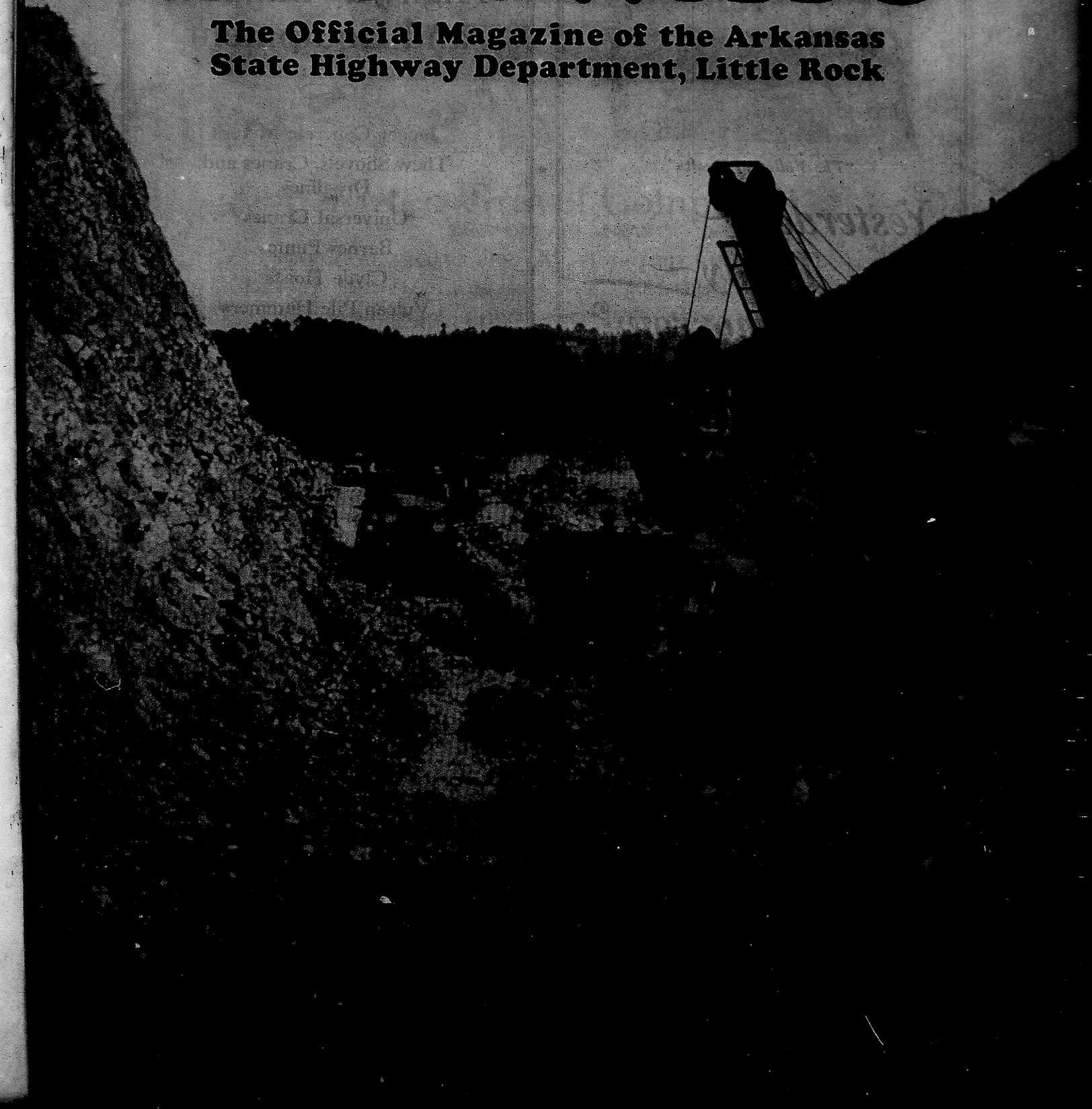


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**The Official Magazine of the Arkansas
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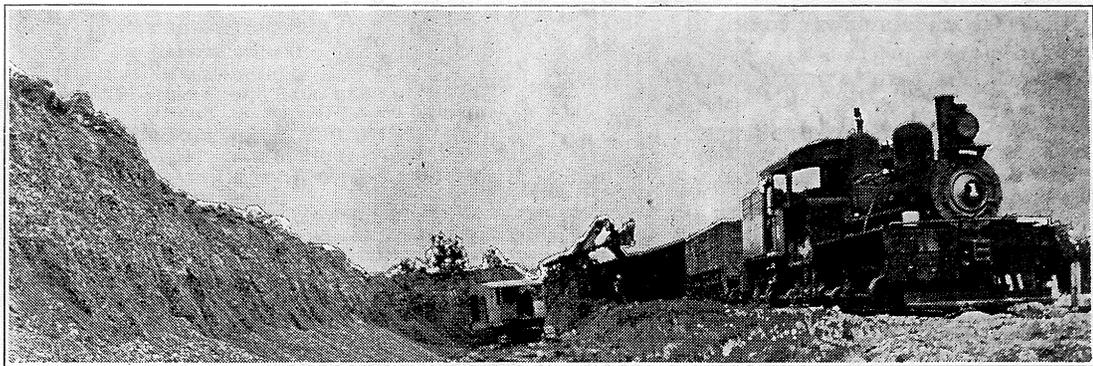


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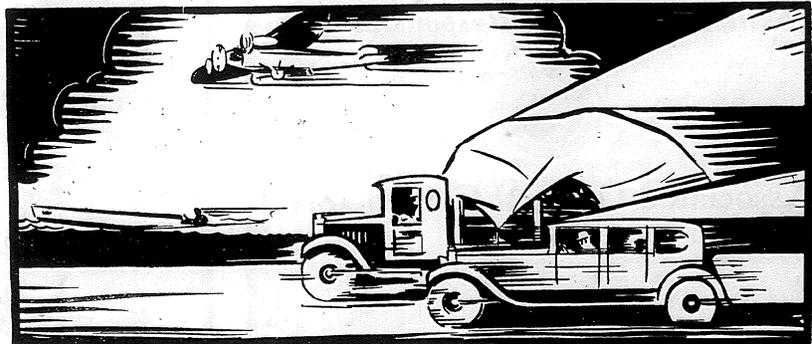


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ARKANSAS HIGHWAYS

Official Monthly
Magazine



State Highway
Department

VOL. VI

OCTOBER, 1929

No. 10

"CONSIDER THE CONTRACTOR"

By DWIGHT H. BLACKWOOD, Chairman of the Arkansas Highway Commission

Members of the Arkansas Highway Commission are justly proud of the comparatively low unit prices at which Arkansas road contracts have been going.

Statistics recently compiled by W. W. Zass, our engineer of construction, covering the period from January 1, 1925, to June 30, 1929, show that in spite of the unusual amount of work which has been done during the last two and one-half years, unit prices on items entering into contract projects have remained constant or shown slight decreases, as a result of unusually keen competition among contractors. It had been predicted that the gigantic road program begun in 1927 was entirely too big to be handled economically, yet Mr. Zass' figures covering 1925 and 1926, years when very little work was done compared with the past two and one-half years, show no increases in unit prices, the changes, if any, being in the other direction.

This very happy state of affairs, from the standpoint of the taxpayers, has not been entirely due, of course, to the competition among contractors. The State has benefited also from a period of generally declining commodity prices. However, there is no doubt that the temporary letting up of improvement activities in adjacent States has brought about a competitive situation which has resulted in jobs being let much cheaper than would otherwise have been possible.

This has resulted in considerable grumbling among unsuccessful contractors who have declared that the State was getting its roads built at less than actual cost and who have made dire predictions about a large number of contractors going broke. These predictions apparently have not been borne out by developments, as our records show that the projects which it has been necessary for bonding companies to take over and complete have had an aggregate monetary value of less than one per cent of the total contract figures.

