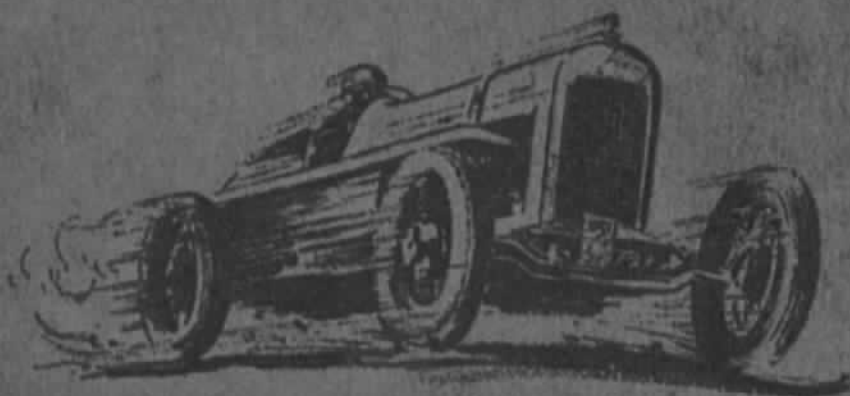


CHEVOLAIR MOTORS, Inc.
Arthur Chevrolet
Aviation Motors Corporation

Formerly
Chevrolet Bros. Mfg. Co.
410 West Tenth Street
INDIANAPOLIS, IND., U.S.A.

Cable Address—"FRONTY—Indianapolis"
Codes: ABC 5th Ed. (5 letters)
Bentley—Liebers

May 15, 1929
Catalog No. 82



CHEVOLAIR MOTORS, Inc.
Exclusive Manufacturers of
"Fronty" Racing Cars
"Frontenac" Cylinder Heads
Speed Specialties and Racing Units
for Fords, Chevrolets and Whippets

This voids all former catalogs

Some Typical "Fronty" Racing Records

Indianapolis Motor Speedway, A. A. A. sanctioned 500-mile race, May 30, 1929—L. L. Corum in Barber-Warneck Special No. 23, equipped with Model S-R Frontonac Head, won fifth place ahead of Mercedes, Bugatti and all foreign cars—and ahead of many American cars. Average speed, 82:58 miles per hour.

Chicago, Robey Speedway, May 17, 1925—Ralph D. Ormsby in Model D-O Fronty won time trials in 48 seconds. In 15-mile light car race he established new record for the distance in 12 minutes and 20 seconds. Also won 15-mile free-for-all against cream of middle west drivers.

Winchester, Ind., May 30, 1925—R. D. Ormsby in Model D-O Fronty-Ford set new world's dirt track record of 27-1/5 seconds in 1/2-mile time trials. Also in 5-mile race; time, 4 minutes, 54 seconds. Also won 15 and 25-mile races. Frontys took second and third places, too, in all events. Another clean sweep.

Toledo, Fort Miami Track, September 19, 1925—Fred Harder in Clemons Car with 16-valve Fronty head won time trials in 40-1/5 seconds. Also won 3-mile, 5-mile, 10-mile and 50-mile races. Ray Campbell in 16-valve Fronty-Ford won all seconds. Clean sweep.

Phoenix, Ariz., November 14, 1925—J. Randolph won 50-mile state championship using Model S-R Fronty Head. Time, 41:55.

Franklin, Neb., July 5, 1925—Fred Merzney driving Fronty-Ford won time trials, 10-mile race and sweepstakes. Also all lap prizes against fastest field ever gathered in territory. Another Fronty clean sweep.

Hammond, Ind., June 13, 1926—Dutch Baumann, driving 16-valve Fronty wins 50-mile race, setting new record for the distance; time, 39 minutes 51 seconds. Louis Schneider driving 16-valve Fronty second.

Louisville, Ky., July 6, 1926—Dutch Baumann driving 16-valve Fronty wins 30-mile race at Paris, Ill.; also makes fastest trial on new Louisville speedway and wins 100-mile race. D. Chaney driving Fronty wins second and Gordon Willis driving Fronty wins third place.

Cedar Rapids, Iowa, September 6, 1926—Dutch Baumann driving 16-valve Fronty wins every event on Labor Day program.

St. Paul, Minn., September 9, 1926—Dutch Baumann driving 16-valve Fronty wins 5-mile race, defeating Sig Haugdahl in Miller Special and several other fast Miller and Duesenberg specials.

Milwaukee, Wis., September 26, 1926—Arthur Brach driving 16-valve Fronty wins 150-mile race. Bill Lowden second in 16-valve Fronty. Frank Brisko driving 16-valve Fronty third.

Hammond, Ind., October 10, 1926—Les Allen driving 16-valve Fronty wins 150-mile national championship race on Robey Speedway.

Detroit, Mich., October 31, 1926—Sam Ross driving 16-valve Fronty Ford Wins 100-Mile race today, defeating a fast field of speedway stars, including four Millers and two Duesenbergs, and setting new track record.

Chicago, Ill., October 31, 1926—Wilbur Shaw driving 16-valve Fronty wins 100-mile race at Hawthorne track, defeating several Miller specials.

See Page 2 for
INDEX



BECAUSE he himself has driven racing cars for a score of years, Arthur Chevrolet realizes the necessity of quality, uniformity and strength in every part of a racing machine. Rigid tests are given every Fronty product before it is placed on the market, and close inspection is given every piece before it leaves the factory.



Fronty-Fords built by Chevrolet Brothers Manufacturing Company are the only Ford cars that have ever qualified and finished in the greatest speed classics the world has ever known—the 500-mile races at Indianapolis. Some of their amazing records made there—and a few of the world's speed records made by these cars elsewhere—are mentioned briefly in this catalog. The picture above shows Henry Ford seated in the Fronty-Ford that won fifth place at Indianapolis, May 30, 1923, after qualifying at the remarkable speed of 83.92 miles per hour.

Index of Contents

Supplanting Previous Catalogs

All Prices f. o. b. Factory

Prices subject to change without notice

Item	Page	Item	Page
Axles, Shafts and Parts	14	Magneto Couplings	14
Bodies	15	Manifolds (Intake)	11
Brackets (Underslung)	13	Motors (Racing)	8
Breather Tube	15	Oiling System	12
Chevrolet Section	16-17-18	Pistons, Rings and Pins.....	10-11
Caps (Ball Bearing) (Filler).....	11-14	Pumps (Oil and Gas).....	12-13
Caps (Main Bearing)	10	Racing Cars	9
Cars (Racing)	9	Racing Motors	8
Carburetors	11	Radiators	14
Connecting Rods	10	Radius Rods	13
Crankshafts	10	Springs	15
Crank Case	5	Steering Gears	13
Cutouts and Loud Speakers.....	13	Steering Knuckles	13
Cylinder Blocks	10	Steering Wheels	13
Cylinder Heads	3-4-5-6	Sub-Base Oil Reservoir	11
Differentials	14	Tires	13
Exhaust Manifolds	11	Transmissions	5
Frames	15	Underslung Parts	13
Front Axle	15	Water Pumps and Magneto Brackets..	12
Gears (Cam)	11	Whippet Section	15
Gear Ratios	14	Wire Wheels (Racing)	13
Magnetos	11		

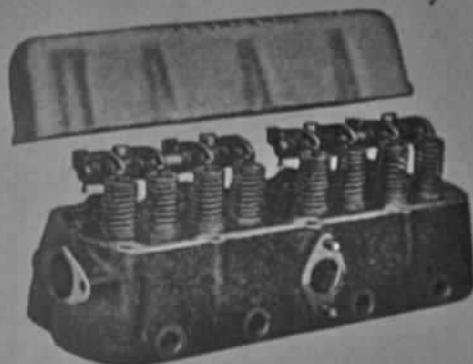
TO REMEMBER WHEN ORDERING

When ordering, to avoid error, state both number and name of parts desired. Specify method of shipment. Send 25 per cent of price with order; balance to be paid C. O. D.

Our book, "How to Build a Fronty-Ford," gives complete instructions on how to build a Fronty-Ford racing car. Sent on receipt of \$2.00, or free of charge with orders amounting to \$50.00 or more.

A handling charge of 10 per cent will be made on all merchandise returned for credit. Do not return any material without first receiving instructions from us. (This applies to any items listed in this catalog.)

