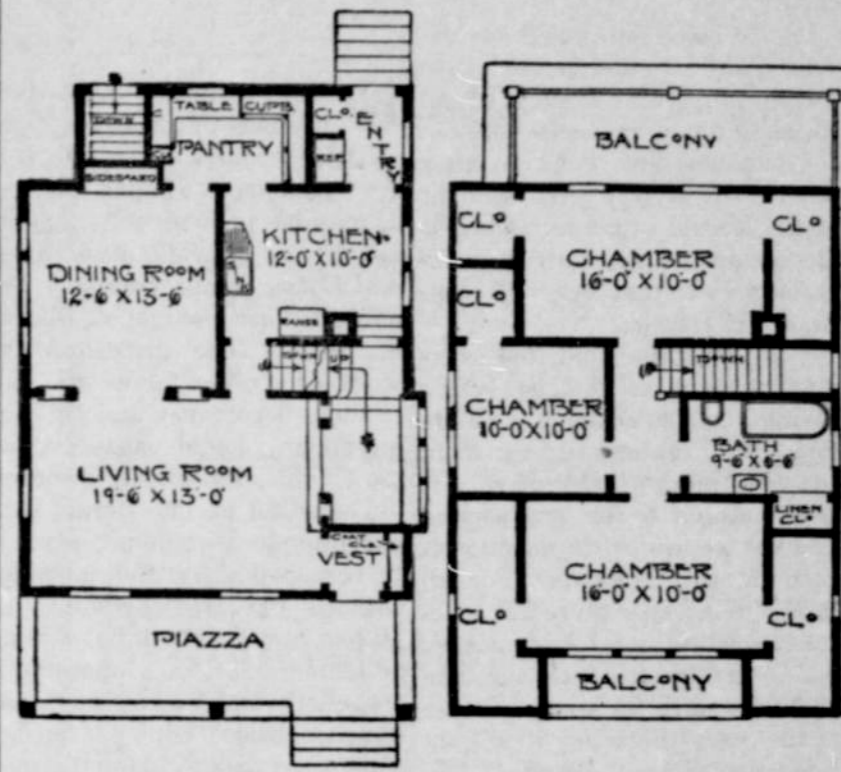
# A BUNGALOW OPEN TO THE SUNSHINE

Design 965, by Glenn L. Saxton, Architect, Minneapolis, Minn.



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## PROGRESS OF STATE DURING PAST WEEK

Portland, Or., April 30 (Special)—Pupils of the Portland schools have taken up Country Life education in earnest and during the past week the work was given new impetus when instructors of the Oregon Agricultural College talked to the children on this interesting subject. One city school alone has 1130 gardens now being grown by pupils.

Photographers of the Northwest states will gather at Portland for the annual convention of the Pacific Coast Association Sept. 2-5. About 200 delegates are expected from all parts of the North Pacific states and British Columbia. The organization was formed in Portland about 12 years ago and the coming gathering will be of interest to all photographers.

The current year, it is said, will prove one of the best periods in the history of the lumber industry, the demand for forest products of Oregon being the best since the period following the San Francisco fire, when the forests of the Northwest were drawn upon heavily to rebuild that city. Prosperous conditions in the lumber trade will be felt generally throughout Oregon, so widespread is this industry.

Preliminary work for the construction of the north Jetty at the mouth of the Columbia River will commence at once, plans having been approved at Washington and forwarded to the local engineers during the past week. The approximate length of the proposed jetty will be two and one-half miles and it will require about five years for construction. It is expected to add materially to the depth of the ship channel across the Columbia River bar.

Two new experiment farms have just been completed in Crook County, one near Metolius and the other near Redmond. They are to be operated under the direction of the Oregon Agricultural College, which is sufficient guarantee that they will be operated on a practical basis and it is believed they will do much toward solving the problems new settlers are meeting with in tilling the dry farming and irrigated lands of the interior of the state.

Extensive displays of state products will undoubtedly be arranged at Portland during the Rose Festival, Elks Convention and other gatherings of the coming summer. The thousands of visitors to the Rose City during the year

will thus be able to get a comprehensive knowledge of Oregon's resources and the advertising will be of great value to the state.

The Oregon Threshers Association will meet at Condon May 23 and 24. This organization has members all over the state and the annual meeting is usually largely attended. Subjects of interest to threshermen are discussed and various problems met.

## JAPANESE CONSUL VISITS O. A. C.

Corvallis, Ore., April 30—M. Ida, Japanese consul, recently transferred from San Francisco to the Portland territory, visited the Oregon Agricultural College yesterday on his way back north from a trip to Ashland.

Mr. Ida's territory includes the states of Oregon, Idaho and Montana, and contains some 5,000 Japanese. He is now traveling through the district getting acquainted with the various conditions. Incidentally he is also investigating agricultural methods which may be suited to conditions in his own country, with a view to making a report upon them for the Imperial College of Agriculture of Japan.

While here the consul was the guest of the three Japanese students of the college, Kakiji Okamoto, Yoshitaro Fujihira, and Moichi Kawashima. He called upon the dean of women Dr. Anna Z. Crayne, and discussed with her the education and training of women.

"In Japan," said Mr. Ida, "there was no education for women until the missionaries came. Now there is a common saying that God is the father of the Japanese women, and the missionary is the mother."

### The Demons Of The Swamp

are mosquitos. As they sting they put deadly malaria germs in the blood. Then follow the icy chills and the fires of fever. The appetite flies and the strength fails; also malaria often paves the way for deadly typhoid. But Electric Bitters kill and cast out the malaria germs from the blood; give you a fine appetite and renew your strength. "After long suffering," wrote Wm. Fretwell, of Lucas, N. C., "three bottles drove all the malaria from my system, and I've had good health ever since." Best for all stomach, liver and kidney ills. 50 cts. at all dealers.

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