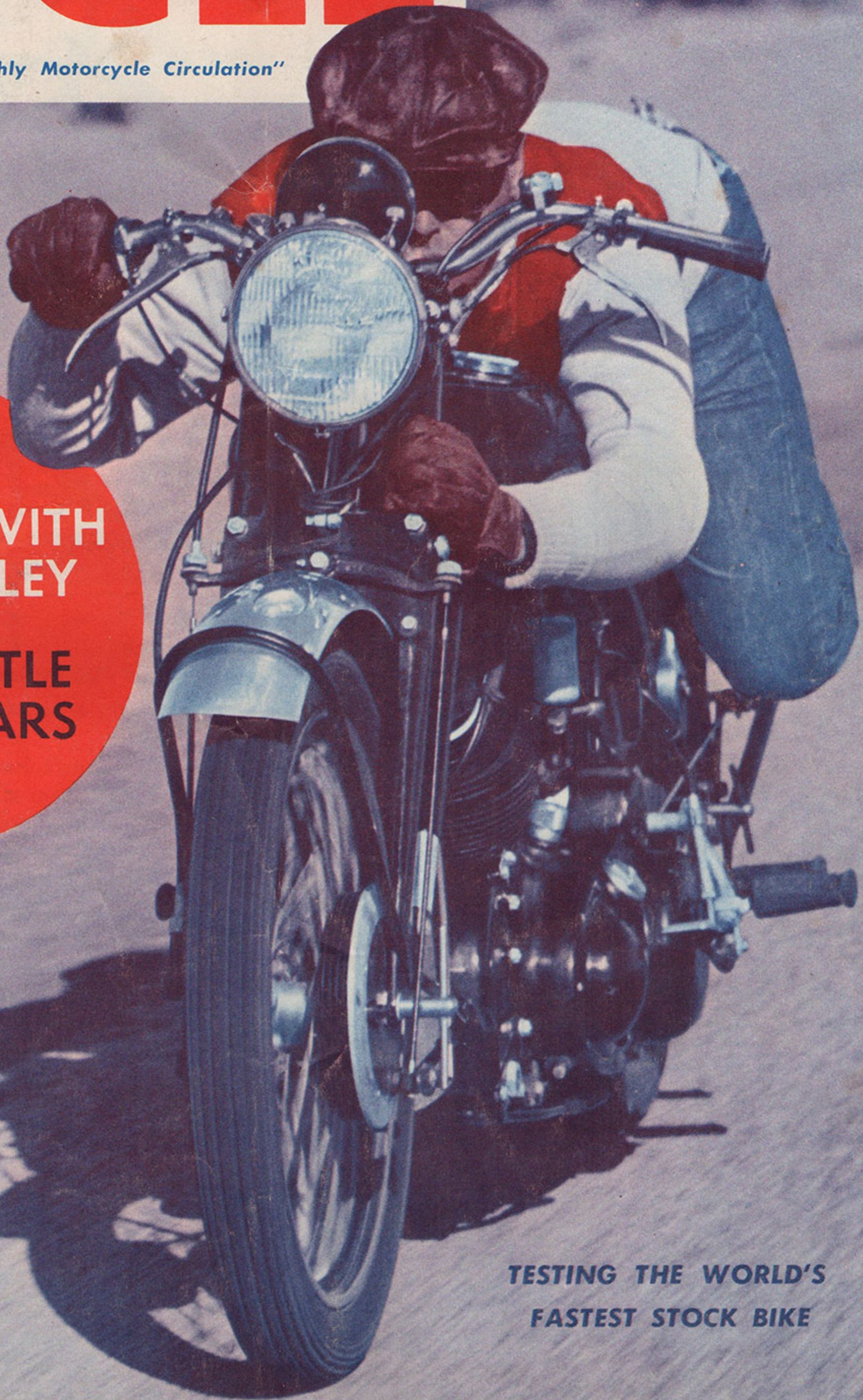


JAN 23
IND

CYCLE

FEBRUARY 1952 35c

"World's Largest Monthly Motorcycle Circulation"



**BREAK 115 WITH
YOUR HARLEY**

**BIKES BATTLE
SPORTS CARS**

**TESTING THE WORLD'S
FASTEST STOCK BIKE**

America's greatest

speedway

record



held by Harley-Davidson

HUBER'S

90.51 m.p.h. average

**TOPS ALL DIRT
TRACK RECORDS**



**Langhorne 100-Miler, stage for
motorcycling's outstanding achievement!**

A GAIN ON Langhorne's one-mile dirt speedway, Harley-Davidson riders set another brilliant record for speed and stamina. Leading a string of eight Harley-Davidson speedsters across the finish line, Billy Huber completed the 100 grueling laps in 66 minutes, 17.30 seconds, an average of 90.51 miles per hour. Here is a remarkable record for one-mile dirt tracks made under A.M.A. regulations . . . a speed record that stands among the world's best! Fastest previous A.M.A. record was the 87.09 mph clocked by Jimmy Chann on a Harley-Davidson at the Langhorne speedway in 1949. Now, Huber's better-than-90 miles per hour set last Labor Day provides a fitting climax to the sparkling records established over the years by Harley-Davidson. And these same outstanding qualities of performance together with unmatched riding comfort are built into every model of the complete Harley-Davidson line. See these American-made beauties today at your nearest Harley-Davidson dealer.

HARLEY-DAVIDSON MOTOR CO. • Milwaukee 1, Wis., U.S.A.

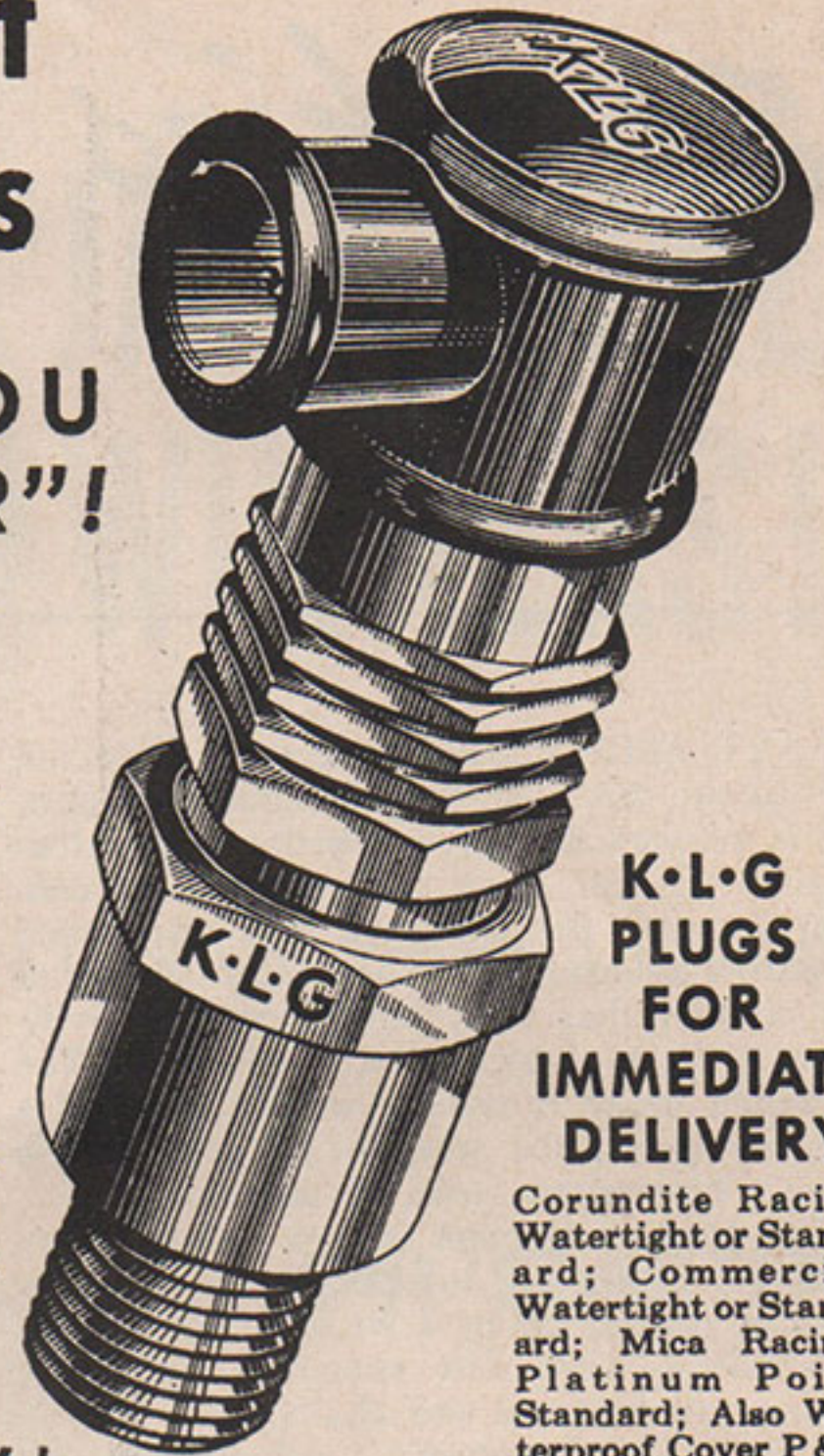


WATERTIGHT PLUGS

World's Finest for Motorcycles

**F-A-S-T... AND BUILT TO TAKE YOU
THROUGH "HELL AND HIGH WATER"!**

Here is a NEW spark plug from Britain, designed especially for your motorcycle engine! With principles taken from aircraft practice, these plugs have a toughened, molded cap that completely seals against water, dirt, oil and grit. Its steel sleeve protects insulator from flying stones or other damage. Its fins disperse all excessive heat. Body made of special rust-resistant steel. Plug is easily dismantled for cleaning insulator or electrode. Never before such a plug! One that takes in stride without even a momentary miss, anything that weather or road conditions offer anywhere. Its the plug of Champions. YOUR plug! Fit and forget it.



**K-L-G
PLUGS
FOR
IMMEDIATE
DELIVERY**

Corundite Racing Watertight or Standard; Commercial Watertight or Standard; Mica Racing; Platinum Point Standard; Also Waterproof Cover P & B Type Terminals.

WINS AT DAYTONA!

200 MILE NATIONAL CHAMPIONSHIP: 1st. Bill Matthews — with record winning speed of 88.7 m.p.h., *Norton*; 2nd. Dick Klamforth, *Norton*.

100 MILE AMATEUR CHAMPIONSHIPS 1st. Rod Coates — with record winning speed of 81.26 m.p.h. — *Norton*.

ALL THREE MACHINES FITTED WITH K-L-G PLUGS

ORDER YOUR K-L-G SPARK PLUGS TODAY!

AUTOCESSORIES, LTD.
WARSAW, INDIANA, U. S. A.



S. H. ARNOLT, INC.
415 EAST ERIE STREET, CHICAGO 11, ILL.

ROAD TEST

Features

- Triumph Thunderbird, Apr. '50
- AJS Springtwin, May '50
- Harley-Davidson, 61 Twin, June '50
- Ariel Red Hunter, July '50
- BSA Golden Flash, Aug. '50
- JAWA 21" Two-Stroke Twin, Sept. '50
- Panther 100, Oct. '50
- 500cc Vincent Comet, Nov. '50
- Puch 250 TF, Dec. '50
- Indian Warrior TT, Jan. '51
- BSA Gold Star, Feb. '51
- Mustang Special 75, March '51
- Velocette MAC, Apr. '51
- Ariel Square Four, May '51
- Indian Black Hawk Chief, June '51
- BMW, July '51
- Moto Guzzi, Aug. '51
- Cushman Eagle, Sept. '51
- Norton Dominator 30" Twin, Oct. '51
- Triumph Tiger 100, Nov. '51
- Velocette, Dec. '51
- Harley-Davidson 74 OHV Twin, Jan. '52

HOW DOES YOUR BIKE COMPARE?



When we road test 'em, we give 'em the works—In the back copies of CYCLE you'll get all the dope on the bikes listed at left plus hours of good reading: events, technical data, special features. When you order your back copies, you'll want a special CYCLE leatherette Binder. Great for keeping your copies and keeping them neat!

1950 @ 25c		
<input type="checkbox"/> Apr.	<input type="checkbox"/> July	<input type="checkbox"/> Oct.
<input type="checkbox"/> May	<input type="checkbox"/> Aug.	<input type="checkbox"/> Nov.
<input type="checkbox"/> June	<input type="checkbox"/> Sept.	<input type="checkbox"/> Dec.
1951 @ 25c		
<input type="checkbox"/> Jan.	<input type="checkbox"/> Feb.	<input type="checkbox"/> Mar.
<input type="checkbox"/> Apr.	<input type="checkbox"/> May	
1951 @ 35c		
<input type="checkbox"/> June	<input type="checkbox"/> Aug.	<input type="checkbox"/> Oct.
<input type="checkbox"/> July	<input type="checkbox"/> Sept.	<input type="checkbox"/> Nov.
<input type="checkbox"/> Dec.	<input type="checkbox"/> Jan. '52	

CYCLE, Dept. 2
1015 So. La Cienega Blvd.
Los Angeles 35, Calif.
Enclosed find \$_____ for _____ back copies
_____ Binders @ \$2.00 each

NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

Speaking Cycle

FEBRUARY 1952

CYCLE

VOL. 3 Published Monthly No. 2

PUBLISHERS—Robert R. Lindsay, R. E. Petersen

EDITOR—Bob Greene

ART DIRECTOR—Al Isaacs

ADVERTISING MANAGER—Ray Bowles

CIRCULATION MANAGER—Gordon Behn

WRITER—Gene Jaderquist

EDITORIAL PRODUCTION—James E. Potter

"World's Largest Monthly Motorcycle Circulation"

HAVE AMERICANS gone soft? Glancing about this push-button country of ours, one is inclined to wonder whether any of that original pioneer spirit still exists. That constant struggle for existence, and its related adventure so common to the early settlers of this country, has been refined by our civilization from a physical to a mental task. The challenge today is usually in the form of a monthly quota; the weapons of preservation being a typewriter, lathe, or sales kit.

The physical element is now handled very neatly by a possible brisk walk to the office or shop, topped off by a weekly "go" at golf or bowling—both fine exercises, but quite lacking in adventure and challenge.

The typical modern's outlook can be summed up in a few words. Stand beside him the next time he happens to watch your motorcycle trials, enduro or hare and hound while he chuckles, exclaims, "They must be crazy. What are they trying to prove?"

Granting that the sight of a couple hundred riders jack-rabbiting over desert sage, or slipping swiftly through a dirt mountain corner leaves the first-time spectator at loss for a motive, it remained for an *aircraft tragedy* to bring out the potential importance of the cow-trailing cyclist, and spotlight the invigorating spirit of motorcycling.

When the light plane in which Mac Helling (outstanding Indianapolis race driver and popular motorcycle fan) was reported missing in the Tehachapi mountains of California, it was only a matter of hours before half a hundred of his friends and fellow cyclists had formed a motorcycle search party, and were riding the mist-shrouded mountain ridges for a clue of the lost flier. Many came from as far away as sixty miles to join in the hunt, dropping whatever they were doing the minute they heard of the loss. So dense was the terrain and so foul the weather that the sheriff's aero detail, the air force, and civil air patrol, who had already been probing the territory, until this time were unable to locate the crashed plane. When the fatal craft was finally found by forest rangers, members of the motorcycle search party were barely a couple hundred feet away.

The racing world had lost a great driver; the motorcycle fraternity was missing a good friend, but the spirit and purpose of our sport had taken on a new light. There was talk by members of the sheriff's organization about the possibility of forming a definite motorcycle posse for just such unfortunate circumstances. Members of the forestry department were surprised at the cyclists' knowledge of trails, and of their ability to cover nearly impassable ground with such fleetness.

Above all was the spirit of helpfulness, the outstanding display of riding ability, and the efficient organization that seemingly came from nowhere. Here was the answer to the skeptic . . . to him who asks of the backwoods cyclist, "What are you trying to prove?"

CONTENTS

- 4 SPEAKING CYCLE
- 6 RIDER WRITINGS
- 8 SQUARING OFF AT DEL MAR—*Russ Kelly*
- 10 BREAK 115 WITH YOUR HARLEY
- 12 THE GAMAUNT BANKER—*Michael Bruce*
- 14 ATOM POWER '52?
- 17 JAP IN JAG'S CLOTHING—*Russ Kelly*
- 18 MOTO GUZZI CUTAWAY—*Rex Burnett*
- 20 IN THE SHADOW OF THE VINCENT—*Bob Greene*
- 24 "DICING" WITH DORAN—*William Onslow*
- 28 SPORT SCENE
- 31 "FLAT-OUT" SNODGRASS—*Tom Medley*
- 34 PHOTO CONTEST



ON THE COVER

Taken on this month's road test of the Vincent Black Shadow from the back of the photographer's speeding convertible. At 90 miles per hour, the biggest problem was staying in focus. Both motorcycle and car had to maintain exact speed while photographer shifted eyes from range finder to view finder. Camera used was Speed Graphic with focal plane shutter, shooting $\frac{1}{500}$ second at f5.6.

Photo by Felix Zelenka

CYCLE, U. S. Copyright 1952 by Trend, Incorporated, 5959 Hollywood Blvd., Los Angeles 28, California. Phone: HUDSON 2-3261. Entered as Second Class matter at the Post Office at Los Angeles, California. SUBSCRIPTION RATE: \$3.50 per year throughout the world. Two years \$6.50. Single copy \$.35. On sale at newsstands, tracks and motorcycle shops across the country. CHANGE OF ADDRESS: Three weeks' notice is required. When requesting a change, please name magazine and either furnish an address imprint from a recent issue, or state exactly how label is addressed. Change cannot be made without the new as well as the old address. ADVERTISING: Closes forty-five days preceding publication date. (See SRDS.) Advertising Eastern Director—Harry Cushing (2437 Book Bldg., Phone WOODWARD 34443, Detroit 26, Mich.). CONTRIBUTIONS: Manuscripts, photographs, and drawings not returned unless accompanied by self-addressed stamped envelope. No responsibility assumed for unsolicited material. Printed in U. S. A.

115

BSA

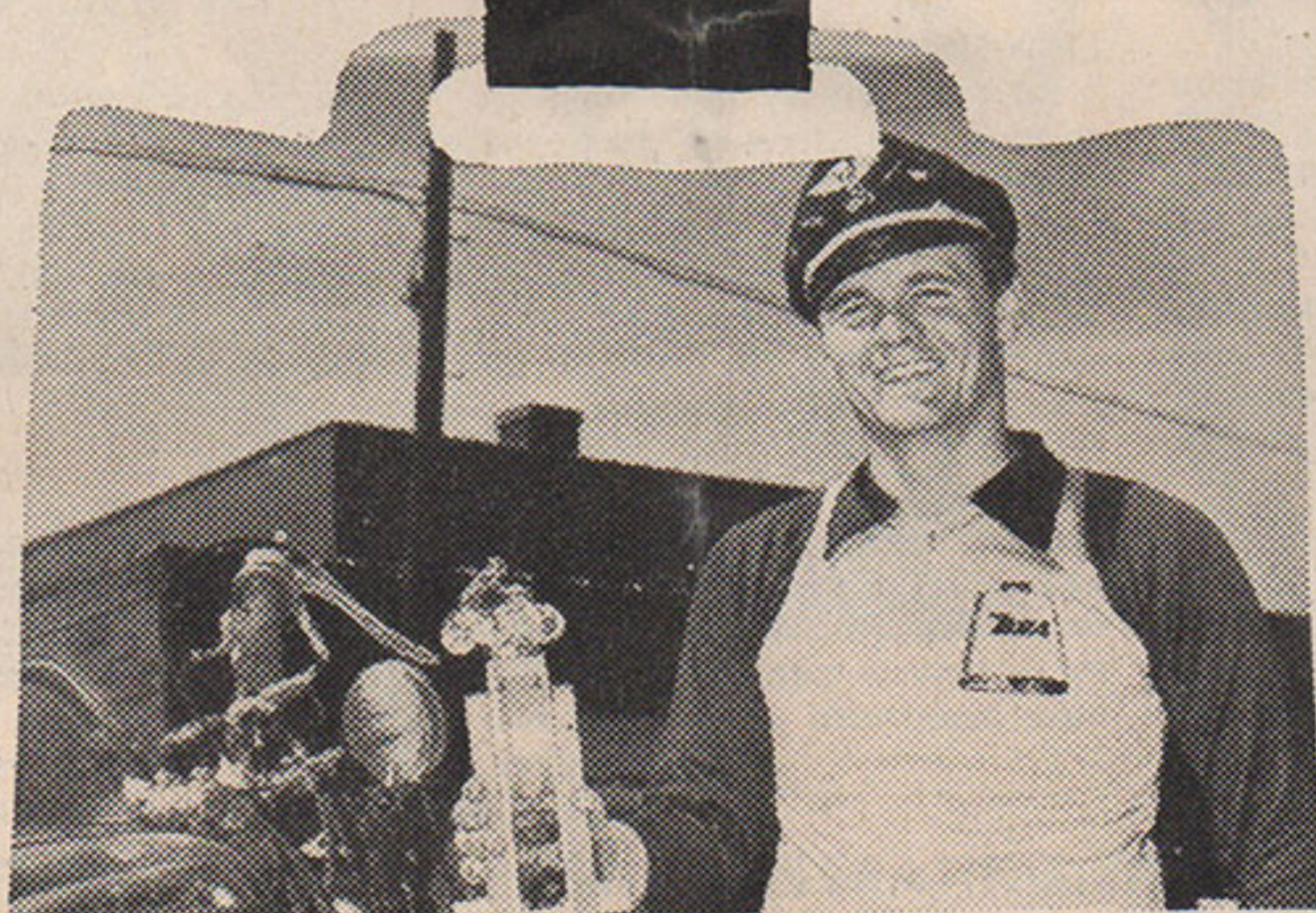
1st
CLASS 'A'

2nd
CLASS 'A'

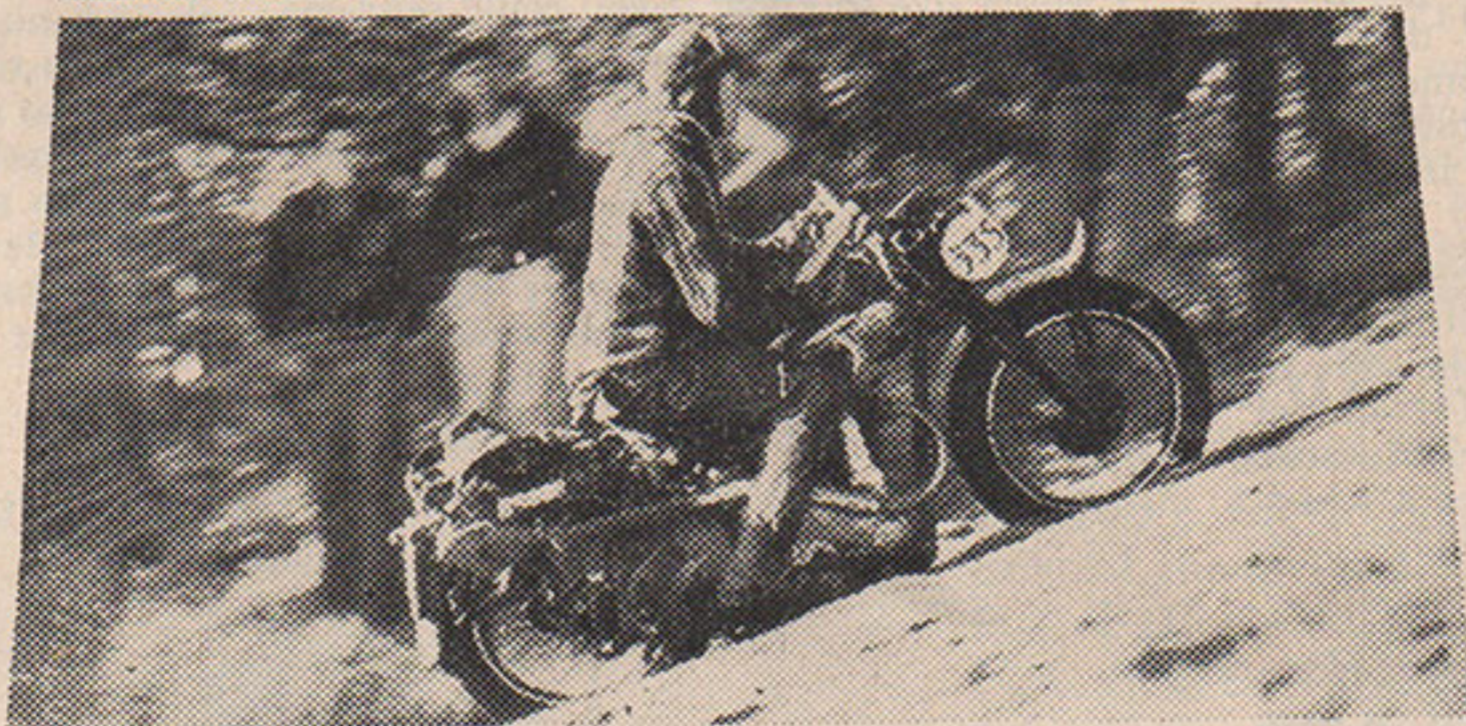
"JACK PINE" WINNERS!