Model R "Fronty" Head—for Racing Cars Only

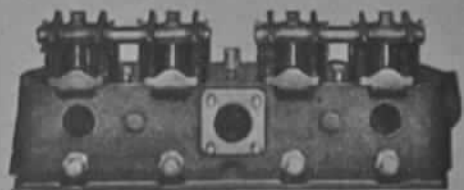


Specifications

Head Casting—Semi-steel, close grain.
 Valves—8 high tungsten steel, 1 3/8-in. diameter.
 Valve Spring Caps—Nickel steel, liberty type lock.
 Rocker Arms—1 1/2 x 1, off set.
 Compression—85 lbs.
 Intake—Single Port.
 Exhaust—3 Port.
 No. 212 Cylinder Head only.
 No equipment \$100.00

Model S-R "Fronty" Head—for Racing Cars Only

THE main difference between this and Model R is that this head uses two spark plugs per cylinder and can be equipped with two carburetors. Compression also is higher. It was brought out to meet a demand for something faster than Model R.



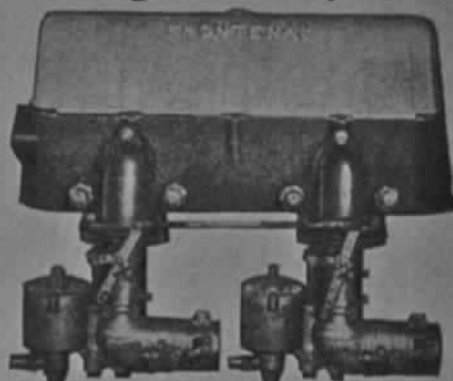
Specifications

Head Casting—Semi-steel, close grain.
 Valves, Valve Springs, Valve Spring Caps—Same as Model R.
 Valve Opening, Rocker Arm, Valve Guide, Rocker Shaft, Push Rod—Same as Model R.
 Compression—100 lbs.
 Intake—Two intake ports, 1 3/8-in. diameter, on left-hand side.
 Exhaust—Three exhaust ports on right-hand side.
 Spark Plugs—Drilled and tapped for metric plugs, two per cylinder, one on each side.
 Equipment—Aluminum cover, bolts, gasket, etc.
 No. 114—Model S-R, for racing cars only \$120.00
 No. 115—Model S-R, with two Zenith carburetors and intake pipe \$180.00
 No. 116—Model S-R, with two Zenith carburetors, intake and exhaust manifold \$200.00

WHEN this cylinder head was first brought out in 1921 its performance astonished the racing world. It made new records in dirt track racing everywhere, winning practically every race entered, from 1 to 100 miles. It enabled two Fronties in the Indianapolis 500-mile race in May, 1922, to make the qualifying speed of 80 miles per hour, and to run the entire race without motor trouble, at an average speed of over 80 miles per hour—the first time a Ford ever qualified for the biggest race event in the world.

Typical Records Made With This Head

Warren, Ind., September 3, 1921—Ralph D. Ormsby made time trial of 30 seconds on half-mile track. World's record.
 Indianapolis, Ind., May 30, 1922—C. Glenn Howard and Jack Curtner qualify for the 500-mile race, being the first Ford cars to ever accomplish this, and were still running when the race was called, averaging 80 miles per hour for the entire 500 miles.
 Uniontown, Pa., June 19, 1922—Jack Curtner turned one lap of 1 3/8-mile speedway in 44 2/5 seconds, fastest time ever made officially (A. A. A. meet) by any Ford car. Ninety-two miles per hour.

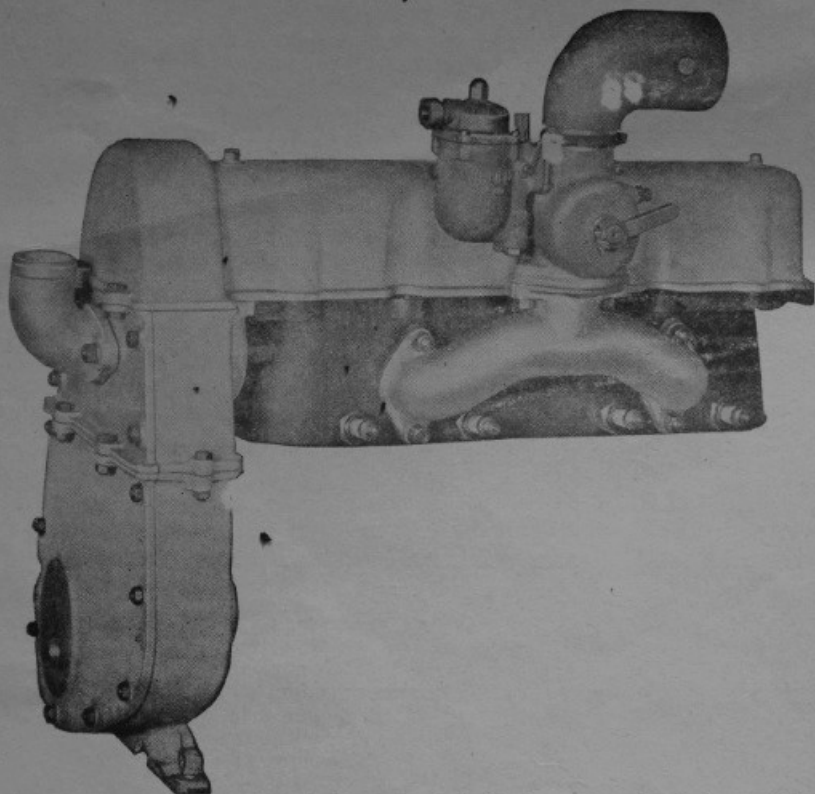


It was first entered in the 500-mile race at Indianapolis on May 30, 1923, on the Barber-Warnock Special No. 23, driven by L. L. Corum. After qualifying at 86.92 miles per hour, it won fifth place, defeating all foreign entries such as Mercedes, Bugatti, and many American entries. Only two stops were made during the race, both for fuel. It ran the entire race without any mechanical trouble or adjustment whatever.

Other Racing Records Made With This Head

Indianapolis, Ind., July 1, 1923—Chance Kingsley breaks track record on Hoosier Speedway. Time: 31 1/5 seconds. W. Schloeman wins 75-mile race; Chance Kingsley, second; C. Chaney, third. All driving Fronties.
 Ventura, Cal., July 28, 1924—Frank Lockhart won 5-mile race. Time: 4:56. Fastest time in the west on half-mile flat track.

Overhead Camshaft and Drive for Model "R" and "S-R" Frontenac Cylinder Heads



This remarkable outfit was designed and built by us at the insistent demand of many of our customers, users of Model "R" and "S-R" racing heads. It has many advantages over the old rocker arm system. It is simpler, more reliable, more efficient in every way and will add considerable speed to a racing motor, equipped with either cylinder head.

By eliminating the rocker arms it is possible to turn the motor up much faster than before and this allows the use of a supercharger if desired. Just note these facts; the size of the camshaft, $1\frac{1}{4}$ inches, does away with all bending and flexing of camshaft, which is a common complaint when using old style camshaft, thereby securing full opening of valves, thereby increasing speed of motor. The contour of the cams is such as to give a very smooth valve operation, avoiding valve and valve spring breakage. The valve operating cups are free to rotate in guides, thereby distributing wear evenly and insuring long life, beside doing away with usual trouble of guide pins coming loose. The whole outfit is oil-tight, the camshaft and valve cups operate in a bath of oil, with a drain hole at front. It will speed up your motor, make it more reliable and better looking.

Following is a brief description and list of specifications on this outfit.

Camshaft: $1\frac{1}{4}$ " diameter, hollow for force feed oiling to all cams and bearings.

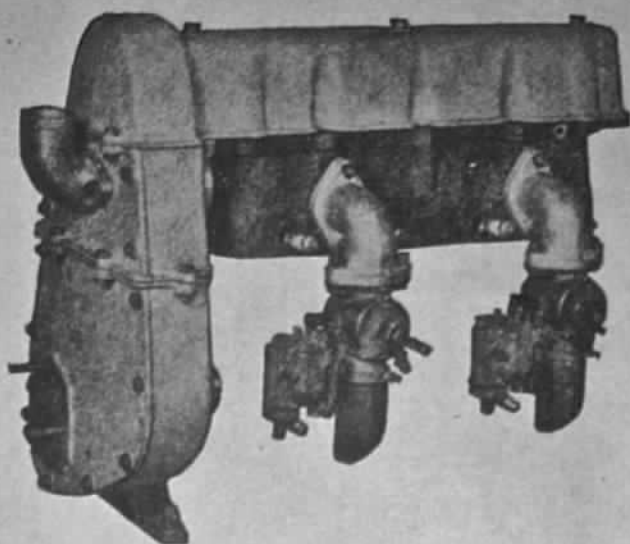
Valve Opening: $\frac{3}{8}$ " after allowing for clearance.

Valve Cups: $1\frac{5}{8}$ " diameter, hardened and ground, free to rotate.