However, it is undoubtedly true that the average margin of profit on Arkansas work during the past two and one-half years has been smaller than usual in a program of such magnitude. Insofar as this has resulted in a saving of money to the State, without the working of any in-



justice upon the contractors, it is naturally a source of pleasure to the Highway Commission, which at all times must represent the public, which is the purchaser of these highways.

There is another side of the picture however, sometimes overlooked in a hasty survey of the general highway situation, and it is the side of the contractor, to whom this issue of "Arkansas Highways" has been dedicated.

While the Highway Commission desires to build as great a mileage of roads as possible with the available revenues, it still realizes that the legitimate, high-class contractor, who lives in this State, maintains a large pay roll here, pays large State and local taxes and plays his part in the general economic life of the community in which he operates, must make a profit on his work.

In the long run, the State would lose more through his financial failure, than it would gain through any unreasonable beating down of legitimate profits. Therefore, the State Highway Commission, so far as consistent with its primary obligation to the general public, seeks to be the contractor's friend. It seeks to throw around him and his operations every reasonable safeguard and protection. It avoids the taking of any undue advantage and seeks at all time to see that the contractor is paid for honest work, honestly done according to the exact specifications

contracted for. Where unusual conditions develop that could not have been foreseen at the time the work was contracted, either through acts of Providence or otherwise, the Commission seeks to deal equitably in its final settlements.

The Commission has gone as far as possible in the protection of the contractor against unscrupulous and irresponsible competition in bidding. It has tried in every way to guarantee to the contractor who bids on Arkansas work that his competition will come only from his honest and responsible bidders, equipped both with machinery and experience to give the State a satisfactory job.

There remains, of course, a field in which the Commission cannot protect the contractor. That field involves his own knowledge and his competitor's knowledge, of operation and construction costs. If contractors blindly and ignorantly submit unreasonably low bids on specific jobs on which their experience and their judgment should show them they cannot reasonably hope to avoid the loss of money and if bonding companies can be found to back them and guarantee them in their folly, the Commission cannot safeguard them against its consequences. When responsible contractors are properly bonded by responsible companies on any job the Commission must presume that the price is right, and it cannot reasonably be expected to do anything except to stand by and see that the contract is carried out either by the contractor or by his bonding company.

It is in this field in which responsible contractors must join hands to protect themselves against the consequence of ignorant and irresponsible bidding. This they are coming more and more to do through their own associations in which work those who have considered the various angles of the construction game must wish them well.

In spite of much public misunderstanding of his function in the general scheme of things the honest contractor is one of the most important factors in modern progress and if more thoughtful consideration of his problems may be stimulated by this edition, we feel that it will be more than justified.

Reputable Contractors Join Forces To Better Conditions

Executive Secretary of Arkansas Branch of A-G-C Explain Purposes of Organization

Perhaps no group in this country, unless it is the farmers, have been more inarticulate in recent years, or have suffered more as a direct result of it, than the contractors.

They have been hounded by professional politicians, preyed upon by unscrupulous manipulators, and misunderstood by the general public until in many cases, it has been hard for even the most reputable and conscientious to secure fair treatment and enjoy in peace the fruits of honest, well-planned effort.

Inside his own ranks, also, he has suffered greatly from the competition of ignorant or unprincipled contractors, who have run prices down below actual cost figures.

We have asked the Executive Secretary of the Arkansas Branch of the Associated General Contractors of America to tell something of the work being done to combat these conditions.—Editor.

By James R. Rhyne, Executive Secretary,
Associated General Contractors

Perhaps many of the bricks that have been hurled at the contracting profession in the past have been amply justified. Not only the contractor, but the lawyer, the doctor, the engineer and even the preacher, all have been criticized, sometimes justly, sometimes unjustly. We all make mistakes.

To one who has time and opportunity to study the general situation, however, there seems no reason, except its own failure to defend itself, why the contracting fraternity should have come in for the almost universal suspicion and distrust in which it has been held in many quarters.

Both in size and in age the contracting industry is second only to agriculture and it appears that in organization they are about on a par for when both industries are analyzed we find that their marketing systems are very similar, neither industry obtaining a fair return for the services rendered.

The average man will retain a surgeon, a lawyer or other professional man for the services he expects to receive and many times without regard to the price until the services have been rendered. When, however, he undertakes to invest his life savings or the savings of some of his neighbors in buildings or other improvements he shops around for some fellow who will "do the thing a little worse for a little less" and expects his own ability as a skillful watchman to enable him to attain his desires. The experienced constructor well knows that there are entirely too many factors entering into

construction for the watchman to prove the panacea for all possible evils and this is where the irresponsible contractor gets in his work.

The owner or manager who lets his work on a competitive basis without selecting for his bidders capable and responsible concerns puts a premium on the man who spends his wakeful hours planning how to evade the skillful watchman.

This doesn't mean that the responsible contractor doesn't believe in free and fair competition, but he desires this competition to be confined to bidders who are fairly equal in ability, in resources and organization to properly do the thing wanted done.

It is pleasing to note, however, that during the past ten years much has been done toward eliminating these conditions through the co-operation of capable and responsible contractors. Methods have been studied and analyzed and today the industry is offering a much better performance than ever before. Through the Associated General Contractors of America, of which the Arkansas Branch is one of the seventy-five units, a work of self-education is being carried on among both contractors and owners and the results have been nothing less than startling.

Much, however, remains to be done, as the responsible contractor needs the co-operation of the architects and engineers in eliminating the irresponsible bidder, and in securing recognition for real worth and service.

He needs the co-operation of the manufacturer and the dealer in the adoption of such price policies as will protect him, and above all the co-operation of the banker and the financial institutions in the elimination of loose credit practices that are detrimental to all.

The public is coming to realize that in construction as well as in anything else it is impractical as well as impossible to get "something for nothing" and the more this is realized the better it will be for the responsible constructor and the industry as a whole.

It has been ten years since prohibition was adopted by Uncle Sam. And you've seen the way some adopted children are treated.—*Savannah News.*

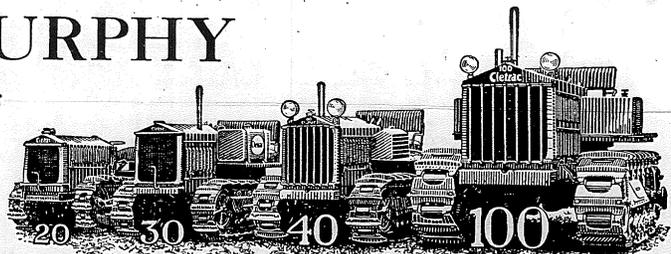
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Statewide Inspection Tour Planned By Commission

Accompanied By Engineers, Commissioners Are Visiting All Construction Jobs On the Entire Highway System.

The first of a series of inspection trips planned by the State Highway Commission to cover the entire program of construction activity on the State Highway system has just been completed, covering twenty-two counties and more than 1,000 miles of State highway.

These trips, arranged so as not to interfere with the routine work of the department, are to be made with a view to covering the remainder of the State before January 1st.

Accompanying Chairman Dwight H. Blackwood and the other members of the commission on the first trip through northwest Arkansas were Mr. C. S. Christian, Chief Engineer; W. W. Mitchell, Assistant Engineer for the Western Division; and District Engineers W. T. Berry of Fort Smith and Fred Coker of Harrison.

During the tour the following towns were visited: Pangburn, Searcy, Higginson, Beebe, Cabot, Benton, Hot Springs, Glenwood, Kirby, Amity, Caddo Gap, Norman, Mount Ida, Waldron, Mansfield, Greenwood, Fort Smith, Van Buren, Alma, Fayetteville, Siloam Springs, Sulphur Springs, Gentry, Gravette, Bentonville, Rogers, Eureka Springs, Perryville, Green Forest, Harrison, Omaha, Yellville, Marshall, Clinton, Heber Springs.

NEW WORK INSPECTED

The following new construction work was inspected:

Five and one-half miles of concrete pavement and new concrete bridge on No. 67 in Saline County south of Benton, both of which were only recently opened up.

The reinforced concrete bridge on No. 70, in Garland County southwest of Hot Springs over the Ouachita River.

Grading, graveling and bridges on No. 70 on the Hot Springs, Glenwood-Amity route.

