

STARTER REAL POON TO THE CAR OWNER

Latter-Day Motorists Don't
Realize Their Luck.

DIFFERENT FEW YEARS AGO

While Airplanes and Tractors Do
Not Have Starters, New Inven-
tion Helps Out a Lot.

Not every motorist, as he presses
his starter pedal, stops to think how
fortunate he is that the process of
cranking the engine has been so sim-
plified for him. Electric starters were
developed because the old method of
cranking by hand proved intolerable

was made by the Duplex four-wheel-
drive truck. Because of the known
ability of the Duplex to negotiate bad
roads a route was selected for it which
covered exceedingly hilly country, the
trip taking the Duplex from Macon to
Milledgeville and back, a distance of
76 miles. The load weighed 16,500
pounds and the round trip was made
in eight hours, running time, with a
gasoline consumption of 11½ gallons.

HIGHWAY TO KALAMA OPEN

Necessity of Crossing River by Ferry
Now Eliminated.

WOODLAND, Wash., July 5.—(Special.)—Motorists will be pleased to
learn that the Pacific highway, be-
tween Woodland and Kalama is now
open for traffic and while it is a little
rough can be easily covered and will
improve as the dryer weather comes
on. This will eliminate the necessity
of ferrying at Kalama, and the con-
sequent delay and expense.

Work is proceeding rapidly on the
completion of the grade between Wood-
land and Martins Bluff, and this as

RACE CARS TO BE SMALLER

PRESENT SPEED MACHINES TO
BE RULED OFF.

American Automobile Association
Gives Notice of Reduction in
Size for Next Season.

Racing cars next year will be smaller
and, presumably slower.

At the close of the Indianapolis race
a week ago it was announced that the
1920 contest on the Hoosier course will
be for cars not more than 182 cubic
inches (three liters) piston displace-
ment instead of 300 cubic inches, the
size to which the present racers con-
form.

This means that the same rule will
apply to all American speedway races.
Moreover, there is a movement on
foot to revive road racing at Elgin
and elsewhere, and this, with cars de-
veloped to their present terrific speed,
would mean risks greater than the
drivers have ever before faced.

Every one agreed at the Indianap-
olis race that the cars were too fast for
the track. Predictions that the drivers
would come to grief on the low banked

Vacuum Cup Cord Tires

Guarantee:

Cords .. 9000 Miles
Fabrics .. 6000 Miles

Prices—INCLUDING EXCISE TAX:

Size	Vacuum Cup Fabric	Vacuum Cup Cord	Channel Tread Cord
30x3½	\$22.00	\$35.70	\$83.25
32x3½	\$25.90	\$39.80	\$87.10
32x4	\$35.25	\$50.50	\$97.05
33x4	\$37.25	\$51.90	\$98.35
34x4	\$37.90	\$53.25	\$99.45
34x4½	\$51.40	\$60.00	\$155.90
36x4½	\$54.05	\$62.95	\$158.55
35x5	\$65.90	\$74.55	\$169.60

*6 ply.

Other Sizes in Proportion

FOR SALE BY

HARMON & CO.
E. 37th and Division

ROBINSON-SMITH CO.
6th and Madison

FRANCIS MOTOR CAR CO.
E. 13th and Hawthorne

PALACE GARAGE CO.
12th and Stark

TALBOT & CASEY
No. 1 Grand Avenue

COVEY MOTOR CAR CO.
21st and Washington

Distributors

A. J. Winters Co. 65-67 Sixth St. Portland, Oregon

NEW COLE INCLOSED CARS

IMPORTANT IMPROVEMENTS IN
LATEST MODELS.

Designed for All-Season Use, They
Embody Many Comforts and
Are Fitted for Touring.

In announcing its new all-season
cars the Cole Motor Car company pre-
sents a series of automobiles which
afford distinctly new advantages in
inclosed car design.

They are a marked improvement over
the conventional types of the past and
give to the enclosed equipages charac-
teristics formerly associated only with
cars of the open type.

There are six models in the line of
Cole aero-eight all-season cars—the
sportosine, the sportsedan, the sport-
coupe, the toursedan, the tourcoupe
and the towncar.

The obvious newness of these six
cars, which more than substantiate
Cole's reputation for building automo-
biles which are a bit ahead of the times,
is revealed in the flush panel construc-
tion employed throughout. This elimi-
nates the overhanging of the super-
structure, adds strength to the design
of the cars, eliminates permanently
inclosed-car use and introduces a new
beauty of line that is instantly appre-
ciated.

