

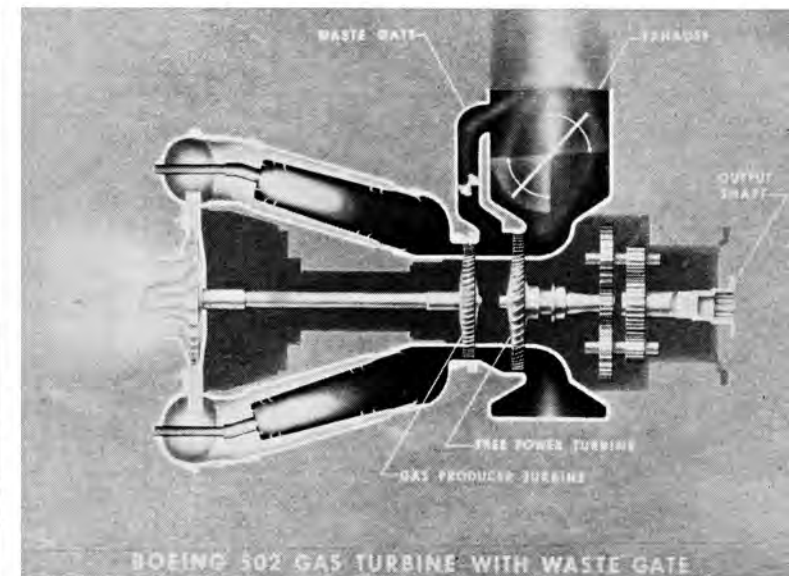
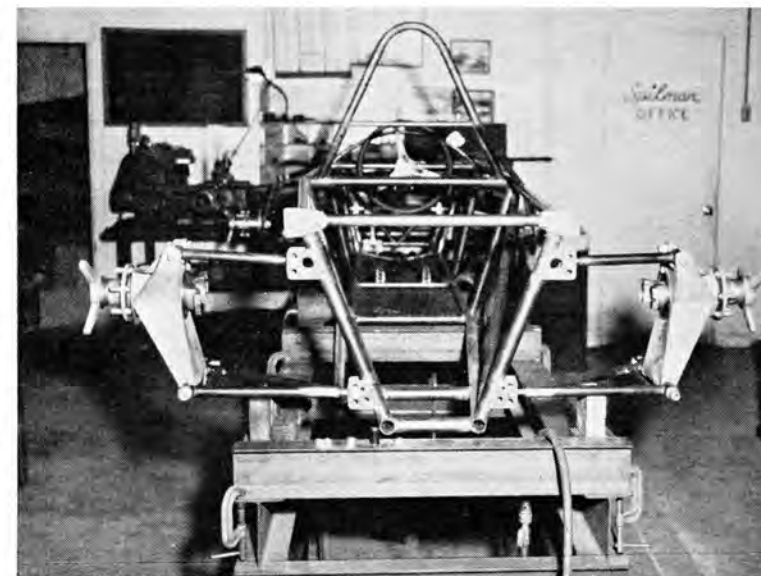


LEFT — Dan Gurney tries out the cockpit of the Zink Trackburner for the first time as owner Jack Zink explains the layout. Rear-engined car has fully independent suspension. Fuel tanks on either side of driver, 35 gallons each.

RIGHT — Len Williams, left, Boeing engineer, and Dennie Moore, chief mechanic for Zink, make the initial fitting of the special gas turbine developed for the unusual car. The turbine requires no cooling system, will run at 39,000 rpm.

BELOW RIGHT — Simplified drawing shows how waste gate between gas producer turbine and free power turbine can be opened to bleed off high velocity gases when power isn't needed. Gate closed, full torque is applied to wheels.

BELOW — Rear view of the Zink chassis on welding table reveals deep V-shaped frame, tubular A-arm components supporting cast magnesium bearing carriers for stub axles. Brakes will be Girling disc; adjustable shocks, Armstrong.



TURBINES and DETROIT

Several new cars with unusual powerplants will try to break up the monopoly held by Meyer-Drake engines when the 51st annual Memorial Day classic gets underway

Spring's here again and the things that usually happen in spring are happening once more. Wild flowers are blooming, the baseball season's well under way, a lot of people have fallen in love and Indy cars are taking shape. We admit that this is a corny way to open a story but it's a fact that every year at this time, racing mechanics in dozens of shops around the country are working at a feverish rate preparing new cars or rebuilding old ones to enter in the world's richest race, the Indianapolis 500.

