

**RULES FOR APPLYING IMPROVEMENT ACT**

Under date of September 1, 1916, the United States department of agriculture has issued a booklet of rules and regulations to be applied in the expenditure of federal-aid road money.

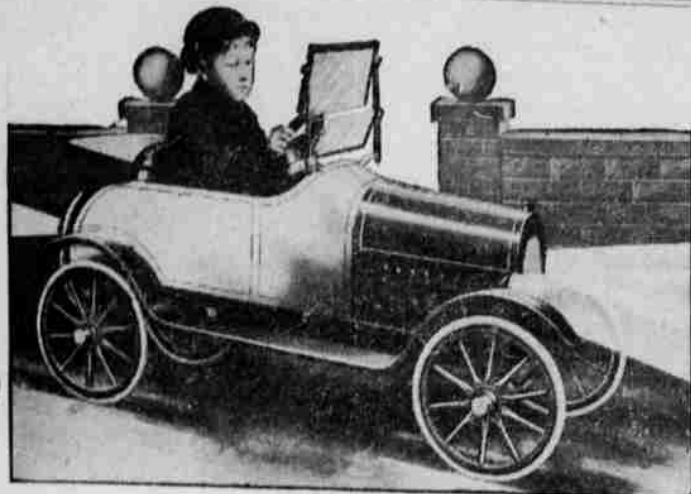
The act is interpreted to apply to those states where the actual expenditures are made and the work is done wholly by the counties, but supervised in a general way by a state highway department. No federal money will be paid for work which cannot be proved to have been actually done. Bids for work must have been advertised, and the contract must have been awarded to the lowest responsible bidder, unless it is satisfactorily proved that it was advantageous to accept the higher bid; otherwise the federal aid will be prorated to the lowest bid and the actual cost of the road.

The office of public roads must be notified in advance of a contract being so that a representative may attend. No part of federal money is to be used directly or indirectly for the payment of a premium or royalty on any patented or proprietary material, specification, process or type of construction, unless purchased or obtained by open competitive bidding at the same or less cost than the patented articles or methods equally fitted to the same purpose.

The rules and regulations governing surveys, plans, specifications, estimates, contracts, construction work, keeping and payments are so comprehensive that the United States office of public roads and rural engineering will have a dominating influence in all the work for which application for federal funds is made.

Engineering News.

It will be noticed that the government clearly states that "no part of federal money is to be used directly or indirectly for the payment



TO BE GIVEN AWAY BY ROYAL CONFECTIONERY AND STRAND THEATRE

of a premium or royalty on any proprietary material \* \* \* unless purchased or obtained by open competitive bidding." If this program had been followed the county of Multnomah would have saved just about \$257,000 on the million and a quarter of dollars paid a certain concern in Portland that laid 98 per cent of the hard surfaced road in that county. The construction company referred to figures on 25 per cent for royalty and 26 per cent for promotion. Their price was about \$1.58 per yard. If we could take off this 45 per cent, the price would be reduced to about what it is really worth. If those who were responsible for paying the high price Multnomah county paid for this patented pavement didn't get something out of the deal it was because they didn't ask for it, because it was surely there. Hard surfacing is the proper thing for the main trunk lines of this or any other county, but a 45 per cent premium on the patented process will bring the cost of road building to such a figure that Columbia county, as sparsely settled as

it is, cannot stand the burden. Hard surface the main trunk lines, and macadamize the roads into the interior, but cut out the promotion and the graft.

**CAN SEE THE AURORA BOREALIS**

For the first time in eleven years the aurora borealis, commonly known as the northern lights, will be visible to the people of Oregon within the winter of 1916-17, according to Edward H. McAllister, professor of mechanics and astronomy of the University of Oregon. This phenomenon is bright to the people of this latitude only during the time when the sun spots have reached their maximum number. The sun spots reach their maximum only once in eleven years, and, according to Professor McAllister, there seems to be some connection between the size and number of the spots and the intensity of the display of the northern lights.

The aurora borealis will appear near the northern horizon in streamers of white and colored lights, vary-

ing in length from two or three to several hundred miles. It is probable that the only lights which will be visible to the people of this latitude will be the white streamers. In the colder or more northerly latitudes the display may show streams of green, yellow, red and purple.

Another interesting phenomenon will appear in the heavens on November 15 and 20 in the form of shooting stars, according to Professor McAllister. A smaller display may also be seen on October 20. Shooting stars may be seen but once a year, during the time when the earth cuts through the orbit of the planets from which the stars come. The display which is due November 15 may be seen in the early hours of the morning. That of November 20 may be seen in the early evening.