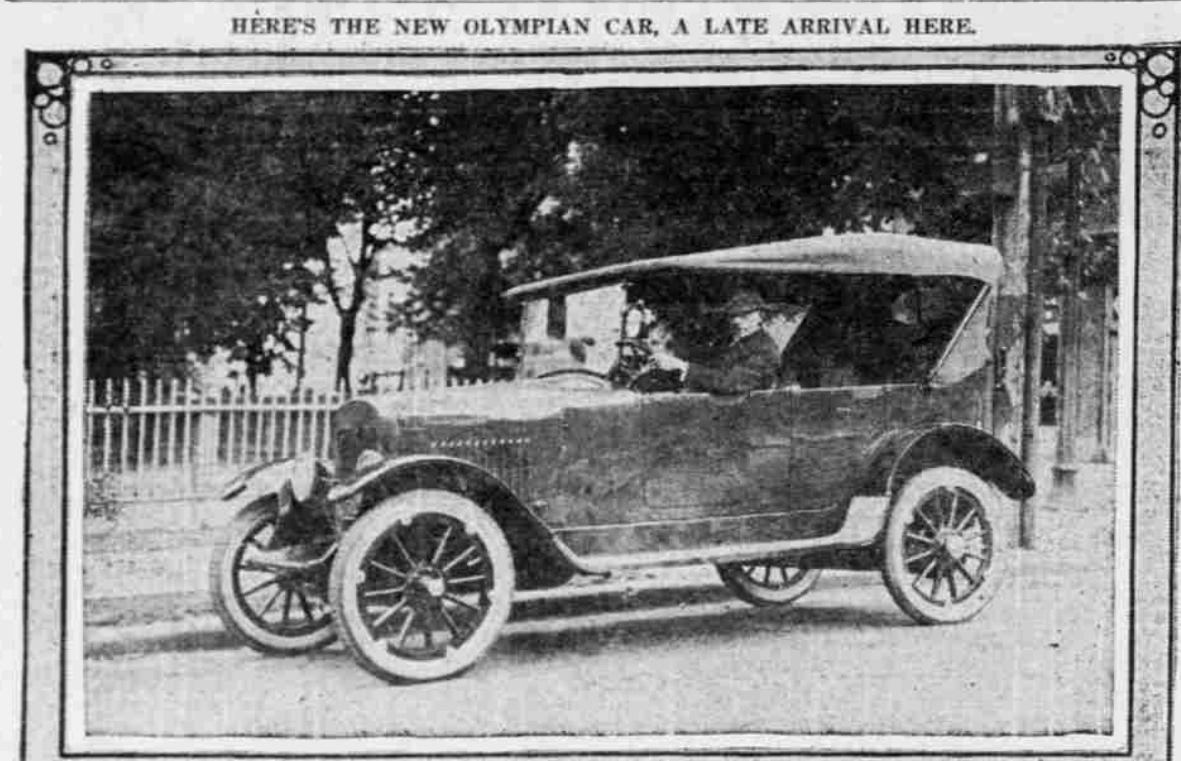
The sportsedan is a swaggar crea-
tion. It is a four-door, four-passenger
model, in which the rear quarter sec-
tions are solid and have octagonal win-
dows. The sportsine combines the
elegance and comfort of a toy limousine
with that of a diminutive sedan. It is
distinctly a sport car and the adjust-
able glass partition between the front
and rear compartments is a novel addi-
tion. It has a seating capacity of six.
The aero-eight sportcoupe is entirely

new in its conception. There is space
for four passengers in it. In design it
strikes an entirely new note.
The tourcoupe is essentially a chauff-
eur-driven car. The glass partition
between the front and rear compart-
ments insures tonneau privacy, al-
though it may be lowered completely
out of view into the back of the front
seat. The toursedan is a spacious fam-
ily sedan—a counterpart of the tour-
coupe, with the exception of the cen-
tral glass partition.
Both the tourcoupe and the toursedan

embody the new Cole vacuum storm-
proof windshield. So designed that
there is always an unobstructed vision
space on a level with the driver's eyes,
this windshield creates a suction of air
from within the car, assuring perfect
ventilation regardless of weather con-
ditions.
The towncar is custom-made through-
out and reflects the personal taste of
the owner. It is one of the most dis-
tinctive exponents of aerotype design.
The new Cole aero-eight all-season
cars are furnished either in American

flag or aero-gray with upholstery to
match. And those who use them are
not confined to driving on boulevards
for their new construction makes them
practicable for touring as well.

When the brakes are not adjusted
equally, not only is there danger of
skidding, but tire wear will result.
When the brake on one side locks its
wheel while the other is still revolving,
the casing on the locked side is scraped
along the ground, to the detriment of
the tread.



HERE'S THE NEW OLYMPIAN CAR, A LATE ARRIVAL HERE.

