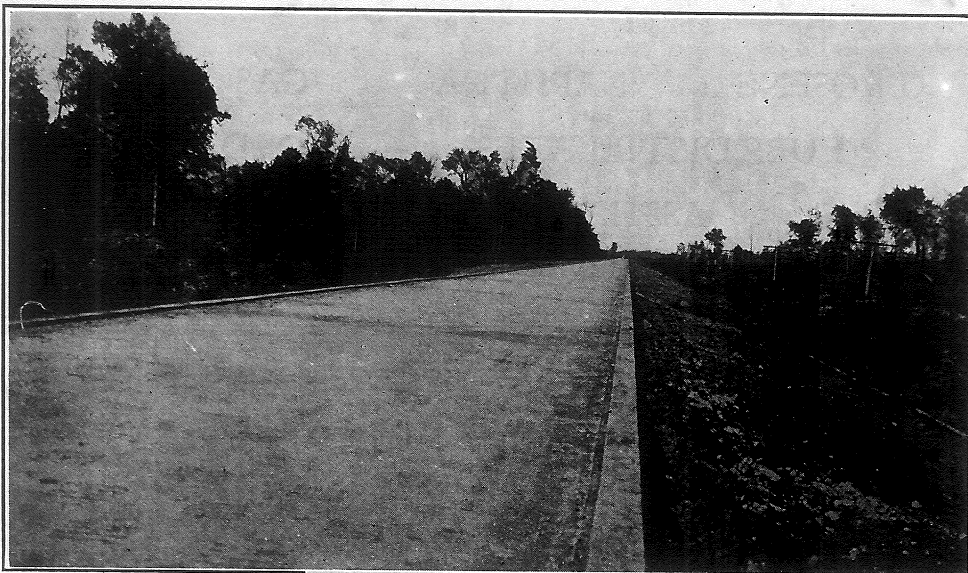


ARKANSAS HIGHWAYS

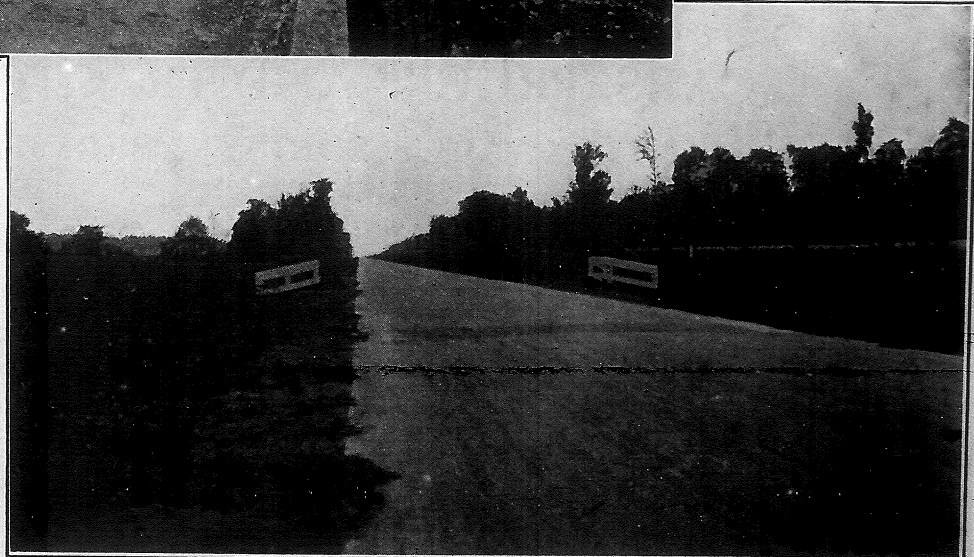
The Official Magazine of the Arkansas
State Highway Department, Little Rock



A Road in
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An Eastern
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Vol. 4

SEPT. 1927

No. 9

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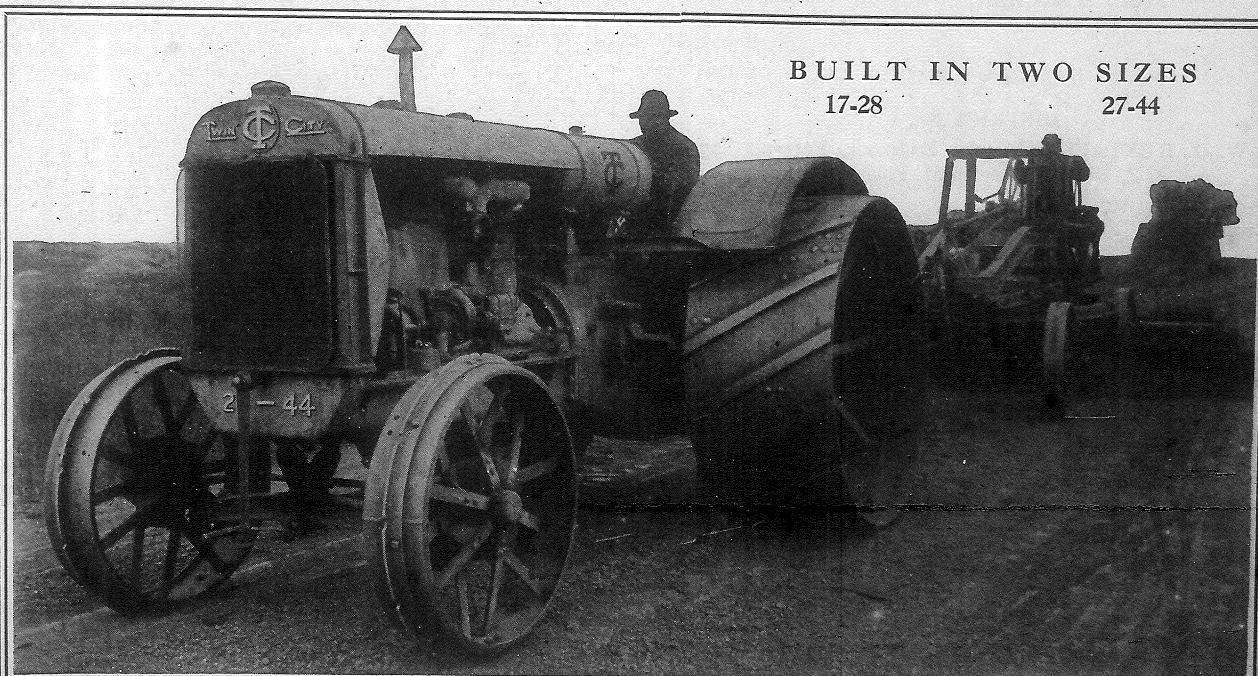
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ARKANSAS HIGHWAYS

*Official Monthly
Magazine*



*State Highway
Department*

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VOL. IV.

SEPTEMBER, 1927

No. 9

Twenty-four Contracts For Highways Are Awarded

Milwaukee Concern to Construct New Bridge at Dardanelle

Contracts on twenty-four highway and bridge projects out of a total of twenty-six jobs upon which construction proposals were asked for in advertised notices were awarded by the Arkansas State Highway Commission at noon Friday.

Charles S. Christian, Chief Highway Engineer, who read the names of successful bidders to 200 or more contractors in the House of Representatives chamber, announced that contracts were not awarded on two projects due to a revision and enlargement of plans or on account of the decision of the Commission for the Highway Department to do the work with its own forces.

It was also announced that all bids for "patch work," or repair on roads and bridges damaged by the recent floods, were rejected, the Commission having voted for the State Highway Department crews to do this work.

The Lakeside Bridge and Steel Company of North Milwaukee, Wis., on its proposal of \$534,137.35, was the successful bidder for construction of the new Dardanelle bridge across the Arkansas river between Pope and Yell counties. The bid covers the pneumatic method of construction which was adopted by the commission as the most feasible in comparison with the open method of construction. It was announced that the contract as awarded to the North Milwaukee concern is as yet tentative, pending final approval of plans by the United States Bureau of Roads from which one-half the cost of the structure is being obtained, and also to permit further investigations of the low bidder's qualifications to begin construction work immediately upon final approval of all plans.

The Lakeside bid was considerably lower than the commission had hoped to receive.