Main Bracket: Cast Iron, valve cup holes reamed accurately, bolt holes to match cylinder head.

Drive: Triple strength Diamond Silent Chain with adjustable idler.

Housings: Aluminum castings, sandblasted to a silken finish.



No. 101: Complete overhead camshaft and drive with housings, ready to install\$200.00

No. 102: Complete overhead camshaft and drive with model "S-R" cylinder head, carburetor, intake and exhaust manifolds\$365.00

No. 103: Complete overhead camshaft and drive with model "R" cylinder head, carburetor, intake and exhaust manifolds\$340.00

No. 104: Complete overhead camshaft and drive with model "S-R" cylinder head only, no equipment.....\$280.00

No. 105: Complete overhead camshaft and drive with model "R" cylinder head only, no equipment.....\$265.00

NOTE—Above prices on Nos. 102 and 103 include Winfield Carburetor and either downdraft or vertical manifold.

Special Fronty Crankcase for Sliding Gear Transmission

This special crankcase and fly wheel housing was designed and built by us for the express purpose of eliminating the old style planetary transmission and replacing it with the new Model "A" Ford sliding gear transmission and clutch, which, in our opinion, are admirably adapted for the kind of work required on dirt track racing cars. This crankcase will enable the racing car owners to do away with all bands and troubles attached to the old planetary transmission, will give a much easier running and faster motor by doing away with all undue friction in transmission, will enable him to push or tow his racing car anywhere without special tow wheels, insure easier starting, with crank, and many other advantages at a reasonable cost.

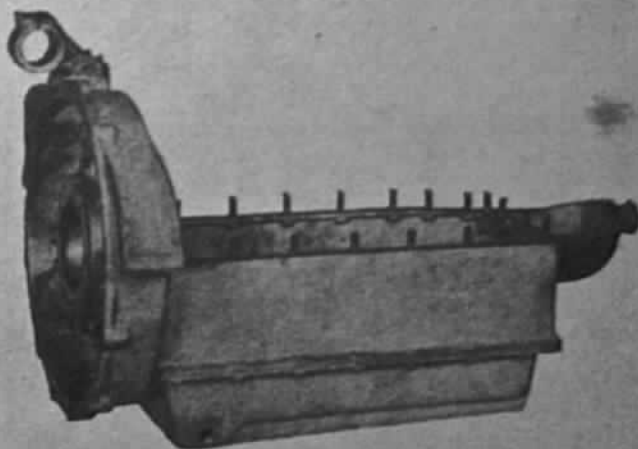
This will also permit running your racing motor on dry sump, feeding cooler oil to the bearings, increasing the life of your motor considerably. This is in keeping with the best and latest practice on racing motors.

Change can be made in a very short time, no machine work necessary.

Can be used on any model Ford racing motor, regardless of what cylinder head or crankshaft is used.

No. 701: Crankcase and fly wheel housing assembly, including support arms, steering gear bracket, crankshaft extension, and oil deflector ring\$150.00

No. 702: Crankcase and fly wheel housing complete, same as above and including new Ford model "A" fly wheel, turned down, clutch, clutch housing, transmission, pedals, complete, ready to install.....\$265.00

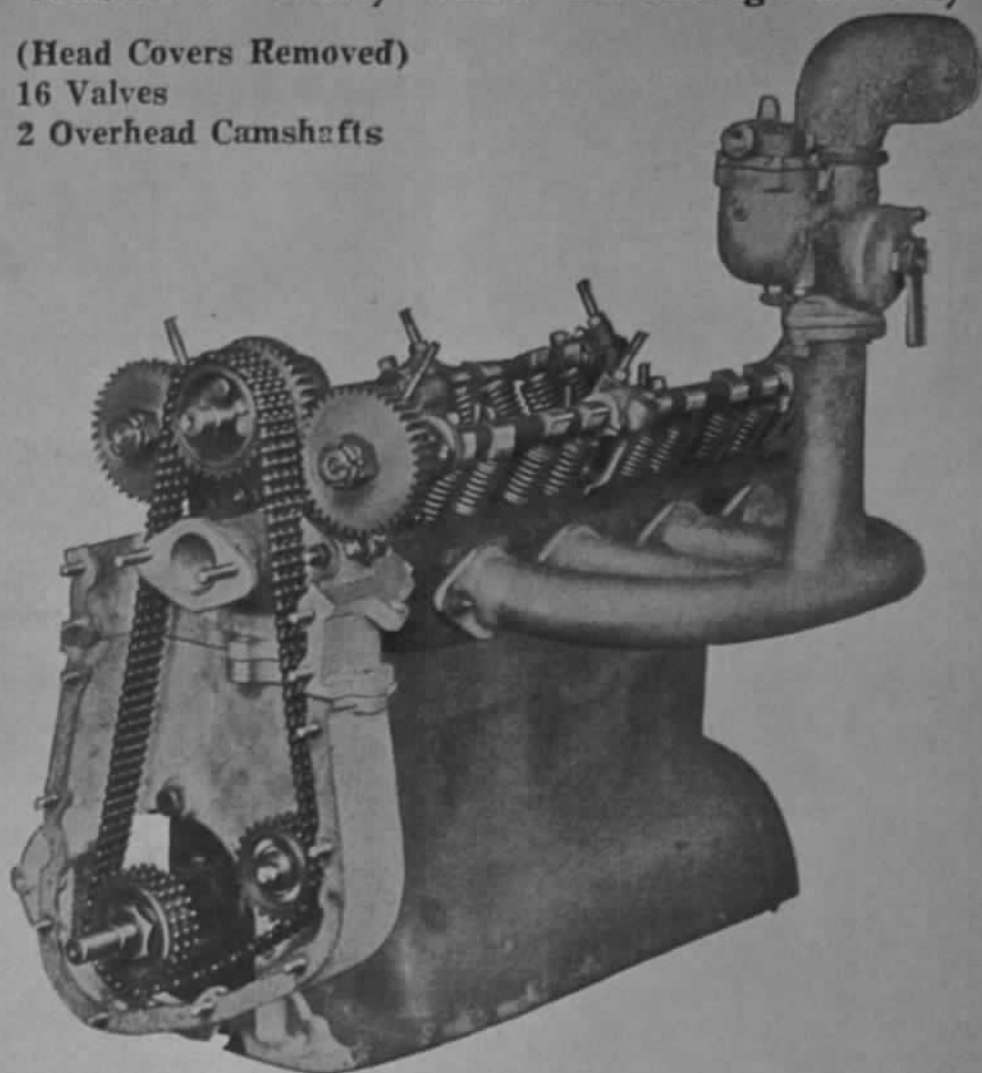


Model D-O "Fronty" Head—for Racing Cars Only

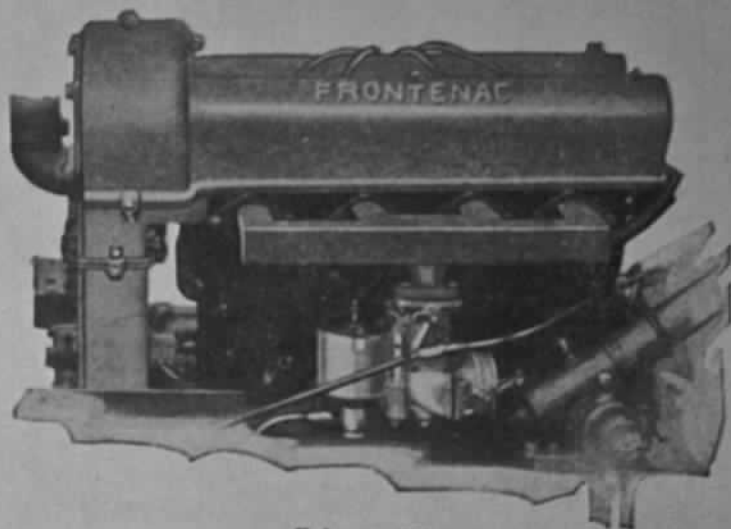
(Head Covers Removed)

16 Valves

2 Overhead Camshafts



Built to satisfy insistent demands for something still faster. It was first put to the most gruelling test known to the whole racing world, the 500-mile race at Indianapolis, May 30, 1924. The car equipped with this head went through the entire race, and for the last 300 miles ran at an average speed of 88 miles per hour. Please keep in mind the fact that every Ford car equipped with the Fronty head entered in the 500-mile race has qualified and finished in the greatest race of the world. Frontys are the only Fords to have accomplished this. This equipment will instantly appeal to those who have tried other types and makes of heads, and who desire to equip their car with the best attachment that can be produced.