The number of starting positions for this race is limited to 33 and the number of entries is usually just about double that so by a simple bit of mathematics we arrive at a solution: only about half of the cars that arrive at Gasoline Alley, the Indianapolis Speedway garage area, during the month of May, will be on the starting grid Memorial Day. Looking at past performances, we can predict that Indy cars more than two or three years old do not have much of a chance of being among the 33 fastest. This is a result of the dozen or

more new cars that are built for each year's race using the latest proven techniques.

For the past several years, the 500 has been almost exclusively a Meyer-Drake lineup on race day. Last year, an English Cooper made the starting field but this has been the only "outsider" in a starting lineup at Indy since 1958 when a pair of Novis made the race. The majority of the entries for 1962 will again be powered by the durable Meyer-Drake Offenhauser four-banger but some pretty fair competition

V8's FOR INDY

by Ray Brock

will make a run at starting spots. The Englishmen won't be back this year; they feel they need at least another year to come up with a powerplant to match the Offy on the four-square-turn track. We also hear that the hoped-for new blood from Ferrari will not be around this year so the interest will center on a number of new American-made cars.

Long time sentimental favorites at Indianapolis, the V8 Novi-engined cars will once more attempt to break into the starting field. Three of these cars will be entered by Paxton Products, supercharger manufacturers, and although they are not connected with the Novi Corporation, the racing fraternity will always refer to any car powered by this 175-inch supercharged V8 as a

Novi. Paxton's owners, the Granatelli brothers, have had two new chassis built by Frank Kurtis during the past winter and they have also put quite a bit of work in the engine.

Kurtis' new chassis for the V8's, only new cars he's built for '62, use lighter tubing, fiberglass nose and tail sections, and many other weight saving pieces. The wide V8 engine mounts on the left side of the chassis with the left cam covers outside the frame rails. Novi mechanic Jean Marcenac and the Granatellis have "detuned" the V8 engines from their former high of 700-plus horsepower to a more reliable 600-plus which is still about 50 percent more than any of the Offy engines put out. With lighter cars, more reliable engines

and a little bit of luck, Paxton hopes to crack the starting lineup for the first time since 1958 and maybe even win it all. Chuck Stevenson and Bill Cheesbourg are the two drivers assigned for the two new cars.

Three new rear-engined, fully independent suspension cars will make their debut at the '62 '500' as Mickey Thompson attempts to invade the "brickyard" with radical new cars powered in the finest hot rod tradition by modified American production V8's. The engines Thompson is using are the aluminum Buick V8's which have a displacement of 215 cubic inches in their stock form but have been bored and stroked to 255 inches, the allowable

(Continued on following page)



TURBINES and DETROIT

Several new cars with unusual powerplants will try to break up the monopoly held by Meyer-Drake engines when the 51st annual Memorial Day classic gets underway

Spring's here again and the things that usually happen in spring are happening once more. Wild flowers are blooming, the baseball season's well under way, a lot of people have fallen in love and Indy cars are taking shape. We admit that this is a corny way to open a story but it's a fact that every year at this time, racing mechanics in dozens of shops around the country are working at a feverish rate preparing new cars or rebuilding old ones to enter in the world's richest race, the Indianapolis 500.

The number of starting positions for this race is limited to 33 and the number of entries is usually just about double that so by a simple bit of mathematics we arrive at a solution: only about half of the cars that arrive at Gasoline Alley, the Indianapolis Speedway garage area, during the month of May, will be on the starting grid Memorial Day. Looking at past performances, we can predict that Indy cars more than two or three years old do not have much of a chance of being among the 33 fastest. This is a result of the dozen or

more new cars that are built for each year's race using the latest proven techniques.