PROPOSALS REJECTED

Projects upon which all bids were rejected were as follows: Howard East and West road, Polk County, rejected to permit the revision and correction of plans to include eight miles additional, bringing the total mileage in the project to 13 miles; the Hoxie Cut-off road, Lawrence County, all proposals rejected, State Highway Department to complete the work.

Contracts on the remaining highway projects were awarded to the following contracting companies on their bids submitted Thursday:

Glenwood-Kirby road, Pike County, 8.8 miles, to Cook & Ransom, Ottawa, Kan., at a price of \$67,719.93.

Martin Creek steel and concrete bridge, Sharp County, to the Pioneer Construction Co., Kansas City, \$21,727.79.

Sherrill-Coy road, 6.3 miles, Jefferson County, to J. P. McNulty & Co., Pine Bluff, \$13,441.48.

Dermott-Collins road, 4.7 miles, Drew County, to the Johnson Team and Dray Co., Little Rock, \$7,865.

Prescott-Bluff City, eight miles, Nevada County, to Griffin & Harville, Gurdon, \$24,180.64.

Prescott-Rosston, 6.4 miles, Nevada County, to F. W. Fletcher, Hannibal, Mo., \$27,067.59.

Fort Smith-Charleston road, Sebastian County, eight miles, to Winstead & Gunter, Siloam Springs, \$49,587.31.

Furnishing treated bridge timber, Tillar-Monticello road, Drew County, to Atkinson Paving Company, Chillicothe, Mo., \$4,735.80.

For construction of steel and concrete bridge on Greenbrier Creek, Independence County, to F. L. Scull, Conway, \$13,168.13.

Pansy-West road, five miles, Cleveland County, to R. J. Lynch, Little Rock, \$27,726.18.

Hot Springs-Glenwood road, 17.2 miles, Garland County, to James Spencer & Sons, Mulvane, Kan., \$123,326.53.

Hot Springs-Malvern road, 12.5 miles, Hot Spring County, to M. E. Gilloz, Monette, Mo., \$128,401.76. This contract is tentative pending investigation.

El Dorado-Calion road, 3-7 miles, Union County, to Philpot Construction Company, Pine Bluff, \$100,204.61.

Corning-North road, three-tenths of a mile, Clay County, to S. C. Taylor, Birmingham, Ala., \$4,895.64.

Conway-Gleason road, 4.5 miles, Faulkner County, to W. L. Davis, Kansas City, \$12,843.18.

Fort Smith-Dardanelle road, 12 miles, Logan County, to Cook & Ransom, Ottawa, Kan., \$72,734.11.

Marmaduke-Clay County line, 5.3 miles, Greene County, to Lahar Bros., Springfield, Mo., \$43,519.62.

Holly Island road, 6.5 miles, Clay County, to Lahar Bros., Springfield, Mo., \$44,669.87.

Dallas County line-Malvern road, 17 miles, Hot Spring county, to R. O. Gwin, Sheridan, \$64,285.

Lonoke-East and West road, 5.5 miles, Lonoke County, to P. F. Connelly Paving Company, Little Rock, \$21,719.30.

Camden-Chidester road, 12 miles, Ouachita County, to M. Tansey, Bastrop, La., \$71,544.55.

Through the town of Greenway, one mile, Clay County, to Lahar Bros., Springfield, Mo., \$6,046.72.

Bridge on Strong-Huttig road, Union County, to Atkinson Company, Chillicothe, Mo., \$8,404.42.

In announcing the awards Mr. Christian stated that the low bidder was not given contracts in each instance, since the Highway Commission had expressed a desire to not overload any one contractor with highway construction work to the extent that the firm might possibly be delayed in completing all projects under its contracts.

It was stated that the Highway Commission in the future will conduct a monthly rating of contractors holding highway contracts, this rating to contain reports on progress of their contracts and their ability to take on additional contracts. Engineer Christian said that in case any contractor does not show satisfactory progress on contracts awarded him that he will not be given additional awards until the contracted job is brought up to the requirements of the State Highway Commission.

The commission remained in session Friday afternoon a short time disposing of routine matters.

The next regular meeting will be held October 15, when another quota of road contracts will be awarded.

HOOTCH, HUGGING, HASTE IS CAUSE OF MOST ACCIDENTS

The State Highway Department of Ohio is using a number of safety-first slogans at safety exhibitions in an effort to reduce motor accidents. Several of these were originated by the department and have found wide vogue. Here are some of them:

1. Don't try to scare locomotives with your horn.
2. A road hog roots up macadam with his nose.
3. Our roads are wide and smooth—don't burn them up.
4. Death is so permanent—take a minute or two at those dangerous railroad crossings.
5. Tragedy in seven words: Speed increases, breath ceases, rest in pieces.
6. Horse sense as well as horse power should enter into the operation of motor vehicles.
7. Live to ride another day by obeying signs—they mean what they say.
8. Keep your hands on the wheel—let your girl hug herself.
9. The three "H's"—Hootch—Hugging—Haste.

Booklet on "Arkansas" Recently Published Contains Much Information and Many Useful Maps

Comprehensive information on any State in the Union is mighty hard to get in one pamphlet or booklet, and this has been no truer of any State than of Arkansas, until now. With the release of his booklet, "Arkansas," Mr. W. D. Self, offices in the Boyle Building, Little Rock, has made available a thorough outline of the resources of this State, and has given information regarding the development of the State, the industries, the road system, and all other points of interest.

By employing a series of maps, pictures and brief descriptions, showing in compact form the more important features of the State of Arkansas, Mr. Self has undoubtedly proven why Arkansas is a mighty good place in which to live, to invest, and to work.

Using the unique method of presenting what he has termed the Mid-South by super-imposing a horseshoe, the symbol of good luck, upon a map of the United States, Mr. Self has given to that area so described all of Arkansas, Louisiana, and Mississippi, and portions of Texas, Oklahoma, Kansas, Missouri, Illinois, Kentucky, Tennessee, Alabama, and Florida. Arkansas, as you will readily see is in the center of this wonderful section of the United States. Interest is centered in the treatment of the facts in his booklet on Arkansas, although the other sections are not slighted.

It will remain for the public to read this wonderful booklet compiled by the author over a period of about two years of research, to really appreciate that substantial centers of industry and agriculture are located in the section covered. That the Mid-South is a land of growing cities is just one more interesting fact brought out. Facts about the population given here will be a revelation to you, as will also some comparisons of temperature, precipitation, growing seasons, drainage, agriculture, timber, minerals, railroads, highways, navigable rivers, super-power, banking, playgrounds, schools and colleges, churches, and the like.

This booklet, "ARKANSAS" is an epitome of information. It is more than that, it really could be used effectively in the schools as a supplement to geography study. It is a text-book, and having been beautifully printed by a Little Rock concern that specializes in color printing, all that could be desired in point of attractiveness is embodied.

'Twas Ever Thus

When the plumber makes a mistake he charges twice for it.

When a lawyer makes a mistake it is just what he wanted, because he has a chance to try the case all over again.

When a carpenter makes a mistake it's just what he expected.

When a doctor makes a mistake he buries it.

When a judge makes a mistake it becomes the law of the land.

When a preacher makes a mistake nobody knows the difference.

But when an editor makes a mistake—Good Night!
—Keystone Topics.

HOW ARKANSAS STANDS

Statistics, usually expressed in figures, make mighty tiresome reading. But they must be read if we are to know just how our State stands in point of Miles of State Road, Area of Square Miles, Number of Miles of State Road per 100 Miles Square Area, Miles of State Road per 1,000 people, Annual Income from all sources, and Income per Mile of Highway. All these facts are given in the table herewith, every State in the Union, and Arkansas' standing is indicated at the bottom.