Toughest endurance run of 1951 proves again—**BSA** Motorcycles are TOPS in performance & dependability!

Frank J. Piasecki, Toledo, Ohio, proudly displays his well-earned trophies as winner of the Class A Solo in the 1951 National Jack Pine Endurance Run. Piasecki rode a BSA machine to victory over one of the toughest courses in the twenty-five years of Jack Pine history.



Bill Penton, Lorain, Ohio "guns" his sturdy BSA up a steep sand trail out of West Branch, Michigan, in the early hours of the morning. Penton captured second place in the Class A Solo event with a fine performance in the grueling 500-mile Run.



Treacherous sand pits didn't trap Piasecki and his dependable BSA on their victory ride in the 1951 National Jack Pine Endurance Run.



341 STARTERS

—ONLY 81

FINISHED THIS

500 MILE

TWO DAY

EVENT!

Thousands of Riders and over 400 authorized BSA dealers in the U.S.A. Say:

EAST COAST BSA DISTRIBUTOR: Rich Child Cycle Co., Inc.—639 Passaic Ave., Nutley, N. J.

WEST COAST BSA DISTRIBUTOR: Hap Alzina—3074 Broadway, Oakland, Cal.

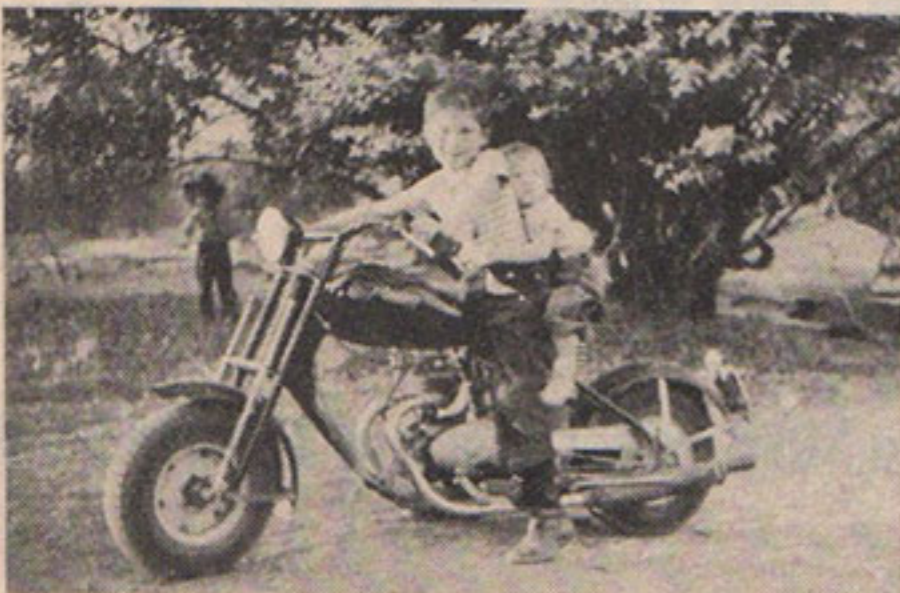
Write today for profitable franchise details

It's time YOU had a
BSA

RIDER WRITINGS

Gentlemen:

Lonnie Brimer, a seasoned rider at six years, is learning everything he can about motorcycles. He's been a fan since two years and at that time his father had him riding a two-wheel bike. By the time he was five, he



could really handle the little American Mustang that he received for his birthday.

His favorite pastime is going to Hanson Dam with his father and "hot-shoeing," hill climbing, and racing his dad who rides a Gold Star BSA. He can name any motor on the road and loves to thumb through CYCLE, having either his mother or dad read to him. Lonnie isn't the only young'un who likes motors. His little sister Jeannie, sixteen months old, loves to go riding with the family also.

Mrs. Ora Brimer
San Fernando, Calif.

Dear Sir:

I'm writing you for information about activities in California this year . . . My husband and I are going to try to take our vacation so that we can be in California during the time when the most motorcycle activities are going to take place. Everyone we've asked didn't seem to know very much about it. May I suggest a list of dates of things to come. We are always taking in some sort of motorcycle "doin's" and have a rough time finding out when and where they are.

Mrs. James L. West
Pueblo, Colorado

(Try the month of May. In addition to a weekly schedule of events you'll be able to see the two-day Catalina Grand National road race and the Greenhorn Endurance Run. The AMA has been asked for a schedule of sanctioned coming events—ED.)

Sirs:

Sobo's idea on average acceleration. (Dec. '51) is fine but you missed the point on page 21, December CYCLE. The Velo $\frac{1}{10}$ -mile drag acceleration is not 9.22 ft. per second. It is 9.22 ft. per second per second. Best written as 1.22 ft./sec.²

I think the average reader would prefer acceleration given in mph per second. (Divide fps by 1.467 to get mph.) Thus any reader can roughcheck his average acceleration by reading his speedometer at the end of a 10-second drag from a stop, then dividing his maximum speed by the number of seconds, (10) to get his average acceleration in mph/sec. Naturally acceleration is not constant, but a 10-second drag is convenient and fairly representative. Speedometers also vary, all of which makes for lively debate.

Bud Hawkins
Arcadia, California

(Think you will find that we've qualified

the omission mentioned in your first paragraph by adding, "average velocity change rate." However, your second suggestion that the rate of acceleration be given in miles per hour per second has been accepted, as you'll see in the January road test—ED.)

Sir:

I've noticed in previous issues that you've tested many of the smaller machines, even down to Cushman. I am interested in models around the 21 cubic inch class and note you have tested the Velocette twice now. I think it would be a good idea to test the Triumph 21 cubic inch and compare it with the Velo single . . .

Donald Dye
Roswell, New Mexico

(The Triumph 21 has been discontinued but several of the other 350cc jobs should make interesting comparisons—ED.)

Dear Bob:

In the January issue on page 5 there is a column article, with two snapshots, titled "Daredevil Dog," and you go on to tell of cyclist Bill Mills of Burbank. What the hey—this is cyclist, mechanic and racing tuner of Wager and Walker's in Santa Ana. This is the same Bill Mills and Stroker (not to be confused with #37) you see each week at Carrell Speedway. Almost every week, in the pits after racing, there are two huddles. One grouped around Basney and #37, the other gathered around Stroker watching him perform. We officially invite you to Santa Ana for a private performance—Bill and Stroker have been with us for over two years . . .

Joe Walker
Santa Ana, California

Sirs:

I would like to know if you could send me some pictures and literature on the Flexi sidecar. I think it's a very good item for someone who likes solo and sidecar work.

Clarence Reven
Quarryville, RD2, Pa.

(The Flexi company no longer exists. Below is picture of the new Gamaunt flexible sidecar on which further details are given in complete story in this issue—ED.)

Dear Sir:

I need help! I want to build up a Harley 68 and plan to use a 61 bore and 74 stroke, plus taking weight off the rods, rocker arms and polishing the intake ports. Do you think this advisable and could you add anything? Also plan on using 8½ pistons and a 1936 Harley 61 cam. My cam is starting to break down and I wondered if it would be a good idea to have an industrial chrome job done on the lobes . . .

Sam Coulson, Jr.
Milwaukee 8, Wisconsin

(The 68 cu. in. combo is the best of the special arrangements. Don't think it necessary to lighten rods or rocker arms, but only advise you polish rods to eliminate crevices, since these help fractures start. 8½:1 pistons should work fine. Chet Herbert, 10215 S. San Pedro, Los Angeles 3, Calif., specializes in speed cams—ED.)

Gentlemen:

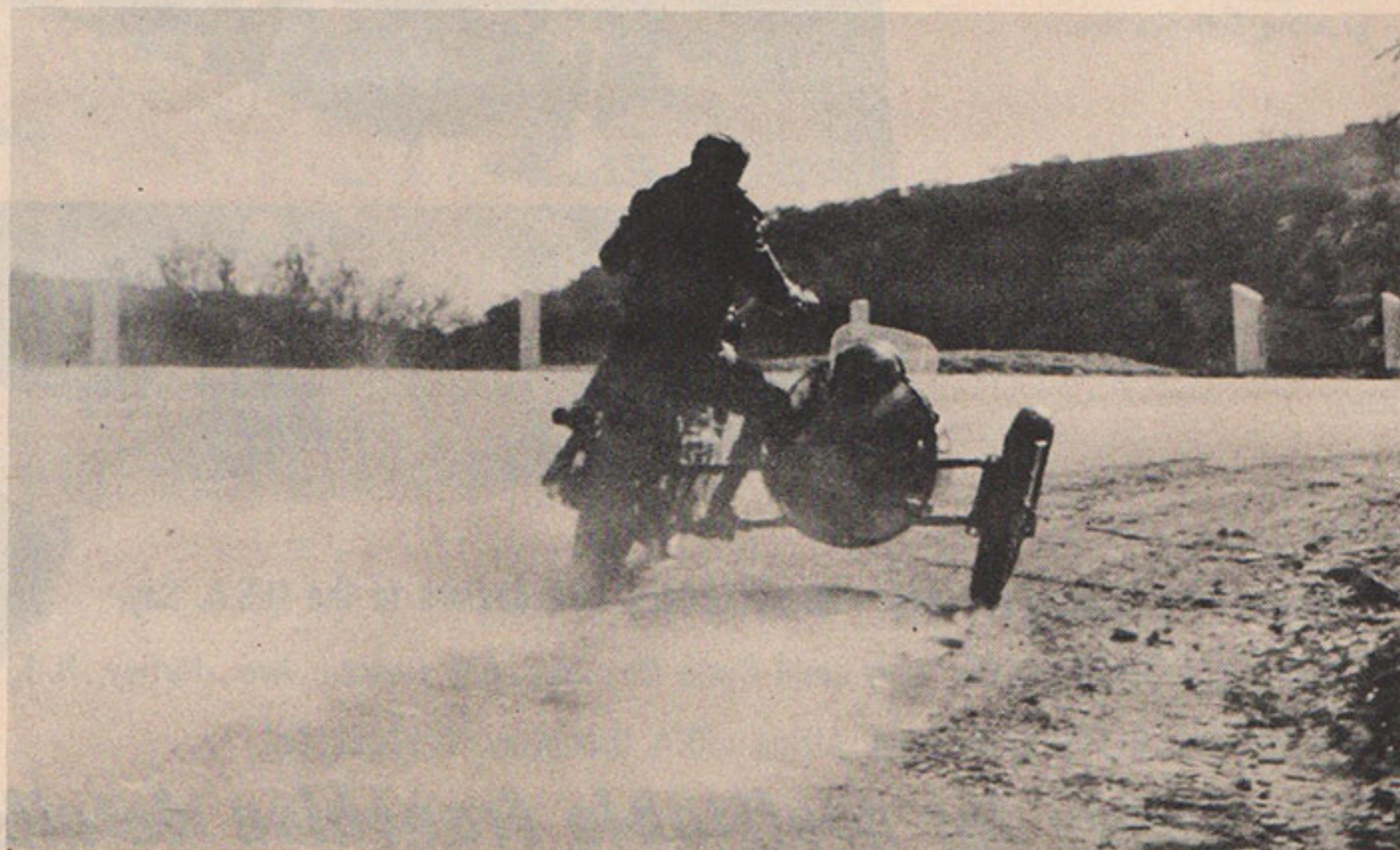
My husband is considering the purchase of a Royal Enfield Bullet which a local dealer expects from England. He is an avid reader of your road test, and wonders if it would be possible for you to make a test of this machine in the near future?

Mrs. I. Rowland
Honolulu 16, Hawaii

Gentlemen:

To better show you my type of cycling, I would like to describe my machine. It is a 1950 Triumph 6T, painted with metallic blue lacquer. Have installed a set of S&W #1 cams, Hepolite 8½ to 1 pistons, 2 carbs, large intake valves, S&W valve springs, S&W valve lifters, and is polished throughout. It's the only one of its kind around, but there is no suitable way to clock it so I make no claim to speed, but it does show amazing speed on its Smith speedometer. Work six days a week in a hardware store and usually make the races on Sunday. Cheer loudest for Bobby Herring, sensational Triumph rider from Jacksonville, Florida, who won 19 out of 21 first places this season.

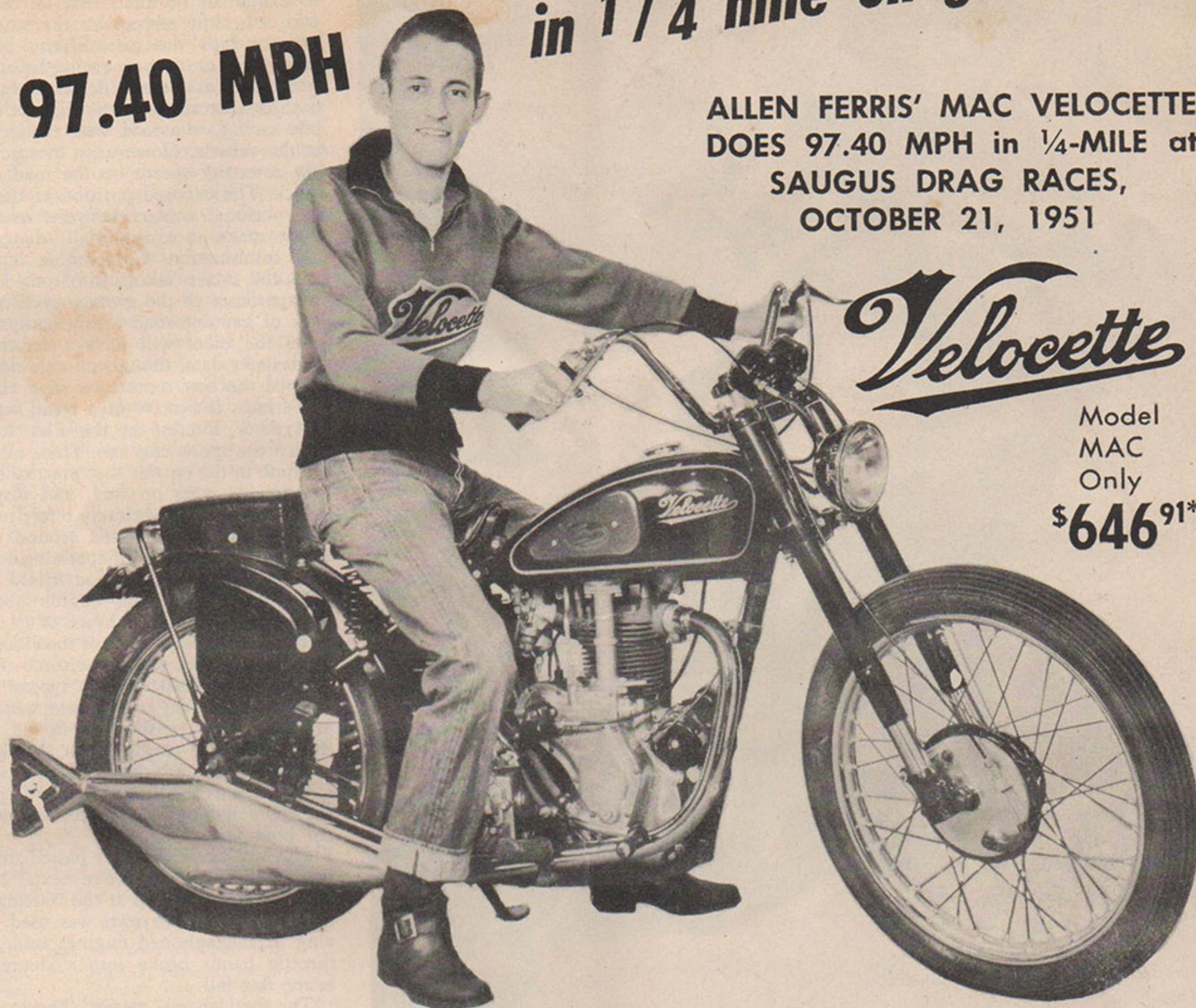
Powell Hassell
Tuscaloosa, Alabama



97.40 MPH

in 1/4 mile on gasoline!

**ALLEN FERRIS' MAC VELOCETTE
DOES 97.40 MPH in 1/4-MILE at
SAUGUS DRAG RACES,
OCTOBER 21, 1951**



Velocette

Model
MAC
Only
\$646^{91*}

ALLEN FERRIS AND HIS FAST-ACCELERATING MAC VELOCETTE

"I'm 100% satisfied with my MAC VELOCETTE. It's wonderful for dirt riding—handles perfectly in the rough or on the highway. Speed-shifting is easy. Braking is excellent. I'll enter my MAC in the next Rosamond Speed Trials, and hope to go to Bonneville next year to have a crack at the AMA 350 cc speed record."

Allen M. Ferris

**Spec. VELOCETTE Racing Equipment
Immediately available:**

- Racing Cams
- Oversize Valves
- Tachometers
- Racing Sprockets
- Scrambles Pipes
- Megaphone Mufflers
- 21" Wheel Rims

**COMPLETE
MAC
SPEED KIT
\$75.00**

**Write for FREE Literature "HOW to
SPEED TUNE your VELOCETTE"
DEALERSHIP INQUIRIES INVITED**

Write for complete details

BRANCH MOTORCYCLE SALES

2019 W. Pico Blvd. Dept. C2, Los Angeles 6, California

Allen Ferris switched to VELOCETTE because of the good reports "VELO" riders gave him on the machine's fine performance. (LOW PRICE and abundance of replacement parts also influenced his decision, of course.) Now Allen, who does most of his own speed-tuning, with Specialist **Chuck Jones'** help is a real VELOCETTE enthusiast—especially after his MAC turned 97.40 mph in 1/4 mile from a standing start!

WE HAVE PARTS . . .

Complete line of Factory Replacement parts available for immediate shipment to any part of the United States.

FULL LINE OF MOTO GUZZI MOTORCYCLES FOR SPEED TRIALS, SCRAMBLES, CROSS-COUNTRY RUNS, ALL-AROUND RIDING. RETAIL PRICES F.O.B. LOS ANGELES OR BALTIMORE.

*Prices Include Federal Tax

CREDIT TERMS AVAILABLE

BRANCH MOTORCYCLE SALES

2019 W. Pico Blvd., Dept. C-2, Los Angeles 6, Calif.
Please send me descriptive literature on the Velocette & Moto Guzzi Motorcycles and full information on the three popular purchase plans.

NAME (please print)

ADDRESS

CITY

STATE



Sensational Triumph riding winner of the day, Jimmy Phillips found high-type bars he had been used to were not the thing for pavement since they made "tucking in" difficult. Jimmy was thrilled over race and performance of his machine, is hopeful for popularity of future paved road events

with the course. Because of the shortage of time, cars and motors were sometimes on the course at the same time, naturally resulting in a number of duels that left each faction with a healthy respect for the other. In these practice laps the dissimilarity between car racing and motorcycle racing became evident. Americans, as automobile-minded people, find nothing disturbing in the sight of an automobile racing on a road with the driver sitting in the vehicle. However, a motorcycle traveling at racing speeds on the road comes as a shock. The exposed position of the rider and the personal contact between man and machine make an exceptionally dangerous-looking combination. Comparable lap times of cars and cycles, taking into consideration the inexperience of the average cyclists and their lack of genuine road racing equipment, indicates the bikes will have a definite edge at some later date, though on race day, the cars topped the best motorcycle laps' time.

Perhaps indicative of a trend was the motorcyclists' interest in the FIA rules under which the sports cars ran. These allowed such latitude in the entries that practically the only restrictions were on fuel, and displacement, and observation of primary safety precautions.

Much interest centered around the home-built, Mercury-powered specials and the race-winning sports car, the Cad Allard. The combination of American engine and English chassis is something unheard of in motorcycle circles. An informal poll of the riders brought out the fact they would welcome road racing under FIM jurisdiction. In typical American fashion they want to compete with the best, and if it is to be the best in the world, all the better. The majority felt that by association with the international group, a wider scope of activities and riders will popularize the sport of motorcycling far beyond its present boundaries.

Sunday, race day, word passed through the pits to "fire 'em up—we're next." More than 30 machines lined up at the starting grid. As in Class C a clutch start was used. The revving of megaphoned engines under nervous throttle hands broke into a shattering roar as the flag fell.

The first lap was terrific. The mass of machines, each rider jockeying for position, swept through one turn after another. The roaring of exhausts, rising and falling almost as one, gave credibility to the illusion that braking and accelerating were being done in unison. Sheer speed on the main straight

SQUARING OFF AT DEL MAR

AT LAST THE U. S. racing enthusiast has been treated to what has long been Europe's second largest crowd drawing sport—motorcycle road racing. Sponsored by the California Sports Car Club, and run in conjunction with their sports car race near Del Mar, California, the event heralded the birth of a new medium for racing enthusiasts. The course was cleverly laid out over three miles of deserted army base roads, in some spots within a hundred yards of the Pacific. The sloping terrain made it possible for spectators to see both the back stretch with its two fast bends and the main straight, where speeds of over 120 mph were reached.

The complexity of the course, roughly rectangular in shape, was such that a corner-for-corner description is impossible, but a verbal tour of the north "end" will give a good illustration of the conditions facing the rider. A favorite area with the crowd, it began with a slow left-hander from the fast main straight, necessitating severe braking, and led

into a very fast down-hill dog-leg from left to right. Next a very tricky wide-radius right-hander was immediately followed by an even faster right turn, with a short straight leading into a slightly uphill, very fast S that started with a left bend and led into an ever-tightening right-hander. The last turn of this series with its adverse camber, led onto the backstretch of a mile on the odometer.