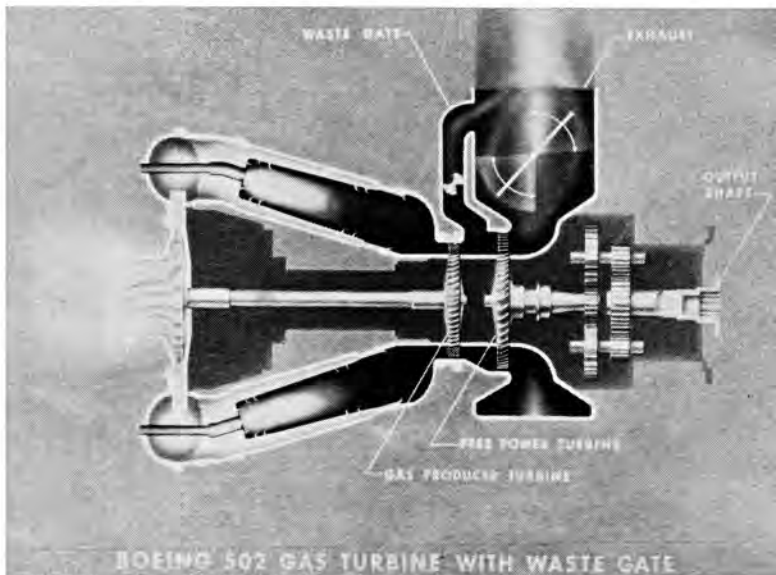
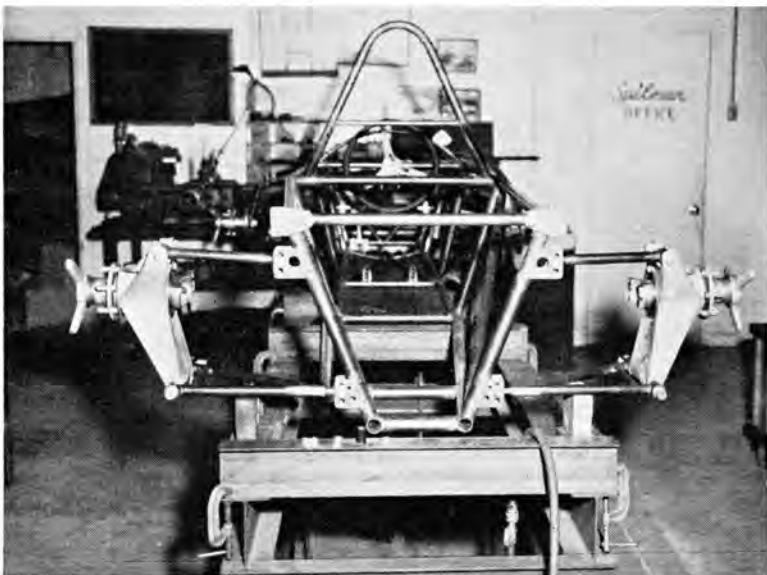
For the past several years, the 500 has been almost exclusively a Meyer-Drake lineup on race day. Last year, an English Cooper made the starting field but this has been the only "outsider" in a starting lineup at Indy since 1958 when a pair of Novis made the race. The majority of the entries for 1962 will again be powered by the durable Meyer-Drake Offenhauser four-banger but some pretty fair competition

LEFT — Dan Gurney tries out the cockpit of the Zink Trackburner for the first time as owner Jack Zink explains the layout. Rear-engined car has fully independent suspension. Fuel tanks on either side of driver, 35 gallons each.

RIGHT — Len Williams, left, Boeing engineer, and Dennie Moore, chief mechanic for Zink, make the initial fitting of the special gas turbine developed for the unusual car. The turbine requires no cooling system, will run at 39,000 rpm.

BELOW RIGHT — Simplified drawing shows how waste gate between gas producer turbine and free power turbine can be opened to bleed off high velocity gases when power isn't needed. Gate closed, full torque is applied to wheels.

BELOW — Rear view of the Zink chassis on welding table reveals deep V-shaped frame, tubular A-arm components supporting cast magnesium bearing carriers for stub axles. Brakes will be Girling disc; adjustable shocks, Armstrong.



V8's FOR INDY

by Ray Brock

will make a run at starting spots. The Englishmen won't be back this year; they feel they need at least another year to come up with a powerplant to match the Offy on the four-square-turn track. We also hear that the hoped-for new blood from Ferrari will not be around this year so the interest will center on a number of new American-made cars.

Long time sentimental favorites at Indianapolis, the V8 Novi-engined cars will once more attempt to break into the starting field. Three of these cars will be entered by Paxton Products, supercharger manufacturers, and although they are not connected with the Novi Corporation, the racing fraternity will always refer to any car powered by this 175-inch supercharged V8 as a

