

THE
STATE TEACHERS
COLLEGE OF COLORADO
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MAY 15 1919



COLORADO HIGHWAYS BULLETIN

May, 1919

Counties Must Help Match Federal Aid

How Far Western States Met An
Emergency

Colorado-to-Coast Motor Short Line

Road Bills Enacted by the 22nd
Assembly

Issued by the
State Highway Department

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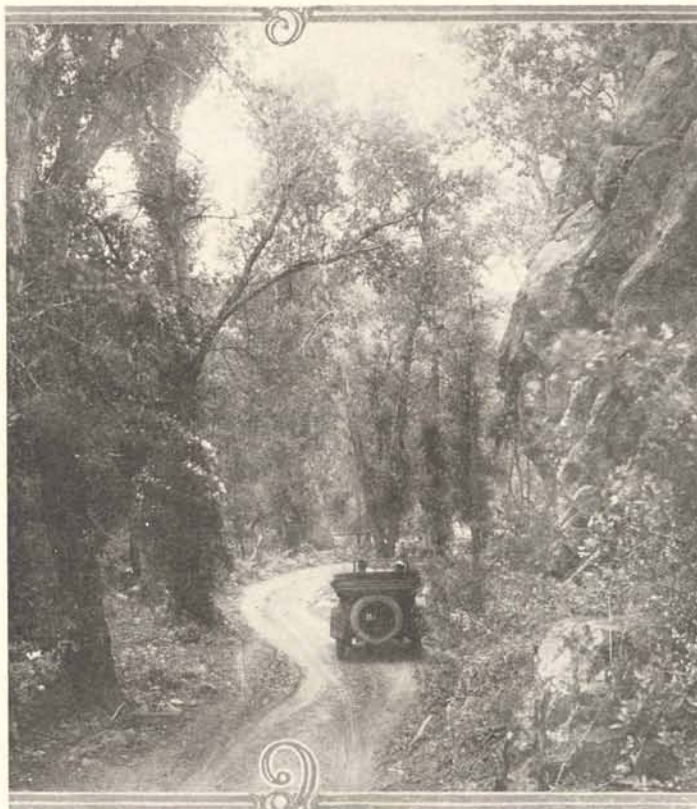
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Picturesque Entrance of the Hardscrabble Canyon Rout, above Florence, Custer County.

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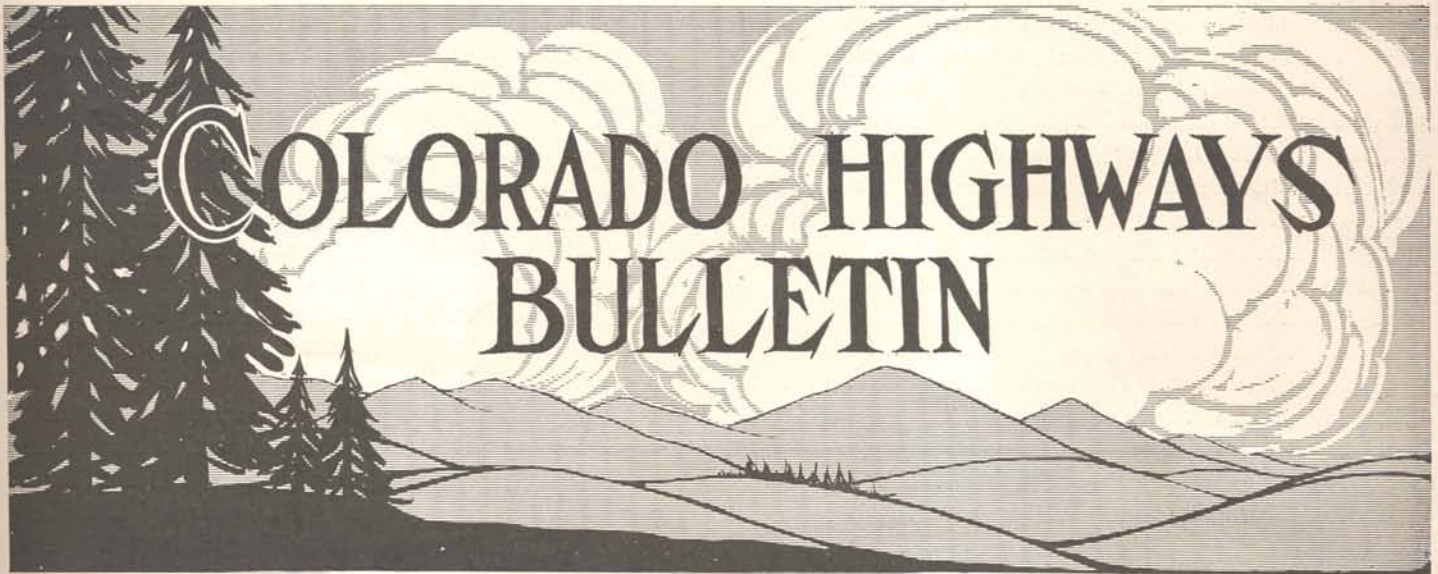
Address all communications to Colorado Highway Department, attention Pyke Johnson, editor, Colorado Highways Bulletin.

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The Amphitheater of the Titans in the Canyon of the Grand above Grand Junction. In the foreground is the shelf road with the placid water of the river below



Counties Must Help Match Federal Aid

Colorado Highway Commission Adopts \$2,300,000 Budget for Federal Aid Projects So That National Allotment Due Now and on January 1st Will Not Lapse--Many Counties Agree to Make Up Funds Which the State Cannot Provide

NOW that the state legislature has folded its tents like the Arabs the Colorado Highway Commission is in a position to take definite action in relation to the immense federal aid funds made available by the Bankhead rider to the postoffice appropriation bill. During the legislative session the commission could do nothing toward taking advantage of the new federal aid funds, for its hands were tied until such time as it might know authoritatively what additional funds might be expected for road work. The commission's activities were limited to an effort to impress upon members of the legislature the critical nature of the situation faced by Colorado in relation to federal aid.

It may be stated fairly that good roads enthusiasts were disappointed in the action of the assembly. Twenty million dollars in bonds were asked, yet the legislature put a limitation of \$5,000,000 upon the amount which will be submitted to the voters of the state in 1920, and put restrictions upon the expenditure of this amount should it be voted. The bill providing for the submission of the bond issue provides that \$2,500,000 of the amount may be spent solely to meet federal aid appropriations, while the remaining \$2,500,000 must be divided among the various counties of the state for road work. To the good roads worker of the day, educated to look at this problem from a broad standpoint, such restrictions seem a reversion to old methods of distributing road funds. There was talk for a time of eliminating the bond issue proposition altogether, but when the good roads organizations of the state

let it be known that a bill would be initiated to submit a \$20,000,000 proposition the \$5,000,000 proposition was passed by the legislature. However, the same division of funds, noted in regard to the bond issue, was made in relation to the gasoline tax bill and the automobile license bill.

Since the bond issue proposition cannot be submitted for another year and the additional one-half mill levy for good roads, passed by the assembly, will not bring in revenue until the levy is made for next year, the Highway Commission can only count upon about \$600,000 additional revenue for this year to meet federal aid appropriations.

Chairman E. E. Sommers, who is thoroughly familiar with this phase of the situation, says that there will be no opposition to the tax of one-half of one per cent on all gasoline not used for farm purposes alone. He estimates that approximately \$400,000 may be expected by the commission from this source. Consumption of gasoline has been running far ahead of consumption last year during corresponding months, and dealers predict the amount consumed during the year will show an increase of fifty per cent over 1918. They also make the prediction that \$400,000 will be realized from this source for use on road work. In addition the commission will receive \$200,000 refund from the Capitol Building fund, this fund having been loaned from road income a number of years ago. These two sources will make up the \$600,000. Some additional revenue may be received from other sources, but will be needed for the contingent fund.

The Colorado Highway Commission at its last meeting on the second Monday in April, adopted a plan to meet \$2,380,000 of federal aid funds this year, including the \$867,000 now available and \$1,300,000 to become available on July 1, 1919. Highway Commissioner T. J. Ehrhart and Chief Engineer J. E. Maloney made up a tentative budget and, in the main, this was accepted. In arriving at a just distribution of the funds the budget took into consideration the valuation, road mileage and area of the five road districts, which gave to each district the following percentages: District No. 1, 50 per cent; District No. 2, 10 per cent; District No. 3, 17 per cent; District No. 4, 15 per cent; District No. 5, 8 per cent. A further adjustment was made by taking 10 per cent from District No. 1 and distributing it between Districts No. 2 and 5. This gives District 2 about 15 per cent and District No. 5 about 10 per cent.

The adoption of this budget does not mean that the entire \$2,380,000 federal aid and a corresponding amount of state funds will be spent this year as that would be almost an impossibility with the scarcity of contractors. It was necessary to adopt a budget, however, and designate the federal aid projects to be undertaken in order that the government appropriations might not lapse and be lost to Colorado. A great part of the year will be spent in making the necessary surveys, and estimates and gathering data upon the projects for submission to the federal government.

The actual division of federal aid funds made in the budget is as follows:

District No. 1	\$ 952,000.00
District No. 2	357,000.00
District No. 3	404,600.00
District No. 4	357,000.00
District No. 5	309,400.00
Total	\$2,380,000.00

The Highway Commission has tentatively allotted funds for each project to be undertaken, of which there are sixty. This working plan will not be published in the Bulletin, however, until the commissioners have each given it further consideration in relation to the needs of their respective districts, as some changes may be found advantageous and desirable. To publish the adoption of a project until it has been decided upon definitely would manifestly be unfair to the communities involved.

The foregoing summarization must have made it plain to the reader that the Colorado Highways Commission cannot hope to have sufficient funds at its disposal to take care of the program outlined. This brings up the question: "How are the additional funds to be raised so that full advantage may be taken of the federal aid appropriations?"

The only solution of the problem and one that is now being worked out in one or more western states is for the counties affected to raise additional road funds by levy, bond issue or some other source.

In New Mexico such a movement is already well under way, and since the adjournment of the Colorado Highway Commission a similar movement has been started in Colorado with gratifying results. At this time a number of counties have signified their willingness to raise such funds and Commissioner Ehrhart estimates that each county to which a federal aid projects are awarded will have to raise approximately 15 per cent of the amount of these appropriations aside from road funds already raised. Pueblo, El Paso, Prowers and Bent county commissioners already have assured the state highway department that they will guarantee that their counties will meet their share of the additional expense. Other counties that have promised to do so in a more or less positive manner are: Saguache, Eagle, Jackson, Moffat, Mesa, Grand, Logan, Adams, Boulder, Las Animas. The town of Del Norte has likewise agreed to raise a fund by public subscription.

The outlook, therefore, is highly optimistic. Not only does it augur well for the adoption of the \$5,000,000 bond issue, but it indicates that the members of the legislature underestimated the sentiment for the larger bond issue which it refused to sanction. With the aid of the counties the Highway Commission will be able to meet the allotments of the federal government for the ensuing year at least.