Grading and graveling on No. 84 between Kirby and Amity, and on No. 8 from Amity to Norman via Glenwood which included cut through Caddo Gap.

Grading and graveling on No. 27 between Norman and Mount Ida, and on No. 6 west of Mount Ida through Montgomery and Scott counties.

Grading and surfacing on No. 71 in Scott County through Waldron and north through Mansfield to Glenwood.

Concrete pavement recently completed between Greenwood and Fort Smith.

Grading and graveling on No. 10 from Greenwood to Booneville, and on No. 116 to Booneville sanatorium recently laid.

Concrete pavement from Fort Smith through to Charleston in Franklin County, and sections of recently completed concrete pavement adjacent to Paris in Logan County.

Concrete pavement from Fort Smith via Van Buren and Alma to Mulberry that was completed in 1928.

Various sections of concrete pavement north from Alma through Fayetteville, Rogers and Bentonville, a part of which is completed and a part of which is under construction.

Grading and surfacing on Nos. 72 and 47 between Bentonville and Eureka Springs.

Grading and surfacing from Eureka Springs to Berryville and grading and surfacing from Berryville through Harrison on No. 12 to Yellville.

Grading and surfacing on No. 65 from Harrison to Marshall, and No. 14 to No. 27 from Yellville to Marshall.

Grading and surfacing on No. 65 from Marshall to Clinton and on Nos. 9 and 16 from Clinton to Heber Springs by way of Shirley.

Grading and surfacing on No. 16 from Heber Springs to Searcy.

Some important changes in alignment on Highway No. 67 from Searcy southwest through White and Lonoke counties were gone over and considered by the commission and the engineers.

The State of Ohio has already repaired roads in over two-thirds the counties of the State this summer, and paid for the same out of the automobile and gas tax fund. This work will continue until all of the counties are reached, and all roads built by the aid of State money will hereafter be maintained by the State.

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Northwest Arkansas Pleased With Road Progress

Mountain Country Begins To See Tangible Results of Martineau Road Program

Everywhere throughout western and northwestern Arkansas, members of the Highway Commission in making the first leg of their State-wide inspection tour, met with the most enthusiastic response from a citizenship which has begun to see, in the most difficult mountain county of the State, the tangible results of the present road program.

Summing up the situation in a recent address before the Rotary Club of Fort Smith, J. S. Parks, publisher of the Fort Smith Southwest-Times Record, pointed out the tremendous strides made by the department in that section and showed that by the end of the next construction season more than 150 miles of concrete highway radiating out of Fort Smith in all directions, except into Oklahoma, will be opened to motor traffic.

In addition to this, more than 1,000 miles of State highway in this immediate section has already been transformed from the condition of part-time availability to all-weather utility as a result of new bridge construction and the grading and gravel surfacing of important links which formerly went out of service in rainy weather or seasons of flood.

Of great interest to western Arkansas south of the Arkansas River is the 75-mile stretch of permanently surfaced highway from Fort Smith to Dardanelle which will be completely open to traffic by the end of this year. Fort Smith is now connected with Mulberry by 27 miles of concrete slab, the importance of which is measured, not so much by mileage, as by contrast with the former terrifying stretches of slithery clay gumbo which formerly paralyzed traffic during wet weather. The finishing touches are being put on seventeen miles of concrete between Fort Smith and Greenwood and eleven miles are being paved rapidly on the difficult Alma-Mountainburg stretch on State Highway No. 71, the principle outlet to Springfield, Missouri. Important units of concrete being laid elsewhere in this section include those between Greenwood and Fayetteville and Bentonville and Rogers.

Evansville is connected by a new gravel road into Fort Smith, an important link in a new direct route into Siloam Springs.

Important bridges are being completed on State Highway No. 64 over Big and Little Mulberry Creeks and

with one or two stretches on this road which will be permanently surfaced early next spring the Fort Smith-Little Rock highway north of the river will be completely bridged and surfaced in conformity with the most approved modern standards.

Fayetteville and Rogers, between which there is very heavy traffic, will be joined with concrete early next year, according to present plans, and south of Fort Smith much important grading and graveling is under way which will open up completely a large section of the State.

OUR COVER PAGE

For the cover page this month we have selected a typical view of some of the rougher and more unfamiliar features of the highway construction now under way throughout Arkansas.

The particular scene selected was found on Arkansas State Job No. 626 on which James Spencer & Sons, well-known contractors of Hot Springs are driving through some of the picturesque mountain country on Highway No. 7 between Hot Springs and Arkadelphia.

This road, when completed, will open up a very picturesque section of the Ozarks between these two important cities. The job comprises some particular heavy rock cuts such as we have pictured and several fills, one of more than forty feet. The estimated cost per mile will be \$11,000, not including the major drainage structures and surfacing which are to follow the present work as quickly as possible.

The contractor on this job is using two team outfits, two elevator grader outfits, two steam shovels and one large culvert outfit, and the prosecution of the work thus far, favored by almost ideal weather, indicates that it will be completed considerably in advance of the contract time. In this connection a recent check-up by the State Highway Department revealed that the contractor had used only forty-three per cent of his contract time and that the job was then more than sixty-eight per cent complete.

Work of this kind, which is being prosecuted at many places in the State, illustrates the point recently made by Chairman Dwight H. Blackwood of the Arkansas Highway Commission in a radio talk broadcasted over station KLRA, that a very large percentage of the work which has been and is being done by the department cannot be seen by the general public until actually completed, with the installation of bridges, and has been permanently surfaced.

The work which Spencer & Sons are doing on this job is in a location not easily reached by the motorist, who will probably see nothing of it until the completed highway is opened.

For this reason Mr. Blackwood urged upon his hearers the cultivation of an "intelligent patience" which he said could be based upon the actual construction figures made public by the department and the knowledge that hundreds of jobs are now under way with a stage of construction such as we have shown on our October cover page.

"Words—their magic rules the world"



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County Road Building On The Boom

State Highway Work Acts As Stimulus to Local Highway Activities All Over Arkansas

Just as Federal aid has stimulated the activity of the various States of the Union in road building so the activities of the Arkansas State Highway Department in prosecuting the so-called Martineau road program has given new impetus to local highway activities in the various counties.

The construction of State highways through the various counties, tying them into close connection with all parts of the State, has given new reason to the various local communities to want to tie themselves with a good gravel road to the nearest State highway.

Almost any county might be taken as an example, for all have felt the effects of the general movement. However, Izard County under the leadership of County Judge C. C. Aylor, offers an outstanding example. This, by reason of the size of the local program and also because of the former backwardness of the county in the matter of road building.

In the old days Izard County was one of the most inaccessible in the State. It was scarcely touched by railroads, and many of its little towns were a good day's journey by wagon-train from Hardy, Sharp County located on the Frisco Railroad, and one of the most popular points of entrance to the county. Such roads as were available were of the crudest construction, being little more than "glorified" cow paths.

Sharp County itself was in practically the same shape so far as roads were concerned, its own point of superiority being due to the fact that it was crossed by an important railroad system which gave it better access to the outside world.

Gradually there came some improvement in these so-called roads but it remained for the present State highway program fully to awaken the citizenship of the county to the importance of a county system of permanent modern highways.

