







# FERGUSON FORUM "BUILDERS OF TEXAS"

1851-1925

## For the Good of Texas

Because the FERGUSON FORUM is in fact "A TEXAS PAPER FOR TEXAS PEOPLE" it is engaged in this campaign to advertise and describe the countless advantages of this great state and the various agencies which are engaged in the development of its agricultural, transportation, mineral, industrial and educational resources.

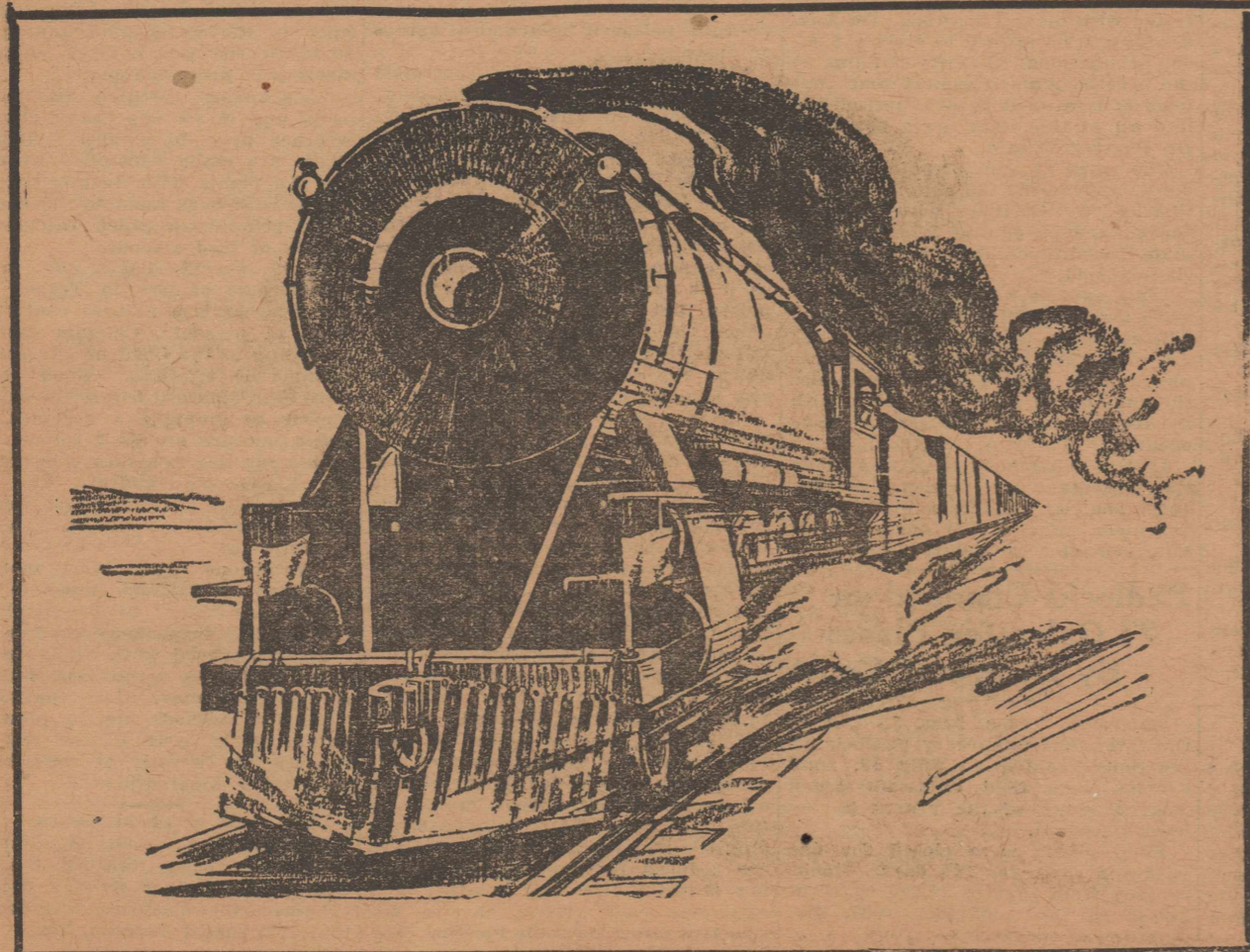
In this campaign will be a vast amount of information concerning what has been accomplished in the development of Texas resources and what is being accomplished and what the future holds in the way of further devel-