Provisions were made for three classes: 500, 650 and 1,000 cc, all to run concurrently over 12 laps. The line-up of riders might have been taken from the "Who's Who" of motorcycling. Jimmy Phillips; this year's national TT champion Ed Kretz, who needs no introduction; Eddie, Jr., one of the outstanding amateurs of the nation; and two Class C straight-away record holders: Jack Dale, 45 cubic inch and Marty Dickerson, 61 cubic inch, to name but a few.

The regular sports car custom of holding practice the day preceding a race gave the riders a chance to familiarize themselves

**Is a sports car
faster than a bike
on a paved course?**

By RUSS KELLY

Photos by

Fergus Peters and

Jack Campbell

broke up this mass into little, evenly matched groups. By the second lap, these little knots of men and machines were hurling themselves into the corners, the first man out forming the head of a "crocodile" that would follow him into the next corner. Interest remained high as lap followed lap, with spectators exhibiting little of the usual road race wanderlust that comes of searching for a spot presenting more action. Everyone seemed convinced that right where he was, was the best place, whether it was located near the main straight where Marty Dickerson squeezed almost 125 mph from his beautiful blue Vincent, or by the first leg of the long "S" bend where Jimmy Phillips whipped through with apparently no more effort than a slight movement of his shoulders.

Ed Kretz, as expected, led the first lap, but was forced to surrender his lead to Jimmy Phillips early in the second lap. Jimmy, a natural at hard surface riding, gained an ever increasing lead over Kretz with each lap and, at less than mid-distance, his lead over the field was quite impressive. The Kretz, Sr.-Bobby Turner duel for second spot saw Kretz successfully fight off the challenge to hold this position until forced out with a broken oil line about half way through the race, joining young Eddie, an earlier victim of mechanical failure, in the pits. Don Hawley, a Class A short tracker of no little fame, threw his weight around to harass the leaders, though he was severely handicapped by less displacement.

It would be difficult to imagine a more successful weekend of racing. Casualties were limited to the mechanical variety—a very gratifying outcome. The general impression left by the event was that there just wasn't enough of it. Perhaps Jimmy Phillips, whose elapsed time was 29 min., 14:02 sec., summed it up best for all concerned when he said, "I really had more fun Saturday, I was able to spend more time on the course."

RESULTS

40 Inch Class Including 61 Cubic Inch

Jimmy Phillips	Triumph Thunderbird	1st
Bobby Turner	Triumph Thunderbird	2nd
Marty Dickerson	Vincent Black Shadow	3rd
Joe Hostetler	Triumph Thunderbird	4th
Jack Dale	BSA Golden Flash	5th

30.50 Inch Class

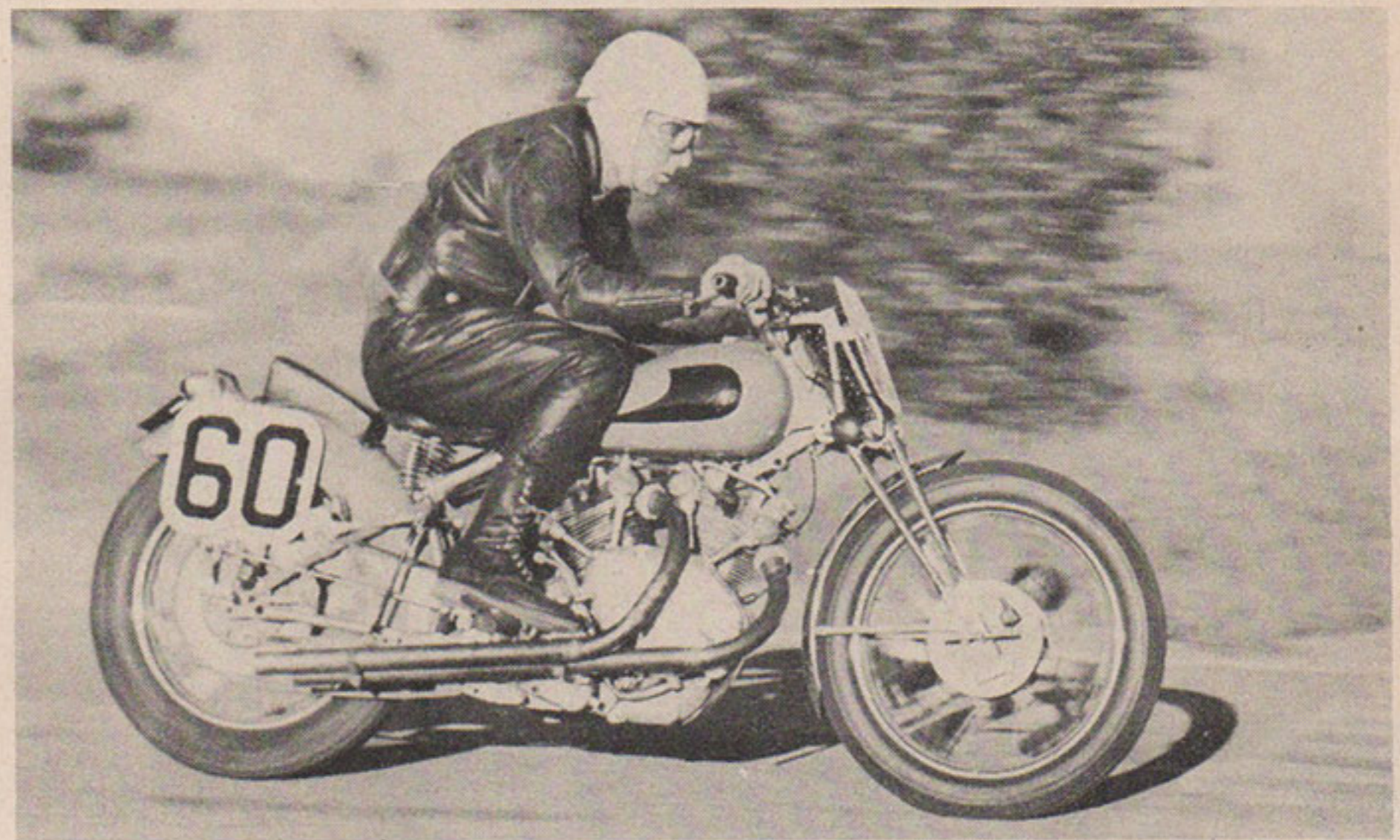
Don Hawley	BSA	1st
Ray Arnold	Triumph	2nd
Allen Flint	Moto Guzzi	3rd

21 Cubic Inch Class

Walt Harger	Velocette	Only Finisher
-------------	-----------	---------------

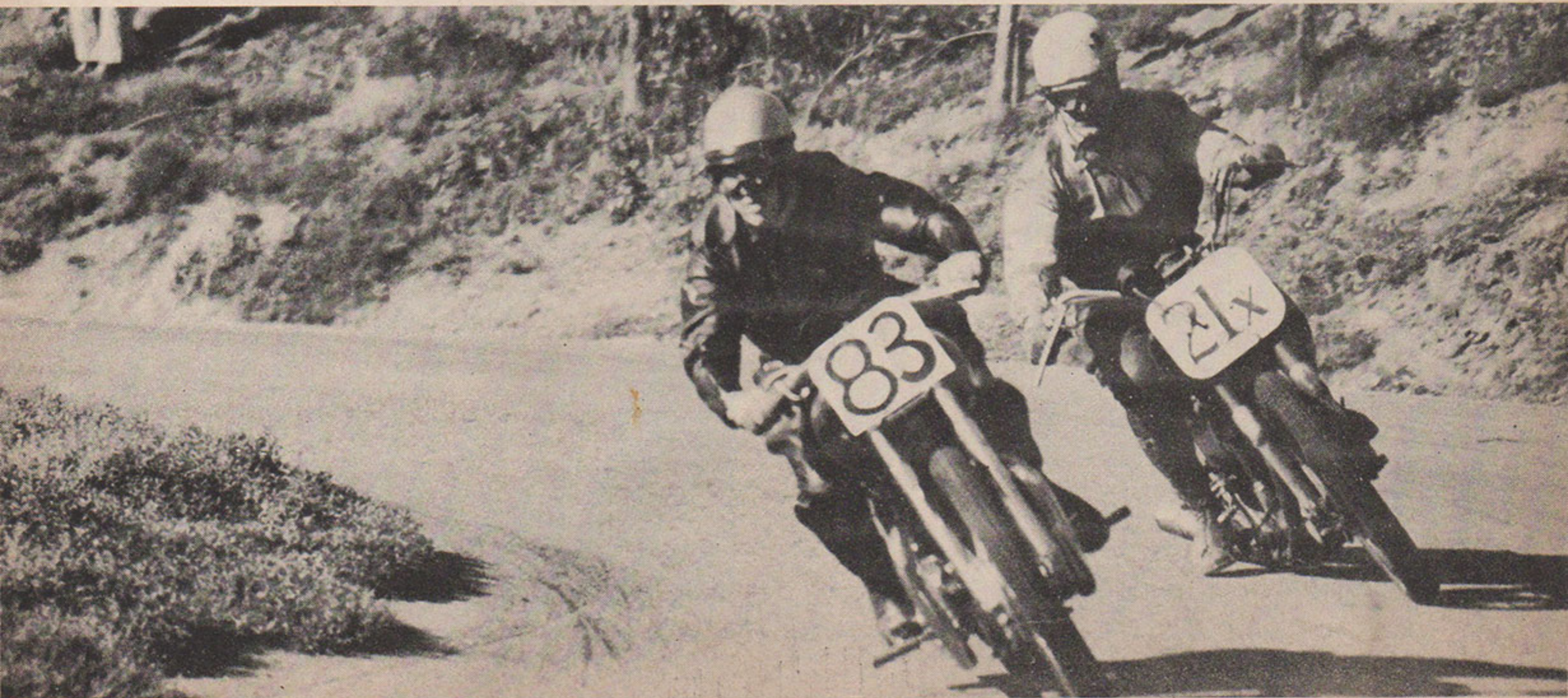


Bobby Michaels, last year's Daytona 100 miler champ, takes Harry Pelton, Jr., in tow. Both are herding Norton singles. For the most part the course was good, there being two long straight-aways which gave ample opportunity for riders to use both engines and brakes to full advantage



"Dud" Moen was one of the Vincent riders. Big twins had terrific acceleration on straightaways. Winner Jimmy Phillips' Triumph was about on a par with the fastest Cadillac-powered Allard

BELOW. No. 83, Richard White, out for first time in any sort of motorcycle competition, tangles with fast company in the person of Harry Pelton, Jr., expert dirt track rider. Note difference in bars



BREAK 115 with your HARLEY

IF YOU'RE RIDING a good stock Harley-Davidson 74 OHV, '48 vintage or later, you can probably wind it up to 100 mph or thereabouts whenever you find a long straight. That's all the speed you need, of course, more than most highways will permit. But in case you live in an area where traffic is light and boulevards long—or if you can't stay away from the salt flats, lake beds, or beach speedways—you'd be happy to see a few more knots register on that "pressure gauge."

There's one catch, though. Your bike has to be used for commuting through the city streets and should still go a long way between engine jobs. That seems to preclude any hopping-up of performance. Everybody knows that large overlap cams, cold plugs, ultra-high compression ratios and concomitant features of high performance engines are often useless for a street machine. Another reason for leaving everything stock is money. It's no secret that speed is a plaything of the rich, the professionals and the mechanics.

This is what everybody has figured. But three Harley specialists from Riverside, Calif. set out to see if everybody hadn't been figuring this thing wrong. Skip, Wimpy and Doc aren't characters out of Popeye and Bugs Bunny cartoons—they are three of the most knowledgeable motorcycle cats who ever picked up on two-wheelers.

Skip Fordyce is the theorist. He began to put two and two together on paper back in '48. Wimpy Windsor is the trouble shooter. He worked with Skip and told him when

something could be done mechanically and when it couldn't. Doc Trainor is the mechanic. They told him what they wanted and he did it. So one day on the dry lakes a stock Harley 74, carrying full fenders and running full street equipment (with one exception to be mentioned later), running on pump gasoline and still holding to factory bore and stroke specifications, shook the timers with a one-way run of 120 mph. For the next year and a half, other Harleys produced by the same trio picked up the honors for the stock-capacity, pump-gasoline class.

What they did, you can do. What's more you can do most of it with the tools specified in last month's article: "Your Basic CYCLE Workshop" plus a few special ones.

Take as much friction out of the wheel bearings and chain rollers as you can. Give the incoming fuel-air mixture a smooth, easy circuit to travel. Get more gasoline flowing through the carburetor. Raise the compression slightly, remove generator drag and eliminate possible hot spots in combustion chamber.

Here's how you do it. First, disassemble the bike. Remember, this only works with the Harley-Davidson 74 OHV engine *with hydraulic lifter!* Disassembly is not as easy as it sounds—in a shop it costs you quite a bit of labor time. But Doc, who has taken down more Harleys than he can count, advises:

1. Get it clean. For one thing, it's much easier to work when you can see every nut and bolt and get a good hold on it. For

another, dirt can fall into the lower end when you take off the barrel and Harley-Davidson does not make a bearing that runs well on fine-sand lubrication.

2. Get your empty jars or coffee cans out to hold the parts you take off. Each part of the bike should have a can all its own. Top-engine pieces go one place, gas-tank bolts another, wheel-bearing parts a third, etc.

3. Drain gasoline.

4. Remove gas tank. To begin with, remove the bolt on the instrument panel. This lets you get at one of the top gas-tank bolts. Lift seat to get at another bolt.

5. Disconnect battery ground connection.

6. Disconnect shift-lever bottom bolt.

7. Remove cylinder head bracket.

8. Disengage choke rod from lever by turning bracket.

9. Remove spark plugs.

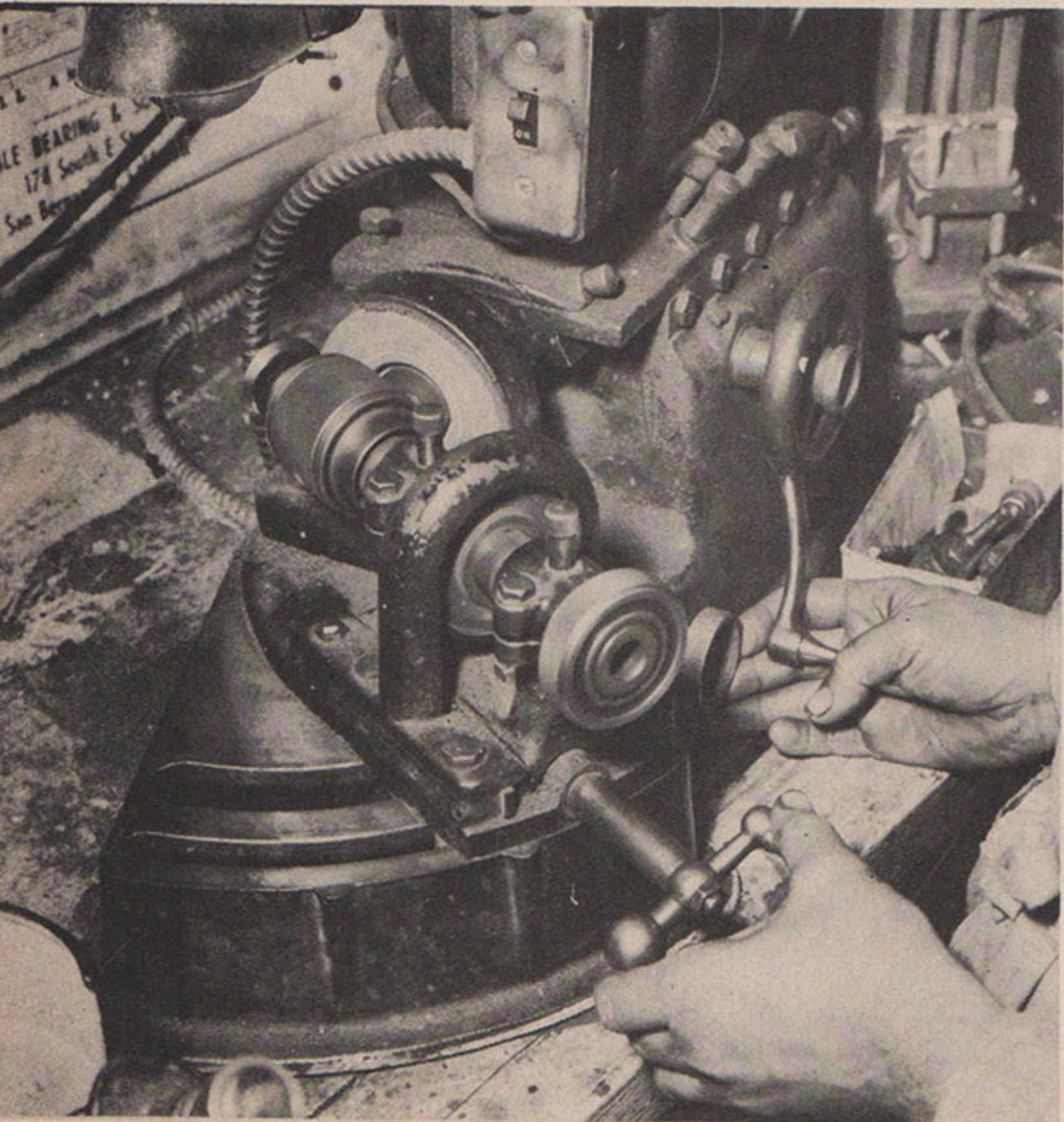
10. Disconnect throttle control wire at carburetor and remove carburetor control wire housing from front clamp.

11. Remove manifold and carburetor.

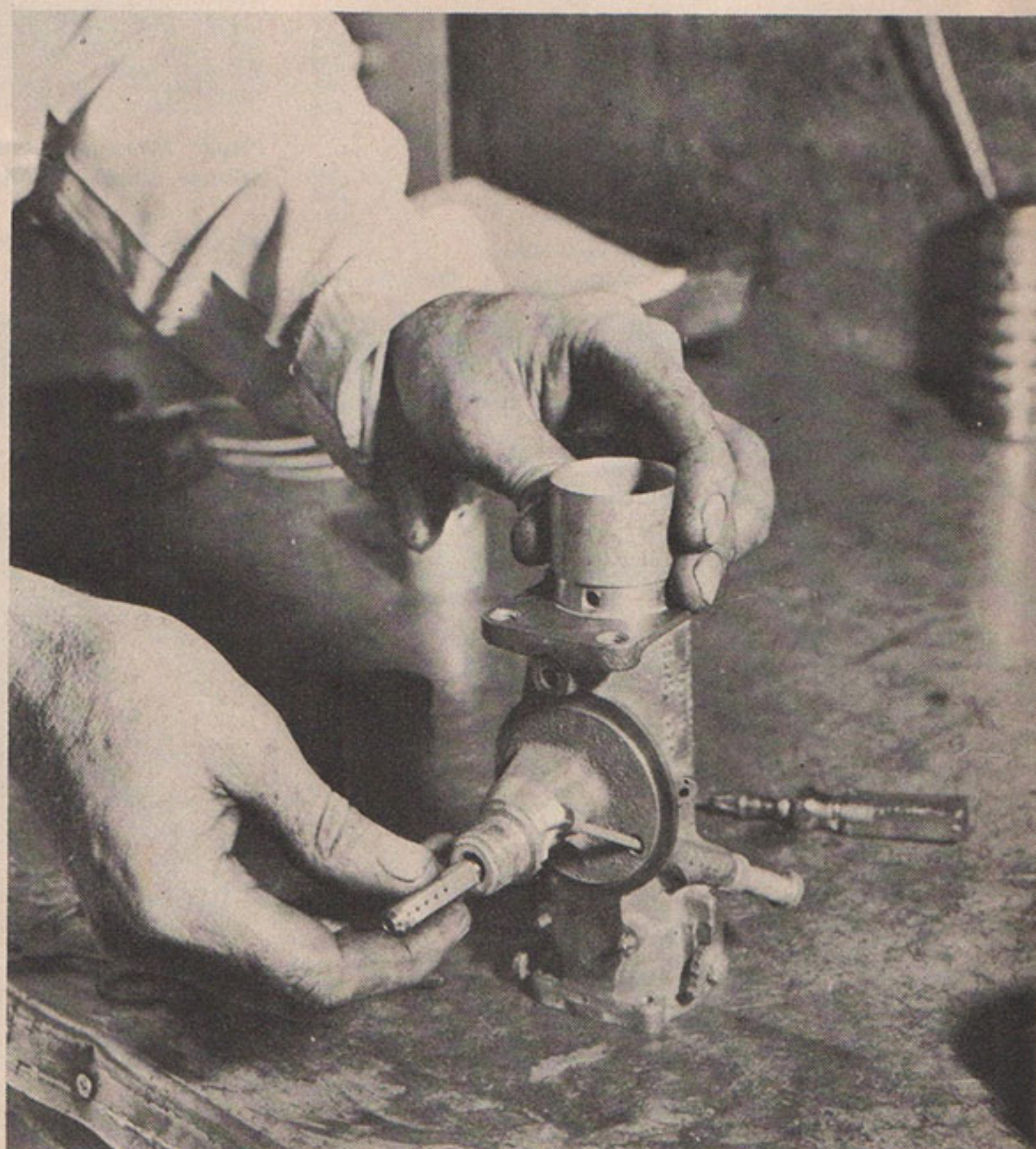
12. Remove nut securing carburetor support bracket to crankcase top center bolt. Unscrew manifold nuts. (Here you'll need one of the special Harley tools described later.)

13. Open push-rod covers. Press cover expander sleeves down and remove push-rod cover keepers. Telescope lower push-rod cover over upper cover.

14. Remove cylinder head bolts and take off head. (This is a job for another special Harley tool—more later.) Remove front cyl-



Special valve surfacing machine is necessary for truing the valve and smoothing sharp lower edges to relieve restriction, eliminate hot spots



Installing the new main nozzle and venturi in your old carburetor is a comparatively simple job. Allows motor to breathe deeper and easier

hopping up that big twin doesn't have to be a radical, expensive job. this formula calls for stock cams, pistons

Photos by Felix Zelenka

inder head, push rods, and push rod covers in one operation. Follow same procedure for rear head. Mark pushrods—If you get the right pushrod on the right valve stem when re-assembling engine, there will be much less valve adjusting to do. If the head does not come off easily, and the chances are it won't, tap lightly with rawhide hammer (not metal) under aluminum rocker-arm housing. If that doesn't do the job, don't take a chance on breaking the cooling fins. Pry gently with a screwdriver, being careful not to press against cylinder fins. Don't pry too hard, however. Many soft raps and nudges are safer than one hard one.