STATE	Miles of State Road	Area of Square Miles	Miles State Road per 100 Square Miles	Population 1925 Census	Miles State Road per 1,000 People	Annual Income all Sources	Income per Mile of Highway
Alabama	3,936.3	51,998	7.5	2,467,190	1.5	\$5,447,903	\$1,384
Arizona	2,031.4	113,956	1.7	407,702	4.9	1,446,059	7,118
Arkansas	8,346.0	53,335	15.6	1,852,905	4.5	7,241,672	868
California	6,582.1	158,297	4.2	4,021,320	1.6	24,979,356	3,795
Colorado	8,966.6	103,948	8.6	1,019,286	8.7	3,599,128	401
Connecticut	1,952.1	4,965	39.3	1,531,255	1.2	8,910,040	4,564
Delaware	590.5	2,370	24.9	234,720	2.5	1,165,991	1,974
Florida	5,654.0	58,668	9.6	1,090,754	5.1	18,195,954	3,218
Georgia	6,258.8	59,265	10.5	3,058,260	2.0	9,034,865	1,443
Idaho	4,668.4	83,888	5.5	492,071	9.4	2,508,147	537
Illinois	9,459.6	56,665	16.6	6,964,950	1.3	14,047,208	1,550
Indiana	4,262.6	36,354	11.7	3,060,416	1.3	14,064,917	3,299
Iowa	6,653.7	56,147	11.8	2,505,569	2.6	15,050,843	2,262
Kansas	7,887.0	82,158	9.5	1,813,621	4.3	9,106,518	1,154
Kentucky	9,646.6	40,598	23.7	2,488,423	3.8	9,066,823	939
Louisiana	8,000.0	48,506	16.4	1,879,024	4.2	6,702,033	837
Maine	1,574.8	33,040	4.7	782,541	2.0	4,178,711	2,653
Maryland	2,419.8	12,327	19.6	1,537,085	1.5	5,222,122	2,158
Massachusetts	1,563.7	8,266	18.9	4,127,653	3	13,077,857	8,363
Michigan	6,756.8	57,980	11.6	4,154,525	1.6	27,035,461	4,000
Minnesota	6,930.9	84,682	8.2	2,563,550	2.7	14,781,248	2,132
Mississippi	6,721.0	46,865	14.3	1,790,618	3.7	6,061,612	900
Missouri	7,640.0	69,420	11.0	3,466,781	2.2	13,564,170	1,775
Montana	7,957.2	146,997	5.4	646,806	12.3	1,900,095	238
Nebraska	6,256.0	77,520	8.0	1,355,371	4.6	6,676,024	1,067
Nevada	2,996.0	110,690	2.7	77,407	38.7	615,738	205
New Hampshire	2,256.6	9,341	24.1	450,171	5.0	2,479,487	1,098
New Jersey	1,457.8	8,224	17.7	3,506,428	4	11,870,529	8,142
New Mexico	9,214.4	122,634	7.5	379,074	24.3	1,276,594	138
New York	14,068.0	49,204	28.5	11,105,625	1.2	28,786,421	2,046
North Carolina	6,218.0	52,426	11.8	2,759,014	2.2	17,186,473	2,763
North Dakota	6,837.8	70,837	9.6	6,686,424	10.0	2,566,574	375
Ohio	11,000.0	41,040	26.8	6,321,539	1.7	23,076,139	2,097
Oklahoma	5,589.0	70,057	7.9	2,238,536	2.4	11,727,454	2,098
Oregon	4,468.6	96,699	4.6	846,061	5.2	9,351,588	2,092
Pennsylvania	12,033.4	45,126	26.6	9,317,647	1.2	35,827,131	2,977
Rhode Island	821.7	1,248	65.8	639,401	1.2	2,474,794	3,011
South Carolina	5,143.3	30,989	16.5	1,779,084	2.8	6,448,527	1,253
South Dakota	5,923.5	77,615	7.6	666,380	8.8	4,353,938	735
Tennessee	5,051.0	42,022	12.0	2,424,616	2.0	7,443,820	1,473
Texas	18,728.0	265,896	7.0	5,097,574	3.6	19,589,769	1,046
Utah	3,248.7	84,990	3.8	492,478	6.5	1,892,057	582
Vermont	4,462.0	9,564	46.6	352,428	12.6	2,249,675	504
Virginia	5,210.5	42,627	12.2	2,449,443	2.1	10,480,145	2,011
Washington	3,283.6	69,127	4.7	1,478,214	2.2	9,538,096	2,905
West Virginia	3,784.6	24,170	15.6	1,601,130	2.3	6,651,610	1,757
Wisconsin	10,279.6	56,066	18.3	2,801,008	3.6	14,284,295	1,389
Wyoming	3,136.2	97,914	3.2	221,842	14.1	1,068,467	340
Arkansas' Rank	10	26	18	26	16	26	37

Twenty-eight Road and Bridge Contracts Awarded

Bids were received and opened in the office of State Highway Commissioner Dwight H. Blackwood on August 30th involving 28 projects of new construction, costing over \$2,000,000. This is the largest letting of contracts for roads ever known in the State. Bidders from all sections of the United States were present. The projects and successful bidders were as follows:

No. 716, Warren-Hermitage, Bradley County, 13.50 miles, grading and minor structures. Awarded to R. J. Lynch for \$32,885.71.

No. 707, Thornton-Hampton, Calhoun County, bridge of steel and concrete, 384 feet in length. Awarded to Lynch & Hill for \$42,277.03.

No. 1016 (Federal Aid No. 238-A), Corning-Piggott, Clay County, 1.47 miles in length, grading and gravel surfacing. Awarded to Brunnell & Mack for \$14,982.03.

No. 1617, Corning-Piggott, Clay County, 9.536 miles grading and minor structures. Awarded to S. C. Taylor for \$35,824.06.

No. 501, Heber Springs, Edgemont, Cleburne County, 8.899 miles in length, grading and minor structures. Awarded to B. H. Heard for \$52,852.66.

Cypress Creek bridge, Conway County, steel and concrete, 93 feet in length. Awarded to Peters & DeCamp for \$7,454.28.

No. 1015, Lake City-Leachville, Craighead County, 3,038 feet grading, minor structures and gravel surfacing. Awarded to C. B. Gregg for \$11,835.15.

No. 402, Alma-Mulberry, Crawford County, 8.967 miles in length, burnt shale surfacing. Awarded to James & Hopper for \$7,090.27.

No. 102 (Federal Aid, Nos. 300-9-11), Harahan Viaduct, Crittenden County, 4,200 feet concrete structures. Awarded to Fuller Construction Company for \$450,339.34.

No. 120, Wynne-Harrisburg, Cross County, 15.181 miles in length, gravel surfacing. Awarded to W. J. Runyan Paving Company for \$34,478.87.

No. 515, Newport-Grubbs, Jackson County, \$1,180 feet untreated timber bridge. Awarded to J. M. Howell for \$13,759.81.

No. 331, Lewisville-Bradley, Lafayette County, 11 miles gravel surfacing. Awarded to J. G. Newkirk for \$42,928.00.

No. 1101, Mansfield-Waldron, Logan and Scott counties, 274 feet concrete bridge. Awarded to Lutten Bridge Company for \$23,807.64.

No. 803, Charleston-Paris, Logan County, 9.671 miles in length, grading and minor structures. Awarded to Ellis & Lewis for \$54,772.42.

No. 332, Ashdown-Ogden, Little River County, 7.469 miles gravel surfacing. Awarded to Richardson Ayres for \$8,241.00.

No. 900, Yellville-Marshall, Marion County, 8.504 miles in length, grading and minor structures. Awarded to S. C. Taylor for \$73,955.76.

No. 103, Clarendon-Indian Bay, Monroe County, 10,236 miles gravel surfacing. Awarded to Simms Bros. for \$11,912.96.

No. 315, Rosston-Waldo, Nevada County, 7.452 miles grading and minor structures. Awarded to J. G. Newkirk for \$35,298.66.

No. 718, Camden-Chidester, Ouachita County, 1.449 miles in length, grading and minor structures. Awarded to J. P. McNulty for \$9,516.92.

No. 333, Murfreesboro-Delight, Pike County, 7.60 miles gravel surfacing. Awarded to J. P. McNulty for \$19,523.80.

No. 1001 (Federal Aid No. 245-A), Marked Tree bridge across St. Francis River, Poinsett County, 2.00 feet steel and concrete. Awarded to Williamson & Williams for \$111,645.41.

No. 615, Saline County, grading and surfacing in flood repair work, 20 miles in length. Awarded to Harvey Brown Construction Company for \$33,839.08.

No. 404, Fort Smith-Greenwood, Sebastian County, 9.954 miles grading and minor structures. Awarded to W. P. McCoy & Son for \$78,110.80.