# The Railroad

The first attempt to build a railroad in Texas was in 1851, but the rails were left piled by the side of the river on account of the difficulties in financing it, and it was not until after 1870 that there was any great progress in railroad construction in Texas. About this time the Houston and Texas Central was extended from Houston to Dallas, and what is today called the Texas & Pacific was crossing the state in the opposite direction toward the ever-beckoning west. Prior to that time the farmers had been compelled to haul their cotton and other products overland to Houston, or else sell at a great disadvantage away from the market centers. The natural result of this was that they could not produce large amounts, and did not care to take the risk of living in the interior of the state. The problem of marketing their goods was a barrier to those in the United States who considered the possibility of emigrating to the fertile plains of our great state,

When these "steel lanes of traffic" opened the center of production, and made possible the marketing of cotton and other products, the greatest hazard which the prospective Texas citizen had to pass was destroyed, and as a result the rural population more than doubled between 1870 and 1880 and has increased steadily from that time to the present. The census of 1920 showed a population of 4,663,228 people, 3,150,539 of which were classed as rural. If the railroads had not made possible the marketing of their agricultural products, many a worthy person would thus have been denied the privilege of starting over in a new land where the keenness of competition was at least dulled by the ability to go on out of the reach of those who were desirous of encroaching upon their neighbor's land or trade. How many natives of Texas today would have been denied that distinction under those circumstances? We can readily see from this that the railroads have been a great, and perhaps the greatest, single factor in building the population and settling the broad expanse of our great state.

Have they, then, served their purpose and outlived their usefulness which in the past has been immeasura-



These pages are part of a series to advertise the RESOURCES and INDUSTRIES of Texas; and are contributed by "BUILDERS OF TEXAS" who have made possible the GROWTH AND DEVELOPMENT of Texas.

# ORDERS OF TEXAS" CAMPAIGN

## The Forum's Mission

1851-1925

opment and exploitation of the advantages offered by Texas to all classes of workers and to investors.

This week the Forum gives a brief review of the railroads of the state and what they have achieved for its progress and upbuilding. The railroads have been true pioneers in the development of the state and opening its millions of fertile acres to new settlers and inspiring the building of cities across its broad plains. Texas owes much of its tremendous advancement to railroad facilities and the people are coming to know that co-operation between the roads and the communities they serve will accomplish still greater things.