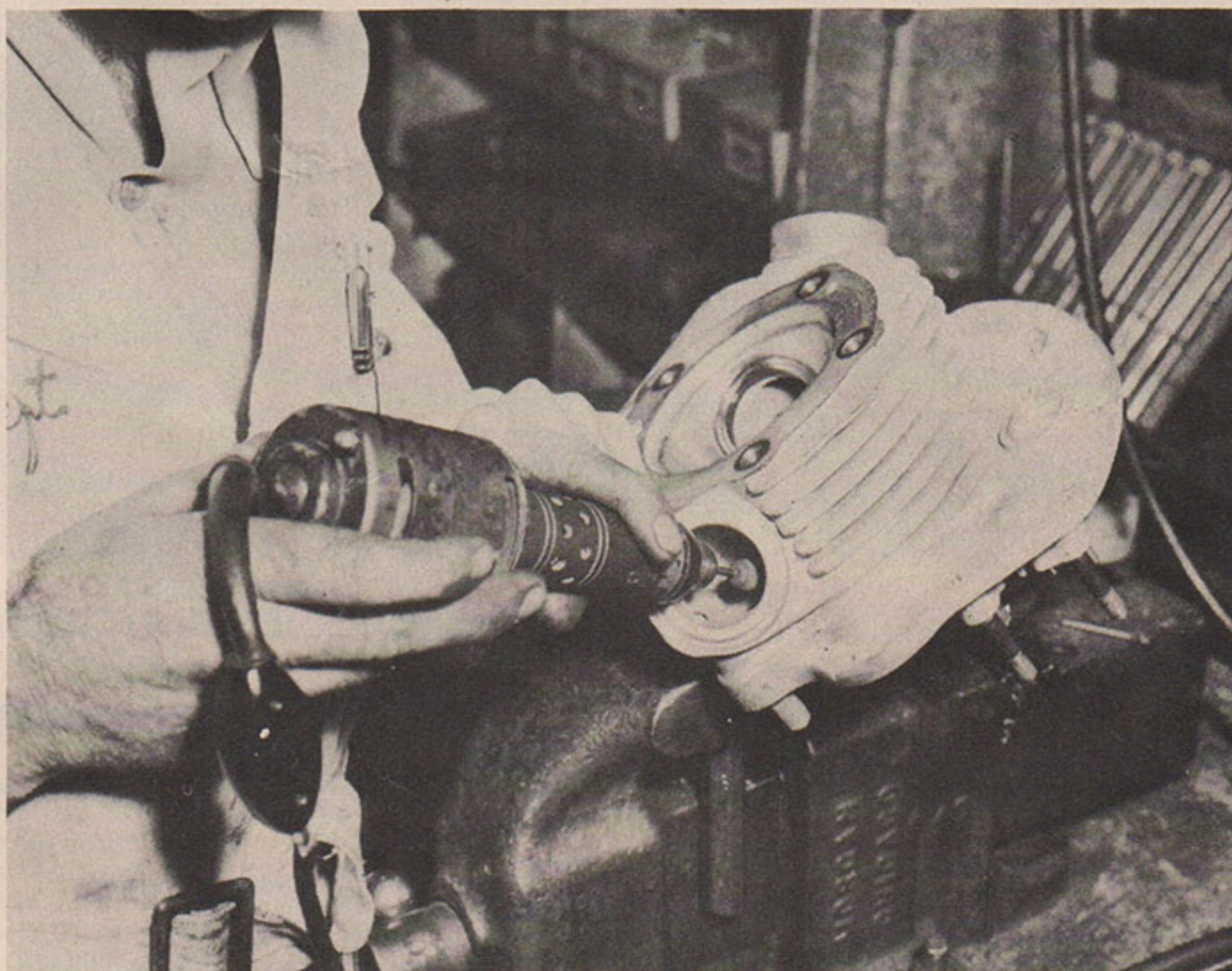
15. Remove cylinders. This requires another special tool. (Don't let these special tools frighten you—they aren't prohibitively expensive.)

16. Place a rag over the crankcase opening. Do this immediately.

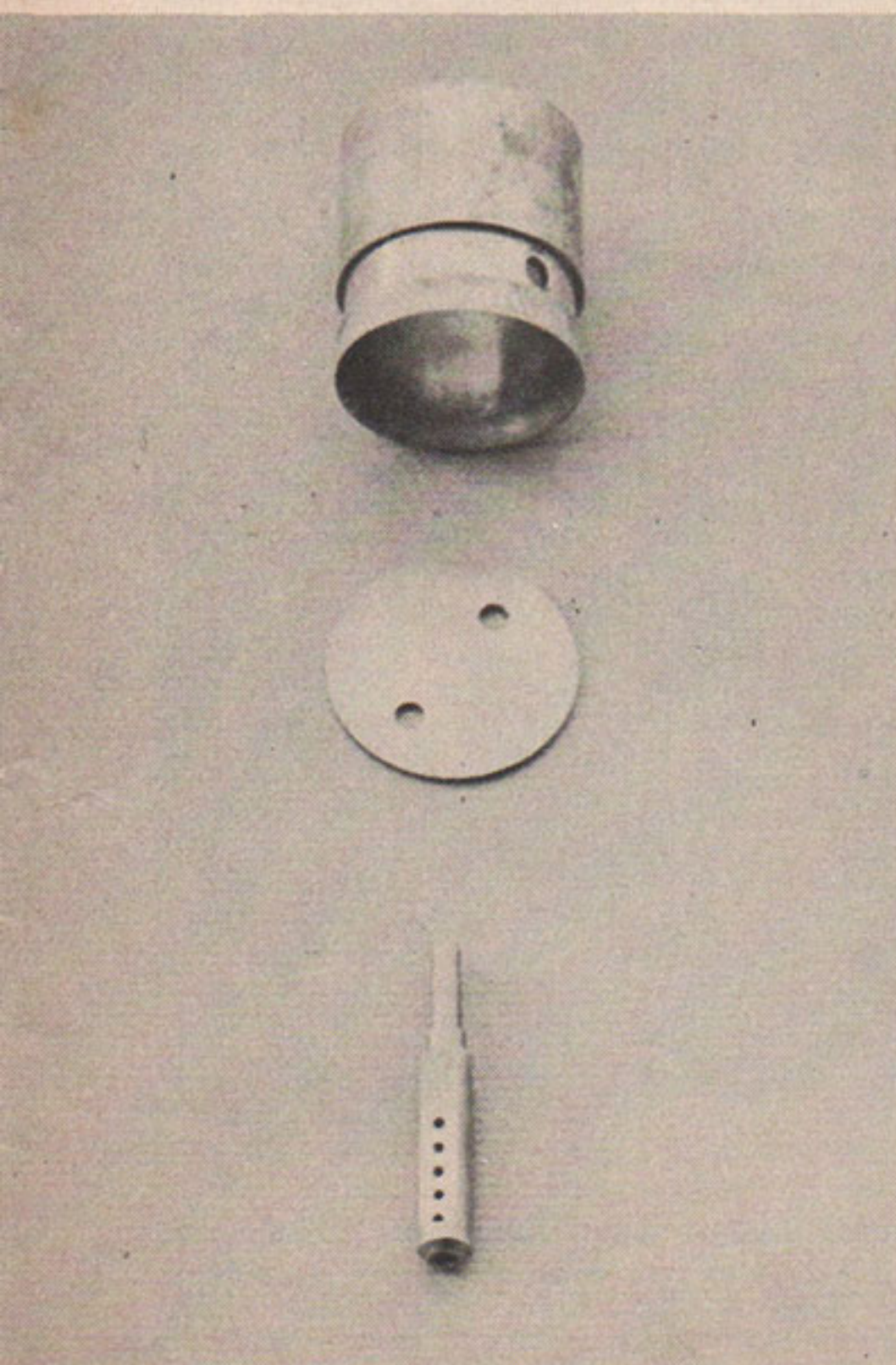
17. Remove valves, using valve-spring compressor. Punch out intake guides only. For this operation, you can make up a simple punch from a scrap piece of steel.

Now you're ready to polish the intake ports. This is a time-consuming operation, but one that pays off in gasoline economy and speed. What you're trying to do is give the fuel-air mixture a perfectly smooth path to follow. So you take out the sharp corners and the rough cast surface. Be sure to taper the part of guide that sticks into inlet port. You'll use the flex attachment to the portable

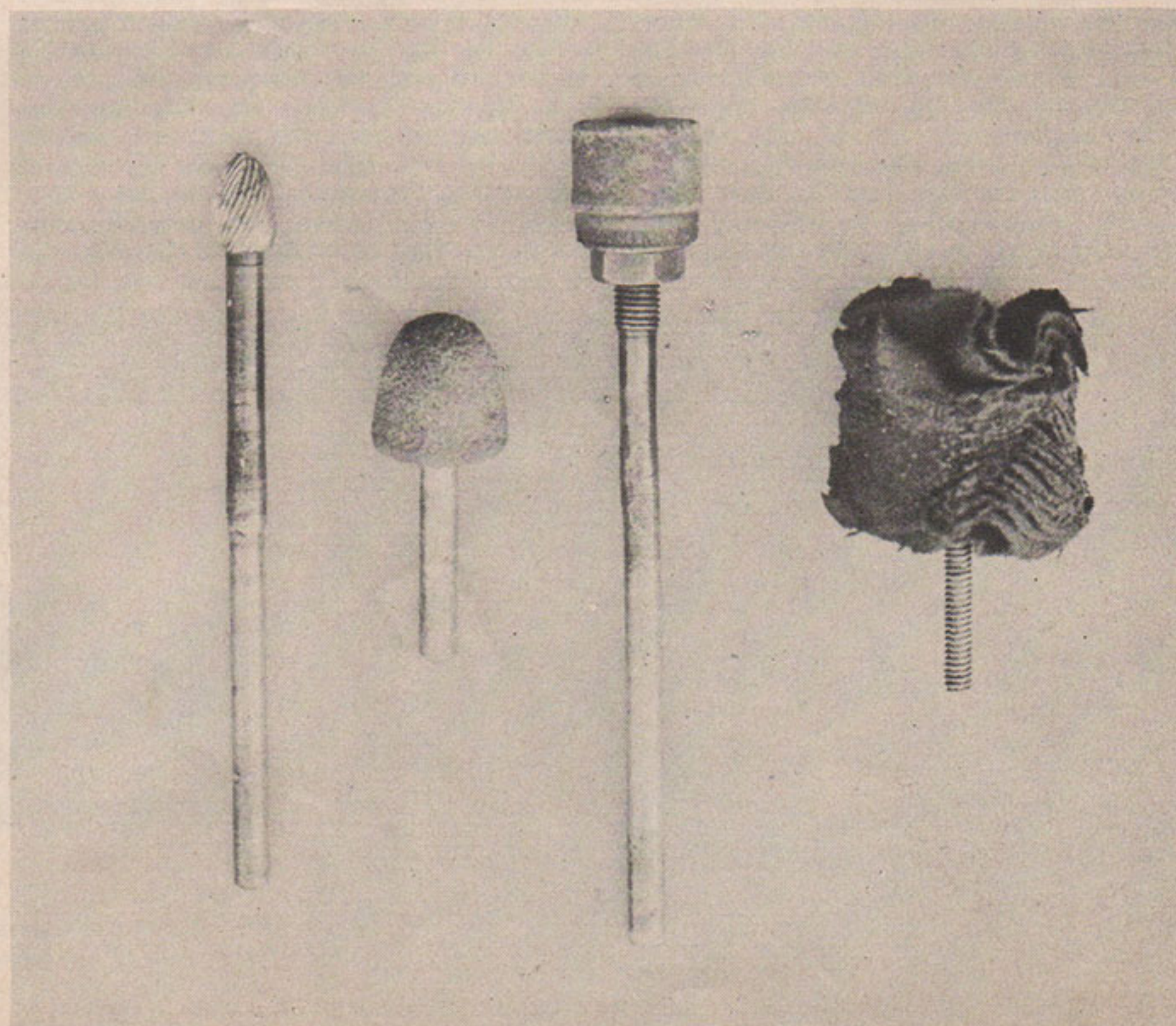
(Continued on page 32)



Surplus lumps are "hogged" out of intake manifold to eliminate restriction of inflowing gases. Your CYCLE Workshop grinder (Jan. '52) will handle this job. Snappier acceleration is the result



Venturi, butterfly and main nozzle are the three carburetor parts required for simple conversion



Four grinding heads necessary for smoothing the surfaces of intake ports. L. to R. in order of their use: rotary file for initial shaping, rough stone, fine stone and cloth polishing bat for final finish

THE GAMAUNT BANKER



THE BANKING SIDECAR RETURNS AND THIS TIME ROGER GAMAUNT REALLY HAS IT— A 95 POUNDER THAT HANDLES WITH SOLO EASE

Text and Photos by Michael Bruce

WHEN THE INVITATION came to take a ride in Roger Gamaunt's new sidecar, the first thought that flashed through my mind was, "Wow—I bruise easily!" My limited experience with sidecar riding had left me with the definite feeling that while it was a way to get from one place to another, so far as I was concerned it was a mode of transportation that did not come under the heading of pleasure.

Sitting low, being slammed from side to side on each tight turn might be sport, but I would rather enjoy all the sensations of speed and mobility of motion without the bone

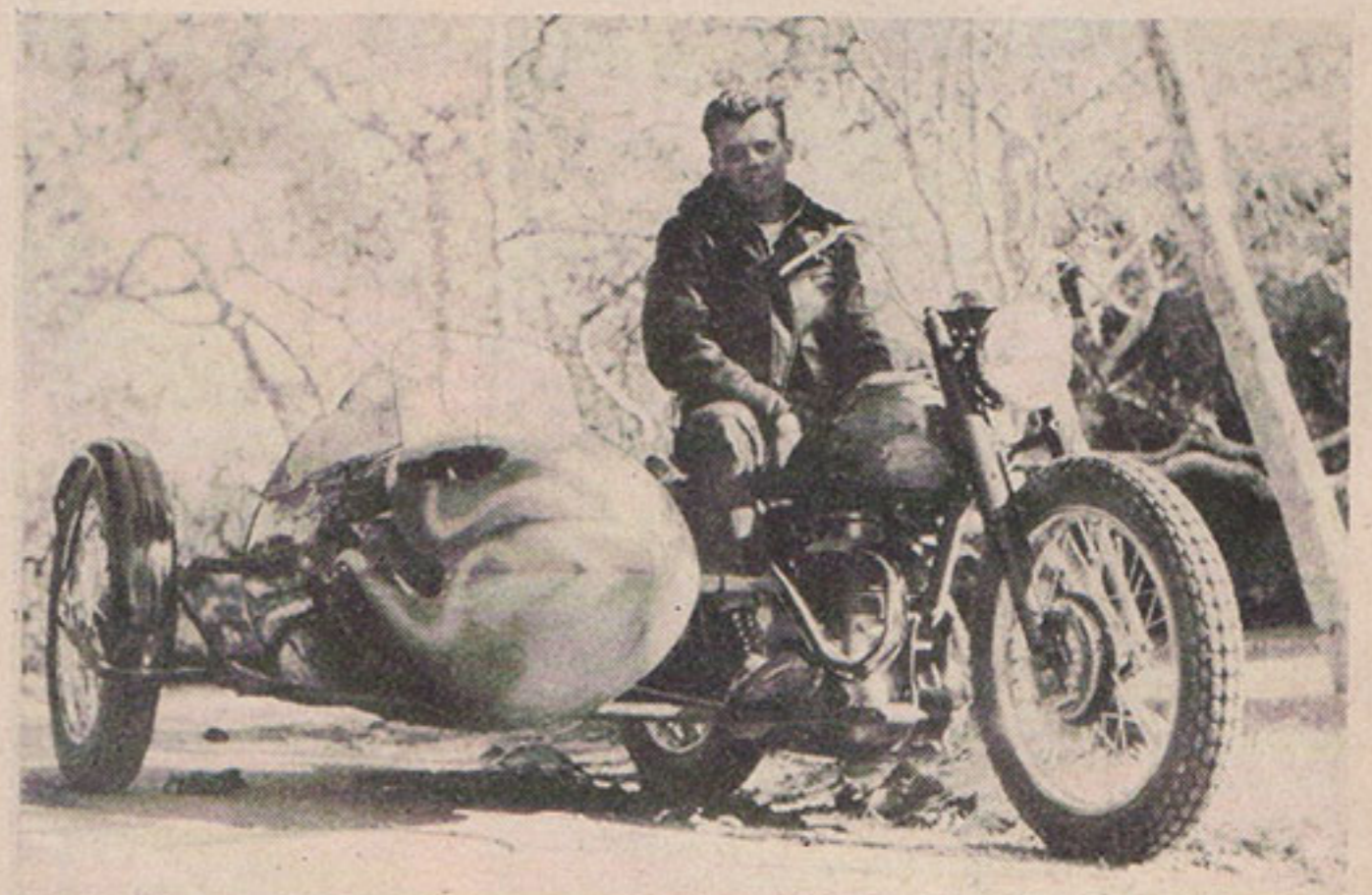
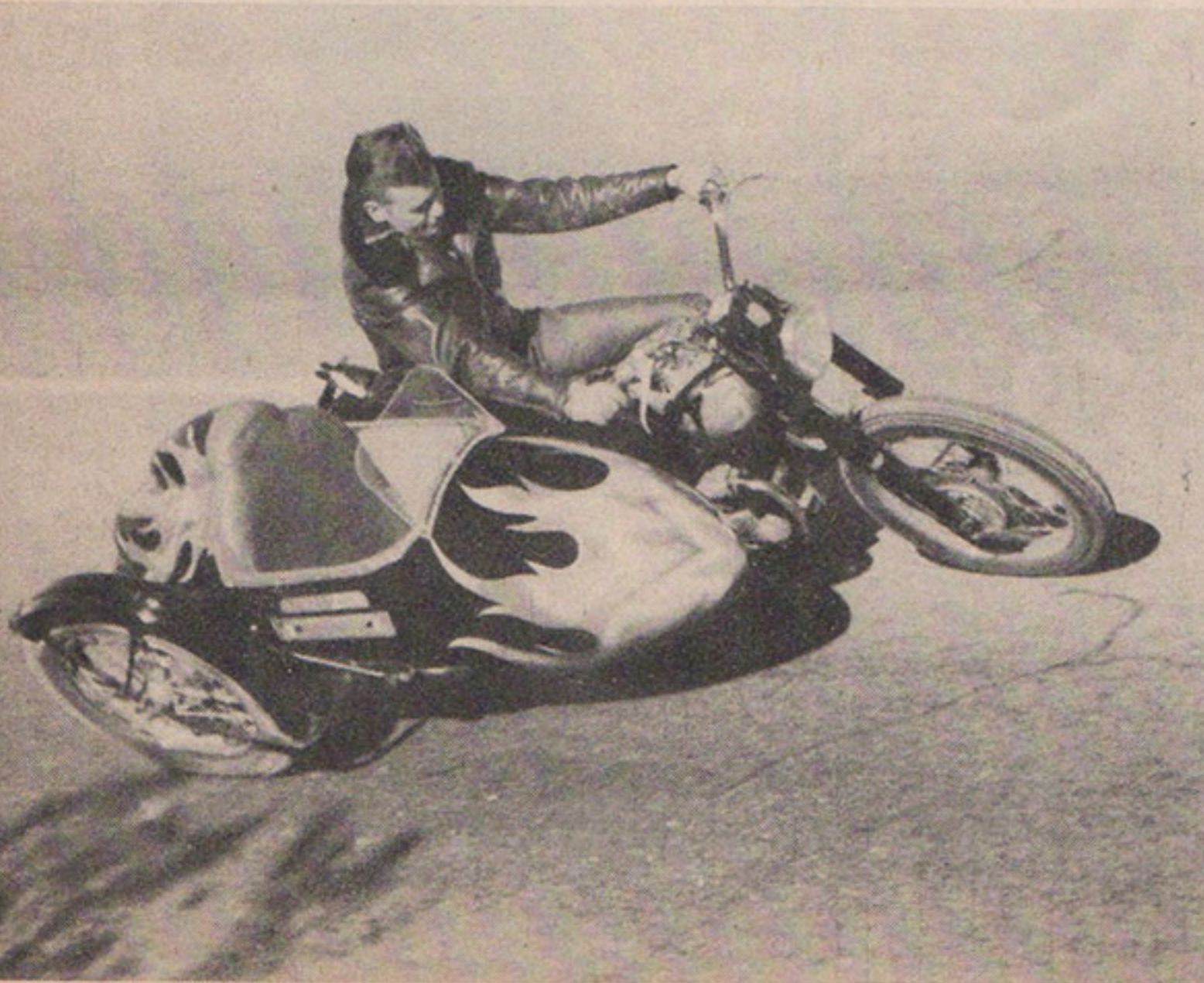
cracking that goes with it. Being a slave to comfort, I could see little appeal in an invitation to ride passenger with one of our shop hack enthusiasts. This was a special treat, however, because Roger Gamaunt, the designer, builder, and owner of a new type of sidecar has finally conceived and executed a hack which gives the passenger solid comfort.

Conventional sidecars are under constant strain, stress and wear. If the road is smooth (and what cycle rider ever sticks to the main highway) a conventional sidecar has a continual rocking motion, not uncomfortable, but nevertheless tiring. Motorcycle safety and

comfort are mighty welcome to a layman like myself, and might well be a strong selling point towards further interest in cycles.

Roger stated he had the answer to all the former bugs and knowing I was an avid photographer, thought that I might be the ideal guinea pig. I volunteered for the test and we set the date.

Early daybreak weather, cutting haze away with its cold dry breezes, greeted us the weekend of the test. Coffee to snap the chill off, and a quick rundown on what pictures were wanted completed our plans. Photographic equipment was inventoried, a neces-



ABOVE. The day's work behind, the hack tested and proven, Roger "takes five." Back in his garage it only took two minutes to stow the sidecar away. Future plans include radio, manifold heater and bubble canopy

LEFT. Haley's Comet had nothing on this fireball. Roaring past, the trim lines of this novel sidecar can be clearly seen. Although moving at a high speed the operator may relax to an effortless solo type ride

sary procedure on location shooting, packed carefully, and stored in the nose of the hack.

Somewhat apprehensive, I slid into the cockpit. Roger eased out from the curb and down the hill from our house to Sunset Blvd. Once on Sunset, I had a chance to become familiar with the sidecar and feeling relaxed and glad to be on our way, I settled back to figure out the hows and whys.

Remembering my experiences in former sidecar riding, I braced myself as we had started out, but quickly found I could relax because curves were made to order for this car. I never felt Sunset straighten out as it did then. There was no pitch and yaw as we rounded one turn after another. The speed was an average 40 mph.

Completely sheltered from the wind, I studied the action on the rear wheel. Noted were the smooth machining, excellent detail, and strong design. The workmanship recalled the prewar German manufacturing. Nowadays, steel that is carefully treated, well polished, and expertly put together, is the exception rather than the rule. Twin pipes roared out their monotonous rhythm, now increasing, now easing off, as we sped up and down the hilly road to the sea. Veering north on Highway 101, we reached our destination, Topanga Canyon.

The Topanga road leads from the Pacific coastline highway to the great San Fernando Valley, a road that should tell me what this hack could do. Now was the chance to prove the practicability of this new innovation in the sidecar field. For three miles we shot up the road until we reached the top. How that bike hugged the road. The hack was like a living-room chair. The sense of security and balance put me perfectly at ease. Where the road widens at the top of the pass, the sidecar received its baptism of high speed usage, before we took our pictures.

Disembarking with my gear, I watched Roger wheel his bike off in a cloud of dust. Locating on a roadside bank, I waited for him to come racing back.

