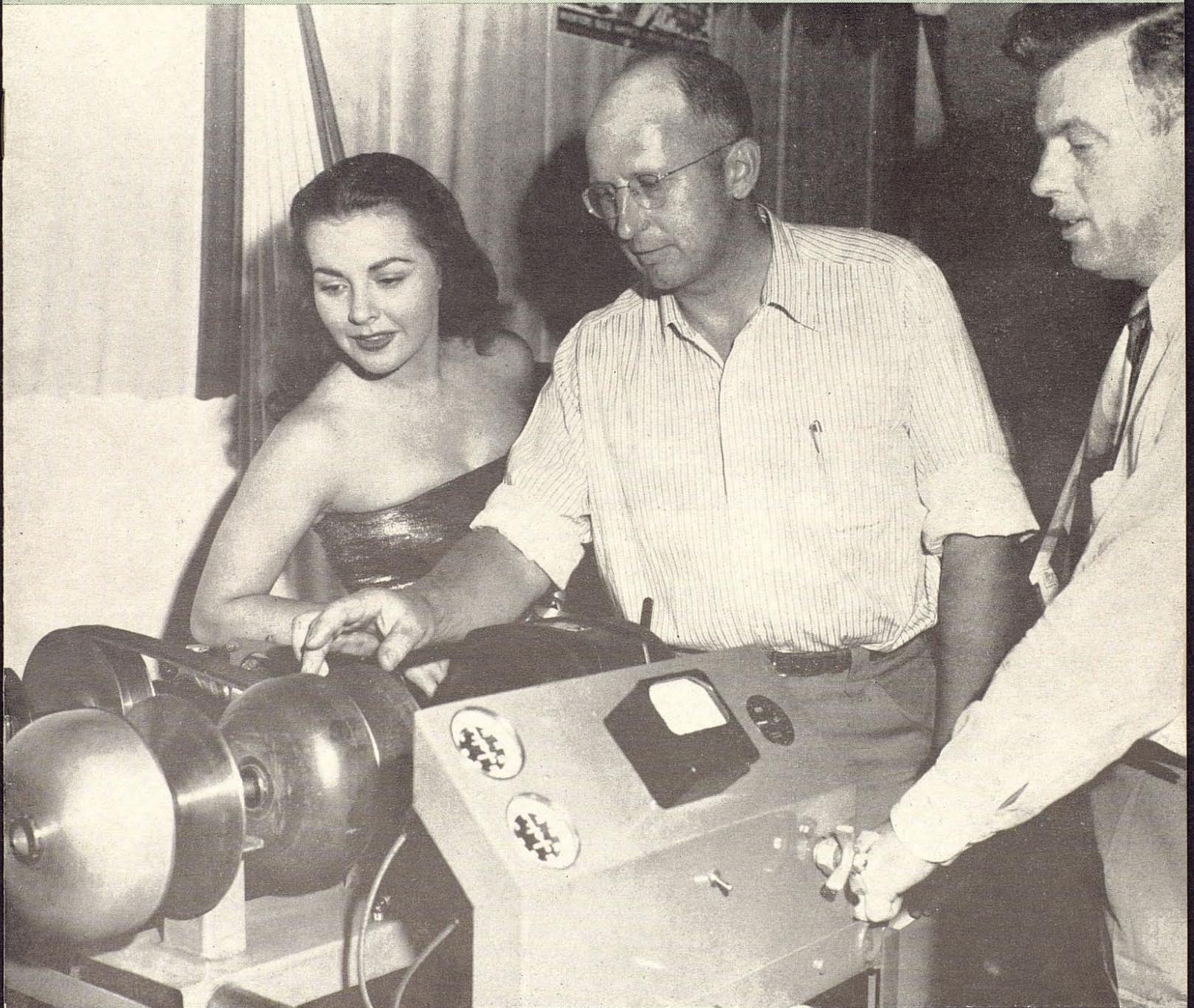


The
SHAMROCK

AUGUST 1950



ROCKY MOUNTAIN INVENTORS CONGRESS

STORY ON PAGE 2



Vicki Johndrow, 4 years old, poses beside folding high chair her father, Neil Johndrow, designed.

Rocky Mountain Inventors Congress

Scores of new ideas for easier, better, and more pleasant living were on display last month when the third annual Rocky Mountain Inventors Congress and Industrial Exhibit was held at Pueblo, Colorado, June 30 and July 1

This year, inventors from all over the West and Southwest brought their ideas to Pueblo in the industrial heart of Colorado. Their inventions ranged from simple household gadgets to complicated industrial machinery — everything from a new kind of potato peeler to a machine for grading and sorting radio-active ore.

The exhibitors at the Rocky

Mountain Inventors Congress were men and women who had recognized the need for a better way of doing something. These exhibitors were also free to exercise their ingenuity in an effort to carry out their ideas. At the Inventors Congress they were displaying ideas they hoped would ultimately receive public approval. In attempting to get their better can openers, their adjustable wrenches, and their many other new ideas on the market, they were competing with thousands of others. If an inventor should succeed in winning approval for his idea, he might also win fame and wealth. If not, he can expect no compensation for

the hours he has put in developing his idea or the money he had expended for tools, materials, and for expenses involved in obtaining patents.