Exhaust Side

(Specifications on next page)

SPECIFICATIONS

(Model D-O—16-Valve "Fronty" Head)

BUILT to order only. Each order receives the personal attention of Mr. Arthur Chevrolet, both during the course of construction and testing. Each head is guaranteed against imperfections in material and workmanship.

Head Casting—Fine gray iron machined practically all over.

Water Jacketing—Given special attention to distribute water evenly around entire combustion chamber, valves and spark plugs.

Valves—16, 2 intake and 2 exhaust per cylinder. Best tungsten steel. All overhead, seated in casting 30 degrees from vertical. $1\frac{7}{8}$ -in. diameter. Stem $\frac{3}{8}$ -in. diameter.

Special Valve Springs—Each held in place by special seat and keeper, which also acts as tappet, upon which cam strikes, operating valve. Tappets held in place by lock nuts. Adjustment is simple and positive. Tappets hardened and ground. Valves operate in removable valve stem guides. Stems $3\frac{1}{4}$ in. long.

Camshafts—2, mounted overhead on 3 bronze bearings. Cams integral with hollow drilled shaft, with oil leads to cams. Entire valve mechanism lubricated by force feed. Camshafts driven by silent chain $1\frac{1}{4}$ in. wide. The front sprocket mounting and camshaft bearing casting are bolted solid to the front of head casting. The chain is kept in proper adjustment by a patented idler. Entire chain drive mechanism in aluminum housing; runs in surplus oil, from camshaft feed. Camshafts housed in aluminum oil-tight, dustproof housings.

Spark Plugs—Located in top of head, firing charges in top and center of

combustion chamber—the most efficient way. Preignition and fouling of plugs eliminated.

Intake and Exhaust Ports—4 each, $1\frac{1}{2}$ in. Smooth and straight, allowing easy passage of gases.

Compression—120 lbs. Entire combustion chamber machined to prevent carbon and preignition.

Water Outlet—2 in. inside diameter. Runs through cam drive chain housing at top of head. Cylinder head uses regular Fronty gasket. All flanges take S. A. E. standard gaskets.

Special care has been taken in the design of this head to make all operating parts easily accessible, and in this equipment so that it may be installed on any standard Ford block, replacing the stock head, or any of the present overhead valve attachments now on the market, without mechanical changes on the block. This head can be removed from the block and reassembled as easily as any ever designed. Special intake manifolds for this head furnished, if desired, for one, two or four carburetors.

No. 201—Without intake or exhaust manifolds or carburetor.....\$500.00

No. 202—Complete 16-valve head with exhaust manifold, intake manifold and carburetor.....\$600.00

(Can be furnished with two Zenith carburetors at same price.)

A deposit of 25 per cent of purchase price required on every order.

A Few Records Established and Races Won by "Fronty" Equipped With Model R Head

Indianapolis, Ind., September 3, 1923—A. Davidson, driving Fronty, wins 100-mile race, Hoosier Speedway; Joe Huff, driving Fronty, second.

Paris, Ill., September 8, 1923—A. Davidson, driving Fronty, won time trials, 20 and 30-mile race Johnson, driving Fronty, second.

Chicago, N. S. Polo Grounds, Ill., July 6, 1924—George Beck, driving Fronty, wins 10-mile light car race; 15-mile free-for-all; Louis Schneider, driving Fronty, second.

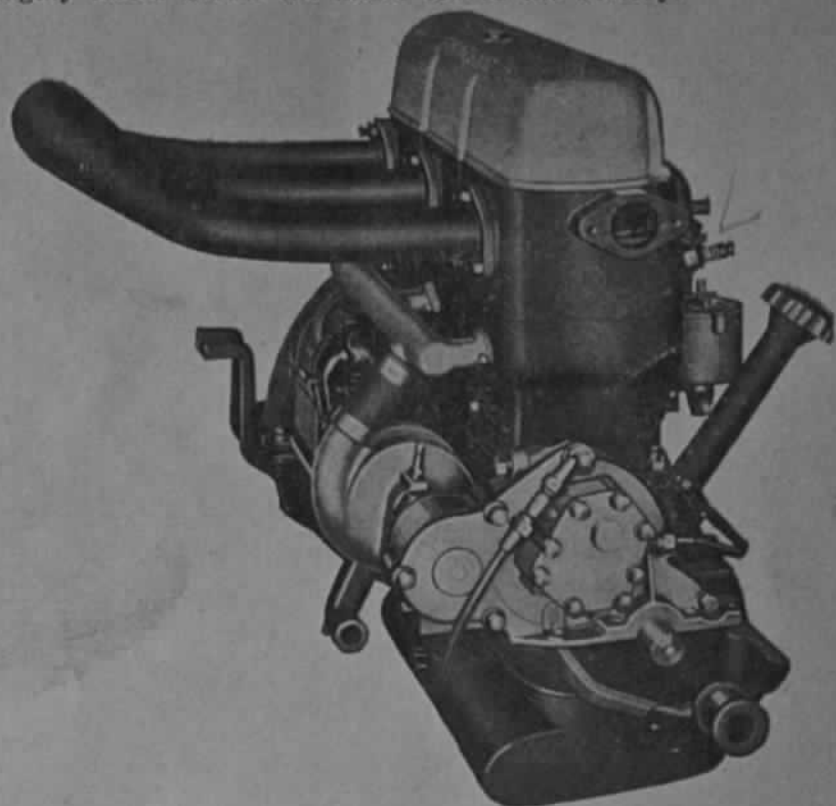
Indianapolis Hoosier Speedway, September 1, 1924—A Davidson, driving Fronty, wins annual 100-mile sweepstakes; Lawwell and Broderick, second and third in Fronties.

Graham, Texas, October 9, 1924—Dick Calhoun, driving Fronty, establishes world's record, turning two laps on one-half mile track in 55 seconds.

Regina, Sask., Canada, 1924—Cleo Sarles, driving Fronty, won Midnight Sun Sweepstakes Race, only race in world held at midnight, defeating seven other cars.

"Fronty"-Ford Racing Motor

THIS is the motor included in specifications for the Fronty-Ford racing car shown on the next page. It embodies the experience of many years in designing motors that will "produce the goods" in racing competition. All parts are thoroughly tested before the motor leaves the factory.

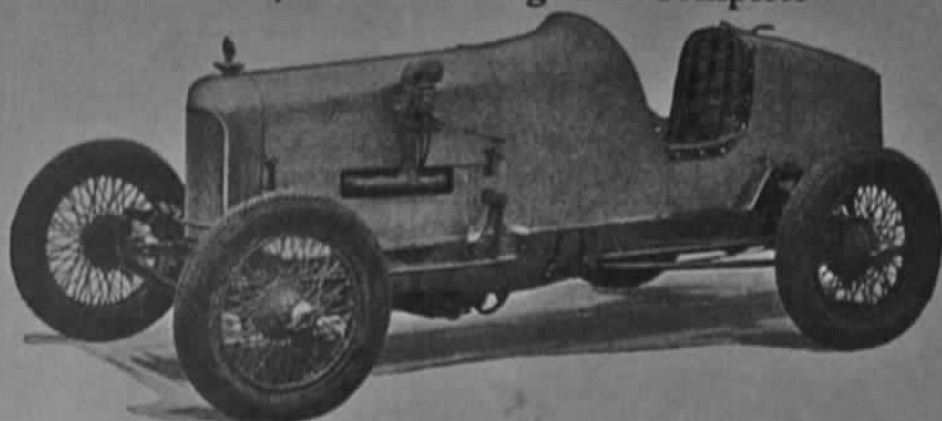


SPECIFICATIONS

Cylinder Block, Catalog No. 220-B.	Rings, Catalogs Nos. 225 and 225A.
Crankshaft, Catalog No. 216-A.	Piston Pins, Catalog No. 224.
Connecting Rods, Catalog No. 218-B.	Oiling System, Catalog No. 227.
Pistons, Catalogs Nos. 223 or 223A.	Water Pump, Catalog No. 226.
Exhaust Manifold, Catalogs Nos. 232 or 232A.	