Fort Smith-Greenwood, Sebastian County, 227 feet steel and concrete bridges. Awarded to O'Hogan & McVeigh for \$31,696.05.

No. 415, Fort Smith-Charleston, Sebastian County, 9.954 miles grading and minor structures. Awarded to Interstate Construction Company for \$40,910.31.

No. 403, Mill Creek and Slough, Scott County, 2,260 feet steel and concrete bridges and grading. Awarded to O'Hogan & McVeigh for \$32,948.26.

No. 715 (Federal Aid No. 232-B), Magnolia-El Dorado, Union County, 18.255 miles concrete surfacing. Awarded to M. D. L. Cook for \$457,031.59.

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LITTLE ROCK, ARKANSAS

An Army Fights To Fill Your Gas Tank

By William Boyd Craig, in Nation's Business

Twenty-five years ago the family horse was fed in the stable and paid for before it was driven. Today the family car is nourished with gasoline at a public filling station, and may or may not be paid for before it is used.

Nothing, says the philosopher, is permanent except change. The changing methods of gasoline retailing is a case in point. At the beginning of this century gasoline was simply one of the by-products of petroleum, a poor relation to kerosene, then the family pride. Swiftly a market grew, until now gasoline is the white-haired boy of the petroleum industry, our fourth largest in value of manufacture and second in value of exports.

A quarter of a century ago gasoline was known in the home principally as a fluid which would remove spots from clothing and was dangerous near flames. Last year more than twelve billion gallons were produced to satisfy an ever-growing demand.

Many new products have their troubles working out efficient systems of distribution. Gasoline is no exception. Because it can find no close precedents to follow, it must proceed by the trial and error methods. Today it is suffering somewhat from overproduction, but those in the industry will tell you that it isn't an overproduction of product so much as it's an overproduction of outlets.

By the latest registration figures, there is a motor car for every sixth American and a gas station for every eighty automobiles in the country. In some States there is probably a filling station for every fifty cars. The number of pumps at any gas station varies from one to fifty or more, each with its underground tank which holds from 500 to 1,000 gallons.

Of the twenty-odd million cars and trucks now running, the average uses just under 500 gallons of gasoline a year, and between 20 and 25 gallons of oil. All over the country the retailer's mark-up on gasoline, which includes overhead and profits, is three cents or less. To exist, a station must have a good location. The better the situation, the higher the fixed charges such as rent will be, with the result that the profits from gas selling are modest, to say the least.

What will the limit be? Is the saturation point near at hand, or has it been passed already? Will the drive for outlets take a more intensive form, until we see gasoline delivered at the doorstep like milk? Or will there be fewer but better sales stations? The retailing end of the industry seems to be nearing a turning point now.

No consideration in retailing of any kind is more interesting or more intricate than price. What makes the price of a one-karat diamond, or of a good cigar, or a Rembrandt painting? Why does gasoline sell for twenty-one cents a gallon in the District of Columbia, for instance? The answer probably will never be worked out with mathematical precision because of the infinite number of gallons, each with its own cost figures, which would have to be averaged together to get a true meaning. Yet a good approximation can offer a lot of food for thought for the motorist who profanely points to the gasoline price as pure extortion. Two cents from every gallon sold goes for a tax used in repairing Washington streets. (The average tax for the nation is

about three cents.) Three cents from the remaining nineteen is the margin or mark-up which the retailer works on. Out of this come rent, light, heat, wages, bookkeeping, advertising, donations, and, if there is anything left, profits.

Sixteen cents is the average tank wagon price. The wholesaler usually works on the same mark-up as the retailer. His overhead is naturally high, with offices and trucks to be maintained, occasional demurrage to pay, cartage, wages and other incidental expenses of selling.

Seven cents is a good refinery price for a gallon of gasoline at Tulsa or similar distributing centers. That leaves six cents for loading, freight, storage, unloading, advertising, cartage and profit. The complete tabulation follows:

Retail price.....	\$0.21
Tax.....	.02
Retailer's mark-up.....	.03
Wholesaler's mark-up.....	.03
Freight and storage.....	.06
Refiner's price.....	.07

The retailer's mark-up will vary somewhat, as he may be granted a better price if he buys in quantity. Competition may be so keen, on the other hand, that a smaller margin is necessary in some localities. Refinery prices, while subject to fluctuations, are not so likely to be lowered to increase sales to wholesalers. This is due

Have you seen the
wonderful booklet

"ARKANSAS"?

This booklet makes available, for the first time, a comprehensive presentation of the State and interesting things worth knowing about the State.

It is a credit to the author, Mr. W. D. Self, to the State, and to the Mid-South.

Also it is a magnificent job of printing, and the reason we were selected to produce it is—

"We Actually Do Better Printing"

CENTRAL PRINTING CO.
Phone 7138 209 Louisiana Little Rock

to the fact that many of the large oil companies have their own wholesale departments to take care of the distribution of their products. These wholesale departments in turn take care of establishing new stations by lending pumps and possibly putting in driveways and other special equipment for the operators. The result of such a policy is that many station operators are doing business financed almost entirely by the big oil companies. It would be possible to find cases where the retailer had a hundred dollars of his own money invested in a filling station, while in pumps and improvements the oil companies had put several thousands.

The strongest single influence on the price of a gallon of gasoline is the cost of transportation, congressional committees to the contrary. Astute economists place the operation of supply and demand as the second factor in importance in establishing price. Instead of the alleged collusion within the industry to keep price up, there is the hottest sort of competition which often results in violent expression in the form of price wars.

A gallon out of every hundred evaporates between the refinery and the automobile tank. This loss must be passed on to the consumer, so that he pays, actually, for 100 gallons while he gets but 99.

The consumer can't tell whether he is using gas refined from a Pennsylvania or a California or an Oklahoma well, or a mixture of all three. If he, the consumer, is on the eastern seaboard, the chances are better than even that it was produced by Atlantic Coast refineries. About a fourth of the East's gasoline is shipped in a finished state from Gulf ports. Ten per cent is from California, and nearly the same amount comes from Appalachian Mountain refineries.

If every refinery in the country shut down suddenly, the existing supply would meet normal demand for less than a month.

Gasoline is showing a slow but certain tendency toward uniformity since the war, according to the Bureau of Mines, which makes a semi-annual survey of the composition of retail gasolines. Average volatility is almost invariably found to be well within navy specifications, which are the standard for the country. Winter gas has heretofore been more volatile than summer gas, but this difference is becoming less and less, the Bureau says.

The retailer is faced with a serious problem in hiring assistants. They are the shock troops of his business, and one of his real assets—or liabilities.

Too often young boys who seem to have skipped all the grades in school where grammar is taught are employed. As a rule they are honest, but not infrequently they give the impression that a real idea would prove fatal.

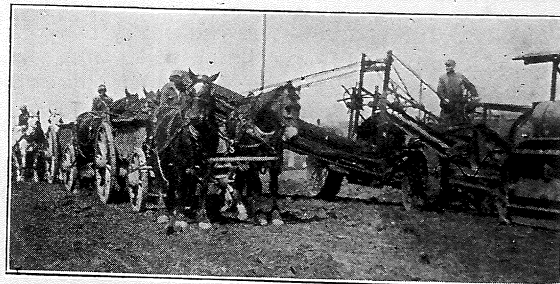
The average wage of a gas station attendant is \$60 or less a month. Not a princely sum, and probably the main reason why they are attendants, not salesmen. To many it's just a job, a little better than going to school. Yet the service that the salesman can give is one key to profits. When a man drives up to a tank and asks for five gallons of gas, that is not necessarily the end of the transaction for the station man. The motorist is distinctly open to suggestion at such a time. He has less "sales resistance" than when in a drug store, for instance. He does not want to be sold what he wants so much as he wants to be sold what he needs.

Nowhere is competition keener than on the Pacific Coast, close to the flush fields of the Far West. Consequently, station service is so good that tourists from distant points return to their homes marveling at the eagerness of most attendants to please them.

A California garage owner was lamenting to a friend over his inability to compete for gas and oil sales with a station across the street run by one of the big producers.