Yet the incentives for the development of new ideas are still great enough in this country that men and women all over the nation are willing to risk time and money in the attempt to create a new machine, gadget or toy to improve still further our high standard of living.

The Rocky Mountain Inventors Congress was established three years ago to focus the attention of the Nation's industrialists on the area around Pueblo and to aid

western inventors in getting favorable publicity for their ideas. The success of the Inventor's Congress can best be illustrated by the fact that some twenty of the ideas in the first two shows are now being manufactured or otherwise produced and an equal number are ready for production.

The manner in which new ideas are conceived and developed was well illustrated by the prize-winning folding high chair on display at the Pueblo exhibit. Like most of the other inventions at the Congress, the idea for the folding high chair was inspired by necessity.

During World War II, Captain Neil F. Johndrow of the Army Air Force, like many other service personnel, wanted to keep his family with him as much as possible while he was stationed in the United States. During one year, however, he was transferred from one station to another eight times. Since the Johndrows had a small child, one of the problems involved in these moves was the transportation of a high chair. After the upholstery of their car had suffered considerable damage from a bulky conventional high chair, the Johndrows tried to buy a folding model but couldn't find one on the market that met their needs. Johndrow then resolved to design one as soon as he could get the opportunity.

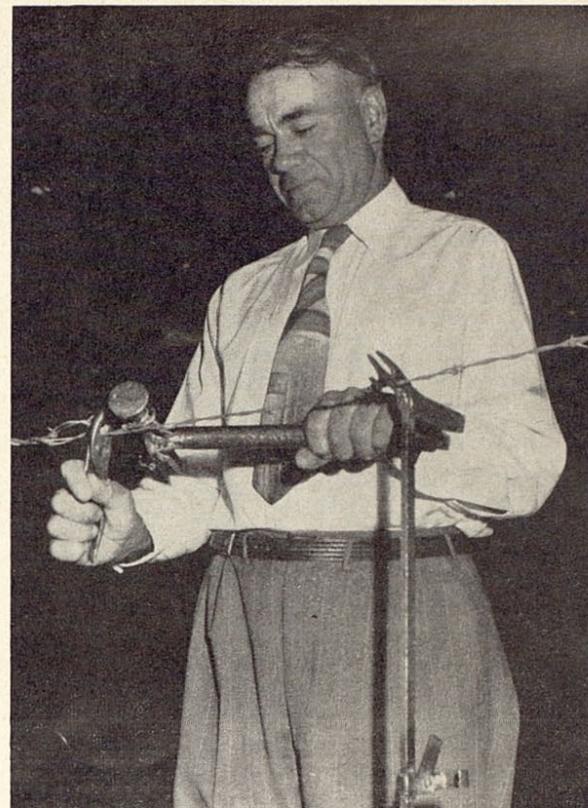
After the war, Johndrow was released from active duty and went to work as a salesman. In his spare time he worked on the idea for the folding high chair. He has now

developed that idea to the point where it is a full time occupation. He has installed a shop at Colorado Springs, Colorado, to manufacture the chairs and has already built and sold several hundred units.

The high chair itself, called the Tuckaway Folding High Chair, is attractively designed and equipped with a non-breakable, heatproof plastic tray. Set up, the chair is as sturdy as any on the market. When not in use it can be folded up in a matter of seconds. Entered in the gadget class at the Rocky Mountain Inventors Congress, the Tuckaway High Chair won the first award in that division.

The winner of the inventions class at the Congress was Charles Miner of Denver, Colorado, with a variable speed clutch pulley which he invented. By means of this device, power from a motor can be delivered as needed to a driveshaft. The variable speed pulley, operating on the principle of centrifugal force automatically adjusts itself according to the load being pulled. Although the model exhibited at the Congress is designed primarily for small power units such as electric motors and motor scooter engines, its inventor says that the principle is adaptable to any motor which is subjected to wide variations of load. Miner, a skilled machinist, has spent some six years developing the idea.

Altogether, there were 88 exhibits at the 1950 Congress. Although most of the entries were



Owen K. Sheldon of Hasty, Colorado, demonstrates wire stretcher he invented and exhibited at the Congress.

from Colorado and neighboring states, such states as California, Nebraska, Missouri, Wisconsin, and Michigan were represented among the list of exhibitors. A total of 32 prizes were awarded to contestants with outstanding ideas.

The second-place winners in both the inventions and gadgets classes also illustrate the manner in which ideas result from necessity.

Owen K. Sheldon, a farmer who lives near Hasty, Colorado, won the second place award in the inventions division with his hammer wire stretcher. Like most farmers who have had occasion to put up or tighten a barbed wire fence, Sheldon had long been irritated by the customary but tedious method of rolling the wire around the neck of an ordinary hammer. The main trouble with this method is that the barbs catch as the roll tightens. With the device which Sheldon



← Mrs. P. M. Goldstein of Denver, Colorado, designed and built this unique, two-seated stroller.