- No. 215—Price complete with Model R racing head, Zenith carburetor, planetary transmission, sub base oil reservoir, ball bearing ball cap, maximum speed 3600 R. P. M.\$765.00
- No. 215A—Same as above with overhead camshaft, Catalog No. 103, and sliding gear transmission outfit No. 702, maximum speed 4200 R. P. M.....\$1150.00
- No. 215B—Complete racing motor with Model S-R head, 2 Zenith carburetors, planetary transmission, sub base oil reservoir, ball bearing ball cap, maximum speed 4000 R. P. M.\$865.00
- No. 215C—Complete racing motor with S-R head and overhead camshaft, Catalog No. 102, and sliding gear transmission No. 702, maximum speed 4800 R. P. M.\$1225.00
- No. 215D—Complete racing motor with 16-valve head, 2 overhead camshafts, Catalog No. 202, and sliding gear transmission No. 702 with either one inverted Winfield carburetor or 2 vertical Zenith carburetors, maximum speed 5600 R. P. M.\$1400.00

"Fronty"-Ford Racing Car Complete



WITH this powerful car you are bound to win. Your skill, plus Fronty-Ford performance, can get you in on the big money every time! The Fronty-Ford stands up under the most severe driving. Lightning get-away and great speed are characteristics of the Fronty-Ford. It is the most consistent and sensational performer on half-mile dirt tracks ever built. The best proof of its speed and reliability was demonstrated in its performance in the Indianapolis 500-mile race, May 30, 1923. In this race it placed fifth, defeating all foreign entries and many of the best American entries.

Specifications

Motor—(See Fronty-Ford Racing Motor on Page 6.)

Body—Special all-steel, one-man body. (Two-man body for small additional sum.) Double tank in tail of body—capacity, 10 gallons gas; 3 gallons oil.

Wheelbase—Optional.

Frame—Standard Ford frame shortened for 96-inch wheelbase (longer if desired).

Front Axle—Standard Ford I-beam. Special radius rods, No. 250 front under-slung brackets.

Rear Axle—Special ball-bearing axle. Special axle shafts, ball bearings and radius rods.

Wheels—Special 28x4 drop center wire wheels.

Springs—Standard Ford springs, lowered. Shock absorbers.

Steering Gear—Special center control. Spring steel steering wheel. Special steering knuckles.

Radiator—Special Fronty model, made with Fedders' high efficiency core.

Feed—Pressure, gas and oil.

Gear Ratio—Optional: 3-1 for straight-away, 3¼-1 for speedway, 3.63-1 for mile dirt track, 4-1 or 4.2-1 for half-mile dirt track.

Tread—Standard.

Weight—1,350 pounds.

Color—Optional.

Speed: Depends on model of head and gear ratio used.

No. 214—With motor No. 215.

Price\$2000.00

No. 214A With Motor No. 215A..\$2300.00

No. 214B With motor No. 215B..\$2100.00

No. 214C With motor No. 215C..\$2400.00

No. 214D With motor No. 215D..\$2700.00

"Fronty"-Fords Built to Order

Fronty-Fords are also built to special specifications for those who want features different from those incorporated in the regular models of Fronty-Ford racing cars. Write or call for prices and information.

Oversize Perfect Balance Crankshaft



The most perfectly balanced crankshaft of best alloy steel obtainable. Main bearings, 1 1/4 in. diameter instead of 1 1/8 in. Connecting rod bearing, 1 1/4 in. diameter instead of 1 1/8 in. Drilled for pressure oil feed. Can be furnished with 1 1/2 or 1 3/4 in. crank pins at same price.

No. 216A—Each\$250.00

Counter-Balanced Crankshaft



DESIGN PATENTED

Counterweights forged integral with shaft. High-grade alloy steel. Fits Ford block without alterations.

No. 216B—Drilled for oil pressure feed\$30.00

No. 216C—Not drilled, for commercial cars\$25.00

No. 216D—Ford Model T crankshaft drilled for oil pressure\$16.00

No. 216E—Ford Model A crankshaft drilled for oil pressure\$40.00

No. 217—Main Bearing Cap—Faced and drilled, but not bored. (When using special heavy crankshaft these caps are necessary, boring them out with cylinder block.) Per set of 3, with bolts\$10.00

Special Star Beam Connecting Rod



No. 218B—Special Star Beam Connecting Rod—Drop forged, made of chrome vanadium steel. Very light and strong. Can be furnished for 1 1/2 or 1 3/4 in. bearing. Per set of four\$60.00

No. 219—Cylinder Block—With special heavy circular crankshaft, bearing caps, connecting rods 218B. All bearings fitted, rods balanced, pistons, rings and pins, water pump and bracket, complete oiling system\$550.00

No. 220—Cylinder Block—With special heavy circular crankshaft, bearing caps, connecting rods balanced, bored out and babbitted, bearings fitted and adjusted\$400.00

No. 220B—Ford Cylinder Block (starter type)—With main bearings bored out to receive oversize crankshaft with caps and bolts, bearings babbitted. New block\$65.00

No. 220C—.031 oversize block\$60.00

No. 221—Model T cylinder block with Model A crankshaft installed and fitted, drilled for oil pressure. No. 218B connecting rods. Special pistons, rings and pins\$200.00 ~~\$250.00~~

No. 222—Model T cylinder block with Model A crankshaft drilled for oil\$105.00

Special Pistons



Racing Pistons. Best for Fronty-Ford racers. Extra strong aluminum and nickel alloy, accurately machined and grooved for three 3/4-in. rings.

No. 223—High Dome, to be used with R head. Per set of four\$40.00

No. 223A—Low Dome, to be used with S-R or D-O head. Per set of four\$40.00

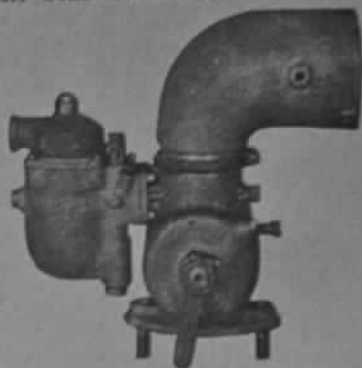
No. 223B—Special, to be used with S-R or D-O head and Model A crankshaft. Per set of four\$40.00

No. 224—Special light weight piston pins made of chrome vanadium steel. Price each\$1.40

High-Compression Racing Piston Rings

3/8-in. wide, perfectly machined from best gray iron castings.

- No. 225—Compression Ring, each.....\$0.50
- No. 225A—Oil Ring, each..... 1.00
- No. 228—Winfield carburetor, best and fastest racing carburetor known. Used by all star drivers:



- 1 1/4 in. Size\$30.00
- 1 1/2 in. Size 35.00
- 1 3/4 in. Inverted ~~60.00~~ 55.00
- 1 7/8 in. Inverted ~~70.00~~ 65.00
- 2 in. Inverted ~~70.00~~ 65.00

Special Zenith Carburetor



For quick getaway and pickup.

No. 228A—With proper jets for Fronty racing heads \$35.00 (Specify whether for Model R or S-R head.)

No. 229—Elbow adapter or intake pipe \$3.00

No. 229A—Intake manifold of steel tubing for use with Model S-R Head, using 1 carburetor only.....\$20.00

No. 229B—Intake manifold for inverted Winfield carburetor and Model S-R Head\$15.00 ~~\$25.00~~

No. 229C—Intake manifold for inverted Winfield carburetor and D-O Head\$40.00

Sub-Base Oil Reservoir



Keeps oil at constant, lower temperature, assuring better lubrication of motor at all times. Made of

- best steel. Capacity, 3 gallons.
- No. 230\$25.00
- No. 231—Same to fit motor with regular Ford front radius rod. Capacity, 2 gallons\$20.00 (If 1925 or later crankshaft is used, specify on order.)

Racing Exhaust Manifold



Gives the famous "Speedway Roar." Made of seamless steel tubing. Complete with long 4-in. pipe to rear of car.

- No. 232\$30.00
- No. 232A—For S-R Head 30.00
- No. 232B—For D-O Head 40.00

High-Tension Magnetos

The only magnetos that stand up on Fronty-Fords. Fully guaranteed.

No. 233—Single spark Rob. Bosch Magneto. Price\$65.00

No. 233A—Double spark Rob. Bosch Magneto. Price\$120.00



No. 233B—Special bracket for using 2 single magnetos with S-R head, \$12.50

No. 233C—Special water pump and magneto drive shaft for 2 magnetos\$10.00



Special Camshaft Gear



Made of nickel steel. No. 235\$10.00

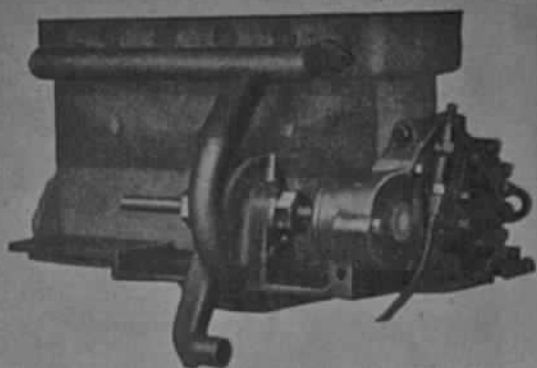
Special Ball-Bearing Cap

Eliminates all trouble from this troublesome bearing. For all Fords. No. 236\$20.00



No. 237—Special Metric racing spark plugs. (Specify what model head.) Each\$1.50

Water Pump and Magneto Bracket Parts List



Especially designed by us for Ford racing motors. Made entirely of aluminum. Absolutely the best of its kind on the market. The shaft, mounted on ball bearings, is made of chrome nickel steel. Front gear cover equipped with pad to receive oil pump.