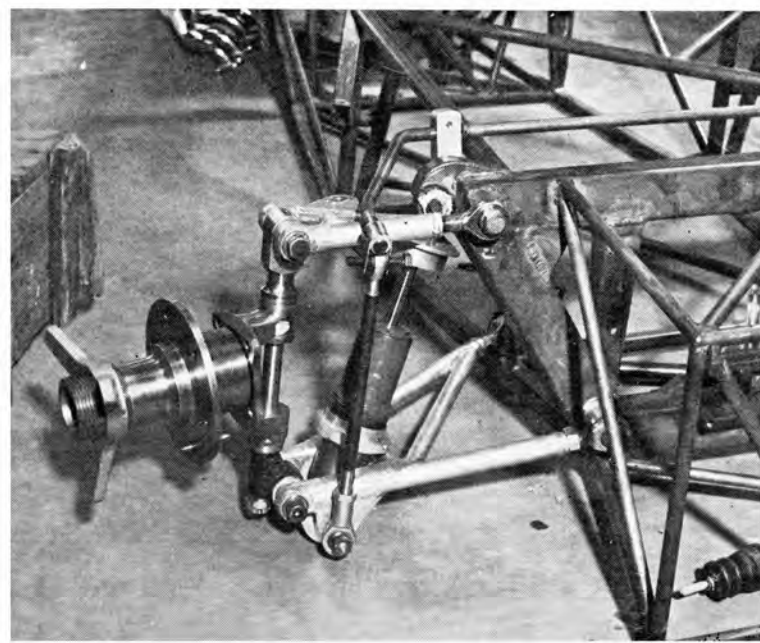
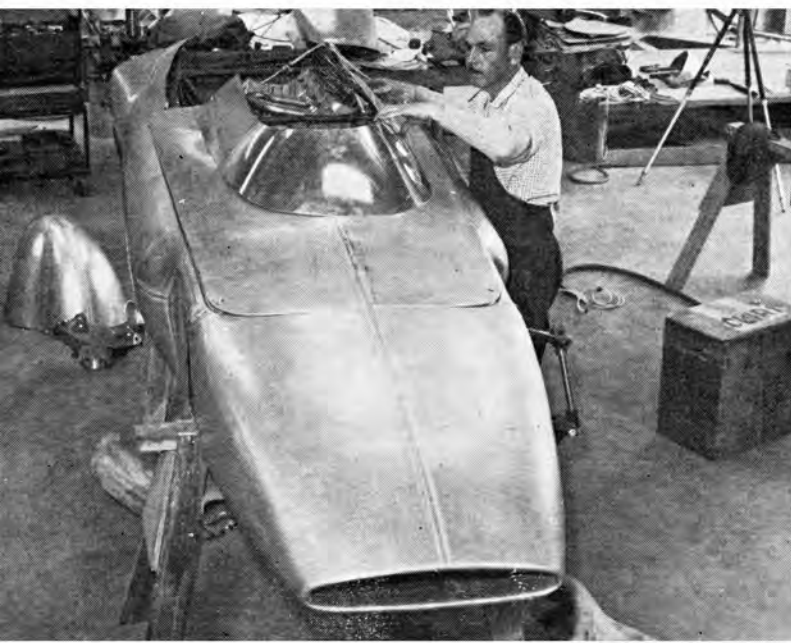
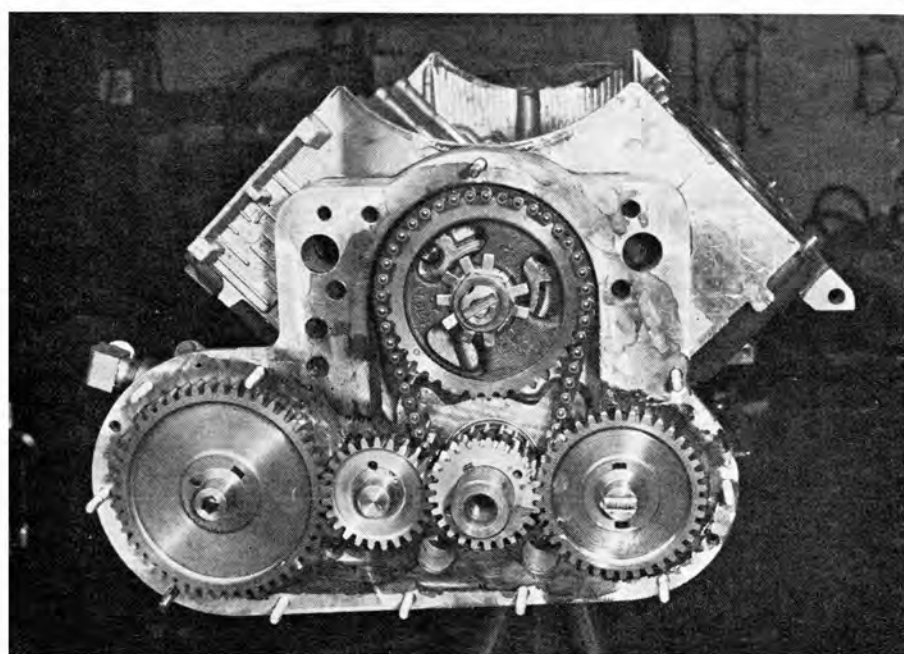
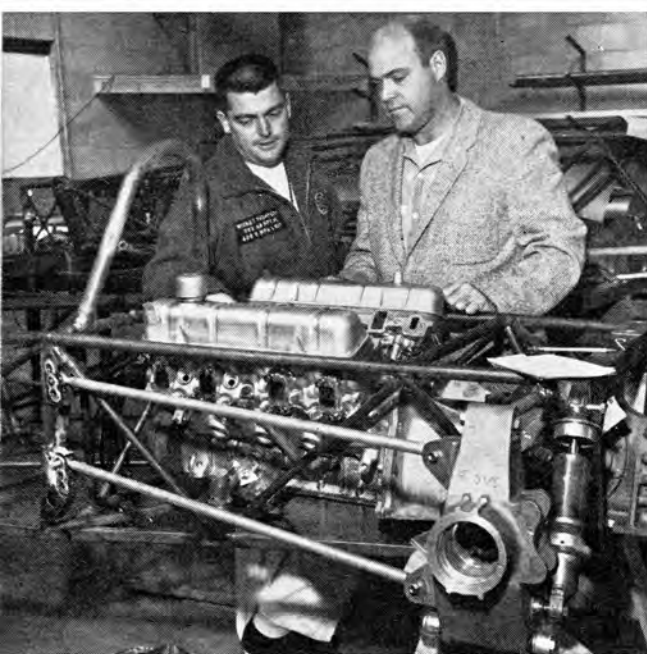
Novi. Paxton's owners, the Granatelli brothers, have had two new chassis built by Frank Kurtis during the past winter and they have also put quite a bit of work in the engine.