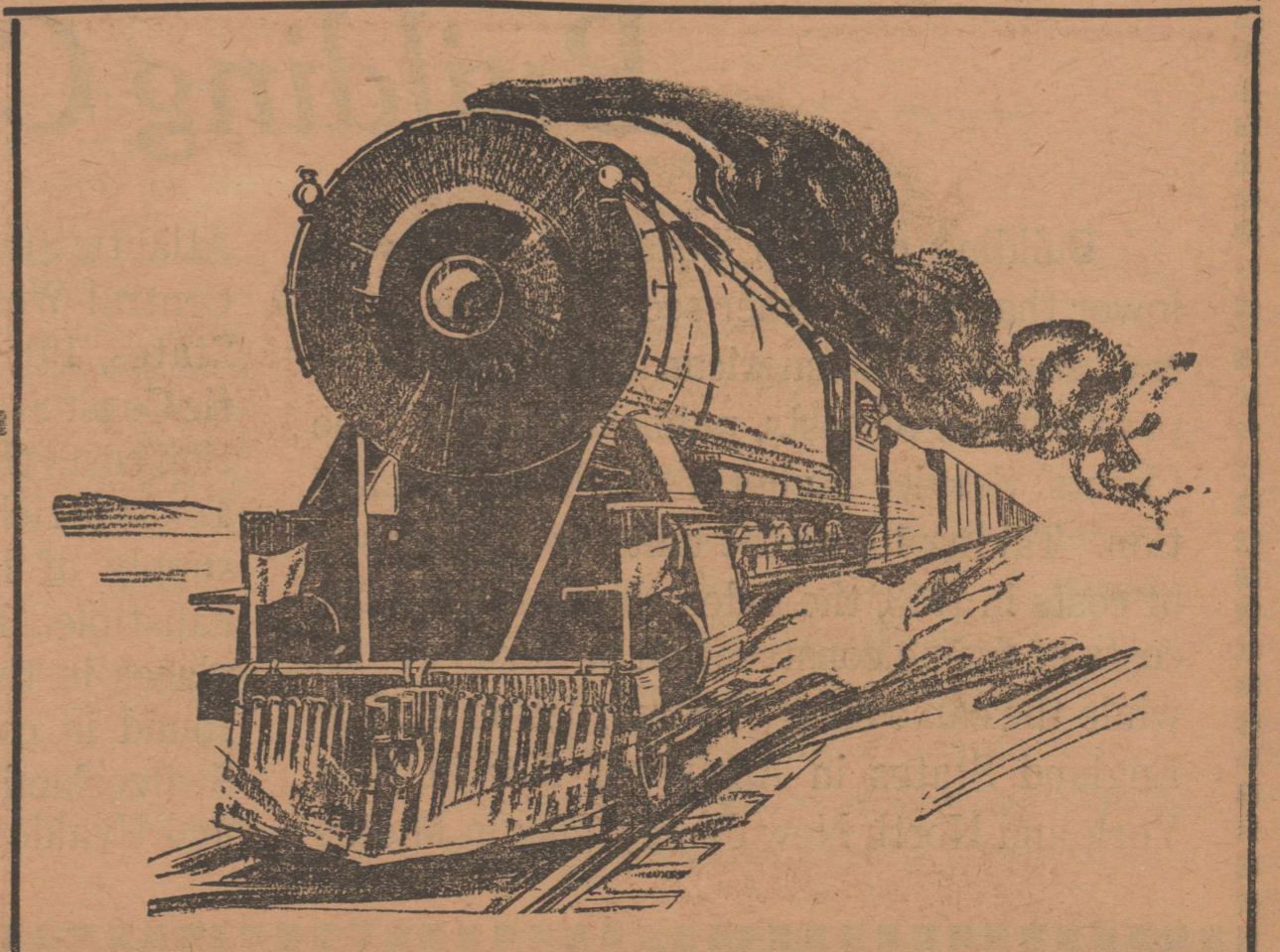
# ads of Texas

ble? By no means. Today there are almost 16,000 miles of trackage in Texas over which the trains of 111 companies are operated, and for which the people paid \$207,463,560 in 1923. When we think of the small proportion of the value of an article which is represented by the cost of its transportation, then we can begin to see just how much these railroads mean to Texas today. Their service is regularly and steadily given day and night throughout the year; the necessity for rapid transit in the marketing of farm products has been greatly increased by an increased demand for the perishable products of the dairy and truck farm; and the state of Texas still has more room for immigrants than any other state in the United States; hence their usefulness has increased and will continue to increase as long as there are people in Texas who want to engage in agriculture or trade.

Is this the full extent of their usefulness? In the beginning the state felt that they were so desirable that they were offered large tracts of land if they would complete enough mileage to open up a new section of the country. Do we still need to subsidize them? By no means. For

the fiscal year ending Sept. 1, 1924, the assessed valuation of railroad property amounted to \$253,534,216 from which the state of Texas derived a revenue of \$1,901,510.37. The counties of the state, taken as a whole, are estimated to have received \$2,535,342.16, taking the median rate of \$1 for every county in Texas. These together give the state of Texas a grand total of \$4,436,852.53 which was received from the railroads and which was then available for building schools and roads, and for any other service to the people for which the state sees fit to use the funds.

This much can be shown by actual figures. Who would attempt to show the value in connecting Texas with the outside world, in giving employment to thousands of Texas people, in stabilizing and commercializing agricultural and industrial production throughout the state?



Other articles in this campaign will deal with the varied industrial, agricultural and mineral interests and their progress and development in Texas. Read each article of this series. It will be worth while.

# FERGUSON FORUM GOOD

## Texas Ranks First in Building Good Roads!

Texas, South Dakota, Illinois and Minnesota, in the order named, led in the completion of Federal aid highways during the last fiscal year.

Department of Agriculture figures show 14,032 miles of the designated 175,000 miles of Federal highway system were completed during the year. The Texas figures were 784 miles, South Dakota 458, Illinois 431 and Minnesota 429.

Former Governor Charles W. Bryan, of Nebraska, brother of the late William Jennings Bryan, is an ardent advocate of good roads and on a recent visit in Texas gave expression to his views on the value and advantages of improved highways to residents of the rural districts.

"I have been engaged in farming all my life," he said. "During the months of February and March of this year I have driven my automobile through twenty-one agricultural states covering a distance of seven thousand miles. No one could make the trip I have made without feeling it was his duty to say to the farmers wherever I have the opportunity that in my judgment the farmer will get more benefit from permanent roads than any of those engaged in any other line of business.