Again and again Roger pulled the hack through in excess of 60 mph. I lay belly down in the road banging off shots as he tore by. Later, when business was finished, I started asking the question. Why go to the trouble of developing and building a new type of sidecar? Roger's answers came back fast and they all made sense.

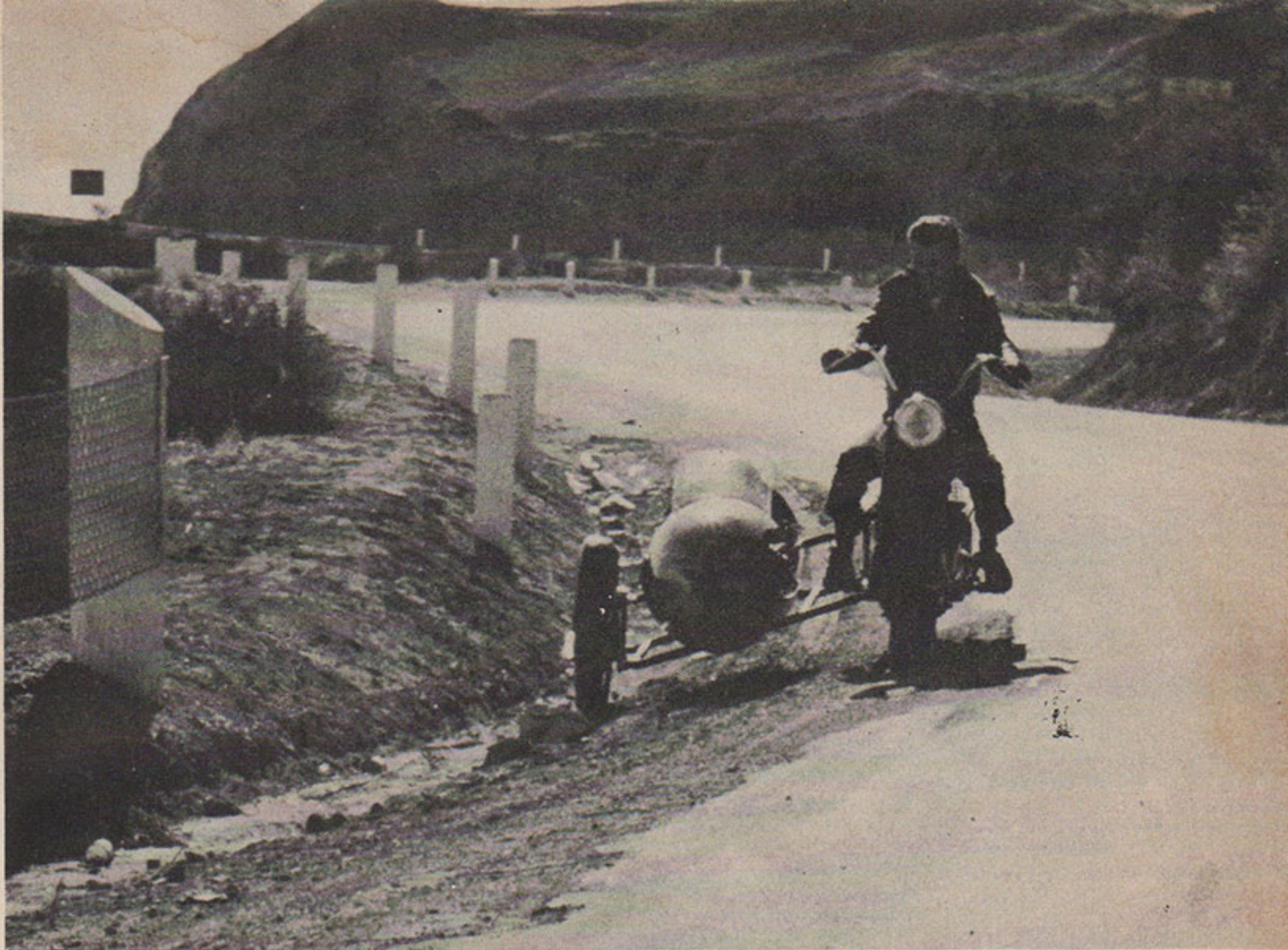
"Riding the Greenhorn endurance run in a rigid hack last year, I wound up with two complete breaks in the frame. I got to thinking how I could relieve some of that strain. As you know, until found, a fundamental fact is often the most elusive."

How to relieve the tension? How to make all forces occurring in high speed turns work for you? How to design a hack that would use the forces of gravity instead of fighting those forces. That was the basic problem. Once that was solved, the fact had to be translated into a workable blueprint.

One year later perseverance and ingenuity won out. Today proved it. The rigid hack tipping over when there was no passenger weight is a thing of the past. No more broken frames. Take along that empty car of Roger's without fighting it on every curve. And if you want to know how, look closely at that sidecar. The bike, sidecar, and third wheel are all at the same angle to the road no matter how you turn!

Three horizontal struts running from the bike through the sidecar attach to the third wheel. The forward strut comes across, then bends back parallel to the body, and attaches

RIGHT. Demonstrating 75 per cent of the banking angle, the Ariel Square Four sits overlooking the San Fernando Valley. Inside the brake drum, can be seen the independent shock strut for the third wheel. This shock strut adjustable to an empty hack or a full 250 pound weight



The bike takes the high road, the hack takes the low road, and all your teeth still stay in place showing the ride in this Cadillac of new sidecars

to the lower rear strut. At a 45-degree angle another short strut runs down from the top strut to the front strut elbow, thereby tying all three struts into a unified piece. Knuckles connect the upper and lower struts to the grease shock strut, which in turn is connected directly to the wheel. A 400 x 18, Scout 101 front wheel donated by the Shell Motors of Lynwood, Calif., forms the third wheel.

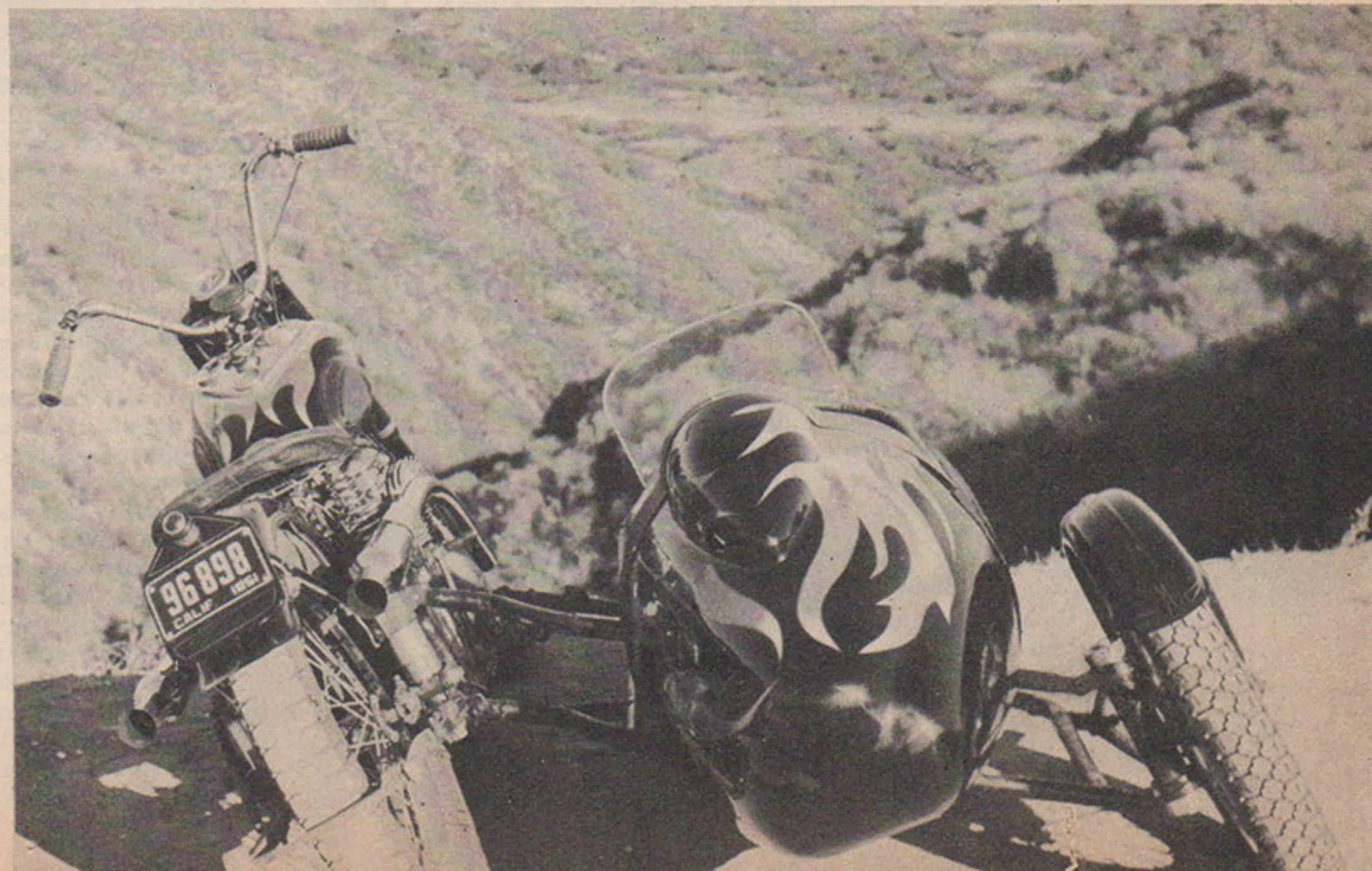
Chrome molybdenum 1 1/4 inch tubing was used in all frame and strut assemblies. Having strength, welding smoothly, and being rust resistant, chrome moly fills the bill. The shock strut was lathe-turned, hardened, precision ground and fitted to the brake drum. During break-in, the grease-filled shock strut was inoperative with the required grease. Its fit was that precise! Oil was substituted. After more usage the grease will be replaced. Replacement and loading are accomplished through the wheel spindle.

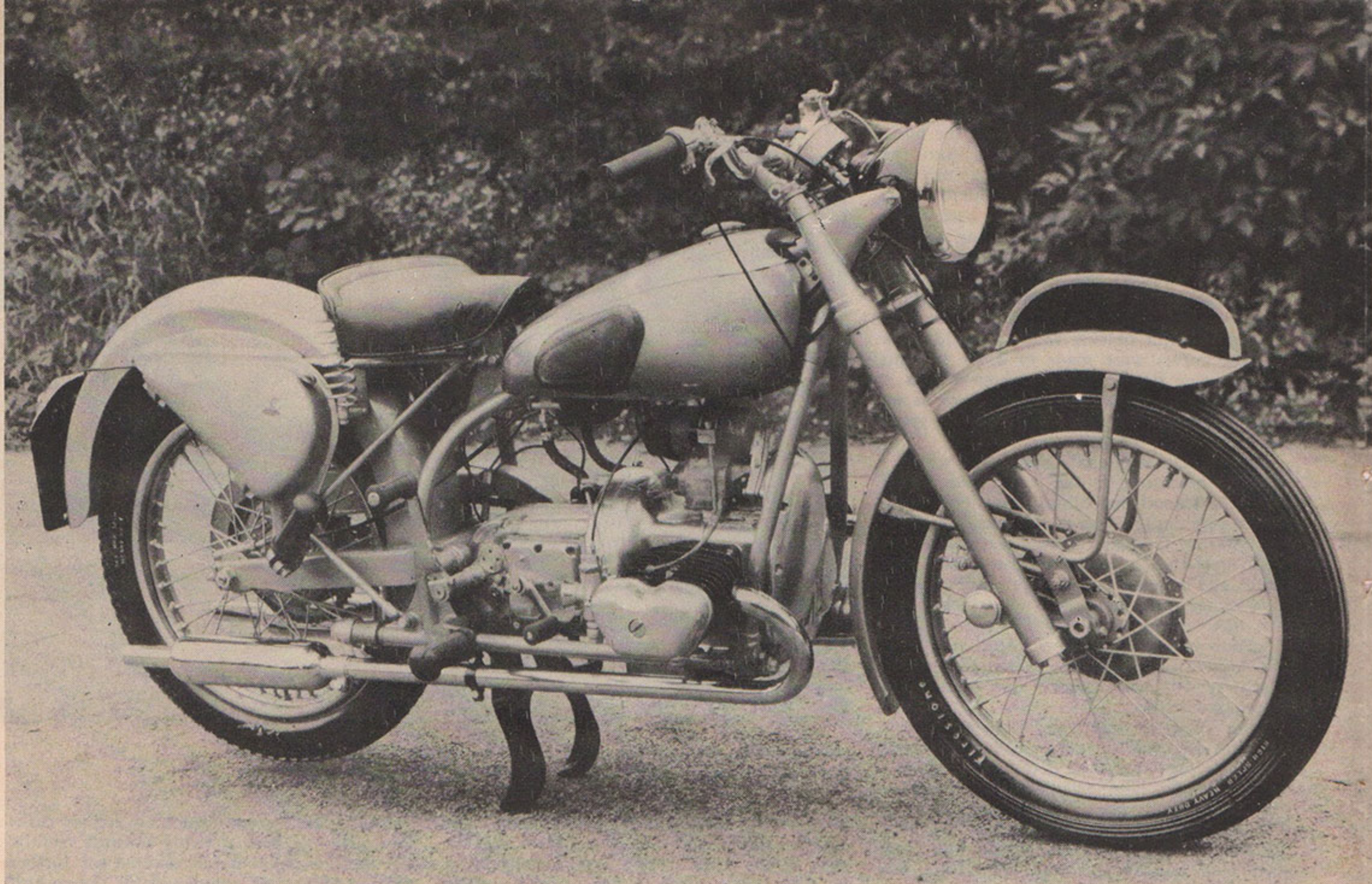
This spare-time creation was formed from an auxiliary airplane wing tank. The head rest achieves its streamline appearance from an old auto headlight, formed and leaded to

the body. Leather covered foam-rubber cushions give the hack a richly finished feeling. All interior metal is felt covered for further comfort. Plans are completed for the cockpit bubble to completely encase the passenger, and when not in use the bubble will be stored in the tail of the sidecar. The paint job can be the same as this flame creation by VonDeutch of Long Beach, Calif. To round off the accessories, heat will be manifold supplied, and space has been allocated for a theft-proof radio.

Sounds pretty soft, eh? Well, let the missus hear about it and you won't have much fight getting this item on the budget.

OK, how much?—and when? The "how much" is hard to state because present estimates are too fluid. Fluctuations in costs of labor and materials hamper an accurate forecast. It will be in the neighborhood of \$450.00 and at present market prices this is a real dollar value. Expect it on the market about next August. Also, for those interested, let Roger hear from you to get an idea which bikes are going to be pulling this new hack.





ATOM POWER IN '52?

hardly, but the new models
boast several refinements
to help bridge the gap

by William Onslow

THOUGH THERE SEEMS little change in the range of machines for the coming year, it does not follow that "the back room boys" have taken an easy way out. On the contrary, they have had a busy time devising means whereby they could produce the fruits of their labors, within a stringent material supply limit. Political unrest throughout the world has once again, partly dictated the style and embellishments of one's favorite brand.

AJS—Working from front to rear on a good looking from Plumstead Road, one finds several marked changes. From a newly designed malleable iron fork crown that is smaller and neater, the eye passes to the telescopic front fork legs with their light alloy sliders that are now highly polished, as is the new alloy brake plate. Rims have assumed the finish of unpolished chrome. Achieved through a process designated as Argenizing, the rims now have a thin coating of a hard substance developed to withstand the most vigorous tire changing. Beneath the black and gold lined tank, now boasting a new alloy motif, protrudes the light alloy head common on their single cylinder models. A modification has simplified the fitting of the hairpin springs. A detachable inspection plate that gives easy access to the clutch thrust rod of the new Burman gear-box fitted to all models is easily spotted.

The company's Matchless range of singles not only boasts of the above refinements but have undergone a major operation. The magneto, protected by a newly designed shield, is now ahead of the engine. This alteration, made to facilitate the removal of the dynamo, has given the range a new look by the inclusion of a new type timing case. The twins, one of each make, still retain exceptional lines. They sport newly designed pressure release valves in the drive side crankshafts. Breathing into the chain case, the valves have superseded the external breather pipe.

Last but not least, the company's competition machines, together

with the AJS Boy Racer, give a total of nineteen models from which the discriminating can choose.

ARIEL—Once again this Birmingham concern opens the season by retiring a "running horse" to stud and offering a new stallion in its stead. The 498cc deluxe twin is dropped so that full attention may be given to another Red Hunter. Designated the VHA, the newcomer is bred exclusively for staying power and high speed. This single cylinder, 497cc OHV power plot has a low expansion, light alloy barrel of silicone content with a pressed-in iron liner as a refinement beyond its brethren, who, though still sporting cast iron mills, have added depth of finning to aid heat dissipation. Generous finning on the new alloy job permits finning of the upper portions of the cast in push-rod tunnels. Also of alloy, the cylinder head houses a normal Hunter rocker gear and pressed-in valve inserts of stainless steel. Barrel and head together save about 12 pounds weight and by reason of their cooling properties, permit higher sustained revolutions. An internal aid to this performance is the fitting of a split-skirt Low-Ex piston on all OHV singles.

The multi-cylinder models remain virtually unaltered. Though both the Square Four and the Red Hunter twin have larger gas tanks, the latter now has cast iron, high tensile pinions in the dynamo and magneto drives, replacing those of fibre that were used in the past.

BSA—Birmingham Small Arms Limited startles us with a list of 30 machines (including six different cylinder capacities) bearing the company initials plus two models of the beautiful shaft driven, in-line OHV Sunbeam twin.

The 123 Bantam has become so popular in all spheres (two finished the ultra lightweight TT) that three sprung and two solid rear end versions of this little "gamecock" are offered. All are fitted with a more substantial steering head by means of a newly designed gusset of greater area. Front wheel spindles are strengthened by both

increased diameter and a decreased thread area. Unsprung models are stronger at the rear end, a heavier gauge tubing being used in its fabrication. One of the springers in competition form has a unique method of front suspension damping. A rubber core in the center of each fork spring, compressed together with them on impact, spreads outwardly and acts as a buffer.

Those who choose a lively mount with low running costs need look no further than the models in the 250 class. Side valve and OHV machines of 249cc can be had in either solid or sprung form and a choice of a three or four speed gearbox. Improved brakes are fitted to these and the other models of the BSA range. Few changes are evident in the 350 and 500cc group, while the hotted-up Gold Star competition jobs retain alloy cylinder and head, polished ports and "what have you." Manufactured only in springer form, cams, gears and compression ratios may be specified for any type contest.

Already in a class of their own, the twin range comprising the 497cc Tourer and its sprightly counterpart, the Star Twin, and the 646 Golden Flash, are all fitted with the plunger type rear suspension. A shroud, cast integrally with the timing cover, embraces the rotating oil breather and eliminates possibility of oil seepage. A new central stand design has resulted in larger ground clearance. Improved front fork damping has been obtained simply by fitting the type proven by Gold Star models in competition fields.

SUNBEAM—Few changes appear on Britain's only in-line twin. Chain drive to the camshaft is fitted with a new tensioner blade anchored at one end only. Rockers have been modified to give a larger bearing on the cams and the heavier of the two models, the S7, has handlebars secured with a two-stud clamp.

DOUGLAS—Famed for its individual trend, Douglas has produced a machine in the 500cc class. Intended for fast touring or sidecar work, it will compete for cleanliness and efficiency with any machine in the world. Features common with the make's three junior models include the tubular, duplex frame. Douglas design takes the form of a horizontally opposed, flat twin unit with crankshaft in line with the frame. A large diameter single plate clutch, mounted directly on the engine shaft is driven at engine speed. A built-in unit, four-speed gearbox with positive stop foot-change mechanism, transmits the final drive by chain via bevel gears to a sprocket incorporating a cam type shock absorber. Cast integrally with the crankcase, the oil sump is yet another feature of clean line and compactness. Conforming with the system of the smaller capacity machines, separate carburetors are provided for each cylinder. The mag dynamo position on the top surface of the crankcase is unaltered but in this case the unit is completely enclosed in a light alloy shell that gives protection and enhances the general appearance.

Suspension units are unaltered and certain to be retained. At the fore end radidraulic bottom link forks are controlled by variable rate springs and hydraulic dampers. The link action insures an almost constant wheelbase. The rear wheel is suspended by pivoted forks fabricated in box section and controlled by torsion bars that are carried in the lower main frame tubes. Three models of the 348cc series are available. The Mark 5, with a compression ratio of 7.25 to 1 is the standard touring model finished in a light green polychromatic paint job, or jet black. The maroon 80 Plus, a hotted version of the Mk 5, has a compression ratio of 8.25 to 1, and lastly the golden 90 Plus, primarily intended for racing. Both Plus jobs have a powerful 9-inch front brake as opposed to the one of seven inches on the Mk 5. All three in common have a rear brake of seven inches.

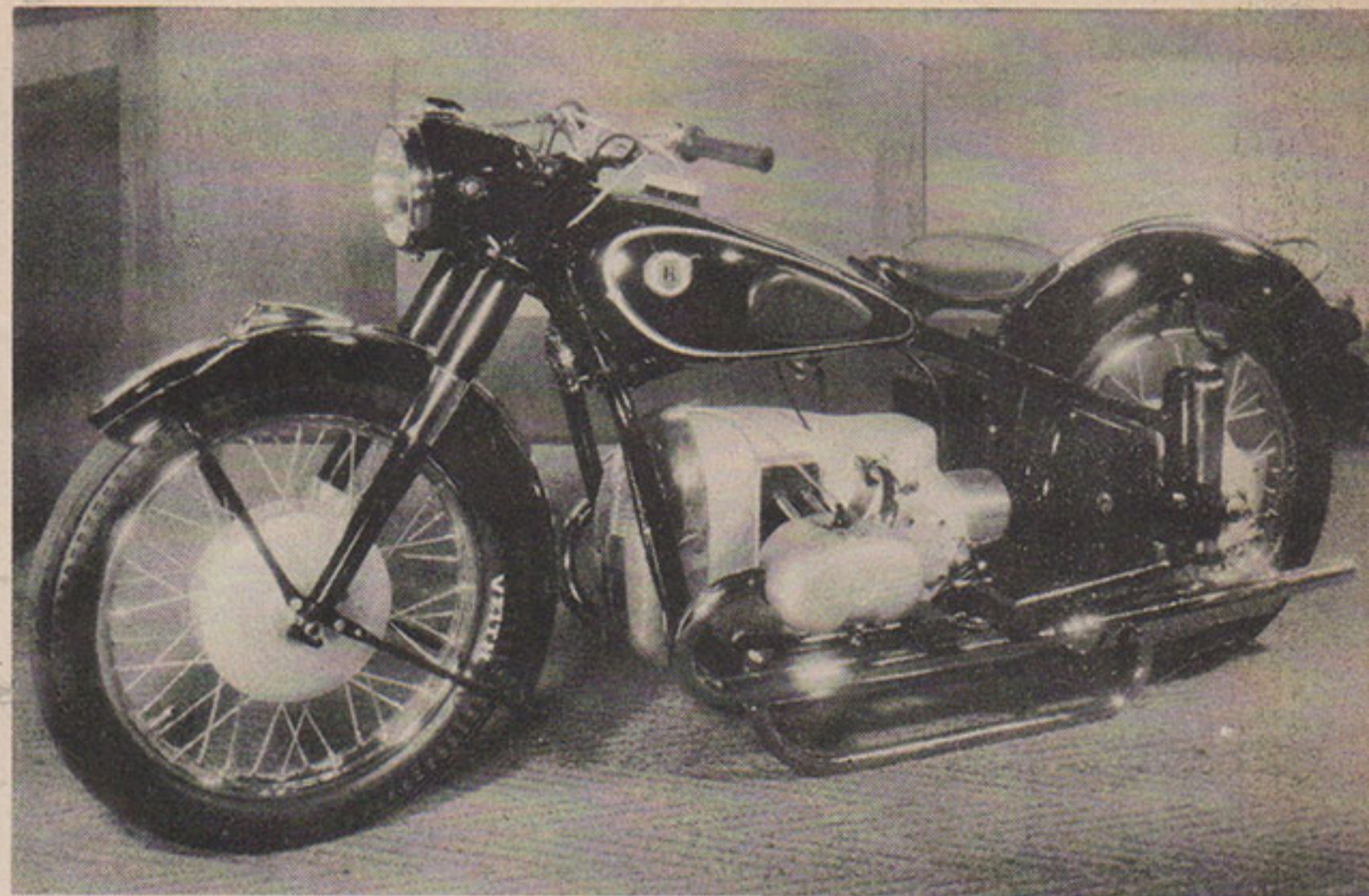
A list of alternative equipment for the sporting models includes TT type carburetors, alloy heads and barrels, racing cams, racing saddle, high compression pistons, light alloy wheel rims and a larger tank. Completing the Douglas range for 1952 is the 125cc Douglas-Vespa scooter.