Kurtis' new chassis for the V8's, only new cars he's built for '62, use lighter tubing, fiberglass nose and tail sections, and many other weight saving pieces. The wide V8 engine mounts on the left side of the chassis with the left cam covers outside the frame rails. Novi mechanic Jean Marcenac and the Granatellis have "detuned" the V8 engines from their former high of 700-plus horsepower to a more reliable 600-plus which is still about 50 percent more than any of the Offy engines put out. With lighter cars, more reliable engines

and a little bit of luck, Paxton hopes to crack the starting lineup for the first time since 1958 and maybe even win it all. Chuck Stevenson and Bill Cheesbourg are the two drivers assigned for the two new cars.

Three new rear-engined, fully independent suspension cars will make their debut at the '62 '500' as Mickey Thompson attempts to invade the "brickyard" with radical new cars powered in the finest hot rod tradition by modified American production V8's. The engines Thompson is using are the aluminum Buick V8's which have a displacement of 215 cubic inches in their stock form but have been bored and stroked to 255 inches, the allowable

(Continued on following page)



TURBINES AND DETROIT V8's for INDY continued

FAR LEFT — New Watson chassis for '59 winner Rodger Ward will have the Meyer-Drake engine mounted upright on the left side of engine compartment. Aluminum cross-flow radiator saves weight. Two shocks per wheel are used on new car compared to singles in '61.

LEFT — Finished except for lettering, Ward's new mount has fiberglass nose and tail sections; magnesium cowl, underpan and side panels, aluminum hood. Total dry car weight is approximately 1650 pounds. When fully loaded with fuel and driver, weight will be 2200 lbs.

FAR LEFT — Mickey Thompson, left, explains modifications of the aluminum Buick V8 which will power three new rear-engined cars he's building for Indy. They've been bored $\frac{1}{8}$ inch, stroked an extra .300-inch for 250-inch displacement. Suspension is fully independent.

LEFT — Aluminum accessory case by Thompson fits the Buick engine. Timing chain and sprockets are standard but nose of cam has driving slot to turn magneto. Large gear at left drives oil pumps on back side, injector pump on front. Right gear drives water pump.

FAR LEFT — Jack Sutton fits the body panels for one of the three Thompson cars. Driver will have excellent vision in forward location and total car weight, dry, should be near 1100 pounds. Harvey Aluminum engineers have assisted Mickey in design to keep weight low.

LEFT — Most of the suspension components for the Thompson cars are special items. Front spindle, however, is modified Ford Econoline part. Monroe shock will have a coil spring between the adjustable seats. Various stabilizer bar rates will be tried at the speedway.

maximum for unblown engines at Indy. With Harvey Aluminum Company as one of his sponsors and owners of one of the cars, Mickey has made a concerted effort using lightweight metals to build the lightest possible cars for the speedway.