One important factor in the "inspiration" was the State's wide graveled highway from Melbourne extend-

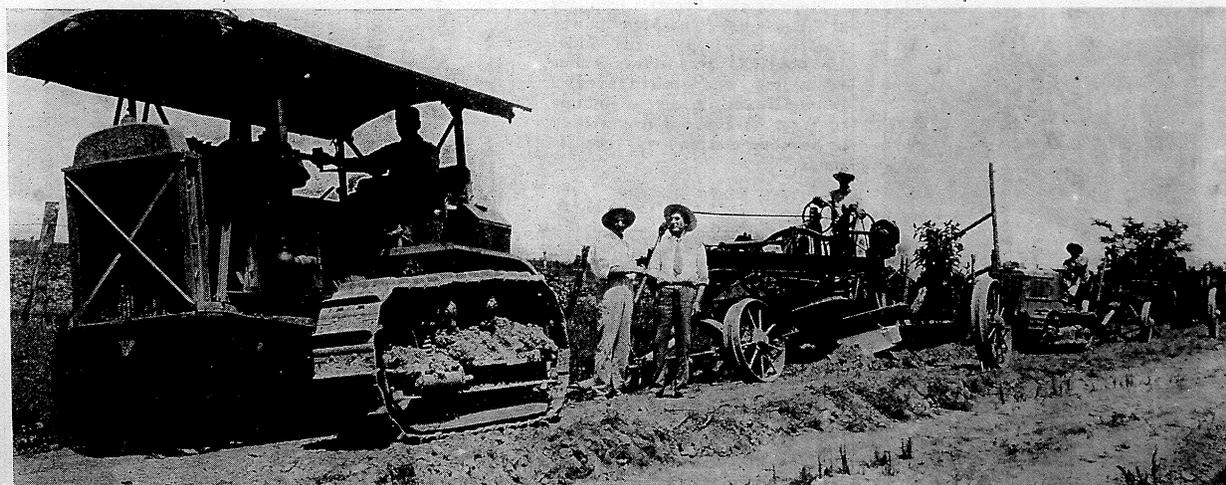
ing twenty-two miles west to Sylamore on the White River Division of the Missouri Pacific. This road, now nearing completion, and the Calico Rock-Hardy Highway, which has been graveled for about eighteen miles from Rockwell to old Franklin, are two of the most important new roads in the county. Their construction has shown the people the possibilities of rendering all parts of this previously inaccessible county easily accessible through the new State highways to all parts of Arkansas and the United States.

Accordingly Judge Aylor is organizing for the construction by county forces of an important network of county roads intersecting the new State highway at various places.

He has purchased some modern road building machinery, including a tractor and a grader, which he offers to use in various sections of the county where the farmers have enough personal interest in the program to clear the right-of-way and grub it through their own efforts and at their own personal expense. The county's forces then follow through with grading and surfacing paid for by the county.

It may be said that Judge Aylor's activities have fitted in very nicely with those of County Judge William J. Pettyjohn who, through similar activities, is joining up the local roads of Sharp County with those which Judge Aylor is building.

The Izard County work being sponsored by Judge Aylor is only a sample of activities which are now under way in virtually all sections of Arkansas as a result of the State highway program. Similar movements also are under way in all of the States of the Union in which State highway activities are going forward. The American Highway Educational Bureau in a bulletin just issued estimates that the construction of such local roads under the direction of county or township authorities, tying local communities up with the State and National highway system, has already reached in this



Typical Caterpillar and Grader Outfit Working in Sharp and Izard Counties

country the surprising total of 600,000 miles. Supplementing these figures it is estimated that an equal or greater amount of local roads is being planned and placed under construction.

It is true that many of these local roads are of very cheap construction calculated to carry only a light traffic. But such traffic is all that they will be called upon to bear, at least for some time. As their inevitable effect in stimulating traffic and bringing new settlers into the country is registered in heavier use of these cheaply constructed roads, they may be economically built upon from time to time.

All in all, the way in which Federal, State and local road activities are reacting and stimulating each other is almost unbelievable. But it is probable that the movement under way will increase even more rapidly, gathering impetus as it goes until the day when virtually every rural community in the State and in the United States will have a suitable outlet over "roads that go somewhere."

MOVING OUT AND ON

The famous "stone roads" of the Romans and other people of ancient days sink into actual insignificance when compared with the road construction of modern America. During the present year a total of 7,489

miles of stone roads will be built in the United States, roads of concrete, asphalt or brick.

Other improved roads will be built to bring the total of new good roads constructed in the United States during this season up to 28,841 miles.

This is the program for the year of the various state highway departments, co-operating with the National Bureau of Roads, and the expenditure will be \$648,-483,000.

In addition to this program, the reports show that approximately \$477,000,000 will be spent by counties and other lesser subdivisions of the government.

More than a billion dollars a year for good roads!

We are spending in one year on the improvement of our roads an amount of money that would have wrecked the fabled wealth of the richest of the ancient nations.

And all this expenditure of money is coming back to us a hundred and a thousand fold.

The good road and its correlative, the automobile, are bringing about an expansion of life in America which is almost revolutionizing the whole social structure of the country.

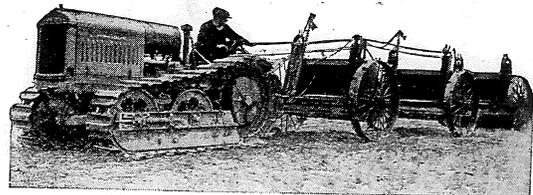
In the midst of the greatest urban growth the world has ever known, there is a movement of people out of and away from the cities which is making an even more remarkable development of suburban and rural life.

Warco Road Building Machinery

Power graders in center and rear control models in suitable sizes to meet the problems of road and street maintenance and construction of Arkansas Contractors and Public Officials.

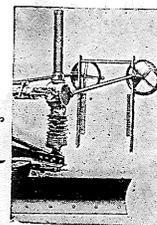


Here is the direct descendant of the original 'One-Man' power grader. It is a powerful Model 15 WARCO Road-Hog grader rebuilding and maintaining county roads in the mountains of West Virginia. The purchase of a second machine was recently made.



The most economical method of moving dirt on short haul is by WARCO wheeled scoops. Ask our Branch Office for details.

The
Warco
Screw
Lift-



"Built
Like a
Screw
Jack."

One of the features described in our new mid-season road machinery catalog. Get your copy from

O. E. TAPLEY, *Branch Manager*
710 EAST WASHINGTON AVENUE
NORTH LITTLE ROCK, ARK.

W. A. Riddell Company
BUCYRUS, OHIO

Graders Rollers Scoops Crawlers

Harnischfeger Corporation Expands Southern Activities

Manufacturers of Well-Known "P. & H." Line of Earth-Moving Machinery Benefit From State Highway and Flood Control Activities in This Section

Greatly stimulated business, resulting from the unusual amount of State highway and flood control work developing in this section, has resulted in a marked expansion of its Southern activities by the Harnischfeger Corporation of Milwaukee, of which H. R. Walton is Arkansas representative.

Mr. Walton, who formerly was located at 2605 West Markham Street, just has completed removal to larger and better-equipped headquarters at 3923 Oakwood Place, from which he will be better able to handle the needs of his customers.

The Memphis Branch, in charge of G. L. Lillard, also has just been moved from 267 Union Avenue to larger quarters at 307 South Front Street. Mr. Lillard and L. M. Ridenour, Southern supervisor, were in Little Rock recently, inspecting the new headquarters, and contacting many customers in attendance at the State highway letting.

One of the largest users of "P. & H." equipment in the State is W. P. McGeorge & Company of Pine Bluff, whose contracts for the State have involved virtually

every kind of earth work. "P. & H." equipment is being put on the difficult Woolsey-Winslow unit of Highway No. 71 by the Interstate Construction Company.

Other "P. & H." equipped contracting or material firms in the State include the Arkansas Sand and Material Company, the Kirten Gravel Company, B. C. George & Co., D. M. Easley, W. T. Gleason, Kochitzky Brothers, C. A. C. Construction Company, Malvern Brick and Tile Co., Phoenix Utility Co., Altman-Rogers Co., Harvey Brown, Parham Construction Co., and others.

The Harnischfeger Corporation is one of the oldest and largest of its kind in the country, having been established forty-five years ago by Alonzo Pawling, now dead, and Henry Harnischfeger, its present president.

Under Mr. Harnischfeger's energetic and resourceful leadership the "P. & H." line early became a recognized standard for all forms of earth-moving machinery, including lifting, digging and conveying machinery, gasoline shovels, drag-lines, clam-shells, pile drivers and skimmer scoops.