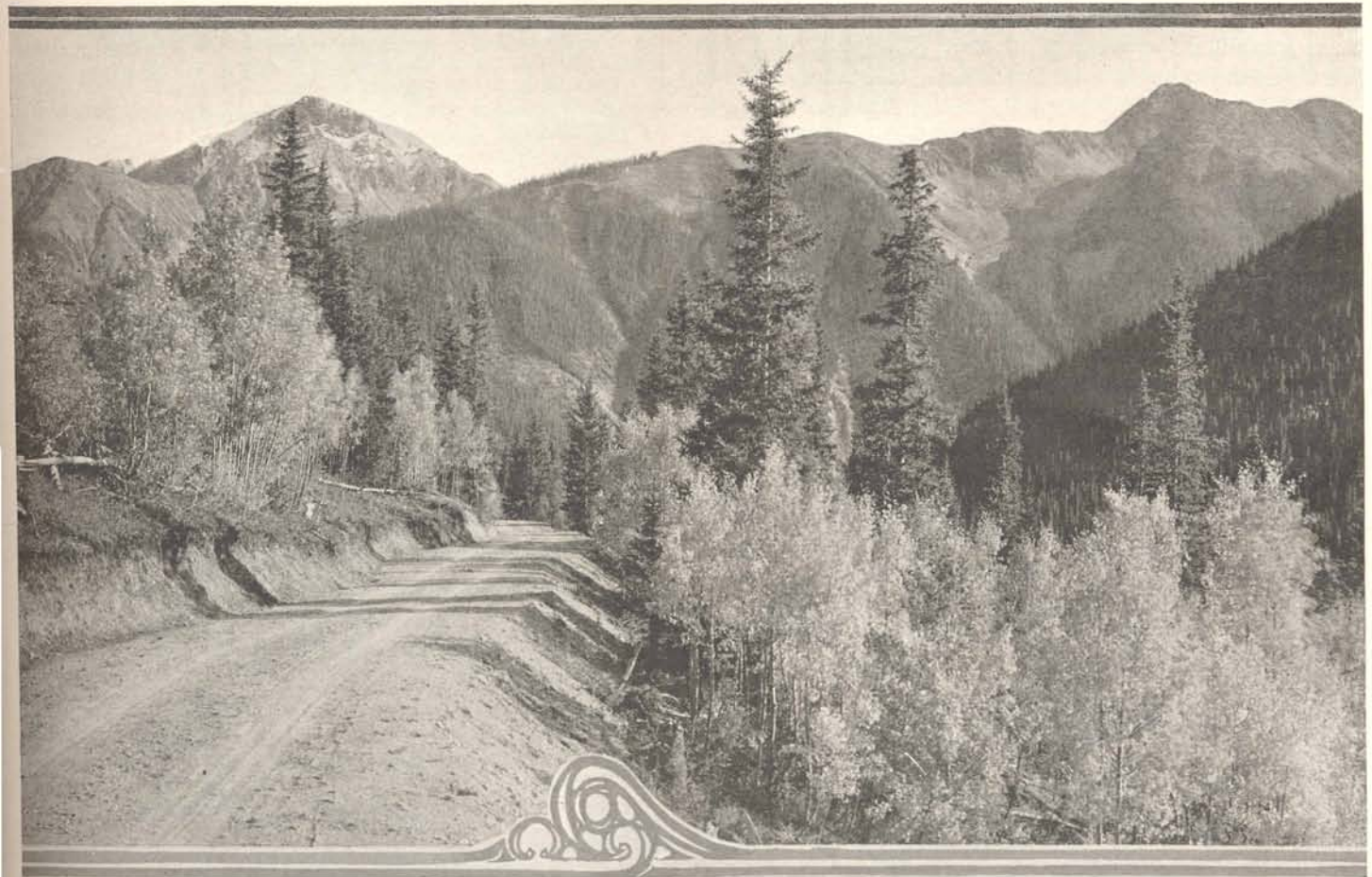
Michigan Votes Bonds

Michigan gave a majority of 225,000 votes for the \$50,000,000 bond issue for good roads at the election held on April 7. This is one of the largest road programs in the country, and it is worth noting that Michigan claims a great number of tourists and travelers during the summer months.

The plan of expenditure will probably provide for an issue of \$5,000,000 for the next two years which, added to \$8,000,000 Federal Aid money available during the next three years, and \$12,000,000 from county bonding propositions and highway income, will give the contractors in Michigan all the work they can handle for some years to come. The \$50,000,000 is available as needed.

The Dominion of Canada may have federal aid for good roads if a resolution introduced in the House of the Dominion Parliament, is passed. This provides for an appropriation of \$20,000,000 for highway work during the next five years. Each province is to receive \$80,000 annually, and an additional payment based upon population. The appropriation will constitute 40 per cent of the cost of each project, and all work must be in accordance with regulations and specifications approved by the governor in council.

The United States has a total of 2,500,000 miles of road of which twelve per cent are classed as improved, and only one-quarter of one per cent as capable of sustaining the modern heavy duty traffic. The rest are dirt highways, used simply as elementary means of communication between points.



Scene on the Southern Slope of Red Mountain Pass, where the United States Forest Service and the State Highway Department plan the location of nine and one-half miles this season.

How Far Western States Met An Emergency

Summary of Legislative Action on Post Roads Appropriations

THE unanimity with which the western states have attacked the problem of how best to meet the federal aid appropriations of the United States government indicates that, at last, they have realized that a better roads program is the key to progress. The West needs better roads far more than any section of the country, for it has neither the great manufacturing interests of the Atlantic Coast, nor the intensive agricultural development of the Mississippi Basin. Until it has the best roads in the country it cannot hope to compete industrially with the older sections of the Union, because it has greater distances to overcome in sending its goods to market.

The adjournment of the various legislatures of the western states makes it possible to sum up the results of the greatest good roads campaign that the west has ever witnessed.

Most of the western states will vote on bond issue propositions sometime within the next two years, few legislatures having failed to provide for the submission of such propositions. Regardless of the state boundary lines the road problem of the West is one, wholly so from a tourist standpoint and largely so from an industrial one.

CALIFORNIA—

A review of the good road situation in California demands precedence because of the fact that the California legislature provided for submission of the largest bond issue in the West. Just before the legislature of California adjourned it voted to submit a \$40,000,000 bond issue. Coming on top of the several heavy bond issues for good roads in this state the action speaks wonders for the progressive spirit of the Native Son state, and there is little room for doubt that her people will pass the measure. There are, of course, other projects for which money will be raised, chief among which may be mentioned a drive by the Automobile Club of Southern California, which will open a campaign on May 22 to raise \$1,000,000, which will be added to the \$700,000 available from state and federal funds, to build an all-year 70-mile concrete road from Merced to Yosemite Valley.

COLORADO—

Colorado, to which the road question is more important than any other issue before the state, has just adopted a \$2,380,000 federal aid program, in addition to the

appropriation of \$1,054,000 at the beginning of the year from established sources of income. The passage of the bill to submit a \$5,000,000 bond issue, the passage of the gasoline tax bill, the automobile license law and the additional one-half mill levy, which alone will raise about \$700,000, insures a fund for next year with which real constructive work can be done. The bond issue, if adopted by the people of the state, will not become available until 1921.

IDAHO—

Idaho came forward with the passage of a bond issue proposition for raising \$2,000,000. Including federal aid the state highway commission of Idaho expects that \$3,000,000 will be spent in that state during 1919, although the bond issue, if adopted by the people, will not be available until 1921.

Aside from some minor bills, and the bond issue bill, the principal bill signed by Governor D. W. Davis, after the adjournment of the legislature was that for a levy of two mills for road purposes, available 1919-1920. This levy will raise approximately \$1,850,000.

WYOMING—

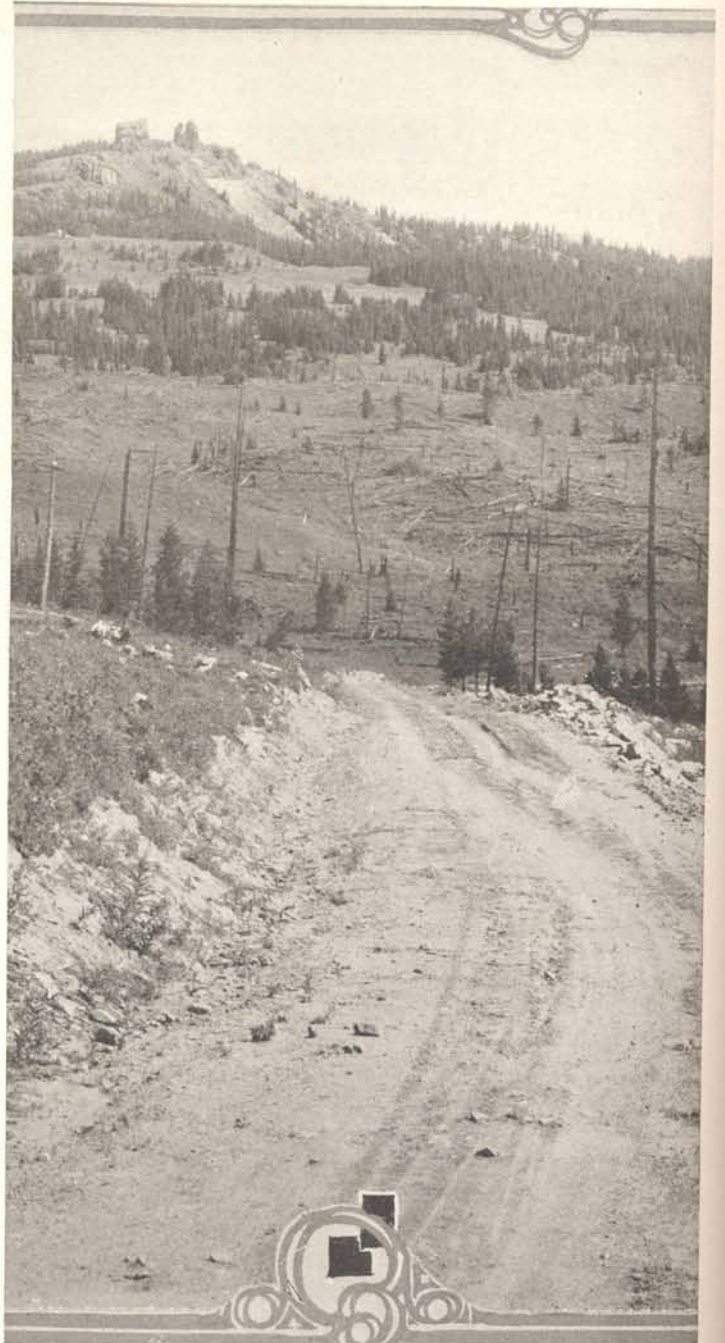
Colorado's sister State of Wyoming, although lacking the wealth of some of her neighbors, acted promptly in putting through a bond issue. The legislature of Wyoming authorized the submission of a \$2,800,000 bond issue and called a special election for the purpose of voting upon this proposition. The election was held on April 22, and the people overwhelmingly voted the issue. Wyoming, therefore, will have a full year's start over other western states, that will submit their bond issue proposals at the next general election, in the matter of beginning her great road building program. The legislature added from other sources \$300,000 a year for road building. The construction of a highway from Cheyenne to the Yellowstone is one of Wyoming's pet projects, and one that is vitally important from the tourist standpoint. It will find a very important link in the Park-to-Park highway that has been the dream of the National Park service for many years.

WASHINGTON—

The legislature of Washington, before its adjournment, voted the largest budget ever provided for road building in that state. From all sources, including \$3,500,000 available from federal aid in 1919 and 1920, Washington has approximately \$17,000,000 to spend on good roads during the next two years. Of this, some \$6,000,000 will come from the counties which must bear the preliminary costs of engineering, estimates, plans and specifications. State Highway Commissioner James Allen advertized for bids when the legislative budget was made up, and opened them within three days after the adjournment of the session. Actual work will start in considerable force there this spring.