"Hard roads will practically bring the

farms of the county into the city limits or suburbs of the towns. It makes every acre of farm land suburban property. It opens up a market that a farmer can reach every day in the year with everything he produces on his farm. It gives the farmers' children access to the schools and colleges within a radius of fifty or seventy-five miles from his home, and enables the young folks to live under the care and influence of their parents while acquiring an education.

"Hard roads will make suburban property out of all the farms, not only those located on the paved highway, but through lateral roads and gravel highways running back from the paved highways it practically makes the farm lands of the county suitable for homes for those who have business in the city and yet desire to maintain the comforts, conveniences and luxuries of farm life.

"In my opinion it is a mistaken idea that future generations are to be called upon to pay a heavy debt or carry a heavy load for development that the present day public has an advantage of. Permanent pavements which are being constructed throughout the rural sections of the United States are increasing the value of farming lands to such an extent that a ten or twenty acre tract of

farming land within a few years will have a commercial value greater than a quarter section of land has today.

"These small tracts of land when used for intensive farming—for raising vegetables and produce, for raising poultry, and the larger tracts for dairying will create more wealth by having access to a ready market where the output can be brought to market in the towns and cities each year, and each day in the year that it will start a permanent prosperity which is not dependable alone on climatic conditions, but will grow and develop with the increasing population. The dairying industry is one of the best paying pursuits the farmer has at his hands. This industry would do well in Texas, having as it does suitable climate for dairy cattle, suitable climate and soils for producing much dairy feedstuffs.

"Being interested primarily in agriculture and having devoted the last twenty-eight years of my life in an effort to having the disadvantages removed to which agriculture has been subjected and encouraging every development that will redound to the interest of the farmer and those depending upon him and endeavoring to help him on his feet, let me express hope that the farmers will take advantage of this opportunity."

## Building Cost In Texas Low

Building costs in Texas in April were lower than in any other section of the country, states the American Appraisal Company's index of costs, published in the June Clients' Service Bulletin of that organization. Taking 100 as the unit for comparison of costs in 1913, the index shows April, 1925, costs of frame construction in Texas at 196, while the same class of construction in New England States in April was 204; in New York and North New Jersey, 206; in Middle

Atlantic States, 207; Pittsburgh district, 211; Central Western States, 205; Northwestern States, 191; Southeastern States, 202; Pacific Coast States, 200. The average construction costs throughout the country was 200.5. Texas is rich in road building materials. Her supply of limestone rock asphalt is inexhaustible. It is said that there are only five places in the world where this material is found in commercial quantities, Germany, Switzerland, France, Sicily and in Kenedy and Uvalde counties, Texas.

Texas has also vast beds of Caliche, limestone rock, mudshell in large quantities mined from the gulf coast country, gravel beds and road bed clay. These deposits are distributed over the state, and are easily available for all road building purposes. More gravel roads have been constructed in Texas than roads of other types, and these have proven both durable and satisfactory.

The deposit of trap rock in Texas is equal to any found in the United States.

# GOOD ROADS CAMPAIGN

## THE BUSINESS OF BUILDING ROADS

It is a regrettable fact that there still exists in some sections of the country a stubborn opposition to investing any money whatever in road improvement. It is especially deplorable when this opposition is encountered in sections where good roads are sorely needed and would repay the citizenship many times over the value of their investment. I believe that this prejudice is due chiefly to the fact that the people of these sections have not realized that the good roads are not a luxury but an investment, and one which usually pays handsome dividends. They must be shown first, that the building of roads in general is an economical proposition and second, that the improvement of their particular roads will prove an asset rather than a liability; that it will repay them in dollars and cents the amount invested plus a reasonable profit. That road improvement in general is a business proposition has been demonstrated many times, and is not hard to prove. It is evidenced by the enormous amount of road building under way today in all sections of the country.

A hundred years ago practically no effort was made at either constructing or maintaining roads, with the exception of such repair work as was necessary to keep the roads passable for horse-drawn vehicles. If anyone had advocated the expenditure of millions of dollars for road improvement he would undoubtedly have been thought crazy. Today, millions of dollars are spent on road improvement in a single county. The change has been occasioned by new inventions that have revolutionized our mode of travel.

The first step came about through the invention of the bicycle. More than fifty years ago bicycle riding was very popular. Not only children, but men and women of all ages engaged in this sport, and it was in answer to their cry for better roads that the first real steps in road improvement were taken.