Mrs. Dora Davis Flanders of Pueblo explains new type railroad switch invented by her father, the late A. G. Davis, to L. C. MacDonald of Mosca, Colorado. MacDonald was also an exhibitor at the Inventors Congress.

Fred T. Holmes of Denver, Colorado, is pictured below with a model of the device he invented for sorting radio-active ore. The machine can be regulated to separate ore of specified quality from that of lower grade.



has developed this difficulty is eliminated. Sheldon's wire stretcher is simple to use, easy to carry, and can be manufactured at a low unit cost.

John Wheat of Pueblo, Colorado, won the second-place award in the gadgets class with a checker or chess board designed for use by invalids. A former railroad man, Wheat got the idea for the checker board while hospitalized by injuries received in an accident. The checkerboard which he invented is designed so that individual checkers or chess men can be easily attached to squares on the board. In this manner the board can be conveniently used by a bed-ridden invalid.

Three men of outstanding mechanical and engineering experience were selected as judges to determine the award-winning exhibits. William Brill, Chairman of the judging committee, is Chief Engineer at the C. F. & I. Steelworks in Pueblo and a long-time member of the Pueblo Chamber of Commerce. He is also a past president of the Pueblo Engineers Society.

James R. Ward, Shop Notes and Crafts editor of Popular Mechanics magazine, has been a member of the judging committee since the Congress was inaugurated in 1948. His position with Popular Mechanics magazine makes him particularly well qualified to judge on the originality of an idea.

David Clow, Sales Engineer for Stearns-Rogers Company of Denver, Colorado, has long been a leader in the field of Sales Engineering. His experience in searching for the sales potential of new ideas was of especial benefit in judging the merit of individual entries at the Congress.

In deciding which ideas were most deserving of prizes, the judges endeavored to determine how well each exhibit met certain definite requirements. To begin with, an invention or a gadget must meet some need or have a definite market value. It must also be an original idea. And it must be practical to manufacture.

Even though all the exhibits did not win awards, the sum total of all the ideas represented added up to a significant achievement in terms of time and money they might save or of comfort, con-

venience and pleasure they could add to living.

One of those ideas designed primarily to add to the convenience of living was a new type stroller for twins or for children near the same age. Invented by Mrs. P. M. Goldstein of Denver, Colorado, the twin stroller was constructed with the idea of eliminating most of the disadvantages of other dual vehicles for toddlers. Mrs. Goldstein, the mother of two small children herself, got the idea for her stroller while trying to navigate a conventional twin stroller through a revolving door. Constructed with seats side by side, most of the two-seated strollers on the market were wide, awkward vehicles too big to go through doors, inconvenient in crowds, and a nuisance on crowded elevators. To eliminate these disadvantages Mrs. Goldstein built a compact stroller with one seat directly behind and slightly above the other.

Among those inventions designed to save time and labor was the machine for separating radioactive ore, exhibited by Fred T. Holmes, a consulting physicist of Denver, Colorado. Ore samples are fed into the machine which can be set to separate the ore of a particular grade from that of lower

quality. The entire operation is done automatically.

Still another idea was conceived with the purpose of helping women stretch their clothing budgets. This idea, developed by G. H. Mavrakis, a bootmaker of Billings, Montana, is a method for manufacturing ladies' shoes with detachable uppers. With shoes of this kind, the wearer can have a variety of styles in one pair of shoes.

A great many other interesting gadgets, inventions and ideas were also displayed at the Rocky Mountain Inventors Congress. An auto air conditioner designed by Robert Bowman, Jr., of Las Animas, Colorado; a motion picture reel alarm invented by Charles Hatke of Denver; an improved seed grain dryer invented by E. T. Eaton of Canon City, Colorado, and many others represent worthwhile achievements along the path of technical progress.

A significant fact about most of the inventors who entered their ideas in the 1950 Congress, as well as those who have entered past exhibits, is that few of them are professional inventors. Most of them were persons who, during the course of their everyday activities, had figured out a better way of doing something.

Laura Elliott, Paramount movie starlet and feature player, presents an award to C. H. Miner of Denver, while other award winners look on.



Miss Shirley Hamilton, a visitor from Golden City, Missouri, tries on a pair of shoes with removable uppers designed by Gus Marvakis of Billings, Mont.

THE COVER

The picture on the front cover this month shows C. H. Miner (center) explaining the operation of his invention to Laura Elliott and Milt Andrus. Miss Elliott, Paramount starlet, was Sweetheart of the 1950 Rocky Mountain Inventors Congress. Andrus, Manager of the Pueblo, Colorado, Chamber of Commerce, was producer of the Congress.

The invention which Miner is explaining to Miss Elliott—and which won for him the first-place award in the inventions class at the Congress—is a variable-speed clutch pulley. Its purpose is to serve as a power transmission for various kinds of motors. Its advantage over other types of transmission is that it automatically adjusts itself to sudden power changes.