ENFIELD—One has to visit the spick and span factory 'mid the beauties of rural Worcestershire to realize that meticulous attention is given to the slightest detail of a five-model Royal range. Reared among the multis', the American rider will probably find greatest interest in the 496cc OHV vertical twin introduced at the last Earl's Court show in England, for in this class the marque offers one of Britain's neatest ever. Finished throughout in a rather light polychromatic grey with silver tank panels lined red and gold, it has the appearance of a light and docile mount. This deception, formed by the paintwork and line of the rear suspension, is quickly dispelled by a twist of the grip for it has fire equal to the red of the nameplate. The frame, with its duplex, triangular loop suspension unit, is constructed with chrome molybdenum tube. This beauty is now fitted with a large rectangular air filter mounted beneath the saddle lug. Ammeter and light switch are now located in the head lamp and the ignition switch, housed in the toolbox, is safe from prying hands of the young.

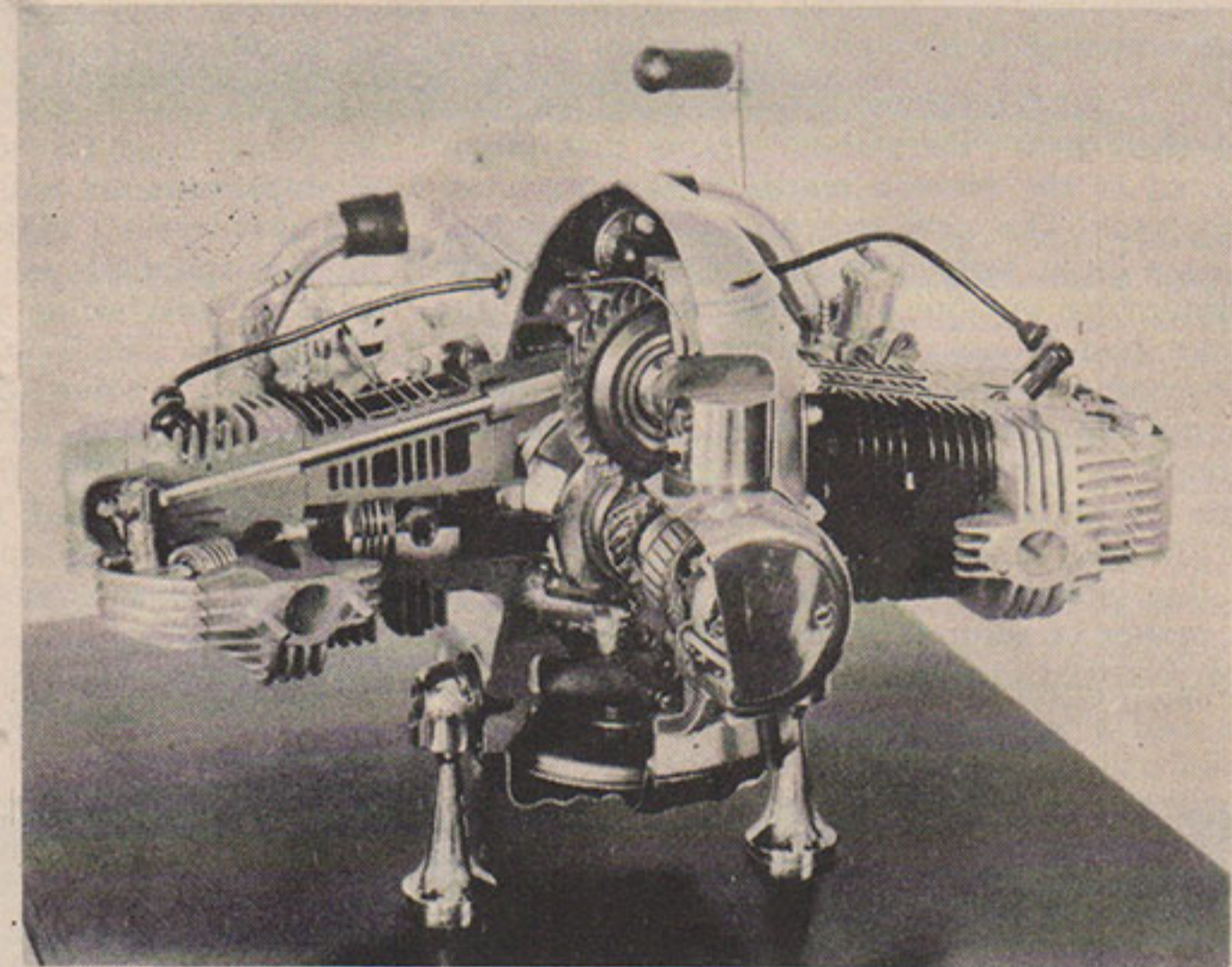
The sporting man could fulfill his wildest dreams with the apt named Bullet, a lusty 350 plot in either standard or trials form. The standard 350 and 500 jobs, both OHV units, are unaltered except that they now have the light alloy fork crown incorporating the speedometer introduced in the two former models this season.

NORTON—A last minute surprise at the Earl's Court show was the 497cc OHV parallel twin with an engine identical to that of the famous Dominator, but incorporating the improved roadholding

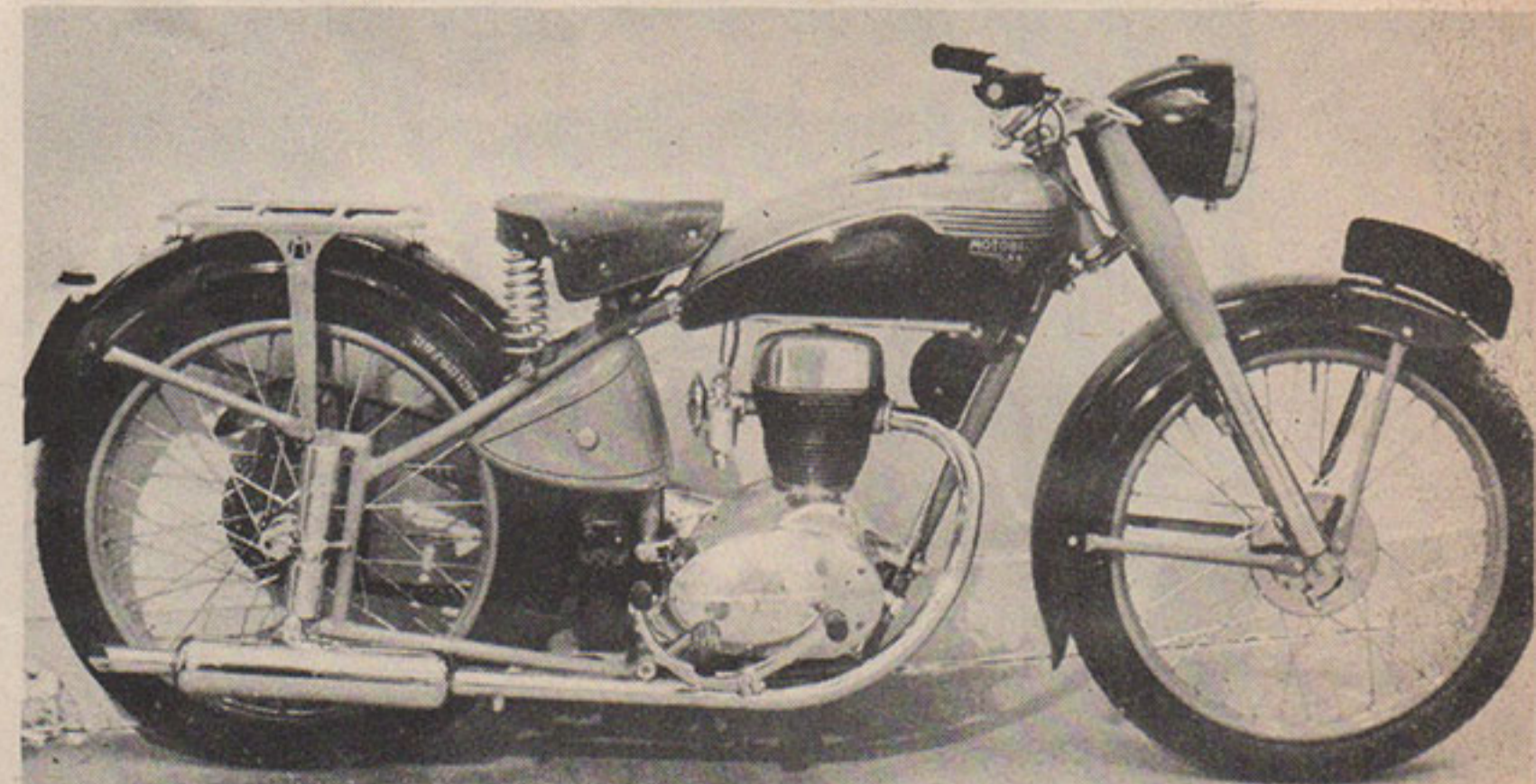
(Continued on next page)



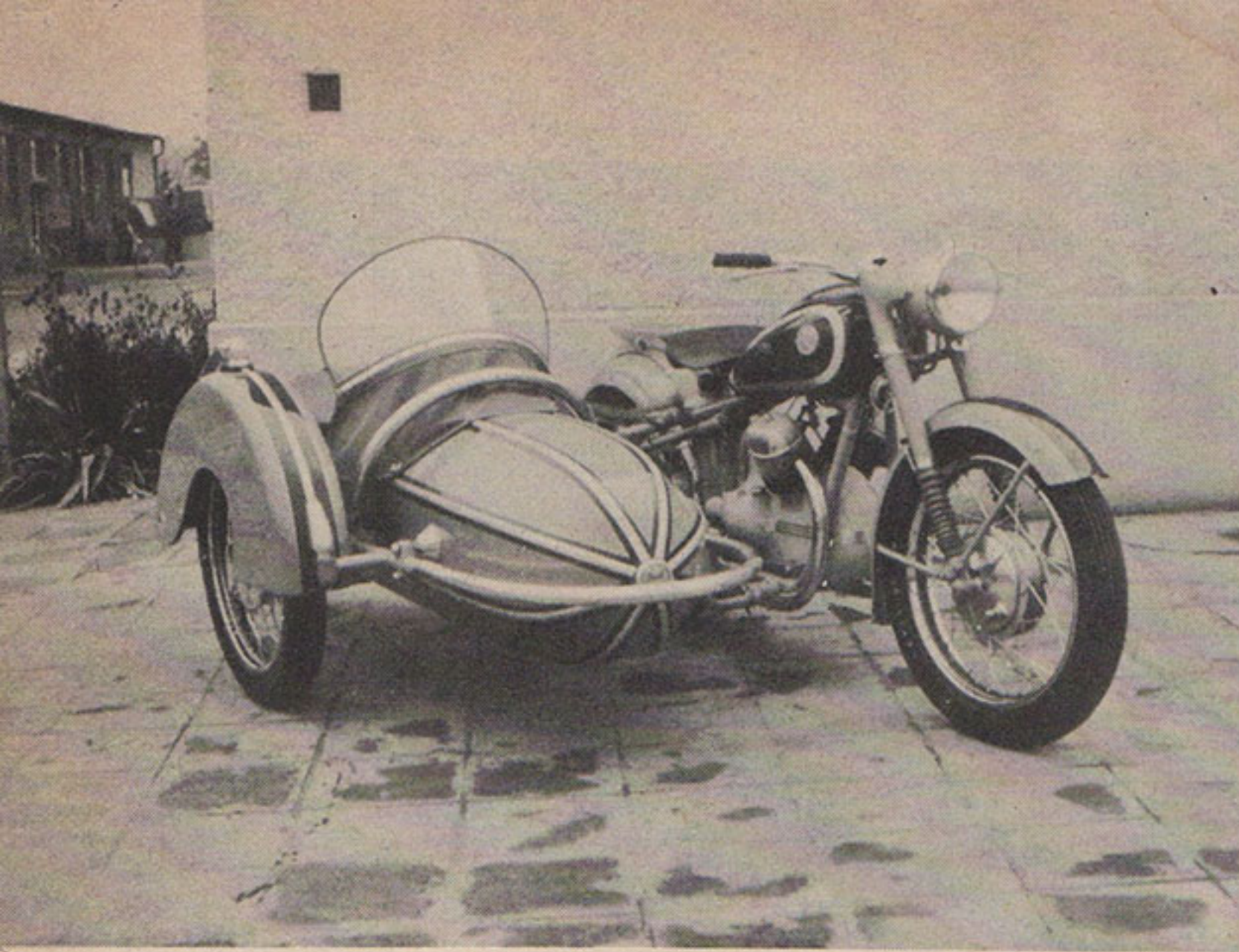
German Rabeneick 500cc opposed twin built by Universal Motorcycle Company has 600cc counterpart used by officers of Swiss army. 24-brake horsepower engine is said to have self starter. Lubrication is wet sump automotive type. Carburetor, ignition, and all the other little doodads ordinarily seen, fully enclosed in streamlined engine housing



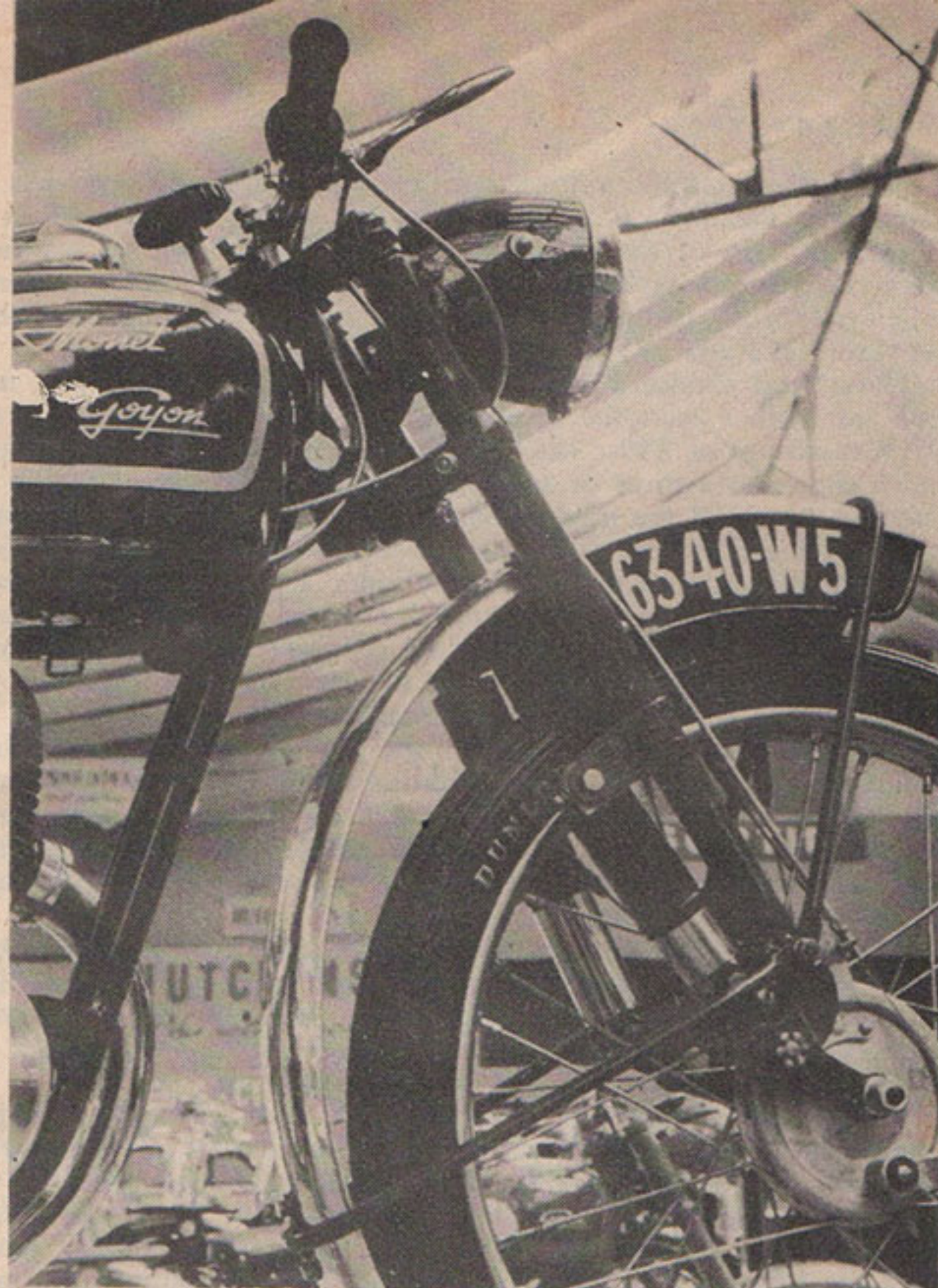
Latest Zundapp KS 601 power-plant shows same neat integral construction, long a trend in Germany. Dual carburetors attach directly to cylinder casting on this 600cc flat twin. Compression ratio is 6.7 to 1. Engine develops 28 hp at 4700 rpm. 4-speed transmission consists of an ingenious system of chains rather than customary gear transfer system



Authenticated News Photo Beautiful 125cc Motobecane built by one of the largest and most popular French manufacturers of motorcycles. Note the refinements in springing and design that are put into these lightweights. In most parts of Europe small motors play an equally important role with the larger machines



ABOVE. A new narrow angle transverse 350cc twin, the Victoria Bergermeister (mountain master) is enhanced with the fitting of latest sidecar. One of the cleanest looking machines manufactured today, features shaft drive, and brake drums in center rather than on the side of wheel



RIGHT. Seen at the latest Paris motor show. Gregoire suspension system incorporating two separate coil springs of varying tension. Main fork tubes appear to be rigid. Spring tubes are oddly set at different angles

of their new "featherbed" frame first introduced in the Norton works racing machines last year. The new structure consists of two single loops welded to form a duplex frame, employing swinging pivot-type rear suspension, hydraulically controlled.

Another innovation in the new Norton is a quickly detachable gas tank, held to the frame by a fore-and-aft strap running the entire length of the tank, with single-bolt fitting at the rear. The toolbox is located underneath a dual seat saddle which can be removed in a matter of seconds. Engine and gearbox can be removed as a unit from the frame.

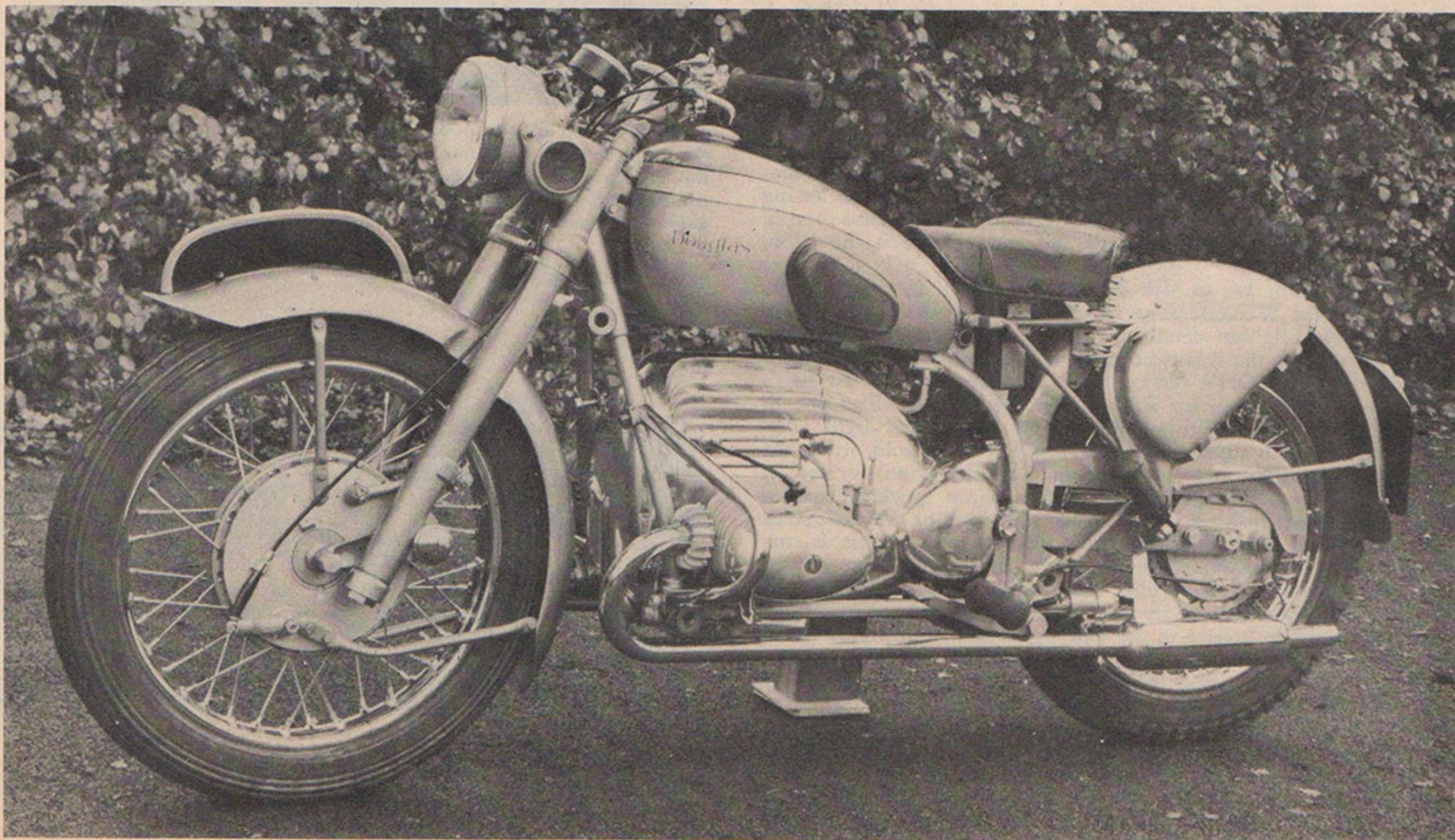
TRIUMPH—Announcement of a new pol-

icy comes from Coventry. In the future, model improvements will not be held back until the next season's range is announced, but will be incorporated as they become available without interfering with the steady flow of production. The Triumph group of four now consists of three 500cc machines—Speed Twin, Tiger 100, and Trophy, plus their increasingly popular 650cc Thunderbird.