UTAH—

Utah's legislature provided for a \$4,000,000 bond issue for roads, the bill providing that \$50,000 shall be

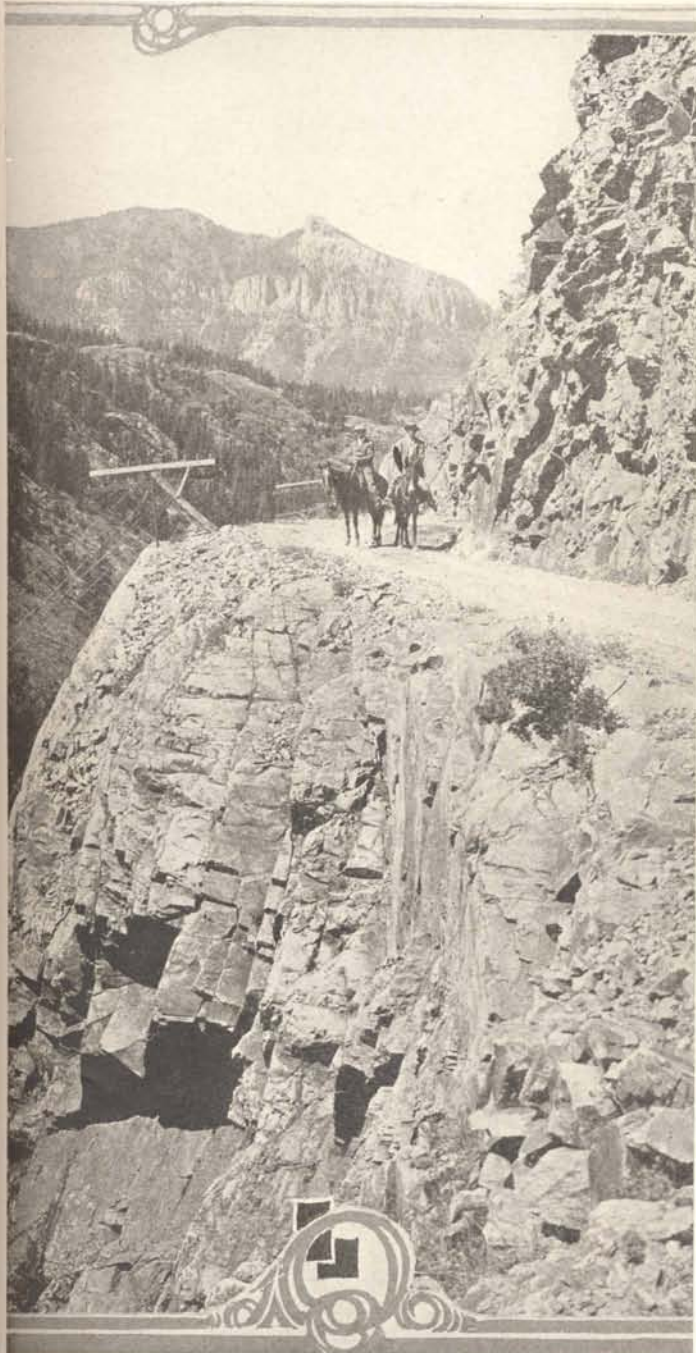


Near the Summit of Rabbit Ears Pass, Routt County, showing the famous landmark. Another Forestry Project to be pushed this year. Last year three miles were built. This year six more will be added.

allotted each county for hard-surface roads. The state road commission decided, so furious was the struggle for road funds, to increase the proportion of costs of state roads in any county, to be paid by that county, from 10 to 25 per cent, and this fund must be secured from funds other than those ordinarily available for road building. Three contracts for hard surfaced roads already have been let, amounting to \$241,809, for concrete road work between Salt Lake City and Ogden.

NEVADA—

In Nevada the legislature authorized the issuance of bonds to the limit of the state's legal indebtedness, \$1,000,000. There also has been an issuance of \$1,420,000



A rugged point on the Durango-Silverton Road. Construction of 46 miles at an estimated cost of \$350,000 is on the program for joint action by the Highway Department and Forestry Service this season.

bonds by various counties. Nevada already has a 10-cent state tax on each \$100 property valuation for construction and maintenance of roads, which raises \$200,000 yearly. This sum is duplicated by an additional 10-cent county-state tax. The amount of unused federal aid money available before the passage of the Bankhead bill was \$800,000.

ARIZONA—

The Arizona legislature failed to pass the \$30,000,000 bond issue, even when it had been pared down to \$10,000,000. Furthermore, when Governor Campbell found that S. B. 185 deprived him of the right to appoint highway

commissioners provided for in it, he vetoed the bill providing \$1,500,000 for two years to meet federal aid allotments. However, the state engineer will have available on July 1st, \$900,000 from tax levy; \$160,000 from automobile licenses; \$60,000 from the prison labor fund; \$200,000 from an emergency appropriation to meet federal aid allotments; \$100,000 from the Miami-Superior appropriation; \$25,000 from the Williams-Clarkdale appropriation; \$50,000 from the Arrowhead Trail appropriation and \$115,000 for bridges and approaches. The state has available now \$1,000,000 in federal aid and will have \$1,300,000 more on July 1.

NEW MEXICO—

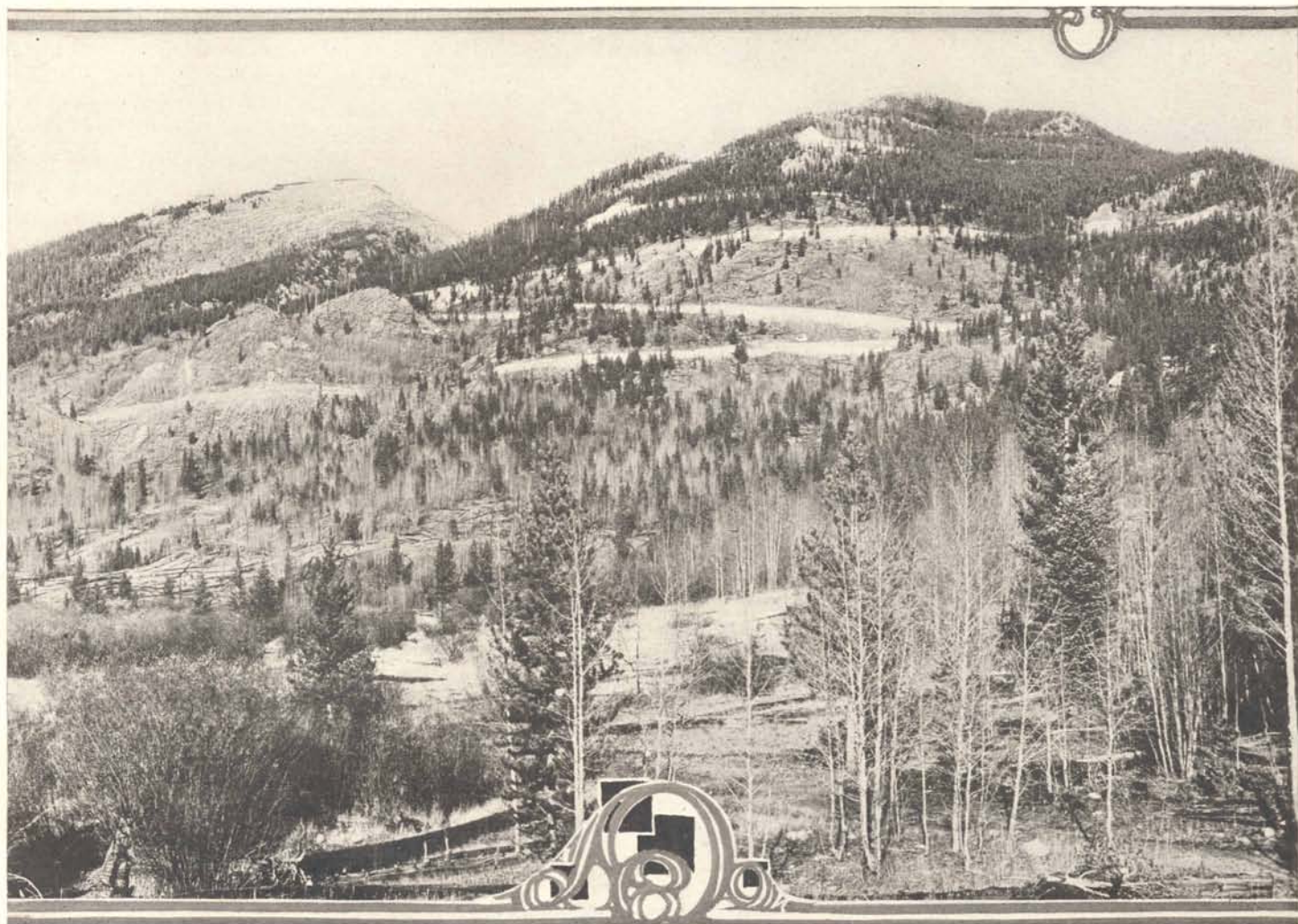
The New Mexico legislature voted to submit a constitutional amendment for a bond issue of \$2,000,000 for better roads. In addition New Mexico has provided for a very heavy mill levy for the same purpose, one bill providing that county commissioners shall make a special levy of three mills on the dollar upon all taxable property in June, 1919, 1920, and 1921. This levy is intended to meet a federal aid allotment of \$4,389,000. Another bill provides for a tax of 1½ mills on all taxable property in the state for the same purpose, and also transfers all automobile tax to the state highway fund, beginning March 17th, last. Still another bill provides for collection of a two-cent per gallon tax on gasoline, the proceeds to go to the state road fund.

OREGON—

Oregon has added \$10,000,000 in bonds to its road fund, there remaining \$3,560,000 from the six million bond issue made several years ago. The state highway commissioner estimates that during 1919, 1920 and 1921, there will be available, including federal and county aid, more than \$25,000,000. Several counties have bond issue propositions before them totalling \$2,640,000. Contracts already let and under way in Oregon total \$2,359,068.17.

MONTANA—

Governor Stewart of Montana vetoed the bill to create a new highway commission and abolish the present non-partisan commission, on the grounds that an adequate road system cannot be worked out if the commission is to be changed constantly. Two years ago, according to the governor, the commission was displaced because it did not do enough work, and the attempt to abolish the present commission was based on the claim that it did too much work. The bill, according to Governor Stewart, also gave the proposed new commission too much discretionary power in regard to accepting or rejecting federal aid allotments. Contracts for four new federal aid projects in Montana have recently been let at an estimated cost of \$73,000, of which the counties will bear fifty per cent of the cost, the federal government fifty per cent, and the state highway the engineering work. Forestry service plans for Montana provide for an expenditure of \$718,688 by the government and \$248,334 by the counties.



A notable switchback leading to the top of the Divide, Fall River Pass. The Highway Department plans to push this road through during the present season, connecting Rocky Mountain National Park with Grand Lake.

Colorado-to-Coast Motor Short Line

CONFERENCES between good roads enthusiasts and highway officials of Colorado, Utah, Nevada and California within the past month have assured the construction of an automobile short line highway from Denver to San Francisco. Heretofore the main auto traffic to the Coast has been over the southern route, passing through New Mexico and Arizona to Southern California, and there has been no practical northern route. The conferences in question were begun with the intention of creating such a route and putting central Colorado, Utah and Nevada on such a transcontinental route.

Last month a meeting was held at the Denver Athletic Club which was attended by W. D. Rishel, secretary and director of the Utah State Automobile association; George Watkins, manager and secretary of the San Francisco Motor Club; Rodney J. Bardwell, representing the Denver Civic and Commercial association and the Denver Motor Club; Ex-Governor George A. Carlson, of Colorado; S. E. Norton, president of the Auto Trades association; Robert H. Higgins, president of the Colorado Good Roads

association; State Highway Commissioner T. J. Ehrhart, and Charles McLain, representing the Colorado Good Roads association.

The project, insofar as Colorado is concerned, calls for connection of the state highway system with a through road being built to the state line through Vernal, Utah, by the Utah Highway Commission. The States of Utah, California and Nevada, together with the General Motors company, have agreed to take care of the road through Nevada.

The route to be followed would start from Denver, pass through Turkey Creek to Fairplay, thence to Buena Vista, then over Tennessee Pass, to Rifle and Meeker, and thence down the White River to the Utah State line. This route is passable now, but those at the meeting believed that it could be much improved by work on the last sixty miles in Colorado. Utah has agreed to build a thirty mile stretch between Vernal and the Colorado line, while on the other side of Vernal it is now con-

(Continued on page 20.)



The incomparable ruggedness of the natural bowl that encloses Ouray, Colorado, is shown in the above photograph. In the foreground appears a switchback in the highway which climbs its sides at one point.

Reorganize Highways Transport Bureau

GROSVENOR B. Clarkson, Director of the U. S. Council of National Defense, announces a reorganization of the Council's Highways Transport Committee.

In harmony with the Council's reorganization to a peace-time basis, the work of the Highways Transport Committee has been broadened to include direct representation from the Office of Public Roads and Rural Engineering of the Department of Agriculture; the Bureau of Markets of the same department; the Post Office Department, and the Department of Commerce.

With this reorganization close co-operation with the executive departments most vitally interested in matters of highways transportation will be brought about in such a way that the committee will be a clearing house of action for all federal interests concerned.

The committee as reorganized consists of the following:

John S. Cravens, of the Council of National Defense, Chairman.

James I. Blakslee, Fourth Assistant Postmaster General.

J. M. Goodell, Consulting Engineer, Office of Public Roads and Rural Engineering.

James H. Collins, Investigator in Market Survey, Bureau of Markets.

R. S. MacElwee, second assistant chief, Bureau Foreign & Domestic Commerce.

Charles W. Reid, executive secretary.

Grosvenor B. Clarkson, Director of the Council, ex-officio.

The committee will be assisted by the Highways Transport Committee Advisory Board, consisting of:

William Phelps Eno, of Washington, D. C.

Prof. Arthur H. Blanchard, of New York.

C. A. Musselman, of Philadelphia.

Raymond Beck, of Akron, Ohio.