Shamrock Completes 21st Year

Latest Birthday Sees Several Major Projects Completed---Others Underway

The Shamrock Oil and Gas Corporation completed its twenty-first year of operation this month.

During the past year, Shamrock added several completed projects to its list of achievements and began work on at least two other enterprises of major proportions which will be completed within the next few months. Completed during the year were two new processing units at Shamrock's McKee Refinery and a new blending and distribution plant at Liberal, Kansas. Shamrock also moved its Amarillo Office into new quarters in the recently completed First National Bank Building in Amarillo.

Two important projects which were begun during the year are the huge catalytic cracking plant now under construction at the McKee Refinery, and the extension of a jointly owned products pipe line from La Junta to Denver, Colo.

Shamrock has had a continued record of progress since its founding in August 1929. At the time of its organization, the Company's operations consisted of a small natural gasoline plant near Lefors, Texas, in Gray County, together with a small number of oil and gas leases in that vicinity.

Shamrock later expanded operations into Moore County where its processing and part of its production activities are now centered. The first of the McKee Plant facilities was constructed near Dumas in 1933. Almost all of the company's processing operations are now carried on at the modern and efficient McKee Gasoline Plant and Refinery. Shamrock's oil and gas production is located principally in Moore, Hutchinson and Sherman counties in the Texas Panhandle, although the company also operates some wells in other parts of the State.

Shamrock's occupation of its



Pictured above is the recently completed First National Bank Building of Amarillo, new home of Shamrock's Amarillo Office. The Amarillo Office, consisting of approximately 100 employees, occupies the top three floors of the modern, ten-story, air-conditioned office building.

new office quarters in the First National Bank in Amarillo marks a significant milestone in the Company's history. The Amarillo Office personnel consisted of four employees at the time of Shamrock's organization in 1929. There are now approximately 100 persons employed in the Company's new office quarters on the eighth, ninth and tenth floors of the First National Bank Building.

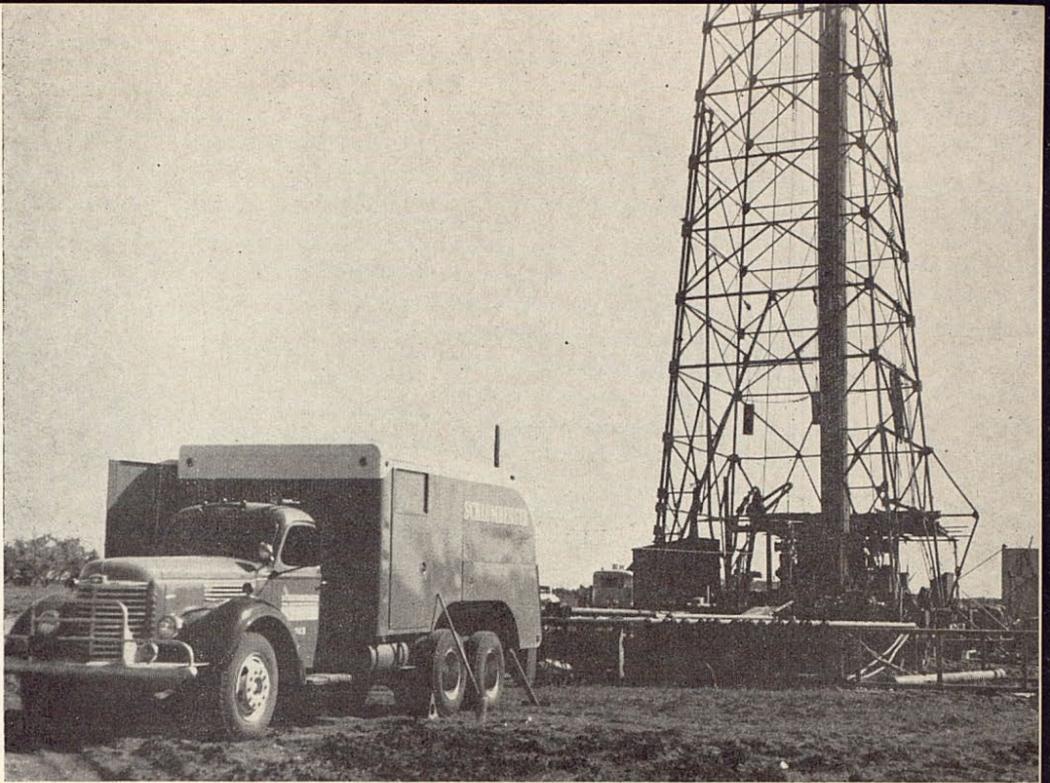
The two new processing units completed in the past 12 months at Shamrock's McKee Refinery also represent important achievements in the Company's operations. These two units, a cycloversion plant and a polymerization unit, have aided Shamrock in stepping up the production of high grade motor fuel and have further increased the overall efficiency of refinery operations. A still larger unit scheduled for completion shortly after the first of the year is a modern catalytic cracking plant. This unit, construction of which is now in progress at McKee Refinery, will also be used in manufacturing high-grade motor fuel.