"How is it," he asked an eastern automobile trade group official, "that I have to pay my attendants twice what they do across the street, and yet I can't get anything like the willingness to work out of the boys that they can? No matter how much I preach service, courteousness and salesmanship to them, they are a step behind the lads of the organization across the street. It has me guessing."

Later the trade association official found the answer from one of the organization offices. "When you drive up to one of our stations for gas or oil," he said, "you are being served by the future officials of the company. If you don't think so, ask them. Mostly college boys, but we sell them on the value of their jobs. They can't even use a pump until they have shown they can wipe windshields. Then, after proving that they are ambitious enough to stick, they are given a little better station rating and given the job of selling oil. It's true that the president and most of the high officials came up through the same ranks, so we go the limit in fanning the private ambitions to succeed among our whole personnel.



2000 Cubic Yards a Day —one-quarter the Cost

This great machine embodies two essentials—Strength and Simplicity.

The first Elevating Grader—built at the close of the Civil War—has been improved to such an extent that it will handle 1000, 1500 and under exceptional conditions, 2000 cubic yards per 10-hour day at $\frac{1}{4}$ to $\frac{1}{3}$ the cost of other methods.

It will excavate ditches 40-ft. wide, delivering earth directly to embankments. In one 10-hour day one machine will dig a ditch one mile long 6-ft. wide at top, 1½-ft. deep with 2-ft. base.

Our Elevating Grader catalog will tell you many more interesting facts. No cost or obligation—just write.

The Austin-Western Road Machinery Co.
400 North Michigan Blvd., Chicago, Ill.

And the company gets the benefit because the public is pleased."

Last January a Kalamazoo, Michigan, operator checked up his sales and found his ratio was 17 gallons of gasoline to every quart of oil. He showed his assistants how things stood and impressed on them that they were evidently overlooking possible oil sales. He led the way himself in soliciting more business by pointing out to customers their own needs. If a motorist asked for five gallons, he put in that amount, then reminded him that the tank would still take 3, 4, 5 or even 10 more gallons, and it might as well be put in now, to save another trip.

The motorist's oil was gauged with a polite "I just wanted to make sure you have enough oil," and thus the burden of proof was shifted to the motorist, or rather to his crank case. The same station operator proved that the automobile which stopped for air was a potential customer for oil and gasoline as well. Putting air into tires is a necessary evil which many men gratefully relinquish to the station attendant with a sigh of relief. The same operator found that polite suggestions sold more and more accessories, as long as the suggestions were put forward as representing a desire to fill the motorist's needs rather than to run up the bill of sale. At the end of three months' sales effort he had changed the oil ratio to a quart for every five and one-half gallons of gas. Profits jumped proportionately, for in oil there is a larger margin for the retailer.

One retailer found that measuring the gas tank of small cars which do not carry gauges increased his volume. Five gallons was the small car owner's usual order. The remark, "It'll take seven," meant enough extra gallons sold to warrant dipping the measuring stick into the small car tank. Naturally, tact was a big factor in the tone in which the information was given to the driver.

It is a hard job for an independent operator to establish the individuality of his station on the mind of a large body of customers. Standard prices prevail pretty largely, so that he is unable to base his appeal on price. Whether a fixed price is good for the industry or not is open to question. When an occasional sign shows gas offered at a price below the average, it is a sign that the distress sign is flying from a refinery somewhere.

Again, the retailer is forced to handle advertised brands. He is, in the eyes of the buying public, the representative of a large producing unit rather than an individual business man fighting to express himself by his own business methods. Whatever good-will he

builds up goes to the manufacturer, in most cases.

One reason for this is to be found in the fact that the individual gets his mess of pottage when he lets the manufacturer lend him his pumps and other facilities. Usually the manufacturer who makes the best offer of free equipment names the only brand carried.

Shall the retailer build his gasoline business as a sideline to his accessories trade, or shall he sink or swim with gas and oil sales? It seems simple enough when stated in so many words, yet that is no small part of his problem, and his success will be measured by the accuracy with which he finds his own answer, depending on local conditions.

A glance at facts brought out by the Baltimore Retail Survey seems worth while here. Gasoline with thirty-one wholesalers found 800 outlets in the city proper. These outlets, with the volume done by each last year, were:

Outlet	Number	Volume
Auto accessories	31	\$121,400
Automobile	21	208,300
Bakeries	2	
Candy	5	2,500
Coal, wood and ice.....	2	18,600
Dairy	1	
Drugs	1	800
Dry goods.....	1	100
Florist	1	
Fruits	1	3,000
Furniture	1	
Gasoline and oil.....	221	13,075,900
General	1	
Groceries	474	4,700
Hardware	17	4,300
Meats and fish.....	15	2,300
Motorcycles	2	2,600
Paint and oil.....	2	100
Ice cream	1	
Total.....		\$13,444,600

Many retailers in that city did not stick to petroleum products as the only source of income. Seven had auto and truck agencies; fifty-one sold accessories; one sold agricultural implements; another offered bakery products; one sold candy; three carried tobacco; one had a side line of coal and wood; three sold chinaware; two carried electrical goods; another sold glass; one had a stock of miscellaneous hardware; one offered household supplies; two had ice cream and soft drinks; one served

1,500 Tons

700 Sizes

STEEL PRODUCTS

CENTRAL SUPPLY COMPANY

LITTLE ROCK, ARKANSAS

meals; another ran a newsstand; two had radio sets and supplies; and another carried a line of oil stoves.

It is a safe surmise that a survey of retailing in a country district would show gasoline carried chiefly as a side line to crossroad groceries and general stores, lunch counters, repair shops and such establishments which depend on other commodities for their principal income.

In many cities stations are placed on unimproved property as a temporary income against the day of final disposition of the property.

When two grades of gas are carried, many retailers refer to the higher priced product as "sucker gas" and wait for a customer to ask for it. On the other hand, the enterprising gas merchant can point out to a buyer that the better gas vaporizes quicker and will consequently make starting easier on cool mornings. Such a suggestion, skillfully made, with tact, not coaxing, has secured results before now.

Thoughtful retailers sometimes ask themselves whether advertising of branded gasoline is productive of the best possible results. A drive for more gallonage of one type may win for it new buyers, but the retailer points out that the buyer was a buyer before, who simply used another brand. Brand advertising seems to shift preference rather than develop or increase demand.

The idea is growing that something should be done to enlarge the present market by making the individual use more gas. If the average annual consumption of the typical motorist could be added to by even ten gallons or less, with little or no increase in overhead, the retailers are realizing that they would be benefited noticeably. More gas stations will simply spread the profits thinner.

The automobile was not developed solely as a market for gasoline. It happened along, and gasoline was produced in increasing quantities as needed. The two-car-family selling is a fresh stimulant to gas sales.

There is overproduction of crude oil, the raw material of gas. There probably will be for some time to come, because no effective way has been devised for limiting the production in a new field. The scientists in the research laboratories of the larger companies are constantly devising new uses for other petroleum by-products, but, with few exceptions, little is being done toward increasing gasoline consumption.

Predictions of the day when crude oil resources will be exhausted are becoming fewer. The best brains of the industry have been directed toward production and refining rather than toward retailing.

Of the retail price, not more than five cents is for the tangible stuff. The remainder is for the service of delivery from the refinery to the auto tank. Few other commodities will show such a difference between manufacture price and retail price.

Milk is another commodity for which the material itself is cheap. The cost of distribution is the largest part of its retail price. The parallel between the two is good. Both must be supplied over a large area and sold in relatively small amounts.

To the credit of the industry is the attractiveness of many gas stations. Beauty as a part of the merchandising technique of gasoline is a fortunate usage. In many cases filling stations put the surrounding retail section to shame.

The organizations in the industry will probably get together soon to solve the ticklish problems of distribution through organized effort, to improve markets and to find or create new consumption.

Through co-operation, rather than competition, gasoline has its best future, in the opinion of the experts. A few instances of where co-operation may be found to be effective may be found in the collection of facts on the uses of trucks for short freight hauls; studies in the best means of increasing the uses of tractors and other farm machinery, using gasoline as a fuel; and in advocating vacation trips for pleasure cars. These fields seem to offer possibilities, but, until the idea behind each is sold to the public through educational and advertising campaigns, they will remain possibilities.