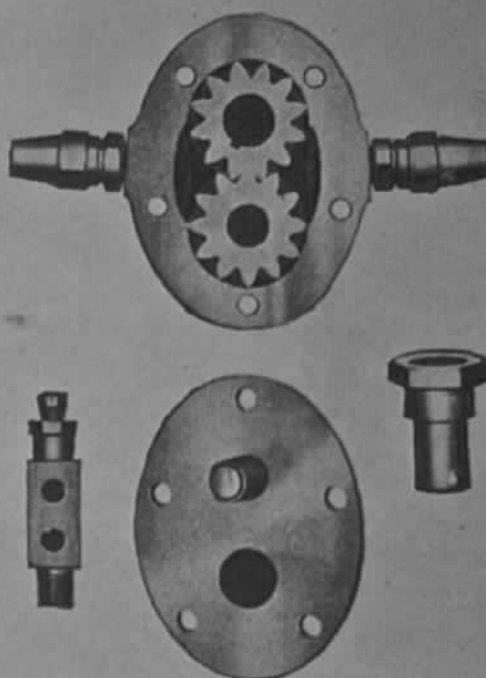
No. 226—Each\$60.00

No.	Name	No. Req.	Price
2226	Front gear cover.....	1	\$10.00
3226	Main bracket.....	1	15.00
4226	Water pump body.....	1	8.00

No.	Name	No. Req.	Price
5226	Water pump cover.....	1	\$7.00
6226	Water pump bushing, each.....	2	.75
7226	Water pump impeller.....	1	2.00
8226	Water pump packing nut, R. H.....	1	1.00
9226	Water pump packing nut, L. H.....	1	1.00
10226	Water pump alemite connection.....	2	.30
	Water pump Woodruff key.....	1	.10
	Water pump taper pin.....	1	.10
11226	Water pump shaft.....	1	7.50
12226	Water pump shaft driving gear.....	1	4.00
13226	Water pump shaft bearing.....	1	5.00
14226	Water pump shaft bearing retainer.....	1	2.00
	Water pump shaft bearing retainer bolts, each.....	3	.10
	Water pump cover screws (short).....	6	.10
	Water pump cover screws (long).....	1	.10
	Water pump anchor bolts, each.....	2	.20
15226	Water manifold.....	1	7.50
	Water manifold studs, each.....	6	.10
	Water manifold stud nuts, each.....	6	.05
	Bracket bolt (long).....	1	.20
	Bracket bolt (short).....	1	.15

Oiling System Parts List

No.	Name	No. Req.	Price
1227	Oil pump, complete.....	1	\$12.00
2227	Oil pump body.....	1	5.00
3227	Oil pump cover.....	1	3.00
4227	Oil pump driven gear (steel).....	1	3.00
5227	Oil pump driven gear (bronze).....	1	2.00
6227	Camshaft extension.....	1	5.00
8227	By-pass.....	1	4.00
	1/4" elbow on base.....	1	.50
	3/8" union on pump, each.....	2	.50
	3/8" front outside tee.....	1	1.00
	1/4" front inside tee.....	1	.80
	1/4" rear inside elbow, also used on bearing caps, ea.....	1	.30
	1/4" union to gauge line.....	1	.35
	3/8" union to overflow line.....	1	.40
	1/4" tee to rear transmission bearing.....	1	.80
	1/4" elbow to rear transmission bearing.....	1	.50
	3/8" elbow overflow return.....	1	.40
	3/8" copper tubing intake line.....	1	.80
	3/8" rubber tubing intake line.....	1	.40
	3/8" copper tubing from pump to rst tee.....	1	.50
	3/8" rubber hose to by-pass.....	1	.40
	1/4" copper tubing, leads to main bearing, each.....	3	.20
	1/4" tubing from by-pass to gauge.....	1	.60
	1/4" tubing from gauge line to rear transmission bearing.....	1	.80
	3/8" tubing overflow line.....	1	.50
	1/4" rubber hose gauge line.....	1	.30
	1/4" rubber hose rear transmission line.....	1	.30
	3/8" rubber hose overflow line.....	1	.35
	Oil pump cap screws, each.....	2	.10



High-Pressure system includes oil pump, camshaft extension, by-pass regulator, oil gauge for dash, all fittings, tubing, connections, and blue prints for installation.

No. 227—Complete\$35.00

Loud Speaker 2-in-1 Cutout and Muffler



Relieves motor of all back pressure, and when open gives a roar like that from speedway racers.
 No. 245\$10.00

Fronty Underslung Parts (Front)



Latest, best method of underslugging front end of racing cars. Take out all side sway, keep spring over the axle. Made of high-grade steel forgings.

No. 250—Per set\$16.00

Manganese Bronze Front Brackets



Underslung. Very strong. For racing cars or speedsters.

No. 251—Per pair\$12.00

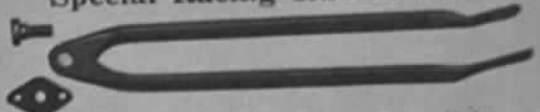
Manganese Bronze Rear Brackets

Underslung. Very easy to attach.

No. 252—Per pair\$8.00



Special Racing Radius Rods



Made of seamless steel tubing. Very light and strong, the best front construction made. (When ordering, state whether car is offset.)

No. 258—Front, per pair, complete with pads and bolts\$24.00

No. 258A—Rear, per pair, complete with pads and bolts\$24.00

Spring Steel Steering Wheel



Same as used on all speedway cars. Flexible spider protects the driver in mishaps. Used commercially, it prevents fatigue caused by vibration of wheels and absorbs shocks and jars.

No. 259—Nickel plated\$18.00

Steering Gear for Racing

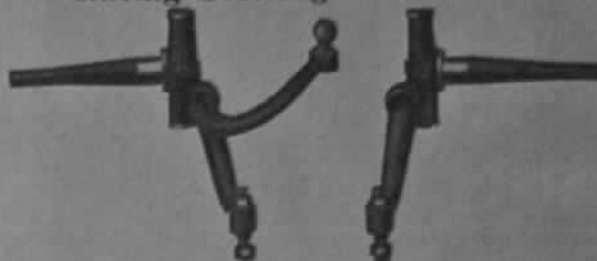
This cam and lever type of gear is meeting with great success everywhere. Complete with drag link, dash and transmission bracket for center control.



260—Price\$50.00

260A—Without brackets steering gear only. Price\$35.00

Racing Steering Knuckles



Fit Ford I-beam. Made of chrome vanadium steel. Best life insurance for drivers. Complete with tie rod and bolts.

No. 261—Per pair\$30.00
 (When ordering state width of tread of car.)

Racing Wire Wheels for Ford Hubs



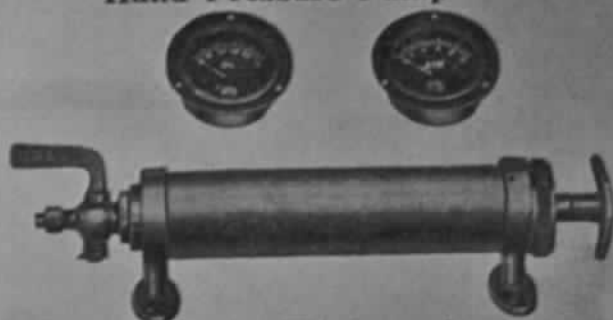
Special 28x4 drop center, straight side racing wheels, with winged hub caps, dental drive. Lightest and fastest wheel to change. Tires can not be thrown or rolled off this wheel under any condition.

No. 263—Per set of 5 wheels, 4 hubs for Ford\$130.00

(Price for other makes on application.) Hubs bored out for oversize axles, extra.

No. 264—Racing tires and tubes. Prices on application.

Hand Pressure Pump



For gas and oil tanks. With 3-way valve.