An important aid to Shamrock's distribution facilities is the Liberal, Kansas, Blending and Distribution plant which was completed during the past 12 months. This plant provides storage as well as truck and rail loading facilities for Shamrock products serving much of the northern part of the company's marketing territory.

Another installation designed to aid in the distribution of finished products is the pipeline terminal station soon to be constructed at Denver, Colorado. Finished liquid products will be transported through the Colorado Products Pipeline from Shamrock's McKee Plants to the Denver terminal. The Colorado Products Pipeline, in which Shamrock has a joint interest, now extends from the Panhandle of Texas to La Junta, Colorado. Plans are now being completed to extend the line on to Denver within the next few months.

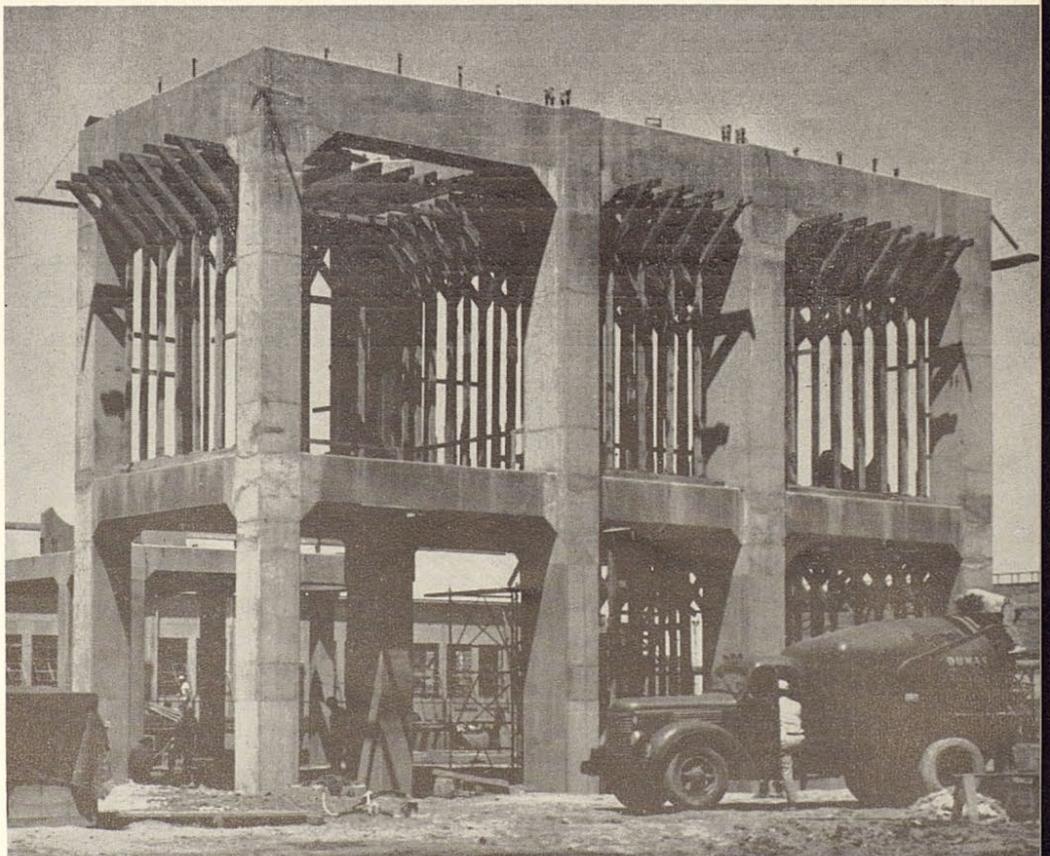
Shamrock's present marketing territory consists primarily of the Panhandles of Texas and Oklahoma, Western Kansas, Eastern

(Continued on Page 11)



To maintain a source of supply for its growing market, Shamrock must constantly search for new oil and gas reserves. The picture above shows electric tests being performed on one of Shamrock's exploratory wells.

The picture below shows initial construction progress of the new catalytic cracking plant at Shamrock's McKee Refinery near Dumas, Texas. When complete, the unit will increase production of high octane gasoline.



Petroleum Provides Power For the Farm



Efficient, rubber-tired tractors, such as the one shown above drawing an alfalfa mower, are valuable "hired hands" on modern, mechanized farms.

Reflecting the progress of the country at large, farmers in the Southwest have been extending the mechanization of their farms at a rapid rate. On the basis of the latest available statistics, it has been estimated that farmers in Colorado, Kansas, New Mexico, Oklahoma, and Texas own and operate more than 550,000 tractors. In other words, more than one out of every seven tractors in use throughout the entire country is to be found in these five states.

Nor is this all.

In addition to their tractors—which have become their most de-

pendable farm hands—farmers in the Southwest have corresponding numbers of passenger cars, trucks, and stationary engines, all of which aid them in boosting the efficiency of farm production. For example, if the Southwest is the same as the country as a whole, more than one out of every four farms has a truck to haul its products to market.