It is a safe prediction that when the producers, wholesalers and retailers do get together, through trade association activities, to cut out whatever waste there is in distribution and to improve the merchandising of petroleum to such an extent that there is yet greater profits for all, the price of a gallon of gas will be lowered.

Self-Service

"I've been watching that mechanic for the last fifteen minutes. There's a man that knows his business. He didn't spill a drop of oil on the mudguard. He put down the hood gently, fastened it securely and left no fingerprints on it. He wiped his hands on clean waste before opening the door, spread a clean cloth over the upholstery, meshed the gears noiselessly and then drove slowly and with caution into the street."

"Yeah. That's his own car."—*Life*.

Warrenite-Bitulithic Pavement

"A WARREnted Product"

*How many years---
not how many yards?*

When you lay this pavement you answer the question of length of service as well as area covered. In the end you will find that it is the severest, and yet the fairest way, to judge the intrinsic merit of any pavement.

Warren Brothers Company

International Highway Engineers and Contractors

EXECUTIVE OFFICES:

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DISTRICT OFFICES:

Havana, Cuba	Washington, D. C.	Dallas, Texas
New York, N. Y.	Utica, N. Y.	Charlotte, N. C.
Portland, Ore.	Minneapolis, Minn.	Oklahoma City, Okla.
St. Louis, Mo.	Oakland, Cal.	Salt Lake City, Utah
Winnipeg, Man.	Toronto, Ont.	Melbourne, Australia
Harrisburg, Penn.	Memphis, Tenn.	Sidney, Australia
Vancouver, B. C.	Birmingham, Ala.	Buenos Aires, R. A.
Chicago, Ill.	Los Angeles, Cal.	Tokyo, Japan
Phoenix, Ariz.	New Orleans, La.	

STANDARDIZATION OF HIGHWAY SIGNS

The importance and desirability of having uniform highway signs has long been apparent to everyone connected with the road building industry. For many years, however, this movement was in the same class as Mark Twain's famous remark about the weather. Everyone talked about it but no one did anything.

During 1926 standardization of highway signs became an accomplished fact. The history of the movement briefly started in 1924 when the American Association of State Highway Officials at their annual meeting in San Francisco requested the Secretary of Agriculture to appoint a Board to formulate "a standard system of numbering and marking highways of interstate character." The Secretary, complying with this request, appointed on February 20, 1925, what was known as the Joint Board on Interstate Highways. On October 26th of the same year this board submitted its final report. All during 1926 this report was reviewed and discussed by many agencies and it has now had the unanimous endorsement of the American Association of State Highway Officials and Secretary Hoover's National Conference on State and Highway Safety, besides numerous State and county organizations throughout the United States. The U. S. Bureau of Public Roads has moreover given its formal approval to the use of standardization signs on all Federal Aid highways.

The standard sign has been developed along three lines—shape, color, and wording and symbols. The three most important of the standardization signs are the "Stop," "Caution" and "Railroad." The first is octagonal and bears the word "Stop." The second is

diamond shape and carries the word "Curve" or "Turn" with appropriate arrow indicating right or left bends in the road. The railroad is round and carries the familiar "R. R." and the cross. All these indications are in black, while the background of the sign is a deep yellow commercially referred to as Federal yellow.

Already thousands of these standardization signs have been erected upon the highways, most of these, however, by the State Highway Departments. The next step in the general adoption of the system is for county and municipal officials to follow in line and employ the standardization sign in marking county highways and main arteries through municipalities. If this is done the application of the standardization movement will be successful in the largest degree.

Orator—"I thought your paper was friendly to me?"

Editor—"So it is. What's the matter?"

Orator—"I made a speech at the dinner last night, and you didn't print a line of it."

Editor—"Well, what further proof do you want?"

Rather Harsh

A man is something that can see a pretty ankle three blocks away while driving a motor car in a crowded city street, but will fail to notice, in the wide, open countryside the approach of a locomotive the size of a schoolhouse and accompanied by a flock of forty-two box cars.

W. P. McGeorge & Co.

RAILWAY, HIGHWAY, STREET
PAVING, LEVEE and SEWER
CONTRACTORS

PINE BLUFF, ARKANSAS

Pine Bluff Sand and Gravel Co.

PRODUCERS OF

CHANNEL WASHED SAND AND
GRAVEL

We Buy, Sell and Rent Used Equipment

PINE BLUFF, ARKANSAS

Cross County Gravel Company

Producers of

Washed and Sized Gravel and Sand
High Grade Road Gravel Railroad Ballast

WASHING PLANT AND PIT
CHERRY VALLEY, ARK.

Missouri Pacific Track

GENERAL OFFICE: PINE BLUFF, ARK.

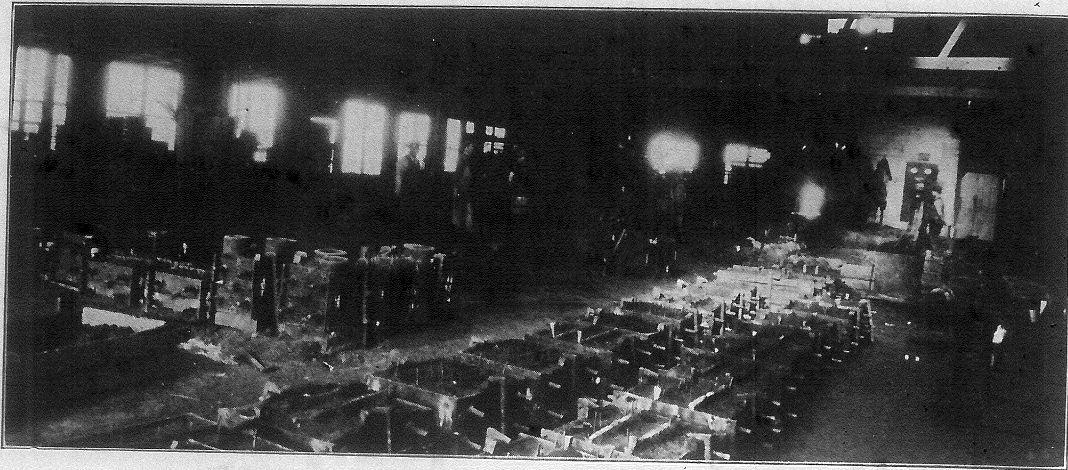
Bearden Gravel Co.

PRODUCERS OF

HIGH GRADE ROAD GRAVEL

Pit Near Millville, Ark., on Cotton Belt Line.

Office, Pine Bluff, Arkansas.