No. 266—Brass finish\$8.00

No. 267—Nickel finish\$9.00

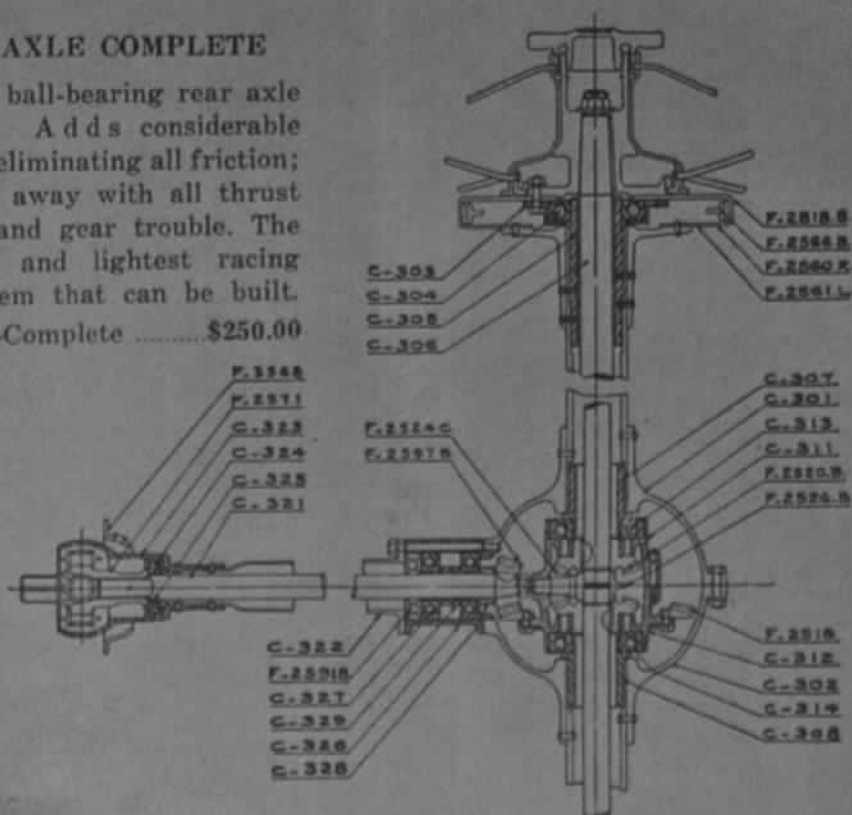
No. 268—Air gauge, 10 lbs.\$3.00

No. 269—Oil gauge, 75 lbs.\$3.00

REAR AXLE COMPLETE

Complete ball-bearing rear axle assembly. Adds considerable speed by eliminating all friction; also does away with all thrust washers and gear trouble. The strongest and lightest racing rear system that can be built.

No. 300—Complete\$250.00



Ball-Bearing Differential

Operates on ball bearings entirely. Eliminates friction. Made of bronze to insure strength.

No. 310\$70.00
Complete with sleeves, bearings and directions.



Oversize Axle Shaft



A necessity for racing cars. Protects driver's life. Also for commercial cars carrying heavy loads. Shaft $1\frac{1}{8}$ in. diameter, made of electric chrome-vanadium steel. (When ordering, state width of thread.)

No. 303—Special ball bearings and housings to replace roller bearings. Per set, including axle tube sleeves.....\$45.00
No. 306—Oversize axle\$10.00
No. 254—Special roller bearings for use with oversize shaft\$5.00

Special Gear Ratios

No. 244—4 4/9x1\$10.00
No. 244A—4 2/10x1 10.00
No. 244B—3 1/4 x1 10.00
No. 244C—3x1 10.00

Filler Cap

For gasoline and oil tanks. Adds snap to any car's appearance.



No. 270—Brass finish\$6.50
No. 271—Nickel finish 7.50

"Fronty"-Ford Radiator



Of special design, with Fedders' new high-efficiency core. Very effective and beautiful. Unusually well made.

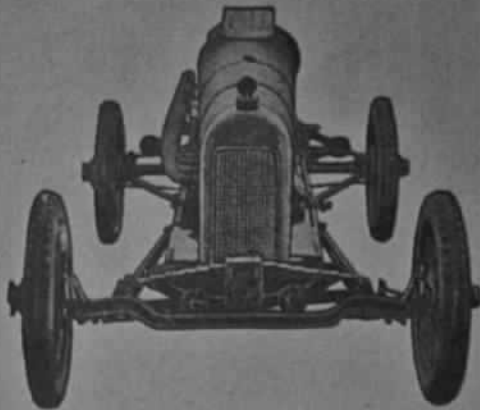
No. 272\$65.00
No. 273—With nickel-plated shell\$75.00
No. 273A—With round nose shell and screen\$93.00

Magneto Coupling

Vernier arrangement to allow exact setting of magneto. Noiseless.

No. 358—Each\$6.00

One-Man Racing Body



Gives car proper balance. Reduces wind resistance to a minimum. Framework of angle steel, strongly braced. All tires can be seen from seat. (When ordering, give wheelbase. State how much motor is set back, if any. Mention method of underslinging used.) Complete with tanks and radiator.

No. 274	\$300.00
No. 274A—Same, with upholstered body	\$350.00

274B—One man racing body only, one-piece, all steel with welded joints, no solder. Without tanks or radiator.
Price\$125.00

Miscellaneous Frame Parts

No. 361—Complete frame assembly, includes front and rear springs, special spring perch, front underslung bracket and front cross members in place and truss rods and supports.....	\$135.00
No. 361A—Same as above, with front and rear radius rods installed and front axle complete with special steering knuckles	\$215.00
No. 361B—Same as 361A with complete rear axle, ball bearing throughout, assembled	\$540.00
No. 362—Rear spring, lowered.....	\$12.00
No. 363—Front spring, lowered.....	7.50
No. 364—Front axle with dropped center	20.00
No. 365—Breather tube assembly....	7.50

Whippet Speed Equipment

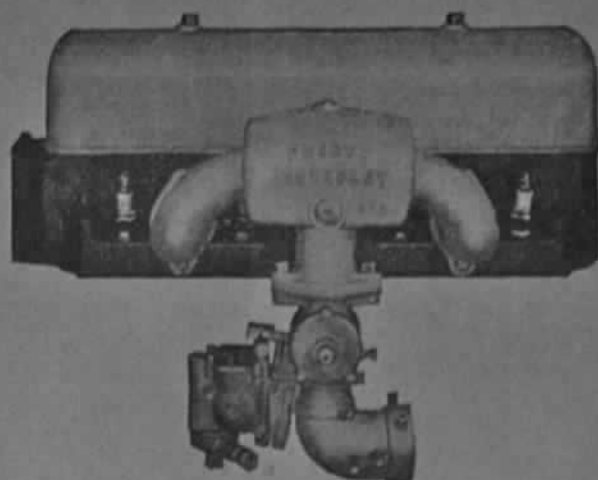
For Road Work Only

No. 401—Special intake manifold	\$12.00
No. 402—Special oversize valves, each	3.00
No. 403—Special valve springs, each30
No. 404—Special valve spring caps, lower30
No. 405—Special spring adapters, upper30
No. 406—Special 1½" Winfield Carburetor	30.00
No. 407—Autopulse fuel pump	10.00
No. 408—Loud Speaker cutout	10.00

A Whippet 4 cylinder equipped as above will show from 70 to 75 M. P. H.

For Racing Purposes

No. 409—Racing pistons	\$40.00
No. 402—Oversize valves, each	3.00
No. 403—Oversize valve springs, outer30
No. 410—Inner valve spring30
No. 411—Racing valve locks	1.50
No. 405—Spring adapters30
No. 401—Intake manifold, for single carburetor	12.00
No. 412—Intake manifold, for two carburetors, each.....	9.00
No. 413—Racing carburetor, Winfield	30.00
No. 414—Racing exhaust and intake manifold combined.....	40.00



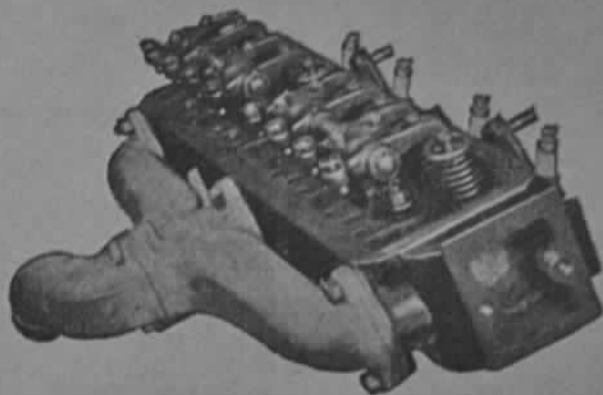
Frontenac

CYLINDER HEAD

for Chevrolet Passenger Cars

DESCRIPTION and SPECIFICATIONS

- Cylinder Head Casting—Special Close Grain Cast Iron.
 Valves: Special steel Valves, 1 $\frac{1}{4}$ in. diameter, $\frac{3}{8}$ stem.
 Valve Springs: Extra Long Coil Spring.
 Valve Guides: Extra Long, Removable.
 Rocker Arms: High grade steel, offset to give $\frac{3}{8}$ opening to valve.
 Rocker Shaft: Size $\frac{3}{4}$ inch. Ground all over.
 Intake Ports: Two (2) in number; 1 $\frac{1}{2}$ inch in diameter.
 Exhaust Ports: Three (3) in number; 1 $\frac{1}{8}$ inch in diameter.
 Cover: Aluminum. Oil tight.
 Intake Manifold: Special Hot Spotted Ramshorn Design.
 Carburetor: Special 1 $\frac{1}{4}$ inch.
 Exhaust Manifold: Cast iron, made special to connect to regular Chevrolet muffler pipe.
 Complete cylinder head and equipment for touring cars, coupes, sedans, roadsters or trucks, consisting of head, carburetor, exhaust and intake pipes, aluminum cover and all bolts and connections.
- No. 501—Price complete\$100.00