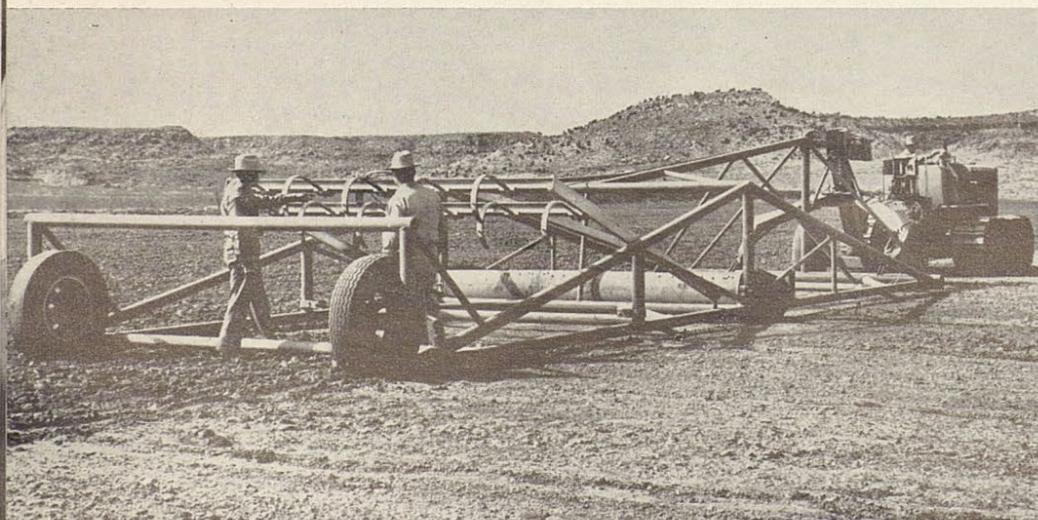
An idea of how important mechanical power has become to farm operations is provided by a glance at the national picture.

Surprising as it may seem, there is more mechanical horsepower on

American farms today than in all of U. S. Industry.

In tractors alone, the nation's farmers as of 1949 (latest available figures) had well over 3½ million of these machines, compared with 1½ million before the war, and they have been acquiring new tractors at the rate of 400,000 to 500,000 units a year. Furthermore, they owned an estimated 5.3 million automobiles, 2.1 million trucks, approximately one million stationary engines, and 9,000 private airplanes. These figures, big as they are, have doubtless been increased even further in the past year as farmers continued to mechanize their farms for most efficient operations.

The key to the peak level of farm mechanization that prevails today lies in the farm tractor. For it was the acceptance and growth of the modern, efficient tractor that revolutionized farming methods and helped to give farmers the highest standard of living in history. Aided by the tractor, farmers have been able to produce more in less time—and with greater efficiency and less labor—than ever before. The tractor, moreover, has



The mechanization of the farm has been of great importance in the development of soil conservation. Shown in operation is a modern land leveler.

freed them from the back-breaking drudgery of the soil, and has given them more time for leisure and enjoyment than they have ever known.

The success story of the modern high compression tractor is only 15 years old. For it was in 1935 that the first high compression gasoline tractor was commercially produced. Previously, tractors were designed to run on kerosene, distillate or Diesel fuel, and they were cumbersome machines. But with gasoline, farmers found that the new high compression tractor delivered much more power and made possible far more efficient and economical operations. In the 15 years since it was first intro-

Petroleum Products Find Countless Uses On American Farms

Petroleum products are playing a greater part in farming. As much as one-fourth of the oil consumed in the United States each year is used on farms as fuel for tractors and other machines, for brooders, for pumps and additional uses.

One new product — endrop — prevents the premature falling of apples, saving farmers thousands of dollars and making available to the public apple crops that otherwise would have been lost.

Seed potatoes which have been treated with ethylene gas have shown an increase in yield from 20 to 100 per cent.

Petroleum compounds which are dusted on fields from airplanes cause the leaves of cotton plants to fall off. They make cotton picking an easier job today.

These petrochemical examples are just a few of the countless new uses for petroleum products which are making life easier and pleasanter in the United States.

Harvesting feed for his livestock is but one of the many jobs in which the farmer (right) will use his versatile, petroleum - powered tractor.

duced, the gasoline tractor has grown to the point where it accounts for the great majority of all farm tractors in use, while every farm equipment company now manufactures one or more gasoline burning models.

Farmers themselves have testified to the superiority of gasoline tractors. In a nationwide survey a few years ago, farmers expressed an overwhelming preference for high compression, gasoline-burning tractors, citing such factors as more power, smoother operation, greater flexibility, quick starting, and fewer repairs.