The modified Buick engines will admittedly be some 75 to 100 horsepower short of the 400-plus claimed by the Offys but they will also be about 200 pounds lighter. With the rear engine placement, additional weight is saved by shorter driveline components. A trans-axle unit developed by Vince Conze bolts to the engine and U-jointed half-shafts drive the independently sprung rear wheels. Since the Buick engine has less power than an Offy and power impulses are much less severe, thanks to twice as many cylinders, lighter drive components can also be used. With the engine at the rear, the majority of the weight is concentrated at the rear so frame structure does not have to be as heavy in the forward part of the car as it is on the front-engined Offy cars. Projected weight for the finished cars will be approximately 1100 pounds, dry. As mentioned, one of the three cars will be owned by Harvey Aluminum while a second is being built for Jim Kimberly and the third, Thompson will keep for himself. As we write this only two drivers have been named, Chuck Daigh for the Harvey car and Englishman Jack Fairman for the Kimberly car.

Probably the most radical car ever to appear at Indianapolis will be the John Zink Trackburner. This car will be powered by a Boeing gas turbine engine instead of the usual reciprocating engine. Zink has long been famous for unorthodox methods at Indy and they've paid off with a pair of wins in the past. The new car will also be of rear-engine design with independent suspension on all four wheels. The Boeing turbine weighs 335 pounds, about 150 less than an Offy, develops 375 shaft horsepower and burns a low-grade fuel such as kerosene. The engine differs from most gas turbines which are slow to throttle response and deceleration. For this application, Boeing developed a "waste gate" which opens ahead of the power turbine to bleed off high pressure gases when the throttle is closed. The turbine remains at full speed during this deceleration period and when the throttle pedal is again depressed, the waste gate closes and all gases pass through the power turbine giving immediate full torque.

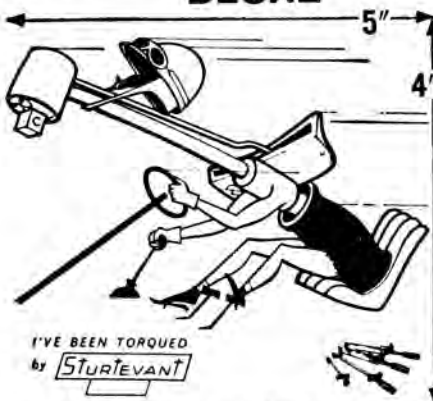
(Continued on page 110)



TOP — Frank Kurtis inspects one of the new chassis he built for the Novi-powered cars that will be sponsored by Tropicana Hotel, Las Vegas. Granatelli brothers, Paxton Products, will prepare cars. Engines have more than 600 hp.

BOTTOM — Grizzly Brake Special will be powered by a 255-inch Chevrolet V8, use a Corvette aluminum cross-flow radiator and be fitted with conventional type drum brakes. Finned aluminum drums use cast iron friction surfaces.

MAD TORQUER DECAL



GET YOURS NOW!

Everyone with a real going machine is sporting this colorful symbol of a mechanic.

CLIP AND MAIL COUPON

Rush () new 4 color "Mad Torquer" Decal(s). I enclose 50c for one or \$1.00 for 3 of the special decals that stick on anything. (Send cash, check or money order.) Please print so

Name _____

Address _____

City _____

State _____

P. A. STURTEVANT CO.

BOX 2000 DEPT. HR ADDISON, ILLINOIS

VINYL SHIFT BOOTS in authentic matching interior colors for **CORVAIR** AND CORVAIR MONZA



INSTALL IN MINUTES!

Dress up your Monza. Prevent grease from soiling clothes and car interior. Guaranteed to last the life of your car.

ONLY \$2.95 postpaid

Jadach PLASTICS CORP.
Research • Development • Manufacturing
324 S. San Gabriel Blvd., San Gabriel, Calif.

Please send _____ Boots at once in the colors checked. Enclosed find Check _____ or Money Order _____ @ 2.95 each Boot (sorry no C.O.D.'s). Calif. residents add 4% sales tax.

☐ FAWN
☐ BLUE
☐ AQUA
☐ RED
☐ GOLD
☐ BLACK
☐ WHITE

NAME _____

ADDRESS _____

CITY _____

STATE _____

Boots for all foreign & domestic cars; send for brochure
Some territories available for domestic line

TURBINES AND DETROIT V8'S FOR INDY continued from page 45

In past years, rules for Indy cars required a transmission with at least two forward and one reverse gear. This year, the rule was changed and no transmission is required. All of the reciprocating-engined cars will have to use two forward gears, one low gear for starts from the pits and a direct gear for the track but the Zink turbine will have full torque from standstill so will need no transmission at all. Also, no cooling system is required. More weight savings.