The 27 hp Speed Twin now breathes a little easier at high speeds as the result of a new, larger air cleaner arrangement that is situated behind the saddle pillar tube of the frame. Improved lighting through a new seven-inch block lens headlamp is also

photo by Rudolfo Mailander
claimed. The Tiger 100 boasts the same improvements and can still be converted for high speed through proven factory racing kit.

Causing great interest on the Thunderbird model is the appearance of a new SU automatically expanding choke-type carburetor of special design that promises to boost both performance and gas economy. Here again the improved air intake system is found, along with the new lighting equipment. The highly successful competition Trophy model which features the Tiger 100 engine with a slightly lower compression in a shorter frame, is offered again without change. Triumph's spring rear wheel suspension is an extra.



English version of flat twin is 500 Douglas. Radidraulic swinging link forks are unusual on big bikes, insure small wheelbase change during operation

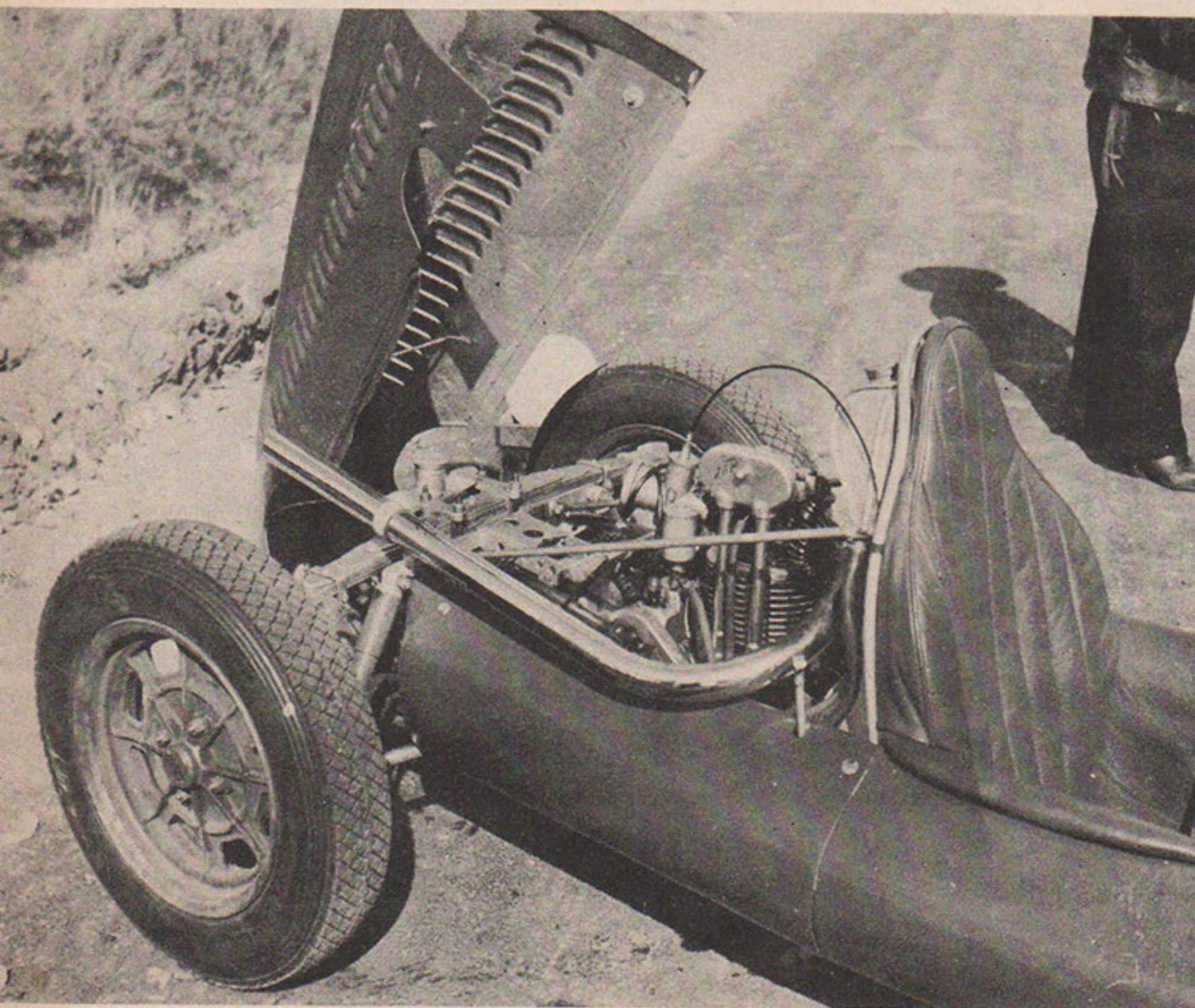


jap in jags clothing

Photos by Eric Rickman

**COOPER RACER, POWERED WITH 30 CU. IN.
J.A.P. CYCLE ENGINE, EASILY SUBDUES
THE BEST SPORTS CARS ON THE TRACKS**

By Russ Kelly as told to Gene Jaderquist



Tiny J. A. Prestwich single cylinder, short track mill peers out of lightweight racer body. Independent 4-wheel springing, high power to weight ratio, and proper weight distribution, makes the Cooper first out of the corners. Ownership of this car is within the realm of the enthusiast of average income. Here is the best of the formula-3 Grand Prix cars that have proved so startling

This man called Kelly first made motorcycle news when Dick Curtner rode a Kelly-tuned Manx Norton to second place in the 100-mile event at Daytona Beach, Florida in 1950. That was Kelly's first adventure with competition, but since then he's made his living by handling the racing stable of a BSA dealer in San Francisco.

Since the motorcycle habit gripped him, Kelly has bought three motorcycles. You can get some idea of his personality by checking the speed reputations of all three—two Vincent HRDs and the Manx Norton. When he goes somewhere he likes to go! So it's only natural that the first Cooper to hit the West Coast should have been turned over to him to tune. It was not, however, expected that he would also drive the thing—Kelly had done no previous competition riding or driving. But—well, let Kelly tell you the story himself—ED.

THE STARTER SAID, "Now I'm going to run down the line of cars toward the starting line. When I get there, I'll jump into the air and bring down the flag. That's when you start."

I was strapped in the cockpit of the Cooper. The car was perched on a slight hill behind the rest of the starters in the first event at the Reno road race. Bill Breeze, Northern California Regional Executive of the Sports Car Club of America, and the owner of the Cooper, was standing beside me, leaning toward my ear.

"Think you can pass some of these (pointing at the field of MGs and the Singer) before the first turn?"

"Sure," I told him.

"All right, then. Miss the last car here, then run close to the pits and pass the double rows of cars instead of keeping to the middle of the track. That way you can get out with the movers at the beginning."

It was a good idea. Everyone ahead of me had been lined up by twos and there were eight rows to weave through to try to take the lead.

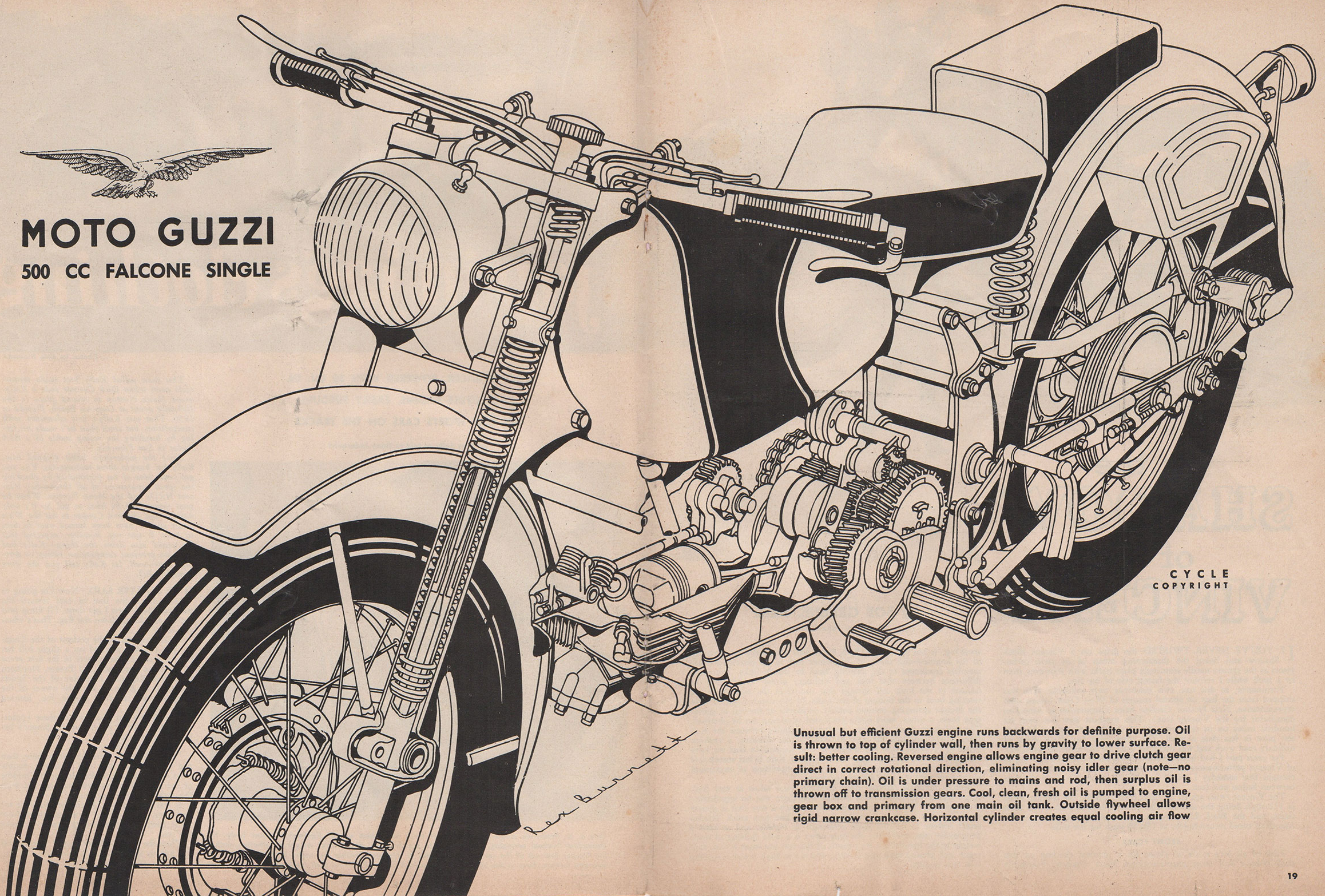
Then the starter's flag dropped. I rolled off the hill to start and cut around the last car.

(Continued on page 27)



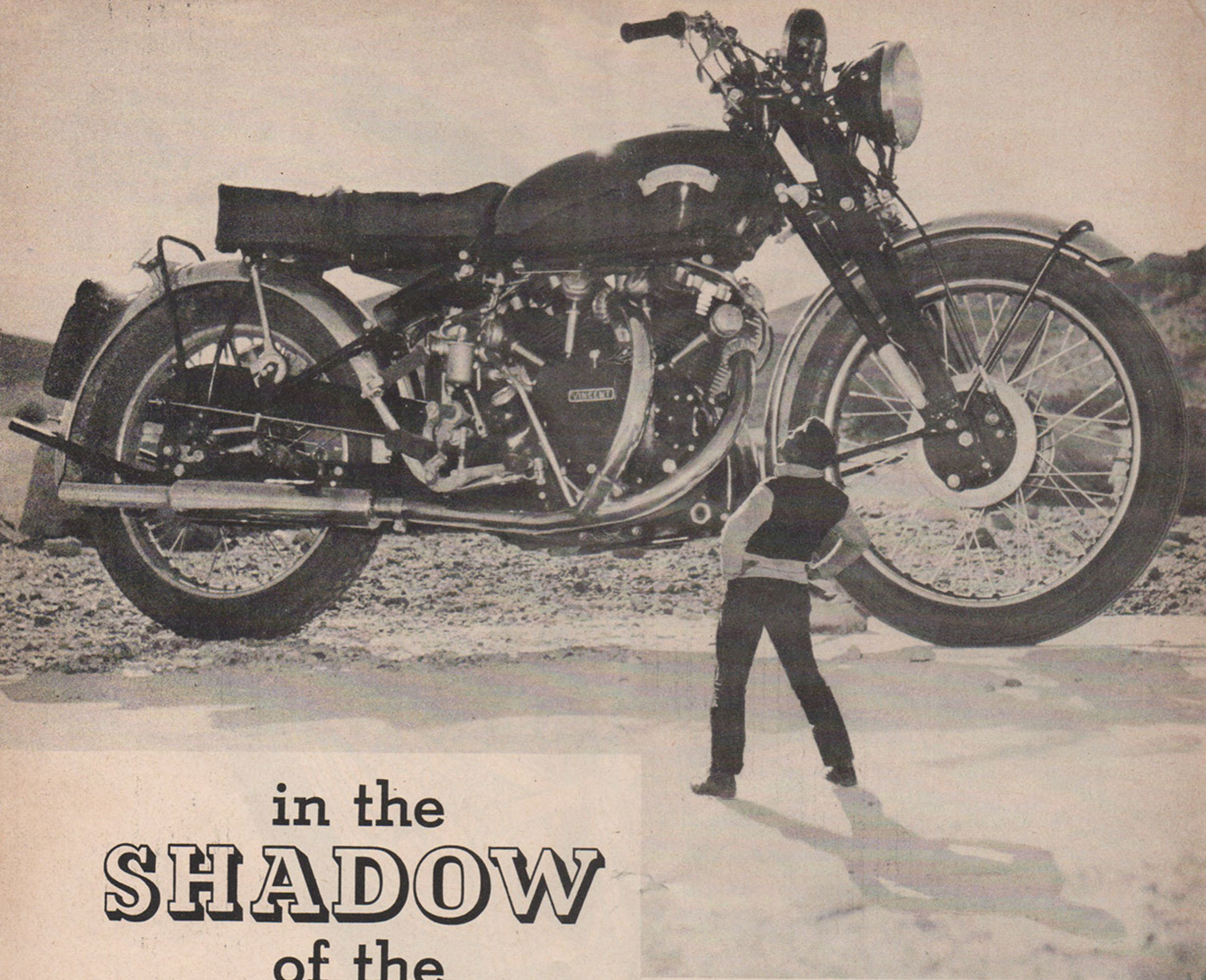
MOTO GUZZI

500 CC FALCONE SINGLE



CYCLE
COPYRIGHT

Unusual but efficient Guzzi engine runs backwards for definite purpose. Oil is thrown to top of cylinder wall, then runs by gravity to lower surface. Result: better cooling. Reversed engine allows engine gear to drive clutch gear direct in correct rotational direction, eliminating noisy idler gear (note—no primary chain). Oil is under pressure to mains and rod, then surplus oil is thrown off to transmission gears. Cool, clean, fresh oil is pumped to engine, gear box and primary from one main oil tank. Outside flywheel allows rigid narrow crankcase. Horizontal cylinder creates equal cooling air flow



in the SHADOW of the VINCENT

by **BOB GREENE**, editor

Photos by Felix Zelenka

IF YOU'VE NEVER TWISTED the grips on a Vincent Black Shadow and heard the threatening moan of its twin carburetors as the speedo needle seemingly plays tricks with your eyes, then sit a spell while I recount the fastest ride of my life.

Fortunately, in this test, two machines were available. One was shipped from the East on special request of West Coast Indian sales representative, Nels Nelson (Indian Sales Corporation is American distributor for the Vincent line). This machine now has over six hundred miles on its odometer, all of which were put on by your test pilot in less than a week. The other twin had 5000 miles of ordinary road work and was therefore used for the ultimate speed test.

For years past I had been mentally filing away the fabulous stories of Vincent performances that are heard from time to time, with the thought that someday I would be able to personally draw the line between fiction and fact.

The Vincent twins are all 61 cubic inch capacity; the Rapide, rated at 110 mph being the slowest. The Shadow is next with a 125 mph claim, and the Black Lightning is now officially recognized as the American speed record-holder at 156.58 mph for the mile.

FRONT FORKS

First of all let's move in closer for a physical checkup on this sleek-looking and most unconventional Black Shadow. Practically

speaking, it has no frame. Both front and rear forks are attached to the engine—and that's it! The front fork is an extremely rigid member connected to the steering head by sturdy links. The main difference between this fork and ordinary girder set-ups will be noticed in the long coil springs that run from the bottom of the steering head to the bottom of the forks. In this manner, rather than the shorter springing method usually employed at the top of girder type forks, a softer, more finely graduated springing can be obtained. The hydraulic shock absorber, mounted centrally between the fork links above, controls the rate of compression, effecting a cushion equal to or better than any telescopic type suspension that we have tested. The factory claims that the Girdraulic fork is less susceptible to twisting; its exclusive design gave the impression of maximum absorption with the least amount of travel.

Rough multiple railroad track crossings were taken at very high speed and it was immediately noticed that there was no appreciable initial impact. The fork reacts instantly in such a way that it almost seems as if it were anticipating the blow. The first quick delicate recoil stiffens to its maximum resistance so rapidly, and at such a progressive rate, that often the only effect is a mild shifting of one's weight to the handlebars. As a result of this soft but short action, fork angle and ground clearance is little affected at high speed cornering—a rare quality.

REAR FORKS

Bolted aft of the unit constructed engine is the triangular rear fork assembly which differs considerably from any other rear suspension unit. This system, pivoting just below the rider, allows the machine to actually break in the middle, imparting a long slow dipping action different from anything ridden before. As a final touch to this suspension system, a very deep cushioned Feridax double saddle is mounted in such a way that rear springing action can be snubbed for riding double by tightening the small friction dampeners at the base of the rear seat supports.

POWERPLANT

The heart of this high stepper works in direct contradiction to those who claim that a narrow angle V twin is the victim of vibration. The only thing that "vibes" on the Shadow is the horn diaphragm. Without a doubt this 50° twin ranks among the very smoothest of motorcycles manufactured today. Probably the most contributing factor is the setting of the cylinders and sleeves so deeply into the cases. Another reason for its silkiness may be the off-set of the two cylinders. Although the factory points out that the barrels have been staggered for cooling purposes, this system also permits the use of a male rod for each cylinder. Actually, its terrific smoothness is a combination of many factors beyond the basic fundamentals of bore-stroke ratio, flywheel balance, etc. Performance-wise, this balance is characteristic at all speeds. Not once did the handlebar tips start to balloon. The liveliness of the engine was a shock, for every movement of the throttle, however slight, is reflected in the huge speed gauge atop the front forks. It almost seems as though the throttle were geared to the speedo, so attentive is the engine. Let me illustrate the point.

On several occasions when cruising at 70, I would come up behind a car, shift back into 3rd, focus my eyes on the car and hook on a handful of throttle. After the pass, a glimpse at the speedometer would catch the needle sweeping past the 100 mark (this clock is very accurate above 70). Below 60, fourth gear is a bit sleepy because of the high gear the bike packs, but shortly above this mark she comes on like "Gang Busters." Third gear is extremely elastic.

The fact that the outside of the engine and primary case did not remain oil free was not too discouraging since an all-around tightening up of the case screws stopped the seepage. Despite the relentless shakedown the Vincent was given right from the first mile, at no time did it show signs of overheating seizure, or oil failure. While tappet noise was a bit more than normal, it was not too objectionable, nor did it show signs of increasing.

While several Vincent owners claim their bikes are "first-kick" starters, the test Shadow was at times a little reluctant to fire—usually when cold. The trick here lies in co-ordinating the compression release and the kick starter and can be learned in a very short time.

TWIN AMALS

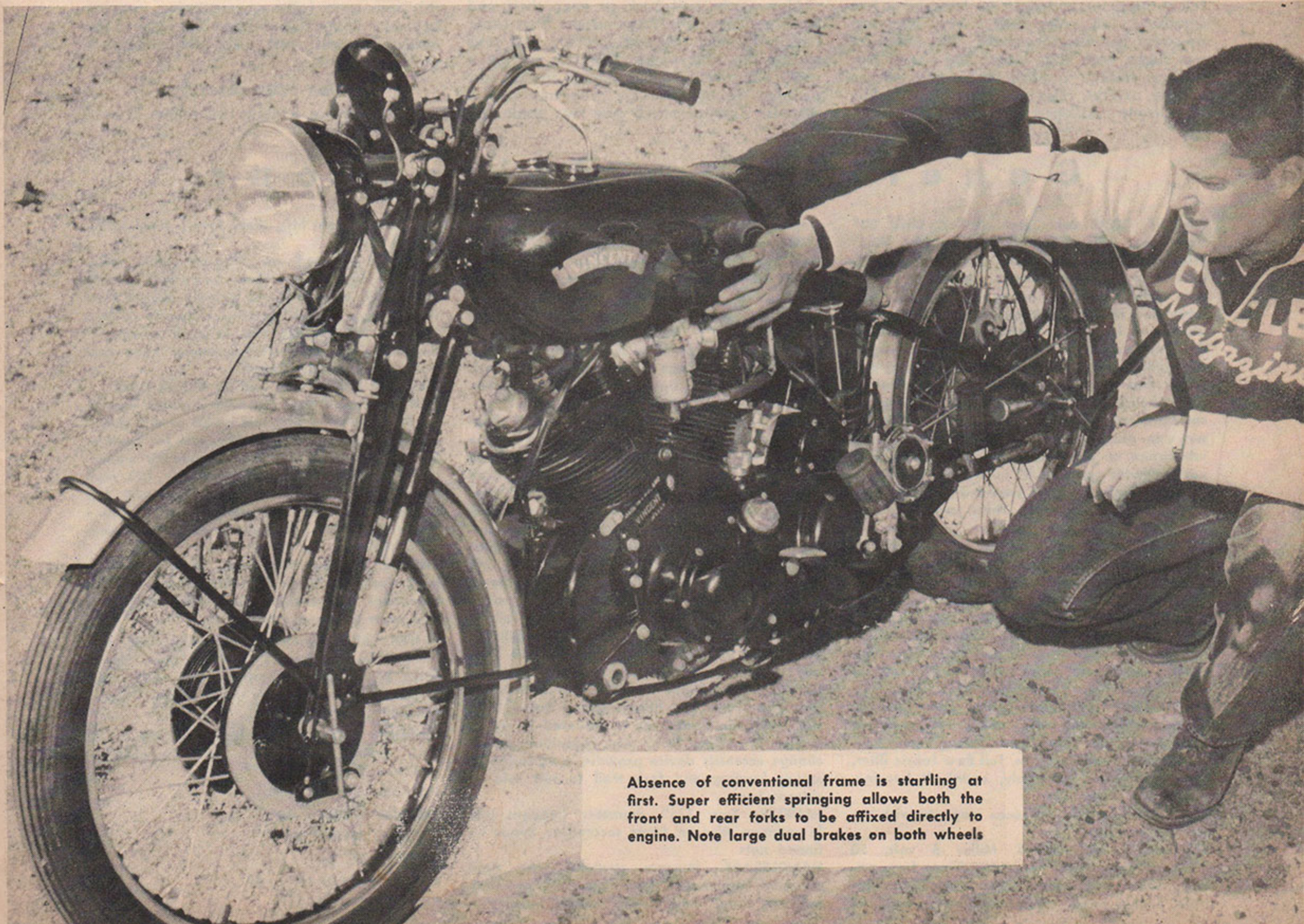
Although the twin carburetors undoubtedly play a marked part in the Vincent's acceleration and economy (more about that later), they were a constant source of irritation, not because of adjustment or malfunction, but only through their persistent leaking when the bike was placed on its sidestand. Unless each of the fuel taps were closed at every engine stop, the carbs would begin to drool. It seems that a relocation of the rear float bowl would be a solution to this minor but continual source of annoyance.