WARRENITE-BITULITHIC PAVEMENT
ON MARINE DRIVE, VANCOUVER, BRITISH
COLUMBIA, DOMINION OF CANADA—THE EXTREME
NORTHERN LIMIT OF THE GREAT PACIFIC HIGHWAY

WARREN BROTHERS COMPANY, BOSTON, MASS.
(Offices in principal cities)

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CANADA
JAPAN
SPAIN
HAWAII
AUSTRALIA
SOUTH
AMERICA



WARRENITE-
BITULITHIC
IS DESIGNED
FOR SERVICE
IN ALL
CLIMATES



Foreign Offices:
Buenos Aires, E. A.
Santiago, Chile
Bogota, Colombia
Valencia, Spain
Warsaw, Poland
Rome, Italy
Sydney, Australia
Melbourne, Australia
Tokyo, Japan

U-T-I-L-I-T-Y

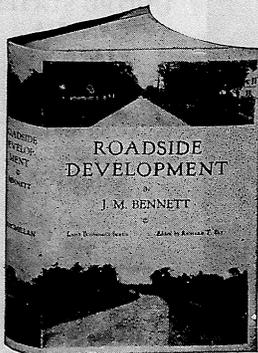
In recognition of its long-time obligation to the earth-moving fraternity, the Harnischfeger Corporation recently had prepared at considerable expense an up-to-date and authoritative map of the Mississippi River flood control area, including a large part of Arkansas, which it has been distributing free of charge among contractors and engineers. Mr. Walton still has a few copies, and those interested may write him at his Little Rock address for them.

MINNESOTA BUYS CEMENT

Cement requirements for its 1930 paving program, aggregating a million barrels will be bought by the State of Minnesota early in November. Cement prices are lower at present than ever before, which is the reason assigned by Commissioner C. M. Babcock for the purchase so far in advance of the construction season, which does not open up in Minnesota until April or May.

You Need This Information!

Based on 10 years actual experience and supervision of work costing millions of dollars, this new book by J. M. Bennett is invaluable to



Highway Officials
Contractors
Engineers
Public Utilities
Nurserymen
Manufacturers
Park Commissions

and others concerned with every phase of roadside development

Arranged in the logical order of preliminary field work, design, construction, planting materials, and methods, seeding and sodding, maintenance, public utilities, comfort stations, and parkways. Describe the organization necessary for the work, operation and material costs, equipment and tools.

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Price \$5.00, Postpaid

Order today from

Arkansas Highways

LITTLE ROCK, ARKANSAS

"The St. Charles Road"

An Editorial From the Helena World

The joint committee from Helena and DeWitt, having conferred with State Highway Commissioner Blackwood, have brought the most gratifying news from the Capitol.

Their report, published in full on page one today, leaves nothing to be added. Only high waters and adverse weather will prevent construction of the Turner-St. Charles link of Highway No. 1 in time to handle the next rice crop. Commissioner Blackwood, apparently, has ignored all phases of the project save development and economy. He has quickly perceived the great benefits to be reaped by southern Arkansas county rice growers from construction of this link and has promised that it shall be done as quickly as possible.

His policy, it seems, is to accomplish the greatest good to the greatest number, and this link of roadway will do that very thing. It will enable the rice growers of southern Arkansas County to save approximately eleven cents a bushel on shipments of rice to New Orleans, the annual crop of that section totaling about three million bushels. Hence the annual saving to these citizens of Arkansas would be in the neighborhood of \$330,000—no mean sum for any community to save, and more than twice as much as the link will cost.

Incidentally, construction of the link would open a new and valuable trade territory to Helena—one result of this city's fortunate location on the Mississippi and its enterprise in providing shipping facilities. These are now being amplified through the erection of additional cotton storage space at the rail and river terminal and a large grain-transfer warehouse to be operated in connection with the terminal plant and the Missouri and North Arkansas Railroad. The latter is almost exclusively an Arkansas railway, extending only a short distance into Missouri.

Thus construction of the link in Highway No. 1 will result in great good to a vast number of people, and add appreciably to the value of Arkansas properties. It follows, therefore, that the people of Phillips and Arkansas counties, and undoubtedly the officials of the Missouri and Arkansas Railroad, are grateful to Commissioner Blackwood for his interest in the matter, and will gladly co-operate with him in any reasonable manner.

WHO PAYS THE BILLS?

The fact cannot be reiterated too often that *Roads Do Not Cost—They Save*. The public has one of two choices. It can pay for road construction and have comfort and convenience in driving, or it can pay for repairs, extra depreciation, extra gasoline bills and have discomfort and inconvenience in driving. Paying for building the roads is much less expensive than paying for extra depreciation, repairs and gasoline. In either case the public pays the bills.—*Nebraska Highways*.

Dr. Mayo says you can keep young by living as the young do. It won't work, doctor. You can't get rich by living as the rich do.—*Tucson Citizen*.

Eighth Annual Meeting of Asphalt Association To Be Held At West Baden, Indiana, October 28

The Eighth Annual Asphalt Paving Conference, which will be held October 28 to November 1, next, at West Baden, Ind., under the auspices of The Asphalt Association, New York, will be of transcendent importance among road meetings this year, according to officials of The Asphalt Association, because of the fact that the improvement of farm-to-market roads will be the keynote of the meeting. Airport paving will also be given serious attention, along with city street construction and trunk-line highway improvement. The dominant feature, however, will be the discussions as to the latest and most economical methods evolved for the construction with asphalt of low-cost surfaces on the secondary and tributary highways. Salvaging of existing gravel and macadam roads and their utilization as bases for low cost asphalt surfaces will receive important consideration as one of the measures figuring heavily in any farm-to-market road paving program.

The Association of Asphalt Paving Technologists will hold its annual meeting in connection with the conference. The sessions of this organization, alternating with those under the auspices of The Asphalt Association, will provide discussions pertaining to the technical side of asphalt construction and affording research information of great value to the technical men in attendance. W. J. Emmons of Ann Arbor, Mich., and C. A.

Mullen of Montreal, Canada, this year, are president and secretary, respectively, of the Association of Asphalt Paving Technologists.

The matter of paving the secondary and tributary highways, or farm-to-market roads, with low cost bituminous surfaces, is assuming vast importance in the eyes of highway engineers and officials, farm, business and motoring organizations and lawmakers in Congress and the several State legislatures, and promises to become the dominant factor in highway improvement during the next few years. Farm organization representatives, as well as engineering and technical men, therefore, will participate in the sessions of the West Baden conference.

Investigation discloses, according to farm organization officials, that only 3 per cent of American farms are located along highways now paved with the hard surfaced types of construction and seventy-four per cent of American farms are still located on unimproved dirt roads. The program being evolved "to get the farmer out of the mud," forms the one great feature of the general project for farm relief and is meeting with warm support from all concerned. Nearly 5,000,000 American farmers are still living on dirt roads that are muddy in wet weather, dusty in hot weather and rough in cold weather, and have little or no means of access to the main paved roads during many months of the year.

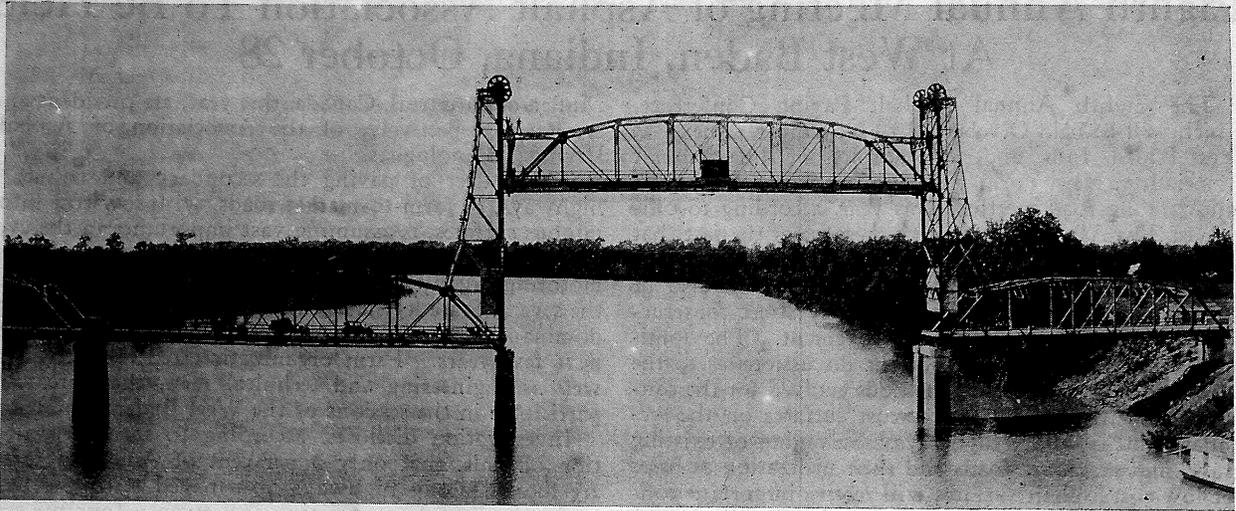
Tires Grip Concrete Like They Do No Other Pavement

SAFETY in these days of congested roads is more than a matter of good tires and good brakes. It has become a matter of *pavement*.