John T. Stockton, of Chicago.

The Council in addressing itself particularly to the
(Continued on page 20.)

Colorado Highway Commission's Meeting

The regular meeting of the Colorado Highway Commission held in the state museum building on April 14, 15, 16, resulted in creation of several new state roads. A digest of the minutes is herewith given for the benefit of those sections of the state affected.



Jefferson county's appropriation of \$3,900 was allotted on the basis of \$2,100 raised by the county.

Saguache County petition that the road location of Hogan hill be changed was granted on the condition that the county secure the right-of-way. Committees from Rio Grande and Saguache counties reported a five to seven thousand dollar flood damage on the Gun Barrel road, and the commission agreed to assist the counties in repairing it. Three thousand dollars was appropriated on condition that the county put up \$1,500.

The Mt. Vernon canyon road, opening a new route into the Denver Mountain Parks, was declared a state highway. Surveys are to be submitted by Jefferson county. This will greatly relieve congested traffic conditions on the Lookout and Bear Creek canyon roads.

Two thousand dollars was appropriated to Douglas County for maintenance on roads three and eight on condition that the county contribute \$1,000.

The application of Larimer and Jackson county commissioners for assistance on state highway from Ft. Collins to Walden was laid over to the next meeting. A committee from Brighton, Adams county, asked assistance to lay concrete paving within the town limits and also south of the town for five miles, but this petition was deferred until more information can be obtained as to the amount of funds that will be available this year.

The commission authorized an inspection of a proposed road from Ft. Morgan to the Nebraska state line, requested by Weld county commissioners. The Highway Commission appropriated \$995 for this project.

Notification was received that the San Juan commissioners have appropriated \$15,000 as the county share of the Durango-Silverton forestry project.

Bids opened on April 7, for the construction of the sixty-mile road from Trinidad south to the New Mexico state line, were rejected because excessive. This road, known as Federal Aid Project No. 2, will be constructed by the state highway commissioner.

Petition of Park County commissioners in reference to bridges across the Platte near Hartsell and Fairplay was deferred until the next meeting.

Petitions were read asking that certain streets in the following towns be declared state highways: Olathe, Montrose county; Silverton, San Juan county; Meeker,

Rio Blanco county; South Canon, Fremont county; Empire, Lyons, Boulder county; Manitou, El Paso county; Idaho Springs, Clear Creek county. The petitions were allowed in cases of Meeker, Empire and Idaho Springs. The Manitou petition was laid on the table. The other petitions were referred to the com-

missioners of the respective districts.

Petitions from Weld County requesting that the roads thru Grover and Hereford to the Wyoming state line, and also from Cornish thru Barnsville and Greeley to Windsor be declared state highways were referred to chairman Sommers for investigation.

An appropriation of \$3,246.13 was made to Alamosa county to pay for additional piling driven to protect a bridge on state highway No. 16.

The road from Akron north to Atwood in Washington county was declared state highway 19S.

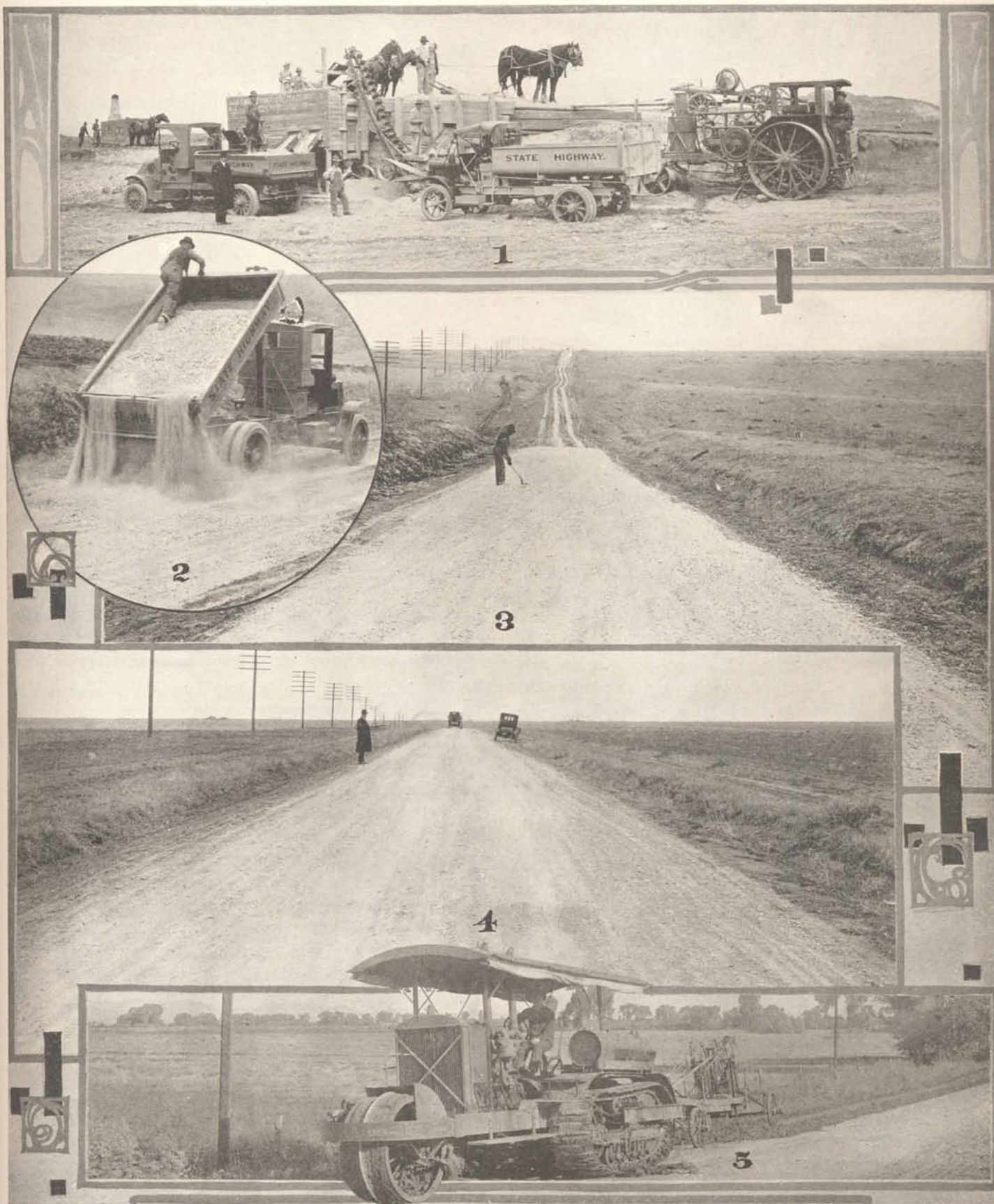
Weld county petition for allotment of state fund on two to one basis was rejected. The allotment in this county is one to one basis.

The commission appropriated \$1,500 for repair of the Lyons-Estes Park road, by the state highway commissioner; \$2,000 was appropriated to Grand County on road 51 north of Grand Lake, the same to be met by \$1,000 from the county. The commission appropriated \$6,000 for construction by the state highway commissioner of two concrete bridges on the road between Denver and Broomfield.

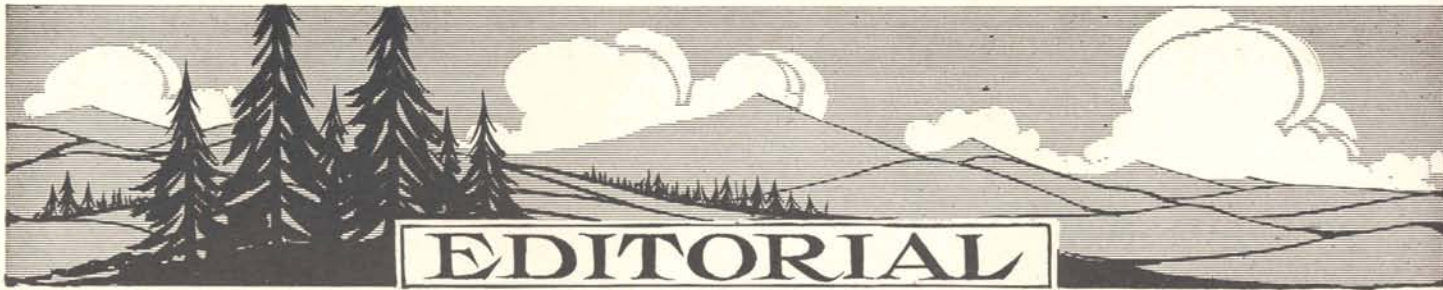
The commission also ordered that the following roads be declared state highways: Sheridan Boulevard, one mile south of Ft. Logan to the intersection of Arvada road No. 72; also the road starting on Waisworth Ave., Arvada, north to Broomfield. The road on the boundary line between the counties of Arapahoe and Jefferson counties also was declared a state highway.

The New Mexico state highway commission has let contracts for four Federal Aid road projects covering the construction of about forty-five miles of road work in the counties of Chavis, Colfax and Santa Fe. It is expected that nearly \$400,000 will be spent on this work. The Santa Fe County road project extends from the city of Santa Fe south to Pankey's Gate. The Colfax County project extends from Raton north to the Colorado state line. The Chavis County project extends from the Mescalero Sands and from Roswell to Comanche Springs.

Governor Sproul of Pennsylvania has signed bills appropriating more than \$14,000,000 for carrying out the highway program of that state. Of this nearly \$11,000,000 has been set aside for construction, maintenance and repair.



1 Conveyor and motor machinery owned by the State Highway Department and used for maintenance in District No. 1. 2. Motor truck spreading gravel on Boulevard F, beyond the north limits of Denver. 3. Before and after gravelling. 4. If the emigrants had found roads like this? 5 Highway Department Caterpillar tractor on the Morrison Road.



County Responsibility

The failure of the state legislature to make adequate provision for funds with which to meet federal aid appropriations now available, or to become available on July 1, 1919, places upon the counties the burden of making up such delinquency as may exist in the state highway funds.

If Colorado is to avail herself of the opportunity offered through federal aid the counties of the state in which federal aid projects are located must raise from funds other than regular road funds approximately 15 per cent of the amount of the allotments. There is hardly much choice about the matter, for it would be almost criminal to allow these funds to lapse back to the federal road revenue when other states are struggling to get their hands upon this money.

Inquiries instituted by officials of the State Highway Department indicate that few counties will fail to raise the extra funds. A number already have signified their intention to do so. This is true also in Colorado's sister states of the mountain region. Montana counties are raising fifty per cent of the total, matching federal aid allotments dollar for dollar. In Utah the counties are expected to raise from 10 to 25 per cent more than was originally contemplated before the passage of the post office appropriation bill with its \$200,000,000 appropriation for post roads. In several states the counties are voting bonds to meet the emergency. The proceeds from the \$5,000,000 bond issue, if authorized by vote of the people of Colorado in the fall of 1920, will not be available until the spring of 1921. The State Highway Commission estimates that the various counties will have to produce something like \$300,000 to enable the commission to take care of federal aid allotments now due or to be available on July 1st.

The Proper Spirit

The manner in which dealers in gasoline have accepted the gasoline tax bill, passed at the last session of the Colorado legislature, not only is highly creditable to them, but an indication of the helpful spirit toward a great road building program manifested by all lines of the automobile industry.

It is to the interest of gasoline dealers, as well as automobile manufacturers, that better roads and more roads should be built, and the automobile trades generally have recognized this. Nevertheless dealers too often consider the immediate effect of a new law upon their business, and are not guided by ultimate results. The car

owner may be expected to complain about the increase in prices, until he becomes thoroughly familiar with the cause and effect, for he must eventually pay the bill, but the gasoline dealers have to argue the matter out with him and it is not always a pleasant task to explain increased costs in these days.

State Construction

Secretary of Agriculture Huston, in a recent message, made the statement that under the federal aid law state highway departments have been developed and strengthened "in a way that could not be equalled under any other type of national road legislation that could be suggested." This is taken by road enthusiasts to mean that direct control of construction under the last federal aid bill, the post office appropriation bill, is to be in the hands of state highway departments and engineers. These are so thoroughly familiar with local conditions that such a course is one greatly to be desired both from a local and national standpoint, the government, of course, retaining a supervisory control.