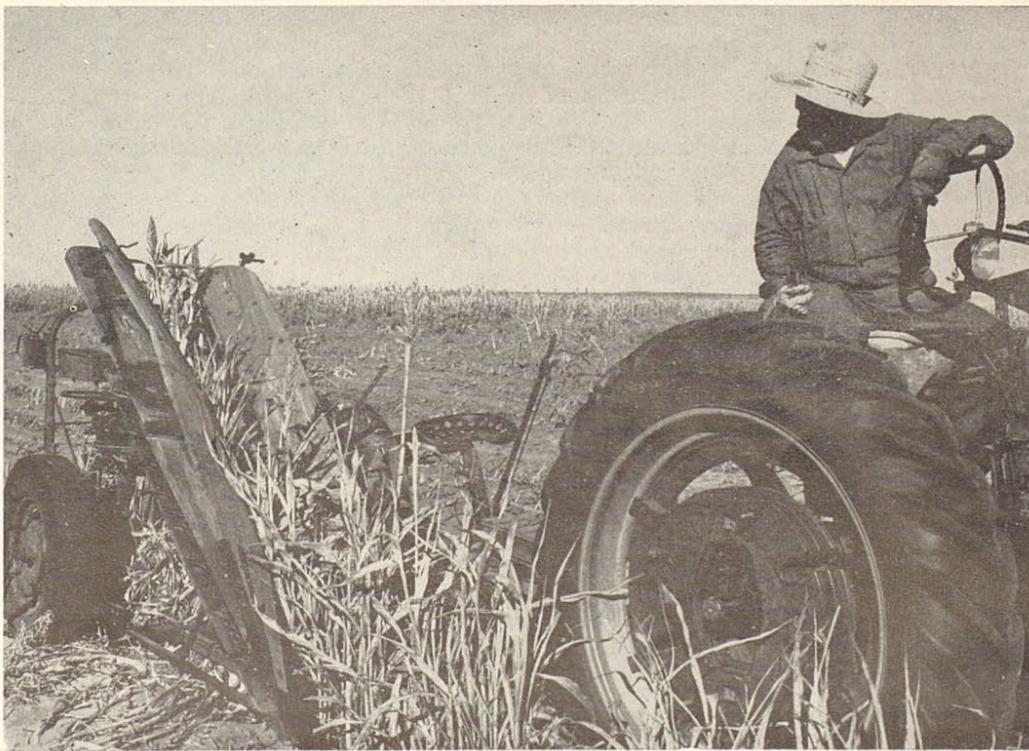
Demonstrating the dollar-and-cents value of the modern tractor, it has been estimated that a farmer can handle three acres of corn land with a tractor and equipment for every acre handled with animal power. And working 24 hours a day if necessary (which animals can't), that tractor can do the job so much faster than horses or mules. What has been accomplished in corn has been duplicated in farm products as a whole. Small wonder, then that the modern trac-

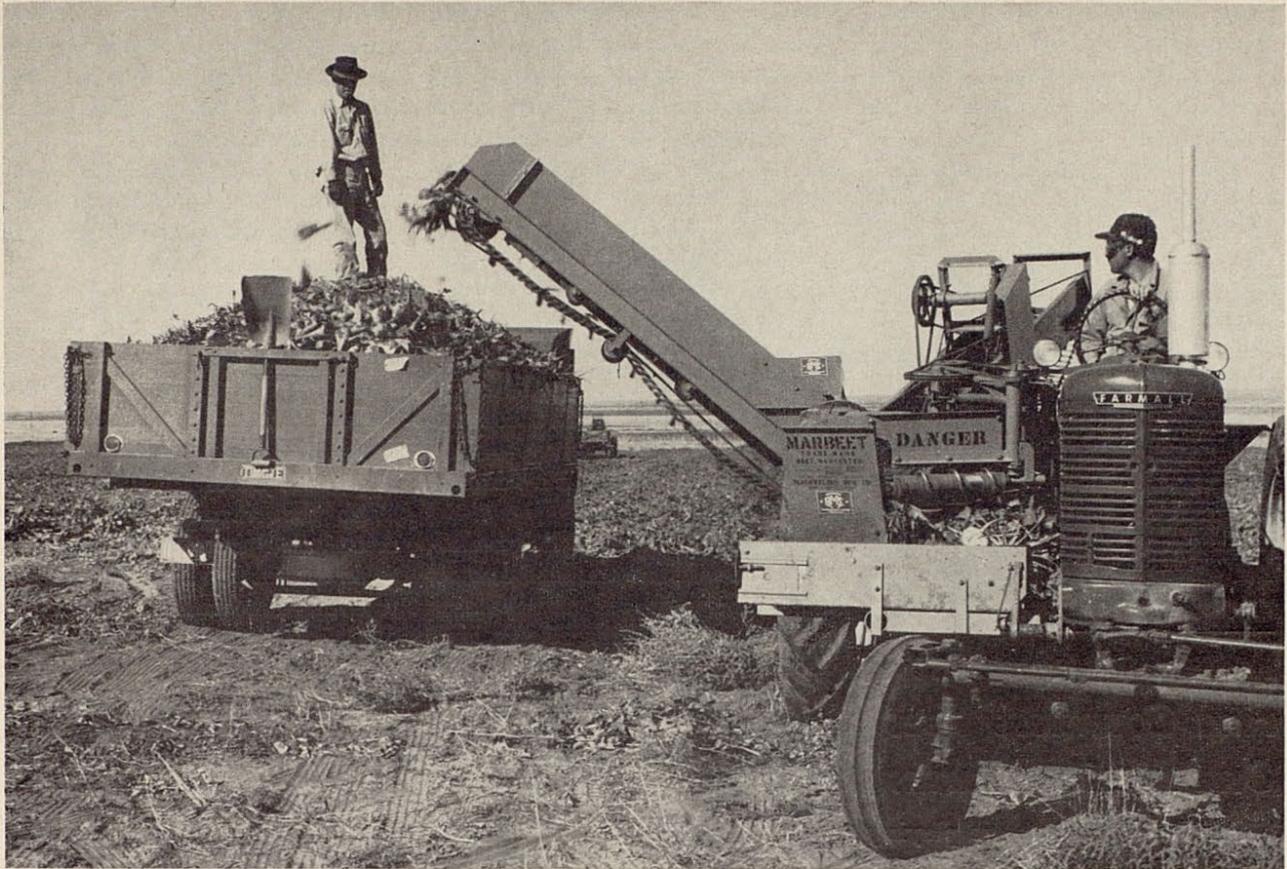
tor has been one of the major reasons behind the record-breaking crops, and high yields per acre, that farmers have turned out in recent years.