The agency for the Olympian has been taken by the McCracken Motor Car company, and James McCracken is at the wheel of the car in the photo. The Olympian has a four-cylinder valve-in-head motor, noted for its power and economy of operation, and with counter-weighted crank shaft, unusual on a car of such low price. Stromberg carburetor, Stewart vacuum system and forced-feed oiling system are regular equipment. The car weighs only 2150 pounds.

to the exacting American motorist.
Yet, hand starting an automobile en-
gine is child's play compared with
the methods necessary to start some
other types of engines.

When a tractor starts the engine
of his big caterpillar he fits a bar into
one of a series of sockets in the big
engine's flywheel and rocks the engine
up to compression. No one can spin
these monsters. Rarely can they be
rocked past compression, but are usu-
ally rocked backward up to compression,
where, thanks to generous priming and
a hot spark, they usually fire and the
holder of the pinbar pulls it from the
starting socket hastily.

The petty officer in the engine room
of a submarine chaser relies upon com-
pressed air to start his unwieldy en-
gines. He, too, must prime copiously
and has the additional responsibility
of an auxiliary engine, hand started, to
pump the air.

Picturesque, but Risky.

A most picturesque but risky method
is ordinarily used to start airplane en-
gines. The mechanic shouts "Off!" as
he approaches the propeller and is
answered in kind by the pilot as he
switches. He then spins the great wooden
blades by hand to charge the cylinders
with gas. Having worked up a warm
permutation, even on the frostiest
mornings, he springs clear and shouts
"Contact!"

The pilot indicates that he has closed
the switch by repeating the signal and
the mechanic once more approaches the
propeller. Gingly this time, how-
ever. With a single swift motion he
twirls the blade through an arc of more
than 90 degrees and steps quickly away

REAL LAW FOR THIEVES.

Through the efforts of the
Pennsylvania State Motor feder-
ation a real law for automobile
thieves is being considered in the
Pennsylvania legislature. The
new law would provide a penalty
of a \$5000 fine or ten years' im-
prisonment. An accessory to a
theft is to be considered as guilty
as the principal. This goes for
so-called joy-riders as well as
professional thieves.

Dixie Magneto Changes Things.

Owing to their weight and complica-
tion, electric starters were not con-
sidered seriously, but an ingenious
auxiliary magneto was contrived by
the Spilford Electric company of
Newark, N. J. This magneto was op-
erated by a small hand crank in the
pilot's cockpit.

The engine was charged in the usual
way, whereupon the mechanic stepped
back, shouting "Clear." The pilot then
closed the switch and turned the crank
of the starting magneto a few times.
The supercharged cylinders received a
shower of white-hot sparks and failure
to start at a lively clip was excep-
tional. With the Dixie starting magneto
a lone pilot might start a 400-horse-
power engine unaided, a thing pre-
viously impossible.

The same company has greatly
simplified the starting of big truck
and engine by applying the im-
pulse starter to the regular Dixie
magneto.

TRUCK STANDS A HARD TEST

Duplex Covers Hilly Country With
Load of 10,000 Pounds.

The chamber of commerce of Macon,
Ga., recently conducted a test of motor
trucks on cross-country hauling to de-
termine the possibilities of trucks in
comparison with railroads. Some strik-
ing results were achieved by the trucks
and it is expected that as a result of
the showing a number of truck routes
will be established.
A particularly strong demonstration

well as the surfacing will be fully
completed the coming summer, as will
the new road south of LaCrosse, so it
is assured that travel can be main-
tained over the whole line from Port-
land to Seattle next winter.

TRUCK CONVOY TO TRAVEL

ARMY MOTOR OUTFIT TO DEM-
ONSTRATE ROAD NEEDS.

Sixty Trucks and Cars With Full
Equipment to Follow Lincoln
Highway Route.

ODOMETER VARIATION NOT BIG

Over-size Tire Makes Difference, But
Not Great One.

A practical demonstration of the need
of a national highway system and of
the value of the motor truck both as
a military and commercial unit will
be afforded through the medium of a
tour from Washington, D. C., to San
Francisco, Cal., which will be taken
shortly by two companies of the motor
transport corps of the war department.

Some 500 men and officers will make
up the complement. They will use 60
trucks and passenger cars, and all of
their equipment, such as kitchens,
shops, ambulances, etc., will be motor-
ized.

Before the trip begins a vigorous en-
listment campaign will be waged with
participation in the tour as one of the
inducements to the men. Observers will
be sent along to gather information
not only as to the performance of the
several motor units, but also as facts
which may develop which will be of
value for inclusion in the motor trans-
portation college course which is now
being worked out by officials of the
training branch of the department.