Dan Gurney, a rookie driver by Indy standards but internationally famous as a European Grand Prix driver on the Porsche team last season, will chauffeur the Zink Trackburner and with his experience in rear-engined cars, should be able to give valuable assistance in setting the chassis up for best results. Turbines are still a mystery item in racing circles but their durability is excellent. It will use fuel at a greater rate than conventional engines so will have to carry a 70 gallon supply versus about 50 for the average Indy car. Even so, the dry weight of 1400 pounds should be about 250 pounds less than the lightest Offy cars. This car and driver shape up as the dark horse entry in our opinion. They could revolutionize the sport of automotive racing.

There will be at least two more non-Offy entries at the speedway this year, both with modified Chevrolet V8 engines. The first will be the car owned and built by Chuck Chenoweth of San Diego. This car appeared at Indy last year and made some impressive 140-plus laps in practice but had oiling problems so did not make a qualification run. This year, Chuck hopes to have everything ready so that the car will earn a starting spot. Veteran driver Mike McGill will be the driver.

The second Chevy-powered car is from Chicago and will be entered as the Grizzly Brake Special. This car will not only be unusual in the powerplant department but also in the brake department. Indy cars have been universal in their selection of braking designs for many years with disc brakes used by all cars since about 1955. This year, the Grizzly entry will attempt to make the race using conventional automotive style drum brakes. The drums are finned aluminum with cast iron liners and Grizzly organic lining will be used on the shoes. Grizzly believes the brakes will prove superior to disc brakes and also be lighter. Naturally, if the car makes the starting lineup, Grizzly will have a strong point to advertise.

Mechanic Bob Peterson has built the

car which he believes will weigh in at 1300 pounds, about 350 less than Offy cars, and his engine output is estimated at 360 horsepower. The Chevy engine has been cut down to 255 inches and will feature a roller cam with mouse-trap type valve springs which Bob believes will permit 8000-plus rpm.

In the more conventional car class, those using Meyer-Drake Offenhauser engines mounted up front with solid axles front and rear, we know of only four new cars for this year's race. Three are by A. J. Watson and the fourth is a Watson chassis with finishing touches by Lujie Lesovsky. All four cars are quite similar to the Watson cars of 1960 which use the upright Offy mounted on the left side of the car and torsion bar suspension. Last year, Watson's new cars had coil spring suspension on all four corners but these didn't work out so well and the idea was discarded. The two cars Watson built for the '61 race were rebuilt for this year's race and torsion bars installed in place of the coils.

The new Watson cars will be driven by '59 winner Rodger Ward, Roger McCluskey and Shorty Templeman. The Watson-Lesovsky new car will be driven by Elmer George. One of the rebuilt '61 Watson cars will be driven by Len Sutton.

Among the cars that are veterans from last year's 500, the Bowes Seal Fast Special with '61 winner A. J. Foyt and the Dean Van Lines Special with '61 pole position driver Eddie Sachs should be strong favorites to be among the leaders on race day. A pair of former winners, Troy Ruttman and Jim Rathmann, should also be in the thick of things. Troy will be driving a two-year-old Kuzma car owned by Jim Robbins and Rathmann will drive the same car he drove to victory in 1960, a Watson chassis. A new car with unusual suspension had been planned for Jim by mechanic Smokey Yunick but evidently time ran short so the radical design was shelved.

Something new in ignitions for the Offy engines will also be tried this year. In the past, Joe Hunt has had a monopoly among the Offys with his converted Bendix aircraft magnetos but this year we hear that the Mallory Electric Company will have some of their new Mini-Mag units ready for the Offys and Tom Spalding will have his battery ignition on two or three cars. One car, the Agajanian Willard Battery Special will use the Spalding ignition for the obvious advertising value. With the magneto ignition they used

last year, all Willard had to talk about was starting power. This year they can talk about a battery ignition and if 1961 Rookie of the Year Parnelli Jones has some luck, Willard could have a lot to talk about.