Visualizing Road Work

Road construction and development is a subject that may more easily be comprehended by the layman through visual demonstration than by reading matter and, acting upon this truth, the Visual Instruction Section of the Department of the Interior, is preparing to book motion pictures of road construction throughout the country. Slides are also to be sent out illustrating the subject. Already twenty-five states have applied, through various agencies, for the service. In addition to the ordinary road pictures there will be listed for circulation among the public some 1,000,000 feet of film negative held by the War Department, which presents every phase of America's participation in the war. These films include road building in the war zone.

One hundred and five federal aid projects, covering 1,148.93 miles of road, and involving a total expenditure of \$14,525,667.38, were approved by the Secretary of Agriculture during March, 1919. This is the greatest amount of federal aid requested for projects in any one month since the passage of the Federal Aid Road Act of 1916. Agreements were executed with state highway departments during the month covering 41 projects with an aggregate total mileage of 290.34.

How to Comply With Bankhead Provisions

By J. E. Maloney, Chief Engineer, State Highway Commission

In order that the Boards of County Commissioners and the public generally may be informed as to the requirements of the Federal Aid Road Act effective March 8th, 1919, the following extracts and notes are given:

FROM BUREAU OF PUBLIC ROADS, ENGINEERING MEMORANDUM No. 5 REVISED.

1. Engineering Memorandum No. 5, effective September 11, 1917, is hereby amended, effective March 8, 1919, as follows:

2. Under the Federal Aid Road Act as amended, any public road that comes within any of the following classes is eligible for Federal Aid:

1. Any public road a major portion of which is used for the transportation of the United States mails at the time the application for Federal Aid is made (the major portion may consist of a single stretch of road or several parts); or

2. Any public road which can, by reasonable construction or improvement in co-operation with the state authorities, be put into such condition as to permit the use thereof for transporting the United States mails; or

3. Any public road no part of which is used for the transportation of the United States mails at the time the application for Federal Aid is made, provided it is not more than ten miles in length and forms a connecting link (cross link) between two roads used for transporting the United States mails at the time such application is made; or

4. Any public road no part of which is used for transporting the United States mails at the time the application for Federal Aid is made, provided it does not exceed ten miles in length and connects the end of a road with the beginning of another road over both of which the United States mails are being transported at the time of such application.

NOTE: These provisions are all subject to the opinion of the solicitor of the Department of Agriculture as to the status of any particular project which may be submitted.

From Rules and Regulations of the Secretary of Agriculture for carrying out the Federal Aid Road Act, revised March 5, 1919.

NOTE: The following are applicable to all Post Road projects:

Regulation 4. Project Statements.

Section 1. A project statement shall contain all information necessary to enable the Secretary to ascertain: (a) whether the project conforms to the requirements of the Act; (b) whether adequate funds, or their equivalent, are or will be available by or on behalf of the state for construction; (c) what purpose the project will serve and how it correlates with the other highway work of the state; (d) the administrative control of, and responsibility for, the project; (e) the adequacy of the plans and pro-

visions for proper maintenance of roads; and (f) the approximate amount of Federal Aid desired.

Sec. 4. Each project statement shall be accompanied by a sketch map, showing the location of the proposed project and all main contiguous transportation features.

Sec. 5. Where any part of the cost of a project is to be furnished by a county or other local subdivision or subdivisions of a state, the project statement shall be accompanied by certified copy of each resolution or order, if any, of the appropriate local officials respecting the funds which are or will be made available, or respecting the supervision of the construction of the road and of the expenditure of the money provided or to be provided for paying such cost.

Regulation 5. Surveys, Plans, Specifications and Estimates.

Section 1. Surveys and plans shall show in convenient form and sufficient detail, according to accepted engineering practice, necessary data, in connection with the specifications and estimates, to enable the Secretary to ascertain and pass upon location, grades, drainage, bridges, other structures, special and unusual features, the work to be performed, and the probable cost thereof, all in conformity with the standards governing form and arrangement prescribed by the Secretary, except that state standard specifications submitted and approved prior to July 1, 1919, need not conform to the standards prescribed by the Secretary; and such approved state standard specifications may continue in force after July 1, 1919, so long as they remain unchanged.

Sec. 2. Specifications shall set forth the proposed method of construction, type of construction, materials to be used, and other essentials, in such detail as to afford complete knowledge of all steps to be taken in the construction of the project.

Sec. 3. The estimate for the proposed type, or types, of construction for each project shall show the estimated quantity and cost of each item of construction in detail and, separately, the ten per cent fund, and shall not include any expense of advertising.

Sec. 4. Unless state standard contract and bond forms have been approved, there shall be submitted, with each set of specifications, for the approval of the Secretary copies of the form of contract, together with all documents referred to therein or made part thereof, and of the contractor's bond which it is proposed to use on the project. No alteration of such form shall be made until it is approved by the Secretary.

Sec. 5. Rights-of-way necessary for any project shall be provided, and any incidental damages to adjoining property due to construction work paid, by or on behalf of the state, and the expense thereof shall not be

included in the estimate or paid in any part, directly or indirectly, by the Federal Government.

Sec. 6. Grade crossings shall be avoided where practicable. The estimated cost of eliminating a grade crossing shall not include any amount the state, county or other civil subdivision has received, is to receive, or is entitled to receive, directly or indirectly, as reimbursement or payment from the owner of a public utility, for or on account of such elimination.

Sec. 7. No part of the expense of making surveys, plans, specifications or estimates, by or on behalf of the state prior to the beginning of construction work, shall be included in the estimate or paid by the Federal Government.

Sec. 8. When plans, specifications and estimates have been approved by the Secretary, no alteration thereof shall be made without his approval, except that minor alterations which will not involve an increase in the cost of the project to the Federal Government may be made with the approval of the Director of the Bureau of Public Roads, or of his authorized representative.

Regulation 6. Project Agreements.

Section 1. A project agreement between the State Highway Department and the Secretary shall be executed in triplicate on a form furnished by the Secretary. No payment shall be made by the United States unless or until such agreement has been executed, nor on account of work done prior to the recommendation by the District Engineer of the Bureau of Public Roads that the project plans, specifications and estimates be approved.

Regulation 7. Contracts.

Section 1. No part of the Federal money set aside on account of any project shall be paid until it has been shown to the satisfaction of the Secretary that adequate means, either by advertising or by other devices appropriate for the purpose, were employed, prior to the beginning of construction, to insure the economical and practical expenditure of such money.

Sec. 2. Immediately on publication of advertisements, copies thereof shall be furnished to the Bureau of Public Roads.

Sec. 3. Bids shall conform to the standard proposal form and the items shall be the same as those contained in the estimate provided for in Reg. 5, Sec. 3.

Sec. 4. Copy of the tabulated bid prices, showing the unit prices and the totals of each bid for every project, shall be furnished promptly to the Bureau of Public Roads.

Sec. 5. In advance of the acceptance of any bid, sufficient notice of the time and place the contract is to be awarded shall be given to the Bureau of Public Roads to enable it, if it so desire, to have a representative present. When a bid has been accepted, prompt notice thereof shall be given to the Bureau of Public Roads.

Sec. 6. If the contract be awarded to any other than the lowest responsible bidder, the Federal Government shall not pay more than its pro rata share of the lowest

responsible bid, unless it be satisfactorily shown that it was advantageous to the work to accept the higher bid.

Sec. 7. A copy of each contract as executed shall be immediately certified by the State Highway Department and furnished to the Bureau of Public Roads.

Sec. 8. The specifications and plans shall be made a part of the contract.

Sec. 9. No alteration in such contract shall be made without the approval of the Secretary.

Regulation 8. Construction Work and Labor.

Sec. 3. Unless otherwise specifically stipulated in the project agreement, bridges, viaducts and underpasses shall have clear width of roadway of not less than 16 feet, and clear head room of not less than 14 feet for a width of 8 feet at the center.

Sec. 4. No part of the money apportioned under the Act shall be used, directly or indirectly, to pay, or to reimburse a state, county or local subdivision for the payment of, any premium or royalty on any patented or proprietary material, specification, process, or type of construction, unless purchased or obtained on open actual competitive bidding at the same or a less cost than unpatented articles or methods equally suitable for the same purpose.

Sec. 5. The supervision of each project by the State Highway Department shall include adequate engineering and inspection throughout the course of construction.

Sec. 8. Force account work, or other labor, teams, material and equipment furnished by or on behalf of the State Highway Department on construction work shall be used only on such terms and conditions as are set forth in the project agreement.

Regulation 9. Records and Cost Keeping.

Section 1. Such records of the cost of the work, and of inspection and tests by or on behalf of the state, shall be kept by or under the direction of the State Highway Department, as will enable the Secretary, or his authorized representative, at any time to determine the condition of the construction and maintenance of, and the cost to the state and the Federal Government of the construction work and labor done on any project.

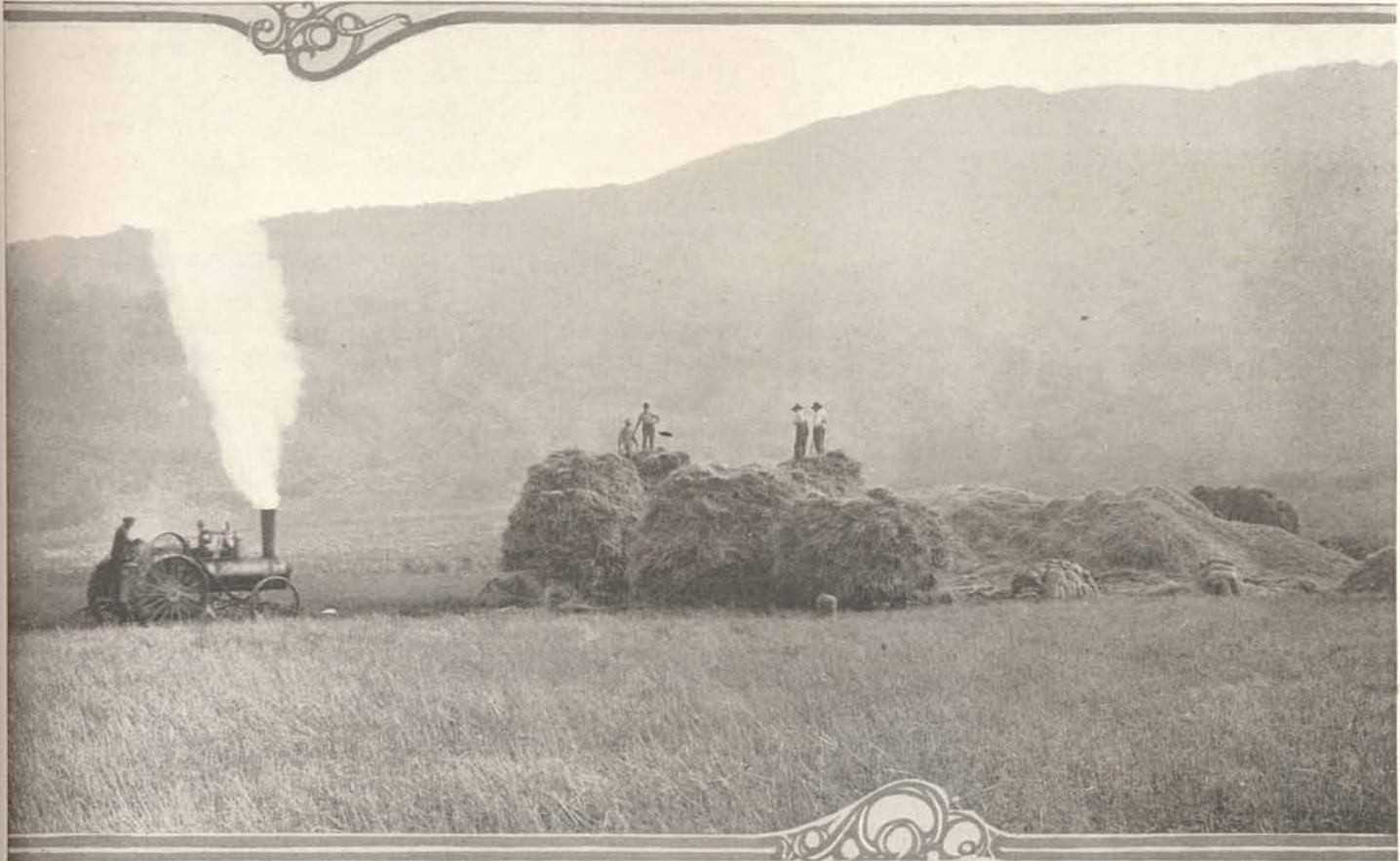
Sec. 2. The accounts and records, together with all supporting documents, shall be open, at all times, to the inspection of the Secretary, or his authorized representative, and copies thereof shall be furnished when requested.