**ANTIQUITY OF PETROLEUM**

The famous oil spring of Zante was mentioned by Herodotus 450 years before Christ, and Alexander the Great in Babylonia was attracted by fountains and springs of oil. On one occasion at least he was amused by a trail of petroleum spread along the street leading to his quarters, which when set on fire at night produced a startling pyrotechnic display. Asphalt was used extensively in the construction of palaces of Nineveh and Babylon, the Tower of Babel and the Temple of Solomon, many evidences of which remain in the petroleum-cemented walls that have endured for more than 3000 years.

**CASTORIA For Infants and Children In Use For Over 30 Years**

Always bears the Signature of *Chas. H. Fletcher*

ASK YOUR GROCER FOR  
**ST. HELENS BRAND**  
A HOME PRODUCT  
CANNED FRUIT AND VEGETABLES.  
WE BUY CHERRIES, PRUNES, PLUMS, BLACK-BERRIES, RHUBARB, BARTLETT PEARS AND CABBAGE TO BE CANNED HERE IN THE CANNERY. THOSE WHO HAVE ANY OF THE ABOVE NAMED WE WOULD BE GLAD TO HAVE THEM COME TO THE CANNERY AND GET A CONTRACT FOR THE SAME.  
WE ALSO BUY POTATOES IN QUANTITIES.  
ALL KINDS OF VEGETABLE PLANTS FOR SALE  
**COLUMBIA RIVER CANNING AND PRODUCE COMPANY**

**FOR A NICE LUNCH**  
Come to MASON'S  
Short Orders, Waffles, Sandwiches  
The cleanliness and service will appeal to you  
CANDIES, ICE CREAM, CIGARS, ETC.  
— Get the Habit —  
COME TO MASON'S

**Livery, Feed and Sale Stable**  
DRAYING AND TRANSFER  
All Business Promptly Attended To  
PHONE 15 OR 12  
WM. H. DAVIES - PROP.  
ST. HELENS, OREGON

**Home Comfort**  
As the Fall comes on and you feel the nip of the frost, you think of warmth and comfort in your home.  
A UNIVERSAL HEATER WILL SUPPLY THIS COMFORT  
We have a large assortment ranging in price from \$1.25 to \$10. Call and inspect them.  
**ST. HELENS HARDWARE COMPANY**  
Everything in the Hardware and Builder's line.  
Phone 97. Free and prompt delivery

**J. L. WILLIAMS & SONS**  
Successors to Perry & Graham  
A Full and Complete line of General Merchandise  
— The Dependable Kind —  
**Dry Goods, Shoes and Groceries**  
Free Delivery  
Give us a trial and you will be satisfied  
Phone 34 WEST ST. HELENS, ORE.

**DEPENDABLE COFFEE**  
At your dealers  
EDWARDS' DEPENDABLE COFFEE  
OWICHT EDWARDS COMPANY - PORTLAND OREGON

**H. MORGUS & SON**  
St. Helens' Pioneer Merchants  
NICE LINE OF GINGHAMS — JUST RECEIVED  
Large Assortment Men's Summer Straw Hats and Caps  
Dress Goods, Hosiery and Gloves  
BERGMAN'S CELEBRATED SHOES  
In Children's, Dress and Logging Shoes.  
Ten Styles to Select From.  
Our Prices Always Right Goods the Best

**Scientific Proof of Maxwell Fuel Economy**

In a test made by David L. Gallup, M. E., Professor of Gas Engineering, Worcester Polytechnic Institute, a stock Maxwell Touring Car made from 23 to 33.7 miles per gallon of gasoline at speeds ranging from 10 to 35 miles per hour. We reproduce a letter from Professor Gallup concerning this test.



Deferred Payments If Desired

DAVID L. GALLUP, M. E.  
Consulting Engineer  
Worcester Mass Sept. 1st, 1916.

Maxwell Motor Co. Inc.,  
Detroit, Michigan.

Gentlemen:-

I beg leave to submit the enclosed blue print giving the results of an economy test made on a 1917 Stock Maxwell Touring Car, furnished by your Boston representatives.

The curve is self explanatory and needs no discussion other than the statement that the carburetor, which was stock, was adjusted to give the best combination of power, flexibility, speed and economy, for such conditions of touring as would ordinarily be encountered.

In tabular form the results (taken from the curve sheet) are as follows:

SPEED (Miles per hour)	ECONOMY (Miles per gallon)
10	33.7
15	32.7
20	31.2
25	29.8
30	26.1
35	23.0

Respectfully submitted,  
*D. L. Gallup*

DLG/X

NOTE that no unusual means were employed to get these results. The car used was taken from stock; the test was made with a full load and with top and windshield up; the regular Maxwell carburetor was used. Any Maxwell car is capable of giving this same economy in gasoline consumption. Maxwell operating economy matches its economy in first cost, making it *The World's Greatest Motor Car Value.*

**THE INDEPENDENT AUTO COMPANY**  
ST. HELENS, OREGON  
PHONE 71  
**Maxwell \$595**  
F.O.B. DETROIT  
Fully Equipped—No Extras to Buy