The Lincoln highway has been se-
lected as the route which will be fol-
lowed for a greater part of the trip as
affording the best transcontinental
course offered, although even it is not
yet improved for the entire distance.
No effort will be made to break any
speed records. The trip is to begin
about July 1 and to consume from six
to eight weeks' time.

When you intend stopping or, in
crowded traffic, slow up always make
your intention known to the driver in
your rear by holding your arm out
from the side of the car in a horizontal
position.

turns found grim fulfillment in the
death of three of the contestants.

Moreover, there is a movement on
foot to revive road racing at Elgin
and elsewhere, and this, with cars de-
veloped to their present terrific speed,
would mean risks greater than the
drivers have ever before faced.

The national automobile organiza-
tions of France and Great Britain voted
several weeks ago to adopt three liters
as the maximum racing size when the
big European contests such as the
French Grand Prix are revived in 1920.
So, after this season, the day of the
present racing machines will be over
and an entirely new type of small fast
power plant will be developed.

REPLACING TERMINALS.

In replacing terminals in the wiring
system the easiest method is simply to
take a terminal from an old wire, leav-
ing a couple of inches of the wire in the
terminal. After both wire and terminal
have been thoroughly cleaned, the new
and old wires are spliced together by
twisting the strands and the job is
completed by soldering and taping the
joint.

TO LOOSEN VALVE CAP.

Occasionally a valve cap will stick
and defy all ordinary efforts to loosen
it. When this occurs run the engine
for a little while until the cap is heat-
ed and then pour a little water in the
recess of the cap. This causes a sud-
den cooling, which makes the metal
contract, permitting the cap to be
easily unscrewed.

USE FRENCH TALE IN THE CASING—BUT AVOID USING TOO MUCH.

When you intend stopping or, in
crowded traffic, slow up always make
your intention known to the driver in
your rear by holding your arm out
from the side of the car in a horizontal
position.

Next Time—Buy

FISK CORD TIRES

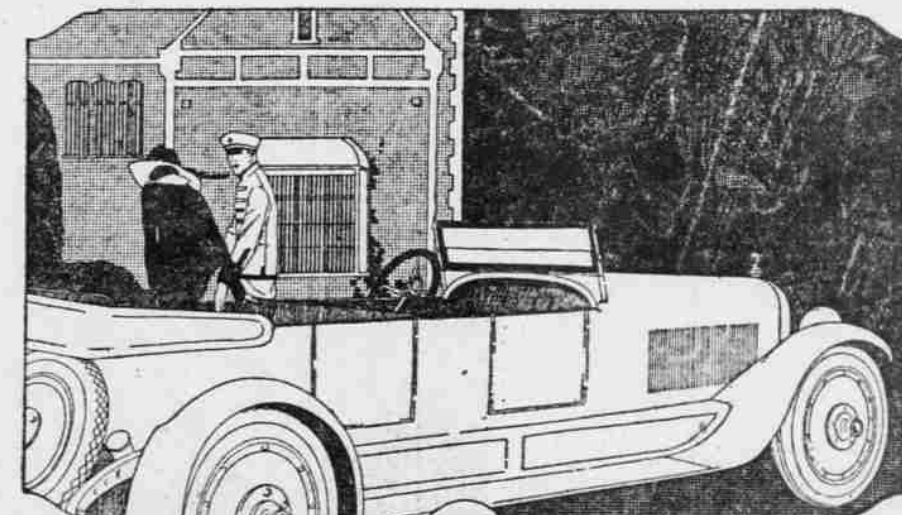


They are the tough
tread tires and a
marvel in their re-
sistance to wear.

BIG TIRES—EXCESS MILEAGE

For Sale by Dealers

JORDAN



You cannot afford to carry extra weight

THE extremely light car of short
wheelbase vibrates up and down.

The extremely heavy car, whose wheel-
base also is short considering its weight,
cannot escape the wear and tear of side
sway.

You cannot afford to carry extra weight.
Yet who would sacrifice it at the cost of
jerky up and down vibration?

The Jordan Silhouette has banished
both difficulties forever.

It is the lightest car on the road for its
wheelbase.

Yet it possesses that peculiar balance
which cannot be attained in cars weighing

twelve to fifteen hundred pounds more—
nor in extremely light, short cars.

Its whole tendency is toward forward
movement.

It is a new kind of a car. And her-
alding the new, it has naturally marked
the passing of the old.

Picture the perfectly balanced chassis
of finished mechanical excellence equipped
with this new custom style all-aluminum
body. Style—dash—individuality—and
perfect riding comfort.

Built in both four and seven passenger.
Optional colors Brewster Green and Bur-
gundy, Old Wine.

Mitchell, Lewis & Staver Co.

BROADWAY AT OAK STS.
JORDAN MOTOR CAR COMPANY, CLEVELAND, OHIO