Sec. 3. Certified copies of payrolls on force account work and of all vouchers for other expenditures shall be furnished, whenever requested by the Secretary or his authorized representative.

Sec. 4. Whenever requested by the Secretary or his authorized representative, unit costs on any project shall be kept, on forms furnished by the Bureau of Public Roads.

NOTE: The method of procedure is: A piece of road is selected for improvement which is a state road and which also is within the classification of The Federal Aid Road Act. An engineer for the state is sent to make a preliminary investigation to base an approximate estimate of the proposed work

(Continued on page 20.)



A modern farm in the Far West. Haying and threshing scene on the road to Aspen, Garfield County.

Road Drag Rules Applicable to Colorado

COUNTY Commissioners and road overseers in Colorado will find much of benefit in a set of rules designed to govern road dragging, in use in Saskatchewan, Canada, because these rules fit Colorado conditions in an ideal manner. They are reprinted in the Bulletin for that reason.

1. Drag at the right time. The right time to drag a road is as soon as possible after every rain when the soil is mellow and pulverizes readily. Do not drag when the soil sticks to the drag, or do not wait until the soil is too dry before you drag.

2. Drag early in the spring as soon as the frost is out of the ground. Dragging a muddy stretch of road will aid in drying it out, since the wind and sun will have free access to the thin layer of saturated soil which the drag spreads over the surface of the road.

3. Drag before it freezes. A road dragged before it freezes in the fall will freeze smooth, and usually remain in this condition for some time. The general condition of the road in the spring, after winter dragging, will be remarkably good.

4. Drag a gravel road when wet. A gravel road should be dragged, as a rule, soon after a rain when the soil is wet but not too saturated. It will be found that the gravel can be worked better when in a wet condition.

5. Drag between the shoulders. When a road is bad-

ly cut up over the entire surface, two complete round trips should be made with the drag. The first trip should be made along the edge of the shoulder. The second trip should be made inside and slightly overlapping the first. This will take up any excess material left by the first round, and will aid in building up the crown.

6. Ride the drag. Under ordinary conditions the driver should ride his drag. He will soon be able to adjust his position so as to produce the desired effect. By standing on the forward edge, the drag may be made to cut deeper and vice versa. A long hitch causes a downward pull and thus increases the depth of the cut, while a short hitch tends to lift up on the front blade and decreases the depth of the cut.

7. Carry pick and shovel. The driver should always carry a pick and shovel on his drag. He will find them very useful in opening water courses, filling mud holes and chuck holes, repairing washed places and digging up rocks.

8. Drag often. Drag as often as ruts appear in the road. Do not try to build a road with the drag. Its use is to maintain the surface of the road which already constructed, in a smooth condition. The best results are obtained by repeated dragging.

9. Successful road dragging requires experience. Dragging a road is a business that is but learned in the

(Continued on page 20.)

Commissioner Changed in District Five



Robert E. Norvell.

State Road District No. 5, embracing the great empire of northwestern Colorado, is now represented on the Colorado Highway Commission by Robert E. Norvell of Hayden, who was appointed by Governor Oliver H. Shoup upon expiration of the term of L. Boyd Walbridge of Meeker.

Mr. Norvell has lived in Colorado for twenty-eight years and has been identified with the upbuilding of the northwestern section of the state since he first entered that land of promise. He was born in Tennessee.

Northwestern Colorado has a great future before it, as it has become what it is in spite of the fact that it has never been on a through railroad and was not served by any railroad until the Denver & Salt Lake was pushed to Steamboat Springs. Business men and cattlemen of Routt and Moffat counties still have long trips to market, but the automobile is rapidly advancing the interests of these counties.

Mr. Norvell is peculiarly fitted to serve on the highway commission as representative of the northwest, not

alone because of his familiarity with the region, but because as a farmer and a distributor of automobiles he is intimately in touch with the great industry of the region, and the means of bringing it in closer touch with the world.

The new highway commissioner has always taken an active interest in a public way in every question involving the interests of his section in particular and the interests of the state in general. He was a member of the Nineteenth and Twentieth General Assemblies, was active in the promotion of good roads legislation during this official period, and has done much to advance the road situation in his own section.

L. Boyd Walbridge

L. Boyd Walbridge, who completed a six year term as highway commissioner for District No. 5, on April 1st of this year, has for more than twenty years played an active part in the development of northwestern Colorado.

Mr. Walbridge, although a pioneer in the northwest, is not a native Coloradoan. He was born September 17, 1859, in Wellesboro, Tioga County, Pennsylvania, moved to Muncy, Penn., when three years of age and was educated in the public schools and the Lycoming County, Pennsylvania Normal school. He started as school teacher and taught in country schools for two terms. Later he worked for a number of years as head clerk and bookkeeper in a Pennsylvania general merchandise-store. Mr. Walbridge went to Hayden, Routt County in the fall of 1886 and spent that winter with his father, Joshua Walbridge, who for a number of years was county judge of Routt.

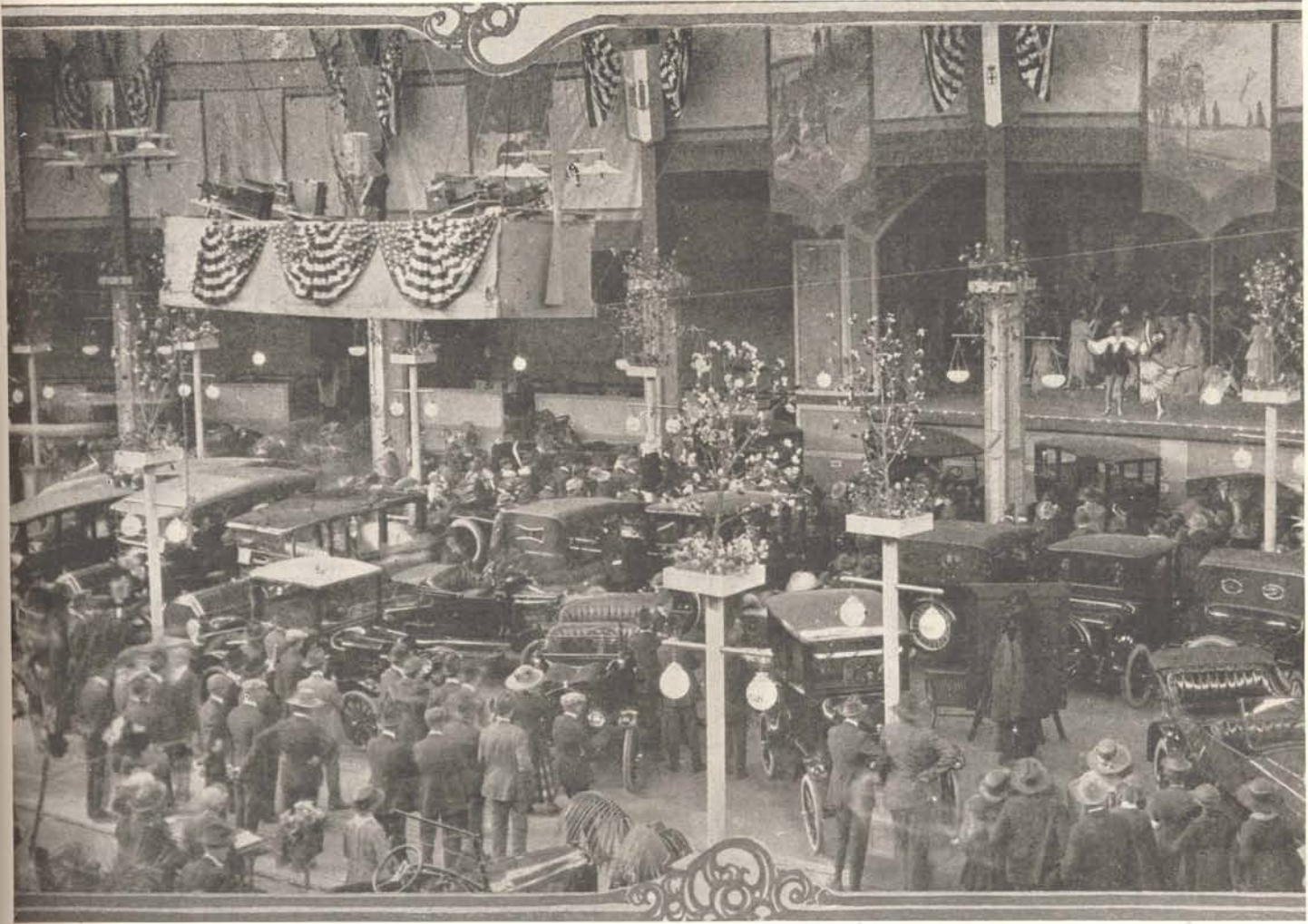
Mr. Walbridge went to Meeker in 1887 and secured employment in the general merchandise store of Thomas Watson. He then worked for J. W. Hugus & Co., pioneer merchants and bankers, part of the time in the store and part of the time as

cashier of their bank. He was elected county clerk of Rio Blanco County, served three terms, and in 1895 branched out in business for himself with an old land company in the general merchandise business. He was one of the founders and for many years has been cashier and director of the First National Bank of Meeker. He always found time however, to give his services to help build northwest Colorado. He represented Routt and Rio Blanco in the Seventeenth and Eighteenth Assemblies.

During Mr. Walbridge's term on the State Highway Commission some very important road projects were inaugurated, all of great importance to his section of the country. These included the opening of some notable passes in District No. 5, including Rabbit Ear, Independence and Tennessee passes, construction of the Pike's Peak ocean-to-ocean highway and Midland trail through to the Utah state line, opening of the canyon of the Grand above Glenwood Springs, elimination of Battle Mountain, and the opening of the north and south highway from Grand Junction to Rifle, thence north to Craig.



L. Boyd Walbridge.



View of the Automotive Show, held in the Stockyards Pavilion, Denver, April 1 to 5, one of the finest exhibits in recent years given in the West. The accessories display was especially good, while every exhibit was of the latest on the market. The Highway Commission road construction display made a hit with the spectators.

Progress on the D-C-D Highway

W. A. Palmer, secretary and general manager of the Dallas-Canadian-Denver Highway Association, has recently completed a trip from Canadian to Dallas and intermediate points in the interest of the highway. He held meetings in all the towns between Canadian and Dallas, and he reports that the people are very active in the matter of improvement of the highway, and, without exception, every town is loyal and doing everything possible in the interest of the D-C-D. He reports that Denton county, Texas, has recently voted one and one-half million road bonds, and every mile of the D-C-D in that county will be hard surfaced. From Dallas to Lewisville, in Denton county, the D-C-D highway goes over a splendid graveled pike. Cook county, just north of Denton, will vote on April 12th one and one-half million good road bonds, and, likewise, every mile of the D-C-D highway in that county will be hard surfaced. A magnificent steel and concrete bridge has recently been opened for traffic across Red river between Texas and Oklahoma, and the cities of Gainesville, Marietta, and Ardmore have raised

a fund of six thousand dollars to grade and clay the stretch of deep sand north of Red river in Love county, Oklahoma. Love county will soon hold an election to vote one hundred and fifty thousand for good road bonds. Carter county's portion of the D-C-D highway is about completed, and this includes twenty miles of road west from Ardmore having a crushed rock base with graveled surface. Every town on the line has promised to make immediate improvement in their respective sections by re-grading, filling in bog holes and dragging. Splendid concrete bridges and culverts are being placed on many sections of the road and there is general activity. Practically every town between Canadian and Dallas has paid its quota in full for the expenses of the association.

Mr. Palmer spent considerable time in Ardmore in conference with the Chamber of Commerce perfecting plans for the annual convention in Ardmore on June 10-11. He also reports that every town on the line will send a large number of cars to the convention, and up to date at least five hundred cars have promised to attend.

Colorado-to-Coast Motor Highway

(Continued from page 10.)

structing a 75 mile concrete road. The greatest difficulty is expected in Nevada, as this State has heavy work before it, aside from this through route. The General Motors company, however, has agreed to give \$250,000 for road construction along this section of the route.