Concrete pavement is the safest of all types because it is rigid and even and its surface makes tires "take hold" with a grip that is unailing.

**PORTLAND CEMENT
ASSOCIATION**
Syndicate Trust Building
ST. LOUIS, MO.
Concrete for Permanence

DIXIE HIGHWAY, GEORGIA



CODY BRIDGE OVER ST. FRANCIS RIVER NEAR MARIANNA

Cody Bridge Replaces Hazardous Ferry In East Arkansas

An event of considerable importance to the people of Eastern Arkansas which was recently celebrated was the opening of the new Cody bridge over the St. Francis River nine miles east of Marianna in Lee County, part of which is pictured above.

This structure, originally initiated by the people of Lee County, who felt the necessity for substituting it for the dangerous and frequently useless ferry formerly operated at this point, serves directly the people of one of the richest cotton sections of Arkansas, as well as a large volume of tourist traffic into Memphis through this section. It is located at the intersection of State Highway No. 3, a splendid new graveled highway, forming a part of the favorite route from southeastern Arkansas points to Memphis.

The improvement district under which the project was started was authorized under Act No. 507 of 1923, with R. L. Mixon of Marianna as chairman of the board. Both State and Federal Aid were invoked in the construction of the bridge and the contract was awarded the Vincennes Bridge Company of Vincennes, Indiana, in 1927. Owing to flood conditions in 1927, virtually no work was done on the bridge proper during that year. High water in 1928 and 1929 also delayed construction so that the bridge was not placed in use until the present summer.

The Cody bridge is a little more than 1,000 feet in length with approximately 800 feet of earth approaches. It is built of steel with concrete floors and piers. The left span shown in the section of the bridge pictured

above allows river traffic a clearance of 70 feet above the highest flood water ever known.

In connection with the Cody bridge it was found necessary to build a second bridge from Cow Bayou just south of it. This is a timber structure 336 feet in length with 323 feet of earth approaches.

During construction the State Highway Department was represented by E. P. Douglass as resident engineer.

SOUTHWEST ROAD SHOW AND SCHOOL

Plans for the fifth annual Southwest Road Show and School at Wichita, Kansas, in which various Federal, State and local agencies co-operate in the promotion of modern ideas of highway building, indicate that the event this winter will be of greater proportions and importance than ever before.

February 25, 26, 27 and 28 are announced as the dates for the road show and school. Last February nine adjacent States entered exhibits, and co-operating agencies included the United States Bureau of Public Roads; the American Association of State Highway Officials, and a number of colleges and universities. Indications now are that all will be showing at the 1930 school and that there will be a much more comprehensive mobilization of exhibits of improved road machinery than ever before. Lectures and discussions of road construction and maintenance will be given by several of the outstanding highway authorities of the country.

STITCHES IN TIME

Watch your step on it.

Taking the other fellow's dust is better than "to dust returneth."

Six feet have awaited many a driver who would not give an inch.

Just because you see its tracks is no sign that a train has just passed.—*Badger Highways.*

TRINIDAD

BERMUDEZ

A. J. RAYNER801 International Office Building
SAINT LOUIS, MO.

LAKE ASPHALT PAVING PRODUCTS



Road Machinery Magnates Do Their Stuff On the Links

Lots of Fun at the Warco Sales Conference

At the left, above, we have the evidence in black and white of a very interesting foursome which was played last month at the Bucyrus, Ohio, Country Club during the annual Warco Sales Conference, machinery demonstration, and picnic staged by the W. A. Riddell Company, well known manufacturers of road machinery.

From left to right the notables are: George M. Schmidt, Secretary-Treasurer and General Manager of the Riddell Company; C. H. Brinker of the Brinker Supply Company, Pittsburgh; H. P. Thieman, International Harvester Company, Chicago; W. A. Riddell, President of the Riddell Company. Mr. Riddell's engaging smile, we are assured, is reminiscent of the score which he has just made and not, as some might imagine, anticipatory of the nineteenth hole which we are informed is no longer played in Bucyrus.

The lively group to be seen in action at the right, above, running from left to right shows O. E. Tapley, Manager of Warco's Little Rock Branch; L. E. Aukerman of the Sales Staff; G. A. Jordan and L. H. High

of the Clay Machinery Department. The interested spectator at the right is N. E. Jersey, road machinery Sales Manager, who is said to have been addressing some very pertinent remarks to Mr. Tapley, complimenting him on apparently being about to complete the course in something less than 150.

Out of a spirit of fairness we are reserving this space in the November issue to permit Mr. Tapley to make such rebuttal as he may see fit.

The Warco party, which was attended by distributors from all sections of the United States, lasted three days and included a sales conference, a banquet, a field demonstration of new equipment, a golf tournament, a basket ball game, horseshoe pitching, a picnic supper and a theatre party. In looking over this juicy program and noting that it is an annual event we are moved to congratulate Mr. Tapley on his judgment in joining up with such an outfit when he made up his mind to retire from the engineering activities which had engaged his time and talents for a number of years in this State.

Two Private Toll Bridges

An Editorial From the Arkansas Gazette

Purchase by the State of the privately owned toll bridge on Highway No. 70 at DeValls Bluff, if the White River Bridge Company is prepared to sell the property at a fair price, might prove the shortest way out of the situation which cannot be allowed to continue indefinitely.

Arkansas cannot afford to have traffic on one of her chief arterial highways subjected to any such charge as a \$1 toll for a single non-return crossing of this relatively short bridge. It is understood that if the State Highway Department should take over the bridge by purchase, the toll would be reduced to 50 cents and collected until the purchase price was paid, after which the bridge would be declared toll free.

In this connection, it may be noted that the toll for a one-time trip by a passenger vehicle over the new Cooper River bridge at Charleston, S. C., has been set at 50

cents. This huge structure, which would make a dozen of the DeValls Bluff bridge, is also a private enterprise, in which nearly \$6,000,000 of capital has been invested. Its over-all length is about 14,000 feet.

It is really two bridges crossing two streams navigable by ocean-going craft, Town Creek and Cooper River, and the 1,000-foot cantilever span bridging the latter channel at a clearance height of 150 feet is the fifth largest span of its sort in the world. Yet the owners of this very costly structure are content to collect a 50-cent one-way toll, with substantial reductions for regular users. Furthermore, they agreed to a franchise with a provision under which, at any time after 20 years, any agency of the State of South Carolina may purchase the bridge for actual cost less depreciation. And the cost figures are a matter of public record.

Their Record Has Been Made and

Successful completion of State Highway work under contract is a priceless asset which each of the firms listed below has made.

S. P. REYNOLDS

J. M. SUTTON

REYNOLDS & SUTTON

Contractors



"Half a million dollars worth of work completed satisfactorily, on time, and without argument."



TYLER, TEXAS

NASHVILLE, ARK.

Altman-Rodgers Company

231-32-33 Cotton Exchange Building

OKLAHOMA CITY, OKLA.

Now working on the Rogers-Bentonville State Highway, grading, drainage structure and six miles of concrete paving. Just completed Eureka Springs paving, biggest State-aid city job ever awarded in Arkansas. Also Arkansas State Jobs Nos. 433, 481, 546, 824, 864 and 865.