SECTION OF EAST END OF STEEL FOUNDRY SHOWING FURNACE
WE MANUFACTURE

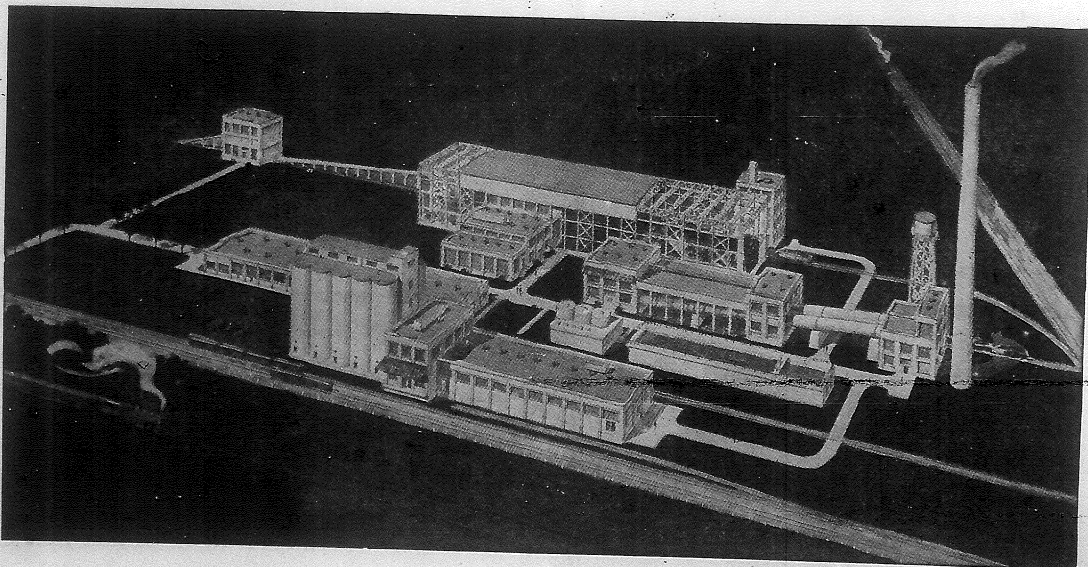
IRON and STEEL CASTINGS

KNOWING HOW MORE THAN A HALF CENTURY
WE SERVE WITH STRICTLY MODERN EQUIPMENT

STANDARD BRAKE SHOE & FOUNDRY COMPANY
PINE BLUFF, ARKANSAS

PHOENIX PORTLAND CEMENT CORPORATION

Manufacturers of High Early Strength Portland Cement



PLANT:
PHOENIXVILLE, ALABAMA
Birmingham-Bessemer District

SALES OFFICE:
ALABAMA POWER BUILDING
BIRMINGHAM, ALABAMA

A Statement to the Public by L. W. Baldwin, President of the

MISSOURI PACIFIC LINES

Building a Railroad for the Present and Future

ALL of the money that has been taken in on the Missouri Pacific, since the railroads were returned to their owners, has been spent for wages, material and supplies, new and additional equipment and facilities, taxes and interest. Not only that, but many millions of additional dollars which had to be borrowed also have been invested in the development of a better railroad.

It has been possible to obtain new capital because investors have confidence in the fairness of the American people and there is a general and well-founded belief that railroads should be permitted to earn a fair return.

What has been accomplished on the Missouri Pacific has been done in spite of most adverse conditions. While it is true that the volume of freight traffic has been increasing, the freight rates, especially on the Western Railways, have been constantly decreasing. In 1926 these rates were only 26 per cent above the level in 1911, while the cost of everything that enters into the production of railroad transportation service remains at a much higher level. For instance, in the 15-year period there has been an increase in the wholesale price of building material of 78 per cent; in fuel and lighting, 135 per cent; metals and metal products, 43 per cent; wages, 127 per cent. In the same 15-year period railroad taxes have increased 294 per cent or to a total of \$388,682,377 last year.

Official figures show the average level cost of all commodities in 1926 to be 63 per cent above the level in 1911. Even the products of agriculture brought returns to the farmer, on his farm, 54 per cent above the 1911 average.

And while this has been going on and millions of dollars have been spent improving passenger train service—purchasing new and even better equipment, etc.—the number of passengers hauled has been constantly decreasing. The American railroads actually handled fewer passengers in 1924, 1925 and 1926 than they did in 1911 and the decrease in 1926 as compared with 1920 was 26 per cent.

Western Railways have had to meet, in this 15-year period, an increase of 120 per cent in operating expenses and they have had with which to meet this increase only 105 per cent more revenue. The difference, as is known, was bridged by increased efficiency and economy of operations.

The foregoing is a brief summary of the railroad problem. It also is a problem of the public. The public must have adequate and dependable railroad transportation and if our Great Southwest is to continue to develop as it should the railroads must be permitted to lead and point the way.

Sympathetic understanding and co-operative assistance of the public are more needed now than ever before. There are many ways in which every individual can be helpful.

I solicit your co-operation and assistance.



"A Service Institution"

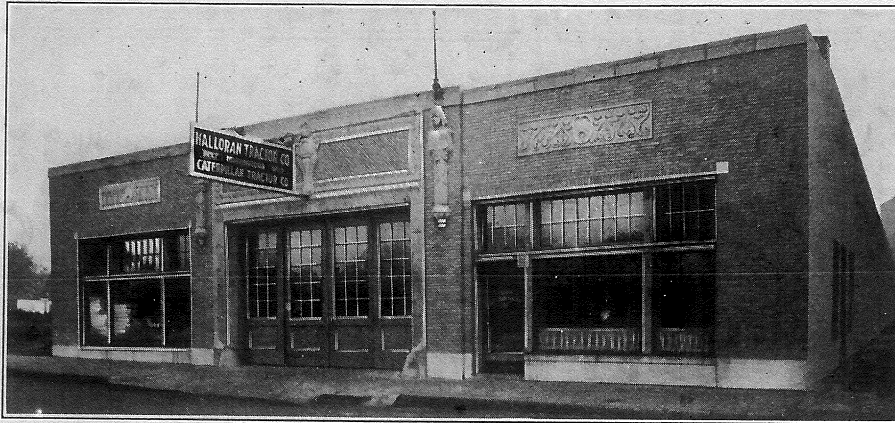
President
Missouri Pacific Lines

MEMPHIS
OFFICE and
WAREHOUSE

185-191
BUTLER AVE.
MEMPHIS

ONE BLOCK
NORTH OF
UNION STATION

LONG
DISTANCE
TELEPHONE
6-1710



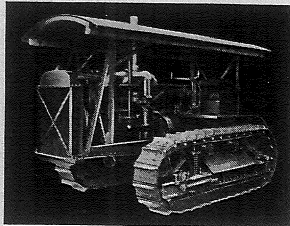
COMPLETE
STOCK, NEW
TRACTORS AND
REPAIR PARTS

FACTORY-
TRAINED
SERVICE MEN

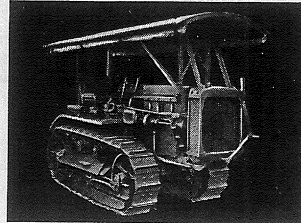
COMPLETELY
EQUIPPED
SHOP

REPAIRING
OVERHAULING
REBUILDING

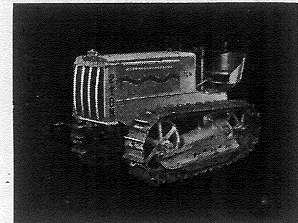
All three models of "Caterpillar" Tractors are carried in Stock at Little Rock, as well as at Memphis—thus insuring you immediate delivery.



←
"Caterpillar"
Sixty
Tractor

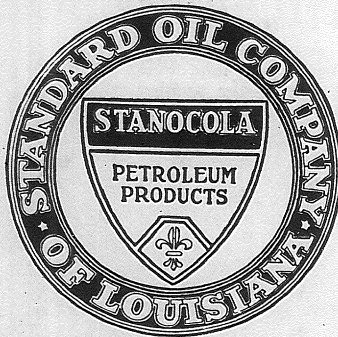


→
"Caterpillar"
Thirty
Tractor



←
"Caterpillar"
2-Ton
Tractor

HALLORAN TRACTOR COMPANY, *Distributors* MEMPHIS, TENNESSEE



"Better Stick
to the
Standard"

"Standard" Motor Oil

(FORMERLY STANOCOLA POLARINE)

and

"Standard" Gasoline

(FORMERLY STANOCOLA)

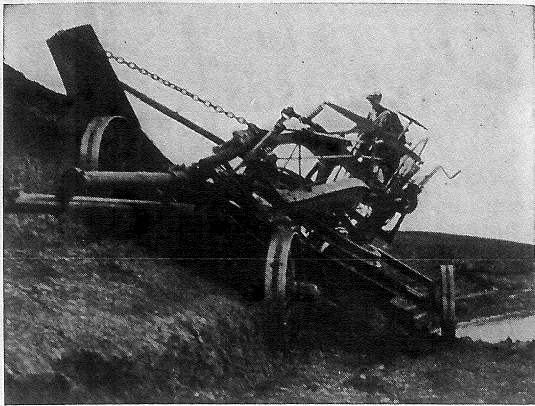
are the two Motor necessities so essential to the efficient operation of your Automobile or Motor Truck—Look for the dealer displaying Stanocola signs and call for Stanocola Polarine or Stanocola Gasoline by name.

ASPHALT—The Standard Oil Company of Louisiana, with its modern Refinery at Baton Rouge, is the largest manufacturer of Asphalt and Asphaltum products in the South.

Asphalt and good roads are synonymous and you will find it used on better Highways from Maine to California and from Canada to the Gulf of Mexico.