Commissioner Ehrhart informed the meeting in Denver that the highway commission has laid out for this year expenditures along the route mentioned totaling \$250,000 for this year. The key to the situation is Tennessee Pass. No other pass in the Rocky Mountains remains open so well during the winter, and it would be possible to maintain practically unbroken traffic during the year over Tennessee Pass. During five or six months of the year, or while the tourist season was on, Berthoud Pass could be used and the journey materially shortened.

The California and Utah representatives are exceedingly enthusiastic about the route and promised quick action from their states. A second meeting is to be held in the near future in Salt Lake City, which will be attended by California and Nevada road enthusiasts, and an active campaign will then be launched to interest road organizations, chambers of commerce and other business associations along the route so that the route may be opened this summer.

Colorado representatives have promised the fullest co-operation as soon as the general program has been adopted in all states, and the matter will then be taken up by the Civic and Commercial Association, the Denver Motor Club and other Colorado cities along the route. It is possible to secure a number of highly scenic variations of the route in Colorado with very little deviation from the short line. Colorado Springs, Salida, or the Middle Park towns could very easily be taken in on detour trips. A road leads down the Bear River from Steamboat Springs, which is almost as short as the one first outlined. Such a route will serve to divert thousands of cars thru Colorado that now go by the southern route.

Reorganize Highways Transport Bureau

(Continued from page 11.)

problems growing out of the entrance of the motor truck into the commercial transportation field, will seek to determine just how the motor truck can best be fitted into the nation's existing transportation agencies.

It is the policy of the Council through its committee to co-operate with all transportation agencies with the view of determining for the people how their transportation needs can be served most efficiently, speedily and economically, and to aid in the promotion of motor express lines through rural communities which now do not have adequate transportation.

The Council will co-operate with the United States Railroad Administration in the study of the short haul problem, and will also give specialized attention to the relation of the Rural Motor express to interurban electric

lines and waterways traffic, in the interest of all elements concerned.

The Highway Industries Association announces from its headquarters in Washington, D. C., that seven hundred and twenty organizations have endorsed the Chicago highway resolution, which calls for the national highway plan as set forth in the Townsend bill, a digest of which was published in April Colorado Highways. Every state in the Union is represented. The organizations include: three hundred and ninety-three commercial clubs, twenty-seven national trade organizations, thirty-one state trade organizations, seventy-two rotary clubs, sixty-two travelers protective associations, seventy-six United Commercial Travelers associations, twelve Kiwanis clubs, ten transcontinental highway associations, thirty-seven state and county good roads organizations. Out of this number two hundred and thirty-eight already have appointed good roads committee to co-operate directly with the highways associations.

How to Comply With Bankhead Provisions

(Continued from page 16.)

upon. A project statement and estimate is made out and submitted to the Bureau of Public Roads for approval. An engineer of the U. S. Dept. inspects the location as to the proposed work and also as to the status of the road as a postal route. Upon approval by the United States of the Project Statement, final surveys, cross sections and plans for the proposed work are made and an estimate of the cost. These are submitted to the U. S. Department and, upon approval, a project agreement or contract is signed by the Secretary of Agriculture for the United States and by the State Highway Commissioner for the state. The work is then advertised and contract let. By the co-operation of the U. S. District Engineer's office time has been saved by having the preliminary investigation made by the State and Federal Engineer together.

Attention may be called to the following points:

The improvement must be of a substantial character.

The maintenance must be kept up by the state and county to the satisfaction of the United States on all Federal Aid roads.

The engineering information must be accurate and complete and cover all details.

When a county sets aside a certain amount of county funds to assist the state in meeting the Federal Aid funds, a certified copy of the resolution of appropriation in duplicate must be sent in to the State Highway Commission to be filed with the project statement.

Road Drag Rules Applicable to Colorado

(Continued from page 17.)

school of practical experience. Every man engaged in dragging must become an enthusiastic and observant student of the road to be dragged if he desires to produce results.

Avoid dragging when the mud sticks to the drag, except when water is standing on the road; then the drag can be used to bale out the water. It is best to drag just following a rain. Drag from the side to the center, driving on one side, returning on the other. It is usually a waste of time to drag a dry road. Drag when possible at all times of the year.

Road Bills Enacted by the 22nd Assembly

*Five Million Dollar Bond Issue
One-half Mill Levy for Roads
One Cent Per Gallon Gasoline Tax
Reimbursement Highway Fund
Motor Vehicle Law*

THE five road measures passed by the Twenty-second General Assembly of Colorado are printed below for the information of those Bulletin readers who desire accurate information as to the contents of the bills. Four measures were enacted into law and signed by Governor Shoup. The resolution providing for submission of the \$5,000,000 bond issue calls for a vote upon this measure at the next state election, which does not occur until November, 1920.

All of the measures mentioned are printed in full with the exception of the Motor Truck Bill, so-called because of the important changes made in relation to motor truck licenses. Because of its length a digest was made of this law.

The only measures from which the State Highway Commission can expect any material benefit during 1919 are the gasoline tax and the reimbursement of highways funds from the Capitol building fund. However, this will be sufficient to give the commission a start toward construction of federal aid projects, provided that estimates and data, collected by the highway department upon the proposed projects, meet the approval of government officials before the end of the year.

The amount of work to be done in preparing estimates for federal aid adopted in the budget of the highway commission, in preparing maps, specifications and plans, is enormous and will necessitate the expansion of the present engineering force until well into next fall. When this is done these plans must go to the Secretary of Agriculture for approval, and the agreement must then be signed with the state highway department.

Bond Issue

HOUSE CONCURRENT RESOLUTION No. 5. By Mr. Bond

Section 1. Whereas the prosperity and comfort of the citizens of the State of Colorado, as the State develops, are becoming more and more dependent upon the condition of the public highways of the State, and under existing law is it impracticable and often impossible to construct and maintain highways throughout the State so that the same shall be permanent and capable of the highest and best utility and service;

Sec. 2. Now, therefore, be it resolved by the House of Representatives of the Twenty-second General Assembly, the Senate concurring:

That there shall be submitted to the qualified electors of the State of Colorado, at the next general election of members of the general assembly, for their approval or rejection, the following amendment to the Constitution of the State of Colorado, which, when ratified by the majority of those voting thereon, shall be valid as a part of the said Constitution, to-wit:

Section Three (3) of Article Eleven (XI) of the Constitution of the State of Colorado shall be amended so as to read as follows: (The old part of the Section omitted because of lack of space. The proposed amendment follows):

"And provided further, that, in addition to the amount of debt that may be incurred as above, the State may contract a debt by loan for the purpose of creating a fund to be expended as provided by law, by the State Highway Commission for the construction and improvement of public highways in the State of Colorado, said debt to be evidenced by registered coupon interest bearing bonds to an amount not to exceed \$5,000,000.00.

"The said bonds, to an extent not exceeding \$2,000,000, shall be dated June 1st, 1921; not exceeding \$3,000,000, dated June 1st, 1922; and said bonds shall be payable at the option of the State of Colorado at any time after ten (10) years from their respective dates, and shall be of the denomination of fifty (\$50) dollars each or any multiple thereof. The interest on said bonds shall be payable semi-annually at the rate of five (5%) per cent per annum, at the office of the State Treasurer or at some place in the State of New York, U. S. A., and the principal of said bonds shall be payable at the office of the State Treasurer.

"No such bonds shall be issued except at par and accrued interest.

"Fifty per centum (50%) of the proceedings from the sales of said bonds shall be divided among the various counties of the state according to the mileage of State Roads and State Highways within said counties, and the remaining fifty per centum (50%) of the proceeds from the sale of said bonds shall be used by the State Highway Commission only to meet and accept the Federal Aid awarded to the State of Colorado by United States Congressional Act.

"The General Assembly shall, as by law provided, enact all such laws, as may be necessary with reference to said bonds and with reference to carrying out the projects and purposes herein specified."

Half-Mill Levy

HOUSE BILL No. 570.

By Mr. Best

Levying a tax for the building of Highways in the State of Colorado and providing for the expenditure thereof.

Be it enacted by the General Assembly of the State of Colorado:

Section 1. There shall be levied annually, beginning with the year 1919, for the purpose of building Highways within the State of Colorado, one-half of one mill on each and every dollar of assessed valuation of all taxable property in the state of Colorado, said tax to be assessed and collected in the same manner and at the same time as is now or may hereafter be provided by law for the assessment and collection of State tax.

Sec. 2. The State Treasurer shall credit the State Highway Fund with all funds received by him under the provisions of this act, and shall furnish the State Highway Commission with a statement of such account not later than the 25th day of each calendar month showing all monies received and credited to the said account during the previous calendar month in which said monies are so received by him.

Sec. 3. The General Assembly hereby declares this law is necessary for the immediate preservation of the Public peace, health and safety.

Sec. 4. In the opinion of the General Assembly, an emergency exists, therefore this act is to take effect and be in force on and after its passage.

One Cent Per Gallon Gasoline Tax

HOUSE BILL No. 406.

By Messrs. Rotruck, Bond, Tedman, Wilkins, Kelley, Godsmann, and Sutton.

Providing a tax on Petroleum products used in propelling motor vehicles

Be it enacted by the General Assembly of the State of Colorado:

Section 1. A tax of one cent (1c) is hereby levied and shall be collected upon each gallon of kerosene, gasoline and any fluid or substance which is a product of Petroleum, whether manufactured in this State or not, offered for sale or used for consumption for power purposes in propelling motor vehicles. Provided that this tax shall not be fixed and charged upon distillate, crude petroleum, residuum, gas oil or smudge oil.

Sec. 2. It shall be the duty of the State Oil Inspector, his assistant and deputies, to collect the tax provided for in this act, at the same time and under the same rules, regulations and provisions under which he makes the collection of the 1-10c inspection fee provided for in Chapter 126 of the Session Laws of Colorado of 1915.

Sec. 3. The State Treasurer is hereby authorized and directed to pay warrants, to persons found to be entitled thereto, out of the special road fund herein created, to repay any tax erroneously collected under this act upon vouchers drawn by the State Auditor with the approval of the State Auditing Board.

Sec. 4. It shall be the duty of the State Oil Inspector to transfer daily the collections obtained from the one cent tax, provided for in this act, to the State Treasurer, to be placed by the said State Treasurer in the special road fund. One-half of the said special road fund shall be apportioned by the State Highway Commission among the several counties of the State according to the mileage of the State roads and State Highways, as established by the State Highway Commission, in said counties, on the first day of January of each year, provided: that nothing in this section shall prevent the State Highway Commission from applying the money in this special road fund, or so much as may be necessary, during the year 1919, to meet the money appropriated by the United States government on the dollar-for-dollar basis, for road construction in Colorado.

Sec. 5. The General Assembly hereby determines and declares that this act and each and every sentence, phrase, clause, section and subsection thereof is necessary for the immediate preservation of the Public peace, health and safety.

Sec. 6. In the opinion of the General Assembly an emergency exists; therefore, this act shall take effect and be in force from and after the date of its passage.

Reimbursement Bill

SENATE BILL No. 274.

By Senator Napier

To provide for the payment of monies borrowed by The Capitol Building Fund from the Internal Improvement Permanent Fund.

Be it enacted by the General Assembly of the State of Colorado:

Section 1. For the purpose of making repayment to the Internal Improvement Permanent Fund of the monies borrowed from the State fund by The Capitol Building Fund, together with interest thereon, the Auditor of the State is hereby directed to issue certificates of indebtedness in favor of the State Treasurer, as custodian of the Internal Improvement Permanent Fund and payable from the Capitol Building Fund as follows:

Ten (10) Certificates of Indebtedness of Five Thousand (\$5,000.00) Dollars each, payable from monies accruing to the Capitol Building Fund from revenues of the year 1919;

Ten (10) Certificates of Indebtedness of Five Thousand (\$5,000.00) Dollars each, payable from monies accruing to the Capitol Building Fund from revenues of the year 1920;

Ten (10) Certificates of Indebtedness of Five Thousand (\$5,000.00) Dollars each, payable from monies accruing to the Capitol Building Fund from revenues of the year 1921;

Ten (10) Certificates of Indebtedness of Five Thousand (\$5,000.00) Dollars each, payable from monies accruing to the Capitol Building fund from revenue of the year 1922.

Sec. 2. Said certificates of indebtedness shall bear interest at the rate of 4 per cent (4%) per annum.