We've run down the list of cars for the '62 Indianapolis 500 and it's now time for us to stick our neck out and try to pick a winner for this year's race. Each year we pick five drivers whom we think will be the ones to watch during the race and up until last year we hadn't missed putting the winner on our list for several years. Last year we really goofed though because we used a full color picture of A. J. Foyt's Bowes Seal Fast Special on the cover of our June issue and then left him off the list in our story. He was one of our ten favorites but when it came to narrowing the list down to five, Foyt lost on the flip of a coin between he and Chuck Stevenson. Chuck finished sixth and Foyt won.

Foyt is the hottest driver on the racing circuit nowadays so we'll start off our list of five with him; George Bignotti is the able mechanic. Eddie Sachs won the pole position in '61, staged a torrid battle with Foyt and had the lead with three laps to go when he had to pit for a tire change. He's a charger and drives like he talks, flat out, so he's our next choice for the list; Clint Brawner is the mechanic for the Dean Van Lines car. Number three on the list is Roger Ward, last year's third place finisher in a car that Watson admits didn't handle up to his expectations. With a new car and Watson as mechanic, Ward should be near the front all the way.

For the last two spots on our list, we are going to go against tradition which dictates sticking with proven champions. Instead of the more obvious selections, Ruttman and Rathmann, we will pick youngsters Parnelli Jones and Jim Hurtubise. These two drivers are the best to hit Indy in quite some time and have the driving style needed to get around the 2½-mile track at top speed. Hurtubise's qualifying record of 149-plus set in 1960 still stands and with the new asphalt capping over the formerly rough brick front stretch, he could easily set new one- and four-lap speeds this year.

There's our list of the five drivers to watch on May 30th. Foyt, Sachs, Ward, Jones and Hurtubise. If those two veterans Ruttman and Rathmann don't upset our dope sheet, one of those five will collect the richest pot in racing about 2:30 p.m. on Memorial Day. Just a minute though, we almost forgot about Gurney in the turbine car and Stevenson in the Novi and Daigh in the Buick. Maybe we'd better....



Save Money ON ALL YOUR AUTOMOTIVE NEEDS! JUST MAIL COUPON BELOW

1962 CATALOG·324 PAGES OVER 100,000 ITEMS It's FREE!

SAVE UP TO 50% on auto accessories and parts by shopping from J. C. Whitney's new 1962 value-packed catalog... the world's largest, most complete collection of automotive bargains! This 324-page book lists and illustrates thousands of parts and accessories for every car, truck, station wagon, hot rod, custom car and dragster, plus foreign and sports car needs. There's a complete section devoted exclusively to items for Model "A" Fords, which rebuilders and old car buffs will certainly appreciate. Without a doubt, this Whitney buying guide contains the greatest selection of values ever offered anywhere... everything for early models to brand-new 1962 cars!

You'll see the newest Hollywood and Custom equipment... just out hi-speed and racing parts... hard-to-find exact replacement parts for every car or truck. Any item a car owner needs and wants is available—ready for easy "arm-chair" ordering!

When you buy direct by mail from Whitney, you SAVE MONEY! Our tremendous buying power and huge volume enable us to cut prices to the bone. We stock over 100,000 items, ready for immediate shipment, with new, improved facilities to speed up service on every order. So don't delay—see what's new for '62 in the automotive field in this bargain-filled book — SEND FOR YOUR COPY TODAY!

FREE CATALOG COUPON

J. C. WHITNEY & CO.
1917 (H6) Archer Avenue, Chicago 16, Ill.

Please send me your giant automotive catalog. I enclose 25c to cover part of handling and mailing cost (refunded on first order of \$5 or more). Offer good in U.S.A. only.

Name _____
Address _____
City _____ Zone _____ State _____



only \$5.95

...THE COMPLETE BOOK OF HOT RODDING

OVER 200 PAGES JAMMED WITH HOW, WHAT AND WHYS OF HOT RODDING... THE MOST EXCITING ROD MATERIAL EVER COMPILED IN ONE GREAT VOLUME! Use it as a master reference to provide you with scores of ideas you can use. See this great book for the latest information on:

- Tackling the World's Engines • The True Facts About Horsepower • More Horsepower From Your Engine • Valves In Your Engine • The latest in Engine Carburetion • Your Engine's Electrical System • Engine Balancing • Facts On Higher Compression • Fuel Injection • Engine Swapping For More Power • Choosing The Right Transmission • Building Your Own Hot Rod • ABC's of Trouble Shooting • Racing Tire Problems • Supercharging for Performance • plus a thorough alphabetical index & special glossary of all basic technical terms.

\$5.95 each, postpaid
send payment to: **COMPLETE BOOK OF HOT RODDING**
5916 Hollywood Boulevard
Los Angeles 28, California