W. P. McGeorge & Co.

General Contractors

PINE BLUFF, ARK.



"We Have Been Building Roads Since 1913"

REINFORCED CONCRETE BRIDGES

"Built for the Ages"

FRED LUTTJOHANN

417 East Thirteenth Street

TOPEKA, KANSAS

"Our record in the building of the mile-long Ramsey Bottom Approach to the Batesville Free Bridge, State Job No. 541, is our best reference. "Subsequent contracts awarded us for 1,655 lineal feet of similar bridges between Evening Shade and Ash Flat, and 2,384 lineal feet of approach to the Fulton bridge indicate our standing with the Highway Commission."

D. B. HILL
GENERAL CONTRACTOR
LITTLE ROCK, ARK.



Equipped, qualified and seasoned by experience through many years of railroad and State highway work.

M. K. Orr Contracting Co.

Designers and Builders of

WOOD, METAL AND CONCRETE
STRUCTURES

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LITTLE ROCK, ARKANSAS

Contractors on Arkansas State Jobs Nos. 148, 179, 282, 440, 519, 552, 650, 767, 793, 869, 894, 956.

These Contractors Are Proud Of It!

Work under strictest supervision of State Highway Engineers
listed on these pages has built up in the past two years

BATSON BROTHERS

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Grading, Drainage Structures
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*"Thirty Miles of the Prettiest Gravel Highway
in Yell and Franklin Counties"*

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Beedeville-McCrory Highway in Woodruff County.
Also treated timber bridges and structural
steel bridges.

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"ALWAYS AHEAD OF SCHEDULE"



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Callahan-Walker Construction Company

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OMAHA, NEBRASKA

Brown-Abbott Co., Inc.

DALLAS, TEXAS



Arkansas Job No. 770, the Camden-East bridge on
State Highway No. 167, 4,911 feet of rein-
forced concrete and timber bridges.

L. V. HITES

Paving Contractor

DES MOINES, IOWA

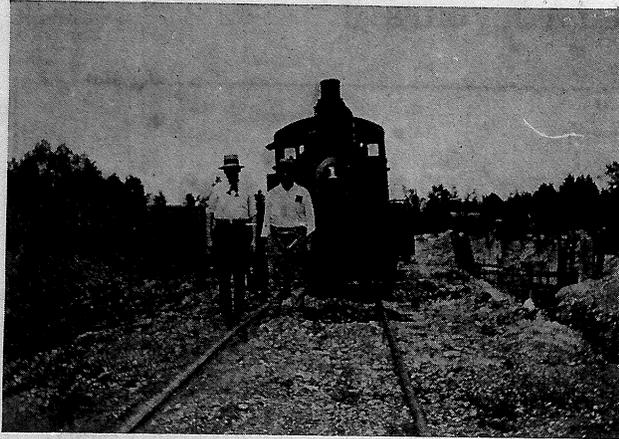
ARKANSAS HEADQUARTERS

PARIS, ARK.

We invite inspection of our plant, our methods, and
results obtained on the 17 miles of high-type concrete
pavement we are now laying on the Fort Smith-
Dardanelle Highway in Yell County, Arkansas State
Jobs Nos. 874 and 877.

Two Well Known Arkansas Men "Hit The Dirt"

M. E. Sherland and Jesse Kirten Superintend Activities At Their Own Gravel Plant



"An Arkansas industry, owned and operated by Arkansas folks doing their part in the Arkansas road program"—this is the slogan adopted by M. E. Sherland and Jesse Kirten, two well-known figures in the politi-

cal and civic life of the State, who have opened a real vein of natural road metal near Benton, Arkansas, and are devoting their personal attention to its development.

Not content with personally supervising the work, both men are actually "hitting the dirt" in opening the plant and keeping it operating as close to capacity as possible. Both men have had wide experience in road construction which has fitted them for the efficient handling of such a business.

Mr. Sherland was for a number of years secretary of the Arkansas-Louisiana Highway District, which constructed the first long stretch of permanent highway in the southwest, a ribbon of asphaltic concrete more than 100 miles long built according to modern standards of permanent road construction, running from the Jefferson County line through southeast Arkansas to connect up with the fine system of gravel highways completed some years ago by the State of Louisiana. Mr. Sherland also served as postmaster at McGehee under the administration of Woodrow Wilson.

Mr. Kirten has been in the contracting business most of his life, residing in Little Rock, and serving for several terms as alderman from the Sixth Ward.

FINANCIAL STATEMENTS MUST COME THROUGH THE MAIL

Among the new regulations governing the bidders on State highway work is one requiring the submission of financial statements through the mail.

This is not an arbitrary requirement but is based on the desire of the State Highway Commission to impress upon bidders their responsibility in making bids on State work. The fact that statements relative to their financial responsibility are sent through the United States mails will increase the dangers of misrepresentation, as Uncle Sam is very much prejudiced against use of the mails to misrepresent or defraud. Penalties for such use are more severe than they would be in State courts.

Not only has the State been the loser from the bidding of irresponsible contractors, but reputable and reliable firms have been hurt and construction conditions have been demoralized as a result of low bidding by firms financially irresponsible. The new regulations, therefore, have been received with enthusiasm by the reputable contractors of the State.

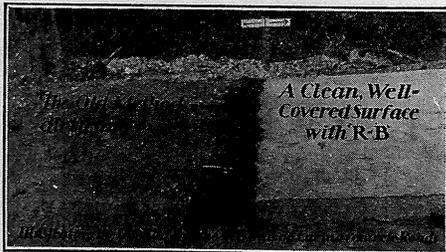
FREE TAGS DISCONTINUED

No longer will the highways of the State be packed and jammed with cars bearing "official" tags, issued free of charge to State, county and city officials. Chairman Blackwood of the State Highway Commission has written to all who have formerly received these courtesies notifying them of the provisions of Act No. 52 of the last General Assembly providing that "no automobile license tag shall be issued * * * to any person, firm or corporation until * * * the full amount of said license fee as required by law has been paid."

Harsh words, but nevertheless true!



Curing Simplified with
GRASSELLI R-B
SILICATE OF SODA



GRASSELLI "R-B," the modern and better way of curing concrete streets and roads, saves time, trouble and money. Avoids complaints of dirt, in city work. Does the job efficiently and easily—and at lower cost. Complete information furnished promptly on request.

THE GRASSELLI CHEMICAL CO.

Incorporated
Established 1839—Branches in 18 Cities

CLEVELAND, OHIO

The Cotter Bridge

The letting of the contract for a magnificent bridge across the White River at Cotter, by the State Highway Department, marks the beginning of a new era for this section. The construction of this bridge is the realization of a hope held by the people of this section of Arkansas for half a century. When completed it means an end to interrupted traffic during periods of high water, and a considerable amount of time cut off of all east and west and north and south travel. It replaces the Lake Ferry, one of the oldest ferries on the upper White River.

The new bridge connects Baxter and Marion counties, two of the fastest developing counties in the north part of the State, and cuts the driving distance between Yellville and Mountain Home, the two county seats down to from 30 to 40 minutes. The greatest amount of good that will be derived from the bridge, however, will be to through travel. The bridge will serve as a crossing for all traffic east and west and north and south on Highways 12, 5, 14 and 101. These highways will all be completed late this year, and beginning next year will carry a heavy traffic. Number 5, leading into Missouri, is expected to carry a very heavy traffic, as all north and south travel will probably come that way.

This bridge will also lend a tone of artistic beauty to the White River at the point it crosses. It will not be a bridge merely built on piers and piles, but a structure that will be artistic as well as useful. It will be of the Marsh type; giant concrete arches that will sweep the river in graceful half curvature lines, and the first of its kind to be constructed in the State. It was financed by bonds issued by the State Highway Department, and will be operated as a toll bridge with reasonable tolls until it is paid for. At that time it will be put into operation as a free bridge.