Sec. 3. The said State Treasurer is hereby authorized and directed to sell the Certificates of Indebtedness provided for in Section 1 hereof at not less than par and accrued interest, and to carry the proceeds of the sale thereof into the Internal Improvement Permanent Fund to apply to the liquidation of the indebtedness incurred under authority of an act entitled "An act for the transfer and loan of One Hundred Fifty Thousand Dollars (\$150,000.00) from the Internal Improvement Permanent Fund to the Capitol Building Fund," approved April 6, 1891.

Sec. 4. The faith and credit of the State is hereby pledged for the payment of principal and interest of said certificates of indebtedness.

Sec. 5. All acts and parts of acts in conflict herewith are hereby repealed.

Sec. 6. This act is hereby declared to be necessary for the immediate preservation of the Public peace, health and safety

Sec. 7. In the opinion of the General Assembly an emergency exists; therefore, this act shall take effect and be in force from and after its passage.

Motor Vehicle Law

H. B. 471 by Messrs. Rhoads, Jenkin, Kelley, Godsmann, Sutton, Wilkins, and Senators Booth and McWilliams.

Section 1 of the act defines the terms and phrases used in the bill. "Motor vehicles" are defined as all vehicles propelled by any power other than muscular power except "road rollers, traction engines used exclusively in drawing or propelling farm machinery, any vehicle that runs on a track or travels through the air, ambulance, fire engines and apparatus and vehicles used solely on official business by federal, state, county or municipal officers."

"Motor truck" is defined as "a motor vehicle specifically equipped for the transportation over and upon the public highways of goods, wares and merchandise and used or to be used for such purpose, and having a carrying capacity of two thousand or more pounds." "Trailer" with a few exceptions, "means a vehicle constructed or specifically equipped for the transportation of goods, wares and merchandise upon the public highways and used or to be used for such purpose, and propelled or moved by being attached to a motor or other vehicle."

Motorcycles are defined as vehicles with not more than three wheels on the ground, not more than 10 horse power, and not exceeding 500 pounds weight, unladen.

Section 2 provides for registration of motor vehicles with the Secretary of State, and the furnishing of complete information in regard to the vehicle and owner, as well as for a public registration of this information.

Section 3 provides for issuance of license tags. The change in the law makes it necessary after 1919 that owners shall carry a license tag both on the front and rear of the vehicle.

Sections 4 and 5 cover the manner of charging license fees. Up until January 1, 1920, the charge is to be based on horse power, the system used at the present time. After January 1, 1920, the charge is to be made on a cost basis, determined by the cost to owners f. o. b. factory, and the license fee shall be one-half of one per cent of the original cost price to owners,

provided that no license shall be less than \$5.00 per year. A reduction of 30 per cent is allowed on vehicles purchased five years previous to the calendar year in which they are registered with an additional reduction of 20 per cent on vehicles purchased eight years previous to registration or re-registration. These provisions apply to passenger or visiting cars. The following are exempted from license: cars used exclusively in the service of the state, any municipality or county, federal government, charitable, or philanthropic association.

Sections 6 and 7 relate to motor trucks and trailers, and, as the licensing of these constitutes the main purpose of the act, they are given in full:

Section 6. (a) The following annual registration license fees are to be paid to and collected by the secretary of state or his authorized agent upon the registration or re-registration of motor trucks.

(b) The annual registration license fee for the registration or re-registration of a motor truck with a carrying capacity of one ton shall be ten dollars; of more than one ton and not to exceed two tons, seventeen dollars and fifty cents; of more than two tons and not to exceed three tons, twenty-five dollars; of more than three tons and not to exceed four tons, thirty-seven dollars and fifty cents; of more than four tons and not to exceed five tons, fifty dollars; and for each additional ton or fractional part thereof over five tons, twenty-five dollars.

(c) The annual registration license fee for the registration or re-registration of motor vehicles used in the transportation of passengers for hire and which seat nine passengers shall be twenty dollars; provided, a further and additional annual fee of one dollar shall be charged for each additional seat capacity provided for passengers in such vehicles.

(d) The provisions herein for the payment of such annual registration license fees for the registration or re-registration of such motor trucks and trailers and of motor vehicles used in the transportation of passengers for hire shall not be held to apply during the year 1919 to any such vehicle that may have been registered or re-registered for the said year 1919 under any previous enactment of the General Assembly of Colorado.

(e) No city, county or town shall require of any person any registration license fee for any motor vehicle or trailer in addition to the registration fees to be paid to the Secretary of State or his agents as provided for in this act.

Section 7. (a) The following annual registration license fees are to be paid to and collected by the Secretary of State, or his authorized agent, for the registration or re-registration of a trailer:

For any such trailer having a carrying capacity of one ton and less than two tons an annual registration license fee of Ten dollars shall be charged; and for every additional ton of carrying capacity over and above said one ton, an additional and further fee of Five dollars shall be charged for each such additional ton of carrying capacity; provided further, a small vehicle having a carrying capacity of not to exceed fifteen hundred pounds shall not be classed or rated as a trailer within the meaning of this act.

Dealers in passenger cars are required by Section 8 to pay \$20 for the first vehicle or trailer, with an additional \$2.50 for each car or trailer up to and including five, with a \$10.00 fee for each vehicle over five. Motor truck dealers are required to pay \$30 for the first truck, \$10.00 for each additional registration up to and including five, and \$20.00 for each registration over five. Dealers in motorcycles are charged one-third the fees on cars other than trucks.

Section 9 provides for registration and licensing of "chauffeurs," the latter being defined as those driving a motor vehicle for hire. Section 10 provides for a 10-day temporary license at 25 cents each. Non-residents of the state are exempted from paying a license on other than trucks or trailers, for 90 days, under Section 11.

Sections 12, 13 and 14 provide for: carrying certificate of registration; penalty of \$100 for false statements; penitentiary term of three years for alteration or falsification of tags.

Sections 15 and 16 provide for destruction of obsolete tags; cancellation of license upon transferal of motor vehicles.

Section 17 directs the disposal of funds collected through license fees. After expenses of operation shall have been paid the state treasurer is ordered, not later than the 20th day of each month, to:

"Pay to the credit and account of the State Highway Fund fifty (50) per cent of the moneys received by him under the provisions of this act; provided, said fifty per cent of such moneys so paid to the credit and account of said State Highway Fund shall be expended under the direction of the State Highway Commission for the construction, maintenance and improvement of the state highways of this state, and for no other purpose.

"The remaining fifty (50) per cent of such moneys so paid by the Secretary of State to the State Treasurer under the provisions of this Act shall, not later than the Twentieth day of each calendar month, be paid by the State Treasurer to the county treasurers of the different counties in which such moneys were collected during the preceding calendar month; provided, such payments shall be made in equal proportion to the moneys collected in each such county under the provisions of this Act; provided, further, such moneys so paid to said county treasurers shall be credited to the road funds of such counties and shall be expended under the "direction of the board of county commissioners of each such county for the construction, maintenance and improvement of the county roads and bridges of such county, and for no other purpose."

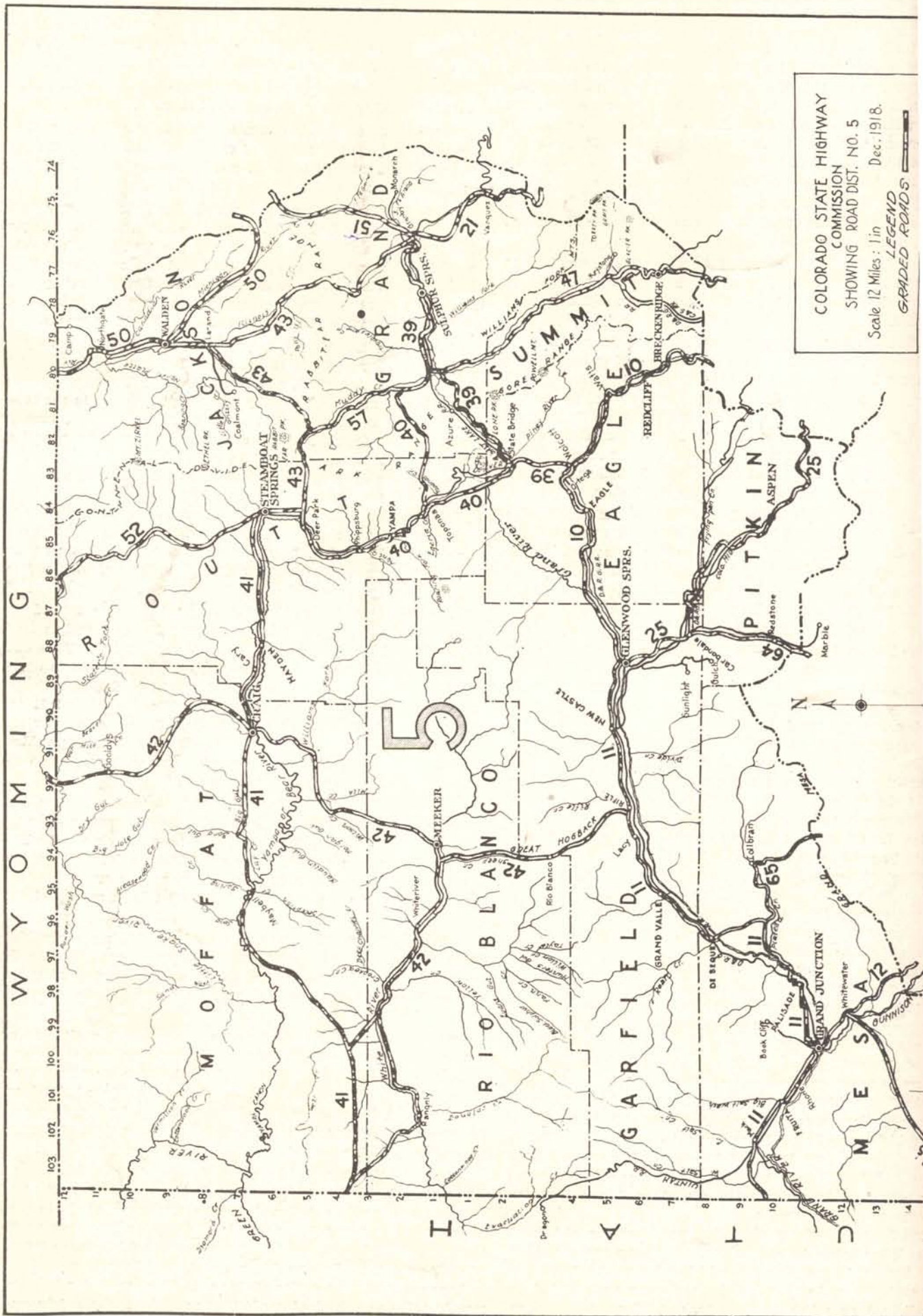
Section 18 authorizes the Secretary of State to expend not more than five per cent of the total annual gross receipts from licenses and penalties, for administration of the law. The county clerk and recorder of each county, except Denver, is designated by Section 19 as the authorized agent for administration of the provisions of the act in his county. Section 20 and 21 are concerned with details of administration, the motor supervisor, to be appointed by the Secretary of State, and motor vehicle license inspectors being given police powers with respect to enforcement of the provisions of this act.

Section 22 gives the Secretary of State and motor vehicle supervisors power to revoke licenses, but no license may be revoked unless the driver or owner has been convicted of violation of the law in police court, or unless final judgment has been entered against him in a civil suit, and in any event, the judge before whom the case was tried must have requested the revocation in writing.

Section 23 prohibits any person from driving a machine while under the influence of intoxicants or drugs. Section 24 provides for penalties. Section 25 directs the manner of transmitting fines and penalties to the Secretary of State. Section 25 is as follows:

"Any person convicted of destroying, removing, altering or defacing any motor vehicle engine or motor number for the purpose, or with the intent of concealing the identity of such vehicle or engine or motor, shall be deemed guilty of a felony, and upon conviction thereof shall be punished by imprisonment in the state penitentiary for a term of not less than two years nor more than five years."

Any one having in his possession a motor vehicle upon which the number has been destroyed or removed is required to have a new number assigned by the Secretary of State and stamped upon the engine, according to Section 25. Section 26 authorized the Secretary of State or motor vehicle inspector to administer oaths. Section 27 authorized the Secretary of State to have published the copies of this act. The remaining sections merely refer to repeal of conflicting provisions, the safety and emergency clauses.



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