Cover
Removed

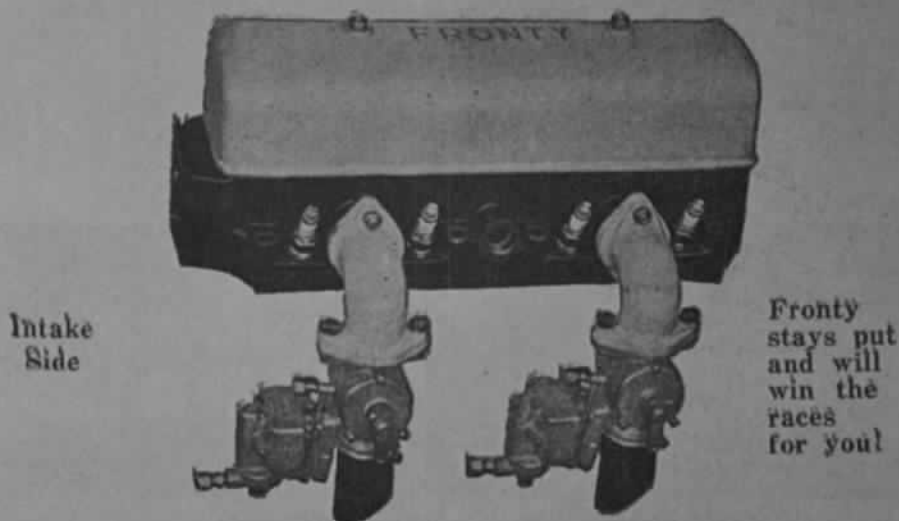
Chevrolet Section of Speed Equipment
100 Miles Per Hour
RACING DRIVERS

Here is the cylinder head you have been looking for to put on that racing car of yours:

DESCRIPTION and SPECIFICATIONS

- Cylinder Head Casting: Special close grain cast iron.
 Valves: 8 valves, overhead; high tungsten, $1\frac{3}{4}$ diameter.
 Valve Springs: Double springs, high grade alloy steel.
 Valve Spring Locks: Liberty type, made of Chrome Vanadium Steel, heat treated.
 Valve Guides: Extra long, removable. Cast iron.
 Rocker Arms: High grade alloy steel, offset $1\frac{1}{2}$ to 1, to give large valve opening.
 Rocker Shaft: Hardened steel, ground all over, $\frac{3}{4}$ diameter.
 Intake Ports: Two on left side, $1\frac{5}{8}$ diameter.
 Exhaust Ports: Three on right side, $1\frac{5}{8}$ diameter.
 Cover: Aluminum, oil tight.
 Spark Plugs: Special metric racing plugs.

- No. 503—Complete racing cylinder head with two $1\frac{1}{2}$ inch racing carburetors, racing exhaust manifold, spark plugs, studs, etc. Price.....\$200.00
 No. 504—Racing cylinder head, complete with one racing carburetor, racing intake manifold, racing exhaust manifold, spark plugs, studs, etc. Price.....\$200.00
 No. 505—Racing cylinder head only, with cover, spark plugs, studs. Price.....\$90.00



Intake
Side

Fronty
stays put
and will
win the
races
for you!

Special Pistons



No. 506—Special high compression racing pistons, latest design. Extra strong aluminum and nickel alloy, accurately machined and grooved for three $\frac{1}{8}$ piston rings. Price per set of four\$40.00

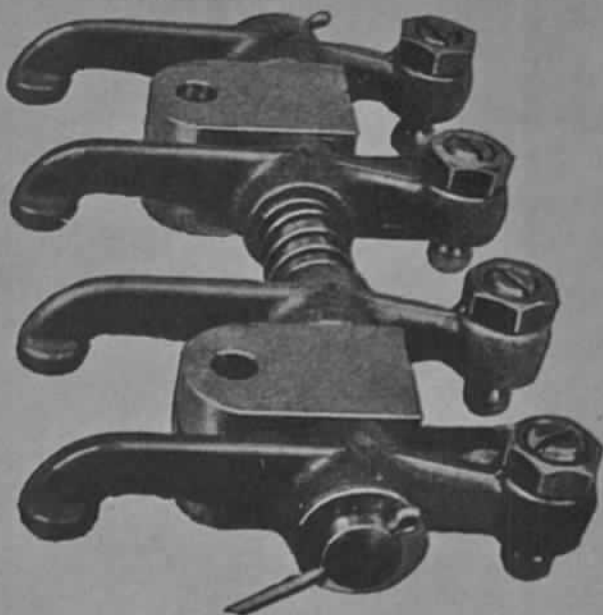
No. 506A—Low dome pistons, same as above. Price per set of four.....\$40.00

No. 507—Special racing piston pins, unbreakable. Price, each\$1.40

No. 508—Special high compression piston rings. Price, each50c

No. 509—Special high compression oil rings. Price, each\$1.00

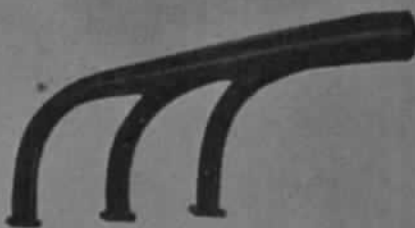
Special Rocker Arms



No. 510—Special offset rocker arms. Ratio $1\frac{1}{2}$ to 1, giving 50% greater valve opening, gives a wonderful increase in speed and acceleration. Made out of high grade alloy steel, with bronze bushings, $\frac{3}{4}$ inch shafts to insure long wear. The best means of increasing the speed of your Chevrolet motor at small expense.

Furnished complete with brackets to fit regular Chevrolet cylinder head, rocker shaft, bushings, etc. Price, per set..\$20.00

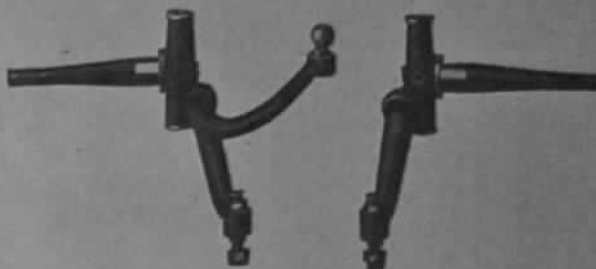
Racing Exhaust Manifold



No. 512—Racing exhaust manifold. Beautifully made, gives your motor that speedway roar, complete with 4 inch pipe to rear of car. Price.....\$30.00

No. 513—Racing intake manifold to use single carburetor. Made of steel tubing to fit either $1\frac{1}{2}$ or $1\frac{3}{4}$ carburetor. Price\$20.00

Racing Steering Knuckles



No. 561—Will fit Chevrolet axle, made of Chrome Vanadium Steel. The best insurance you can buy. Price, per set\$30.00

Some "Fronty" Records

Dutch Baumann, driving a Fronty Racing Car, Catalog No. 215-D, made 52 starts during the 1928 season and won 43 firsts. This record has never been approached in the history of dirt track racing and is the best proof we can offer of the speed, stamina, and reliability of the Fronty Racing Cars. Several other drivers of the Middle West have also long lists of victories won with their Frontys, notable among these are Gus Schrader of Cedar Rapids, Iowa; Ira Hall, of Terre Haute, Ind., who with Frank Swigert set a new record for half mile track of 24 $\frac{2}{5}$ seconds at Jungle Park Speedway, Rockville, Ind. This was made by both drivers with Frontys, Model 215-D. Others who have been very successful are Howard Wilcox and Bill Cummings, of Indianapolis, who have been driving Frontys, Model 214-C, Bill McCoy and Mark Billman, who have been driving Frontys, Model 214-B.

The Fronty is recognized as the best all round dirt track car ever built and all of the above drivers staking their chances on these cars. There must be a reason.