Standard Oil Company of Louisiana

NEW ORLEANS, LOUISIANA



In a Ditch or On a Bank

—It's all the same to an Adams Adjustable Leaning Wheel Grader. An Adams Grader has a wider range of usefulness than any straight-axle grader because its leaning wheels hold it to the work wherever you want to put it. And it has a mechanical simplicity and ease of operation that is not to be found in any other leaning wheel grader.

J. D. Adams & Co.

20 Adams Ave.

Memphis, Tenn.

Complete Stock Carried for Immediate Shipment

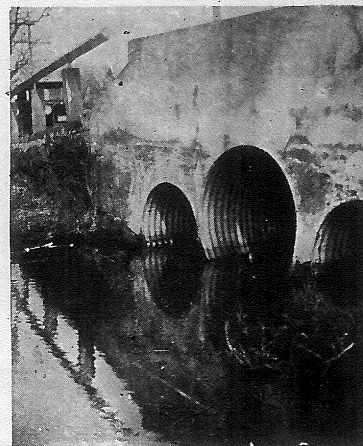
**ADAMS
ADJUSTABLE
LEANING WHEEL
GRADERS**

"The Original—A Proved Success Since 1885"

A Culvert with a Three-fold Protection

1. Toncan Iron has the natural corrosion resistance of a dense, homogeneous well-made iron of great purity.

2. Toncan Iron is alloyed with .40% copper—an enemy of rust.



3. Toncan Iron is alloyed with .05% Mo-lyb-den-um, something that no other culvert contains, and which greatly adds to the strength and life of Toncan.

REG. U. S. PAT. OFF.
TONCAN
COPPER

Mo-lyb-den-um

IRON CULVERT PIPE

**Choctaw
Culvert & Machinery Co.**

MEMPHIS

Russell Motor Patrol - in 4 sizes Perfected Powerful Units

Better Built Motorized Patrol Graders. With these highly finished machines comes refinement of design eliminating mere clumsy weight—machines which give speed and ease in control and a standard of efficiency which can scarcely be overestimated—then too, they afford a minimum of up-keep cost.

Russell Motor Patrols are built in four sizes—

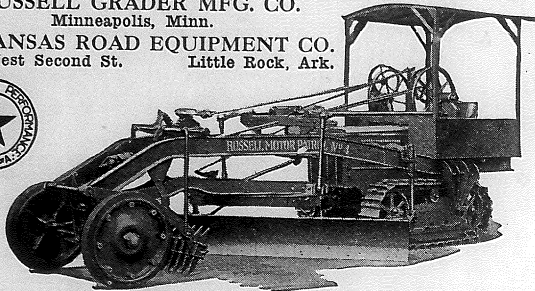
- No. 2 for Fordson tractor for power
- No. 3 for 10-20 McCormick-Deering tractor for power
- No. 4 for "Caterpillar" 2-ton tractor for power
- No. 5 for "Cletrac" 20-K tractor for power

Each of the four models No. 2—No. 3—No. 4—No. 5 is equipped with scarifier worked with blade or independent of blade, as desired.

Our catalog of special interest to all road builders—sent free and postpaid.

RUSSELL GRADER MFG. CO.
Minneapolis, Minn.

ARKANSAS ROAD EQUIPMENT CO.
214 West Second St. Little Rock, Ark.



Printers to Arkansas!

Gradually through the years there has been built up a State-wide appreciation of what the "Calvert-McBride" mark means on printing.

Quantity Production
Highest Quality
Prompt Delivery
Lowest Price

*These Things Tell
The Story*



Calvert-McBride Printing Company
FORT SMITH, ARKANSAS

Hermitage Portland Cement

SAND • GRAVEL • STONE

STEEL
ROAD
MESH

*Our facilities for supplying
road building materials
are unexcelled*

CAREY'S
ELASTITE
EXPANSION
JOINT

FISCHER LIME & CEMENT CO.

MEMPHIS



BUY
En-ar-co
MOTOR OIL
At the Sign of
The
Boy and Slate

Costs less per mile

En-ar-co Motor Oil forms a perfect seal between rings and pistons, between pistons and cylinder walls. Gasoline can't penetrate this seal and get down into the crank case to destroy the oil. Surplus oil can't get past this seal to form carbon on valves and spark plugs.

EN-AR-CO MOTOR OIL
LIGHT—MEDIUM—HEAVY—EXTRA HEAVY

THE NATIONAL REFINING CO.
Memphis, Tenn. Little Rock, Ark.

National Headquarters, National Building
CLEVELAND, OHIO

IMMEDIATE SHIPMENT ON
IRON and STEEL

For Bridges and Buildings

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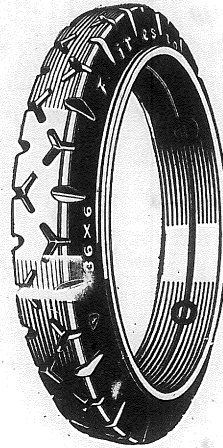
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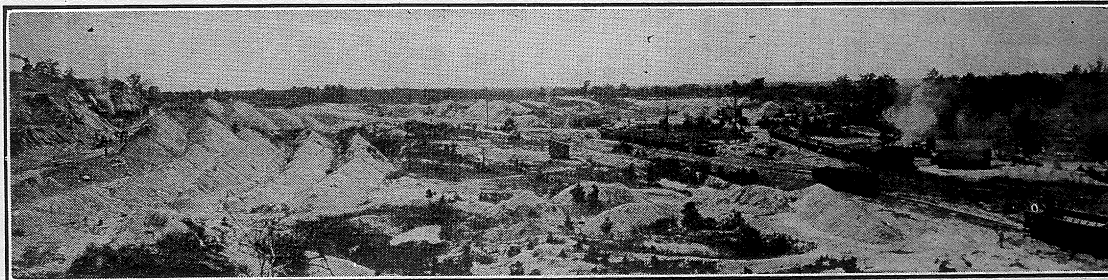
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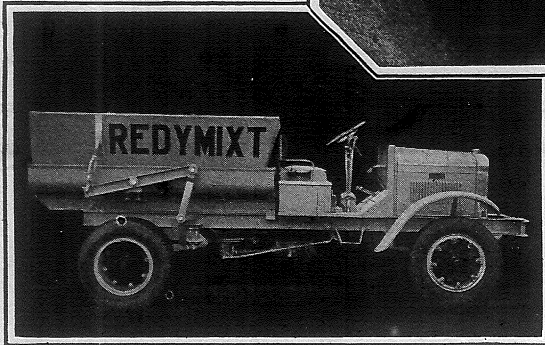
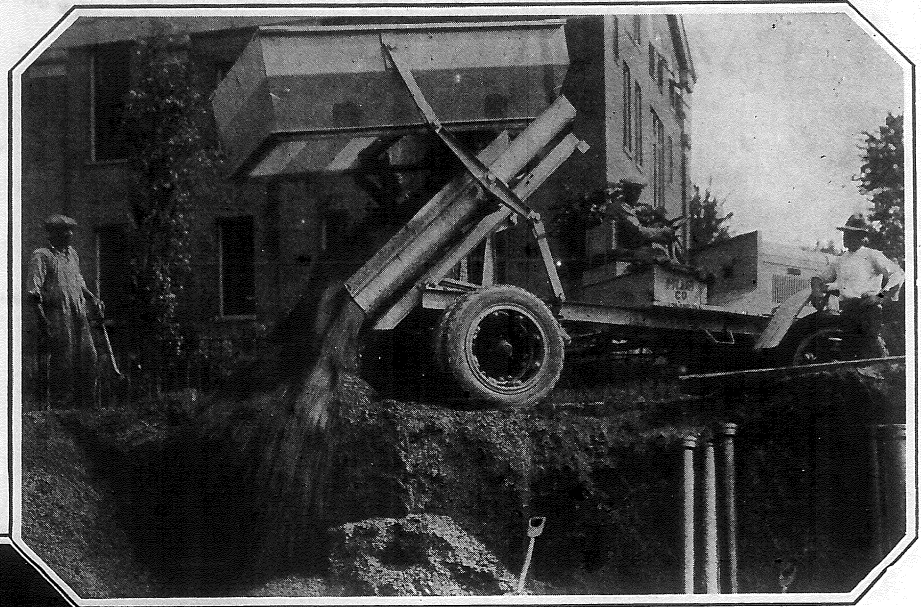
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