In selecting Cotter, as the location of a bridge across White River, the Highway Department has chosen wisely. The traffic will be sufficient, in a few years, to pay the interest and retire the bonds, and probably no site on the river offers as many advantages in cheap construction as this. Contractors will have advantage of trackage right to the site, which will eliminate all expensive trucking and rehandling of material. Most of the material from which the bridge will be constructed lies right at hand. An immense gravel bar will furnish enough gravel for the concrete work, and there are large quantities of sand nearby. Limestone ledges in adjacent bluffs will furnish the stone.

A large part of the money which will be spent in the construction of the bridge will be left right here at home. It is expected that from a year to two years will be required to complete the structure, and it will furnish lots of labor to local men. The payroll will have a beneficial effect on local business. Considerable credit for this bridge should be given County Judge Ruthven. He was the first one to take the matter up with the Highway Department, and has been untiring in his efforts ever since, working hand in hand with the department in the matter of gathering data and extending them all the assistance he could. While conditions justified the construction of a bridge at this point, it seemed hardly possible that the department could be interested enough

to build it. Data on the conditions that justified the construction of the bridge was collected by Judge Ruthven and presented to the department in an orderly, and convincing manner. He first took the project up with them in November, 1927. The middle of that month the first survey was made and the site definitely determined on. Since that time it has kept the judge busy a part of every week furnishing data both to the Highway Department and to the government.

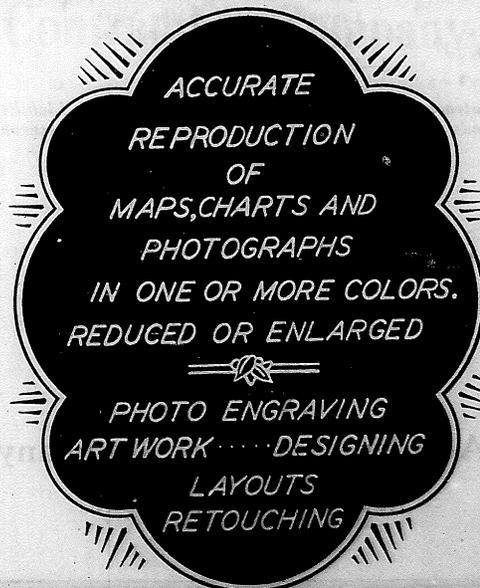
To adequately describe the building of this bridge, we would say that it was one of the greatest achievements ever accomplished by Baxter and Marion counties and the State Highway Department. Its completion should mark one of the largest celebrations ever held in this section of the State—*Baxter Bulletin*.

NEW ROAD TO ARKANSAS CITY FERRY ASKED

Property owners of Desha County are asking the State Highway Department for a two and one-half mile extension on the Arkansas-Louisiana Highway north through Arkansas City to a point on the Mississippi River opposite the Stopps Ferry landing in Mississippi.

Under present conditions, traffic is under the necessity of going approximately seven miles up the Mississippi River from the ferry landing to the nearest State highway on the Mississippi side. The extension of the Arkansas-Louisiana Highway which is asked would shorten the route almost six miles. County Judge J. M. Smith and the people of Arkansas City have pledged themselves to build the fills on the extension and furnish the gravel for surfacing if the department will furnish the engineering supervision and will haul the materials.

PEERLESS ENGRAVING CO.



PORTLAND CEMENT ASSOCIATION ANNOUNCES NEW DISTRICT MANAGER

The Portland Cement Association announces the appointment of James R. Fairman to be manager, eastern offices, with headquarters at 347 Madison Avenue, New York City, succeeding B. H. Wait resigned.

Mr. Fairman is a graduate of the University of Missouri, and was engaged in bridge designing and general engineering work in Kansas City and vicinity for several years. He was a Major of Engineers, U. S. Army, during the World War.

Mr. Fairman joined the field staff of this association at Kansas City in 1919 and was appointed District Engineer in charge of the Birmingham, Alabama, office in 1923.

Since December 1, 1925, Mr. Fairman has been manager, Southeastern Offices, Atlanta, Georgia, and will continue to supervise association activities in the south-east in addition to his new duties at New York.

TAGS ISSUED EARLY THIS YEAR

All sheriffs in the State have been notified by Dwight H. Blackwood, chairman of the Arkansas Highway Commission, that issuance of applications for 1930 auto license tags may begin on December 20th this year.

This is the first time such permission has been given, and it is believed will do much to relieve the congestion in the Highway Department and the postoffice which always occurs around the first of the year. Ap-

plications will be dated January 1st, as usual, so that records may be kept accurately for the proper year.

CAMDEN-EL DORADO PAVING PARTIALLY COMPLETE

An important section of the concrete highway being built by the State Highway Department from El Dorado to Camden has been completed and traffic between the two cities now is using the new road from El Dorado to Elliot. Traffic moving over the new route leaves the concrete at the Rinehart peach orchard going to Forbes' Lake and thence over the Mt. Holly road to Camden. The new route is considerably shorter and has been welcomed with loud acclaim by traffic between the two cities. It is expected that the remainder of the road will be open before the first of the year.

AMERICAN ROAD BUILDERS ASSOCIATION

Greatly reduced railroad rates are announced for the twenty-seventh convention and road show of the American Road Builders' Association to be held in Atlantic City January 11-18. This is one of the most important events in the entire field of road building and it probably will be attended by a large number from this section.

Pass the Bait

Vicar: "And what parable do you like best, my son?"

Boy: "The one about the multitude that loafs and fishes."—*Montreal Star*.

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Grandma Up-to-Date

Thelma _____, seventy-seven, was struck by an automobile when she roller-skated into the street in front of her home.—*Cincinnati paper*.

Domestic Economy Triumphant

One argument in favor of bridge is that it has done away with the necessity for an attic to store junk in. We give it all away now as prizes.—*Boston Transcript*.

The farmer has uneasy moments when he thinks G. O. P. means Great On Promises.—*Chatham (Ont.) News*.

There's Many a Slip

Mrs. Jones was caught beneath the auto and was taken to St. Joseph's Hospital with several fractured bones. The bones were on their way to Woonsocket, R. I., to spend the holiday.—*Norwich (Conn.) Bulletin*.

Cause and Effect

"I heard the most perfectly darling radio program last night," Miss Sparker gushed.

"Yes, wasn't it wonderful?" agreed her very dearest girl friend. "I didn't have a date either."

"Did you manage to give the cop the slip?"

"No, he gave me one."

Father: "You kept the car out rather late last night, son. What delayed you?"

Son: "Had a blowout, dad."

Father: "Hub! Tire or roadhouse?"

Husband (in car)—"Great heavens! The engine is terribly overheated."

Wife (calmly)—"Then why don't you turn off the radiator?"—*Life*.

"Which do you like better, balloon tires or high pressure tires?"

"I like balloon tires better."

"What kind of a car do you have?"

"I don't have any, I'm a pedestrian."—*Grinnell Malteaser*.

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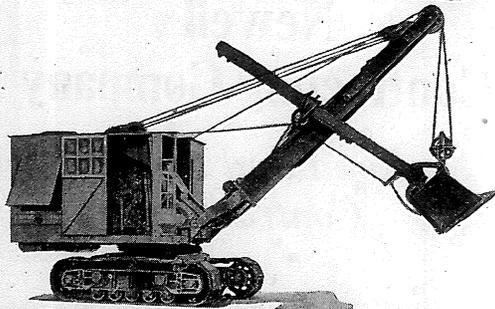
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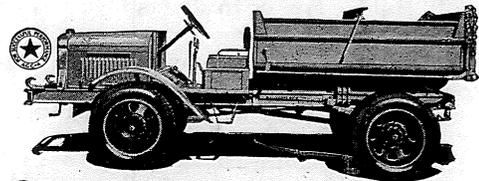
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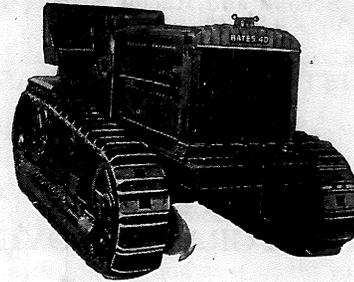


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