The real impetus to road improvement did not come, however, until after the invention and perfection of the motor vehicles. Since that time the business of road building has increased by leaps and bounds, until today more than a billion dollars a year is spent on highway construction in this country. Approximately 9,000 miles of Federal Aid Highways were completed the last fiscal year, making a total of over 55,000 miles. Texas alone has nearly 3,200 miles of completed Federal Aid Highways and 1,500 miles under construction, more than any other state in the union.

This tremendous increase in highway construction could not have come about if it had not been proved, and the great majority of the citizenship of this country had not realized that good roads were a necessity and a good investment.

Many of the business enterprises of this country are dependent upon the highways. The communities in the vicinity of our large cities, that it is not economical for the railroads to serve, are reached by motor truck lines and by bus lines. The products of the farm are largely transported to town by the truck, and stores in the farming communities are supplied with groceries, dry goods, etc., largely by the same means. For this reason the farmer, as well as the business man, has realized that good

roads are a necessity, and that road improvement is a money-saving proposition.

The science of road building is largely a business proposition, a matter of dollars and cents. The highway department of this state is the largest business institution in the state. Its business is the building and maintaining of state highways. Every phase of construction and maintenance presents its own economical problems. These problems arise in the selection of the type, in the determination of the grade line, in the location. The cost of construction, the cost of maintenance, the saving in operation cost are all considered before the plans are made; then that type, and grade line and location are selected that will prove the most economical or will cost the public least in the long run.

The first consideration is whether the nature and amount of traffic will justify the improvement of a road—in other words, whether or not the improvement will repay in dollars and cents to the public the amount to be invested plus a reasonable profit on the investment. An improved road pays for itself in various ways. It increases the value of the adjacent property, it stimulates trade between the cities and the communities which it connects, it saves time in transportation, thereby saving money, for time has a monetary value to everyone, and it saves greatly in operation and upkeep of trucks and motor cars.

Let us take for example a road built some years ago. There was a fifty-mile stretch of unimproved earth road connecting two towns. At three places very steep grades were encountered and in wet weather the road was practically impassable. Twelve hundred dollars was spent annually on the maintenance of this road, and a traffic census revealed that 350 motor vehicles passed over it a day. It was desired to improve the road, and as both concrete and surfacing gravel were to be had locally, only two types were considered, concrete and gravel.

In relocating the road five miles was saved in length and the grade was lowered considerably.

It was estimated that the cost of building with concrete over this stretch would be approximately \$2,000,000 and the cost of surfacing with gravel \$350,000.

The life of the concrete road was taken at twenty years, during which time the gravel would have to be resurfaced at least five times. The maintenance cost of the concrete for twenty years was assumed at \$180,000, and that of the gravel for the same length of time, including resurfacing five times, at \$1,200,000. So the total cost of the concrete in twenty years will be \$2,180,000, the cost of the gravel \$1,550,000. From tests conducted in different sections of the country it was assumed that the cost of operation and upkeep of motor vehicles over the concrete road would be at least 4 cents less per mile than over the unimproved earth road, and over the gravel road would be at least 2 1-2 cents less than the earth road. It was calculated that the traffic would be increased to 400 motor vehicles a day due to the improvement. Estimating the cost per mile per car, over the unimproved road at 10 cents it was found that the cost of operating 400 cars a day for 20 years over the earth road would have been \$14,600,000, and the saving on concrete and gravel surface was computed, the following figures resulting:

Saving over 45 miles of concrete road in 20 years, \$5,256,000, plus \$1,460,000 saved by eliminating operation cost over 5 miles equals \$6,716,000.

Saving over 45 miles gravel road in 20 years, \$3,285,000, plus \$1,460,000 saved by eliminating 5 miles, equals \$4,745,000.

If we subtract our first costs plus 5 per cent, plus the cost of maintenance on either the gravel or the concrete we have left a very substantial profit on our investment, and it is not necessary to consider the gain from increase in property value, or from the stimulation of trade, nor the gain due to saving in time of transportation, anyone of which would have added very materially to the profit realized on our investment.

In fact, in twenty years a saving of 2 cents per mile on each vehicle would alone have repaid the cost of construction and maintenance for the concrete road.

The example serves to illustrate that road improvements is first of all an investment, and one that is usually well worth while.

MARK S. SWAIN, Division Engineer.  
Caldwell, Texas.

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*These pages are part of a series to promote the building of more GOOD ROADS in Texas and is contributed by the undersigned public spirited citizens who have at heart the best interests of this great state.*

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