To the average farmer today, the tractor is the most dependable all-around farm hand he has ever had working for him.

It operates more than a hundred different tools and implements, either operating them directly or providing the take-off and belt power for their operation. It is also an invaluable workhorse in the important job of soil conservation. With the tractor-powered equipment, the farmer drains and contours his land to keep in place the top soil that would otherwise be lost through erosion. And under the heading of miscellaneous chores, the tractor is everything from a snow plow to a post hole digger, to mention but two of the scores of odd jobs it can perform.

The effects of farm mechanization, in which the tractor has played a leading role, have been far reaching. Because he can produce more crops in less time and with less hired help, the American





Modern method of harvesting sugar beets on a Southwest farm.

farmer has seen his cash income double and redouble in recent decades. With his modern machinery and equipment, it has been estimated, it requires only two-thirds as many man hours of labor to grow a given amount of crops than it did back in 1920. The average farmer now grows enough to feed himself and 14 other people, whereas the farmer of 90 years ago could produce only enough to support himself and four others.

Not only has mechanized farming enabled the farmer to grow more crops on his existing land, but it has freed still other land for worthwhile crop production. There are something like 17 million fewer horses and mules on farms than there were 30 years ago. By making this shift from animal to mechanical power, the farmer in these past 30 years has been able to divert 55 million acres of land from the growing of feed for his draft animals to the production of food and fiber for human beings.

The more efficient farm operation provided by farm power is of

particular importance to national defense. Because American farmers, with the aid of farm machinery, can now produce much larger quantities of food on a given amount of land than would have been possible a few years ago, we are in a much better position to supply our own armed forces. We are also able to export more food and other farm products to potential allies than ever before.

The wide-spread use of the petroleum powered tractor has also stimulated the development of other machines and equipment for farm use. Here in the Southwest, the growing use for terracers, levelers, mesquite plows, and other such machines has been of great value in conserving soil and in making productive land that once was considered unfit for cultivation. With the abundant tractor power now available, farmers are better able than ever to cope with the hazards of wind erosion through the use of plows and other equipment of advance design.

A recent survey completed by

the U. S. Department of Agriculture indicates that farmers are using their tractors more extensively than ever before, operating them on an average of 592 hours in 1947. Tractor consumption of motor fuels has reached an all-time peak, reflecting the 50% growth in tractor use in the last three decades.

Not only do the farmers themselves reap benefits from the higher production made possible by the use of mechanical power, so also does the nation as a whole through the increasing production of food supplies for national defense, for domestic consumption, and for aid to friendly foreign countries.

PHOTO CREDITS—The photograph of the First National Bank Building in Amarillo, page 6, was used through the courtesy of McCormick Company, Amarillo. All photographs on pages 8, 9 and 10 were provided by the U. S. Department of Interior, Bureau of Reclamation.

SHAMROCK—Continued

Colorado and parts of New Mexico. Products which the company distributes throughout this territory include several grades of gasoline and other motor fuels, motor oils and greases, diesel fuel, propane, and butane.

Gasoline and other motor fuels, motor oil and lubricants are marketed through a system of branded retail dealers. Other liquid products are marketed through distributors in the South and Southwest.

An important part of Shamrock's gross business is derived from the sale of dry natural gas processed through the McKee and Sunray Gasoline Plants near Dumas, Texas. This natural gas is sold to a number of pipeline transmission companies who transport it to various parts of the United States, principally in the North and East. Shamrock also sells dry natural gas to other industrial organizations in the Panhandle area. These neighboring industries—carbon black plants, power companies, and one ore smelter—use the gas either as fuel to provide power for their plants or as raw material in their manufacturing processes.

With greatly expanded facilities in plants, property and equipment, Shamrock looks forward to the future with confidence. By early 1951, the company expects to have completed its new catalytic cracking plant and other major improvements.



The
SHAMROCK

"Dedicated to the Progress
of the Great Southwest"

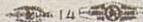
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