FOOTSHIFT-HAND CLUTCH

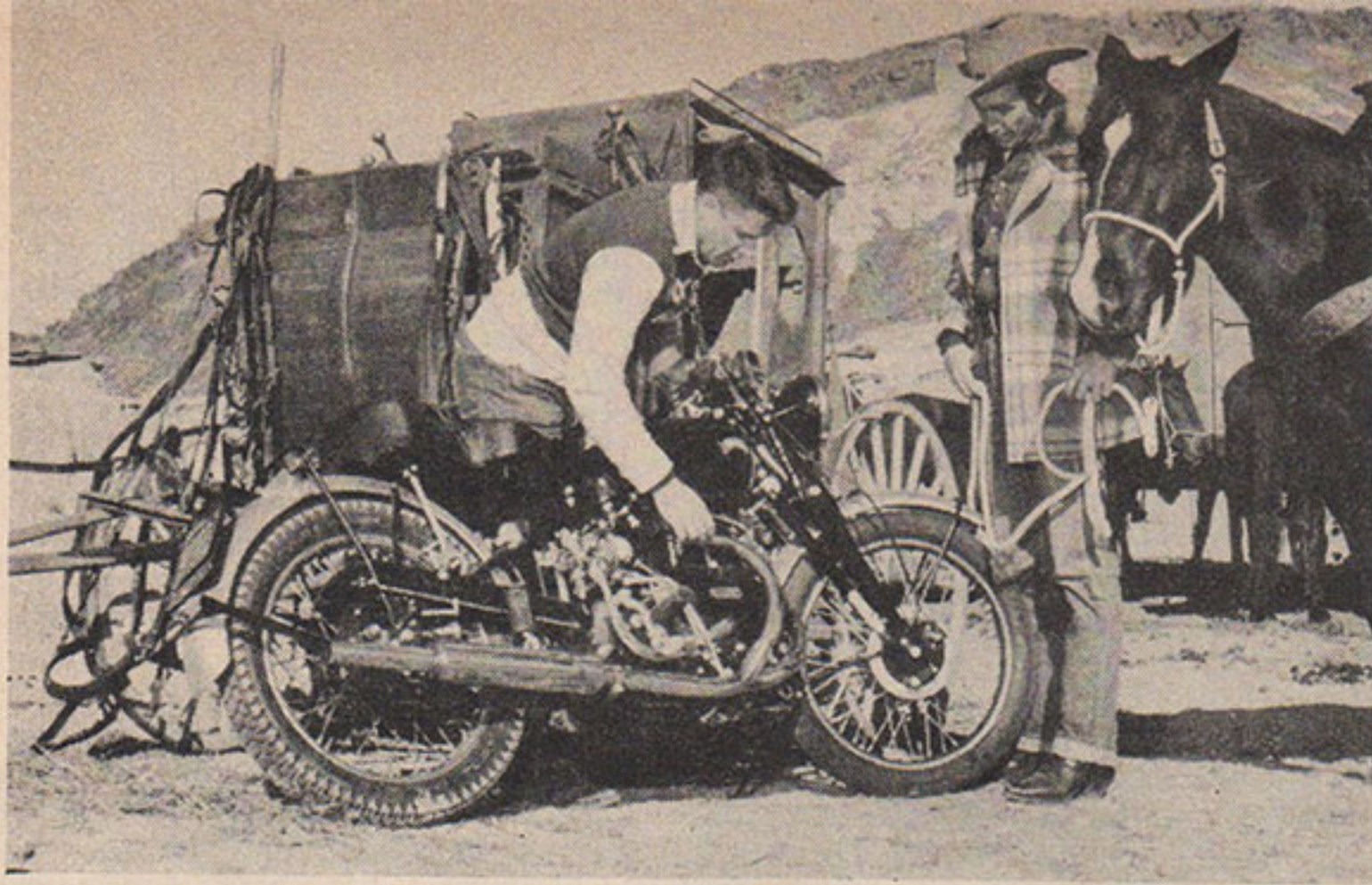
For the clutch you love to touch, Vincent has it. It's easy and positive with but one exception; the actuating lever, at the end of the cable and enclosed in the right side of the transmission, had the occasional habit of only partially releasing, thus causing the plates to hang up with a resulting slippage. A likely remedy would be stronger clutch springs or a re-vamping of the actuating arm. Vincent owners claim the clutch itself is practically indestructible.

The footshift pedal, connected to the main actuating shaft by an adjustable linkage, was quite sloppy in operation. Engaging low with the engine running, and the bike standing still was practically impossible unless the combination gear indicator and auxiliary shift arm were used. This could be done only by kicking the arm smartly into low with the heel. Word has been received that this linkage

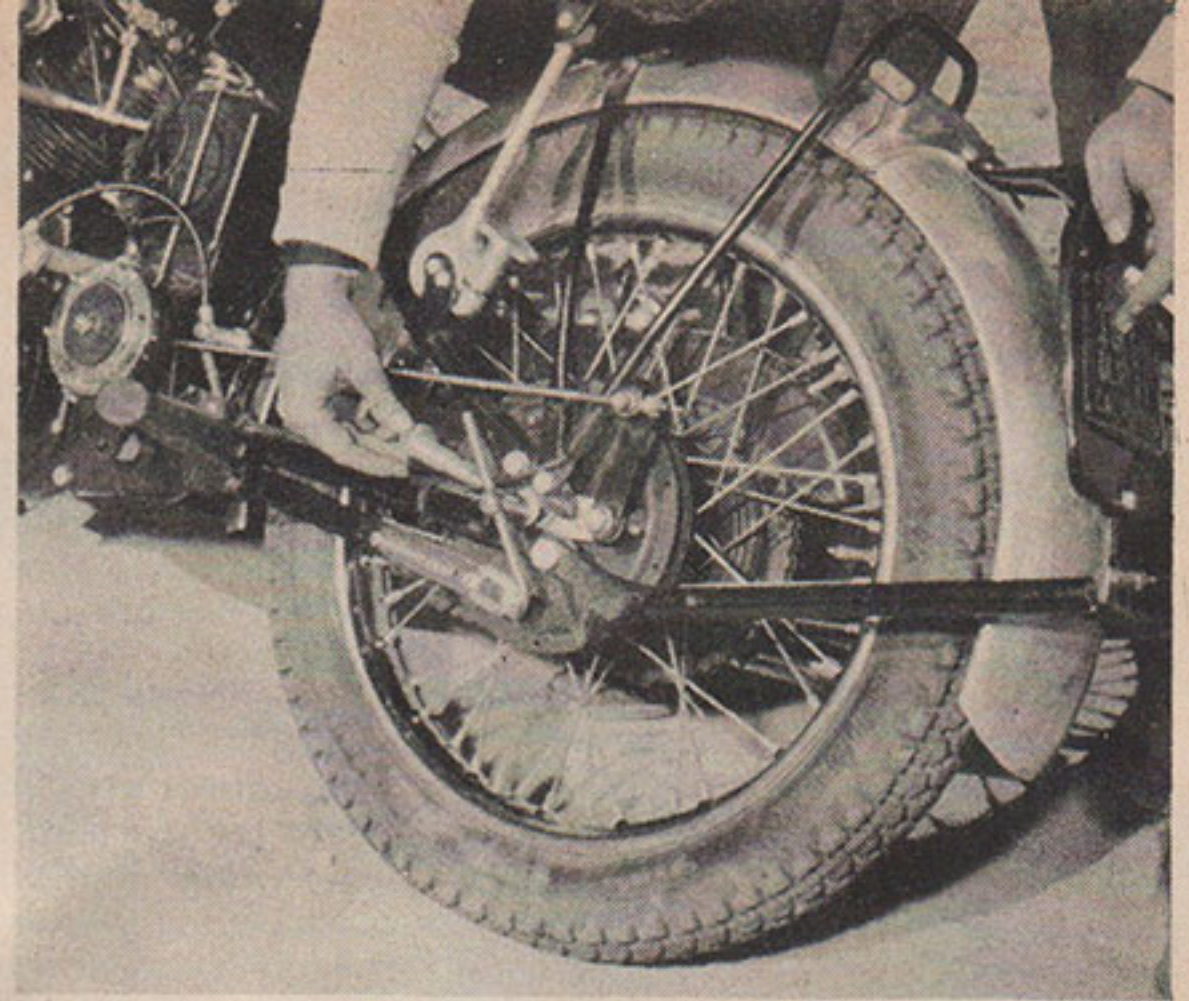
(Continued on next page)



Absence of conventional frame is startling at first. Super efficient springing allows both the front and rear forks to be affixed directly to engine. Note large dual brakes on both wheels



Cowboy loved his horse but was sold on the Shadow. Our paths crossed when road test took CYCLE crew to Red Rock Canyon where 16mm western TV movie series, "Cowboy Slim," was being filmed. Note sliding toolbox tray beneath saddle. Sculptured saddle is notched for passenger, prevents him from crowding driver



Many adjustments on the Vincent can be made by hand without tools. Rear wheel adjustment (as shown) is controlled by large knurled knob after loosening rear axle by permanent spanner. All four brakes can be regulated in seconds

system has been done away with and that the conventional footshift arm is now grafted directly onto the actuating shaft, thus making for a much more accurate and sensitive control.

If your Vincent doesn't have this alteration, install it yourself. It will make a "night and day" difference. With this modification, there are few machines that shift easier.

RIDING POSITION

"Bottoms up" best describes the attitude of a rider using the standard handlebar-seat arrangement. After a few short miles of normal riding the stubby, near-straight bars were felt to be tiring and short on leverage at low speeds. As an experiment a very moderate up-swept bar was substituted. The difference was slight, both as to length and rise of bar, but just enough to allow the rider to assume a more natural, relaxed position. The saddle was deeply cushioned and excellent for riding

double. Beneath the saddle is a sliding tray toolbox, out of the way but easy to reach. For high speed work the rear half of the seat, and passenger footpegs were used, allowing the rider to lay on the wind at a comfortable 45° angle.

AT SPEED

When it came time for the supreme effort, Rosamond Dry Lake was out of the question. A series of rare California rains had pummeled the lakebed beyond use. It was a cold and gusty day and we finally decided on a secondary macadam highway for our run against the watch.

Now settle well back in your chair and brace both feet firmly against the floor while I recite the first two and only top gear runs against the stop watch. Without making a single adjustment or plug change, the Shadow rocketed through the 1/10 mile trap in 2.8 seconds. Another check ride was made im-

mediately following with an identical stop watch reading translating into 128.57 miles per hour. The speedo was showing right at 126 mph during the run—less than a 3 mph slow error. An approximate 15 mph wind was blowing from the right three-quarter rear direction and undoubtedly had some influence on the speed of the machine. I would estimate the effect to be not over 3 mph (possibly less) since it was as much a side wind as a tail wind. It should be pointed out that the unevenness of the roadway was enough to prevent a full flat-out riding position. In view of the circumstances, both favorable and unfavorable, it is felt that the results of this test were fully representative, proving beyond a doubt that the Black Shadow is the fastest standard road bike offered from a showroom floor.

ONLY FOUR BRAKES?

Yes, there are actually two brakes to each

General Specifications

ENGINE. 60.92 cubic inch (998cc) OHV 50° Vee twin. Bore 3.30" (84mm), stroke 3.53" (90mm). Compression ratio 7.3 to 1. Aluminum alloy cylinder heads. Inclined valves; twin guides, shrunk in seats. Enclosed and lubricated rockers of forged steel run in duraluminum bearings. Aluminum alloy pistons. Aluminum cylinder has cast iron liner. Forged connecting rods 65 ton nickel chrome steel, polished. Con rod big end runs on three rows of roller bearings. Crank pin 1 9/16" diameter of casehardened nickel chrome steel. Drilled oil ways in pin, flywheel, and main shaft insure lubrication to big end. Separate camshaft for each cylinder operates 6" push rods. Four large diameter main bearings provided in crank case, two to each main shaft. Three are roller and fourth is ball bearing.

CARBURETORS. Twin Amals, 1 1/8" diameter chokes. Air cleaners extra. Individual choke levers on handlebars.

TRANSMISSION. Unit construction with engine. Gears are casehardened nickel chrome steel. Four speed foot shift, hand clutch. External gear indicator lever can be used to find neutral or change gears by hand. Kick starter can be mounted on either side of machine.

LUBRICATION. Circulating dry sump system. Large double acting rotary plunger pump, worm driven. Oil from tank passes through gauze filter, then through 54 sq. in. full flow fabric filter, then to big end assembly, camshaft bearing, rear cylinder walls.

IGNITION. Gear driven Lucas magneto with automatic advance.

ELECTRICAL EQUIPMENT. Miller 6 volt, 50 watt, voltage control generator driven from primary chain and the sprocket is easily detachable. Sealed beam headlight. Stop taillight. 13

ampere hour Exide battery. Disc type horn. **CLUTCH.** Special Vincent design in separate oil-tight housing in chain case cover. Single plate clutch provides expanding pressure to work pair of shoes in cast iron ribbed drum.

DRIVE. 3 row primary chain. Rear is Reynolds 5/8" pitch X 3/8" wide. If desired a second sprocket can be fitted to left brake drum and ratios quickly change by reversing the wheel. Gear ratios with standard 21-tooth sprocket. Top 3.5, 3rd-4.2, 2nd-5.6, 1st-9.1 to 1.

FRAME. Unorthodox system practically eliminates conventional framework, employs engine itself as main support. Bottom of steering head is bolted to front cylinder. Strong concealed oil tank also connects steering head to rear cylinder. Only other frame member is swinging rear fork assembly, bottom of which pivots from mounting at rear of engine unit, and top of which works against a spring and shock absorber unit anchored atop rear cylinder. Rear fork pivots on large Timken taper roller bearings, has 6" travel.

FORKS. Girdraulic system is actually refined girder type. Main fork legs are forged light alloy blades of tapered oval section. Two long coil springs, one within the other, are housed in tubular retainers one on each side and to the rear of main fork to handle spring action. Special hydraulic dampener is mounted in upper center of main fork. An ingenious quick-change eccentric device provides a variation of spring loading and fork trail to suit solo or sidecar use.

MUFFLER. Two 1 5/8" diameter headers join in common silencer. Pipes secured to heads by finned nuts.

HANDLEBARS. Narrow straight type rigid mounted, adjustable. Up-swept bars optional. Left bar, clutch, compression release, horn, dim-

mer switch. Right bar, choke levers, front brake and throttle.

WHEELS. Mounted on Timken taper roller bearings. Die cast aluminum alloy hub, wheels detachable without tools, chrome plated steel rims. Heavy gauge spokes, cadmium plated. **BRAKES.** Four in all, two to each wheel. 7" diameter, 7/8" wide. Nickel-chrome alloy cast iron drums deeply finned.

TIRES. 19 X 3.50 rear and 20 X 3.00 front.

TANKS. Pressed steel gas tank 4-gallon capacity. Drop rear end prevents water or dirt reaching tap outlet. Twin gas taps, one for reserve. Oil tank forms part of frame, capacity 6-pints. **INSTRUMENTS.** Smith's chronometric 150 mph speedometer with illuminated total and trip recorder. 5" dial mounted almost vertically above front fork. Ammeter mounted in headlight shell.

SADDLE. Feridax dual seat. Leatherette covered. Form fit for both riders. Unique friction dampener compensates for added weight of passenger by hand adjustment.

FINISH. All enameled parts bonderized and finished in best quality enamel. Tanks, frame, forks, engine base, cylinders, primary case and transmission finished in glossy black. Fenders have bright metal finish.

TOOLKIT. Includes tire pump. Complete set of tools, grease gun and tire irons contained in tool box beneath saddle.

WEIGHT. 458 lbs. dry.

OVERALL LENGTH. 85 1/2"

OVERALL WIDTH. 25 1/2"

WHEELBASE. 56"

GROUND CLEARANCE. 6"

SADDLE HEIGHT. 31"

"DICING"* WITH DORAN

**AJS Racing Team Collects
37 International Titles.
Bill Doran, Captain,
Reminisces
By William Onslow**

LAST MONTH'S MAG broke the exciting news of an outstanding achievement in the motorcycle world concerning the AJS team's record-breaking efforts at Montlhéry track just outside Paris. Thirty-seven records were salted away for solo and sidecar machines, ranging from ten miles to one thousand kilometers (621 miles). Leader of the team was Bill Doran, who had never ridden a sidecar machine seriously before this attempt.

Being interested in learning more about this business of speed, I headed for the AJS factory to collect some first hand information from Bill himself. I set out through the mists of a typical British morning on my 600 Panther outfit, along the leafy lanes of rural South Buckinghamshire. It was here in the church of Stoke Poges that poet Gray penned his *Elegy Written in a Country Churchyard*. Soon I was winding across London, an experience as lively as trying to get out of Chicago during the five o'clock rush hour.

Reaching the AJS works at Woolwich on the banks of the Thames in Southeast London, I parked the Panther, hurried into the firm's offices and soon found Jock West, one of the greatest personalities in the game. Jock is a veteran of the racing world, having spent 20 active years in it. Few have had wider racing experience on so many varied machines. Only last year he finished high among the leaders in the machine-breaking, nerve-racking Ulster Grand Prix, placing just ahead of that great racer Harold Daniell.

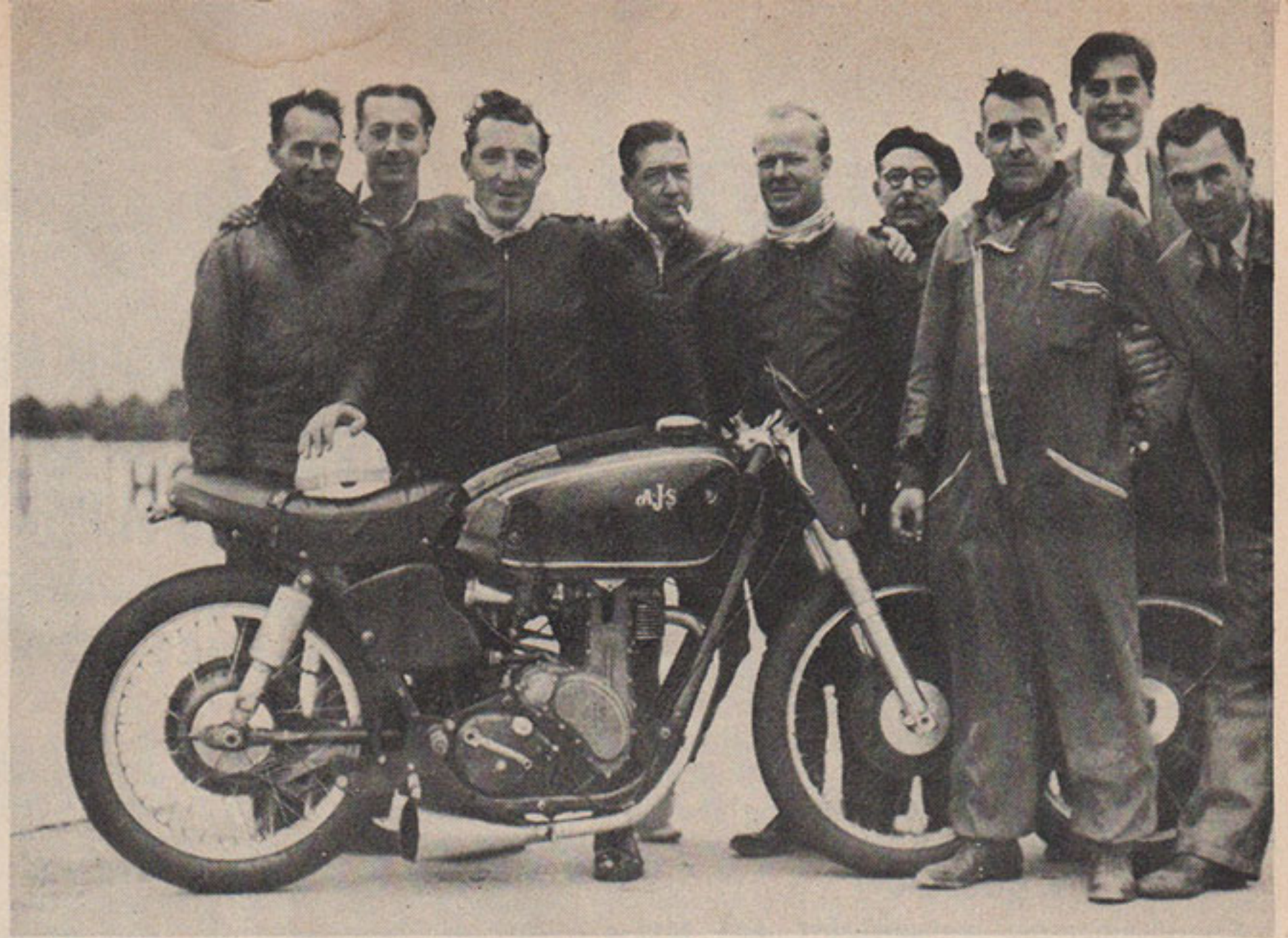
After I had explained the purpose of my visit, he gave me a friendly grin and left. A minute later I heard a roar "Bill!" and looked up to find the object of my visit—Bill Doran. Giving way to an irresistible impulse I greeted him with: "Hullo William Bendix." He laughed and said, "OK chum, I'll go quietly." Yes, Bill Doran looked like a streamlined version of the American movie star, with his husky build, weather-beaten face, and keen steady eyes. Thinking a few personal details would be interesting, I began by asking for information about his career as a racing man. Bill became thoughtfully silent.

"Here, let me in on this," said Jock West, and he began to unload a stream of dope about Bill—so fast and furiously that it was all I could do to keep pace with my pen. Bill literally wriggled with embarrassment while it was explained that sheer determination, will power, willingness to take advice, and his hail-fellow-well-met attitude had placed him on the topmost rung of the ladder during his six-year career. Then, with a glance at Bill, Jock thundered, "We'll do better next year when you begin to bite larger lumps out of the sponge, won't we?"—meaning that Bill could perhaps lie closer to the tank for longer periods to overcome wind resistance.

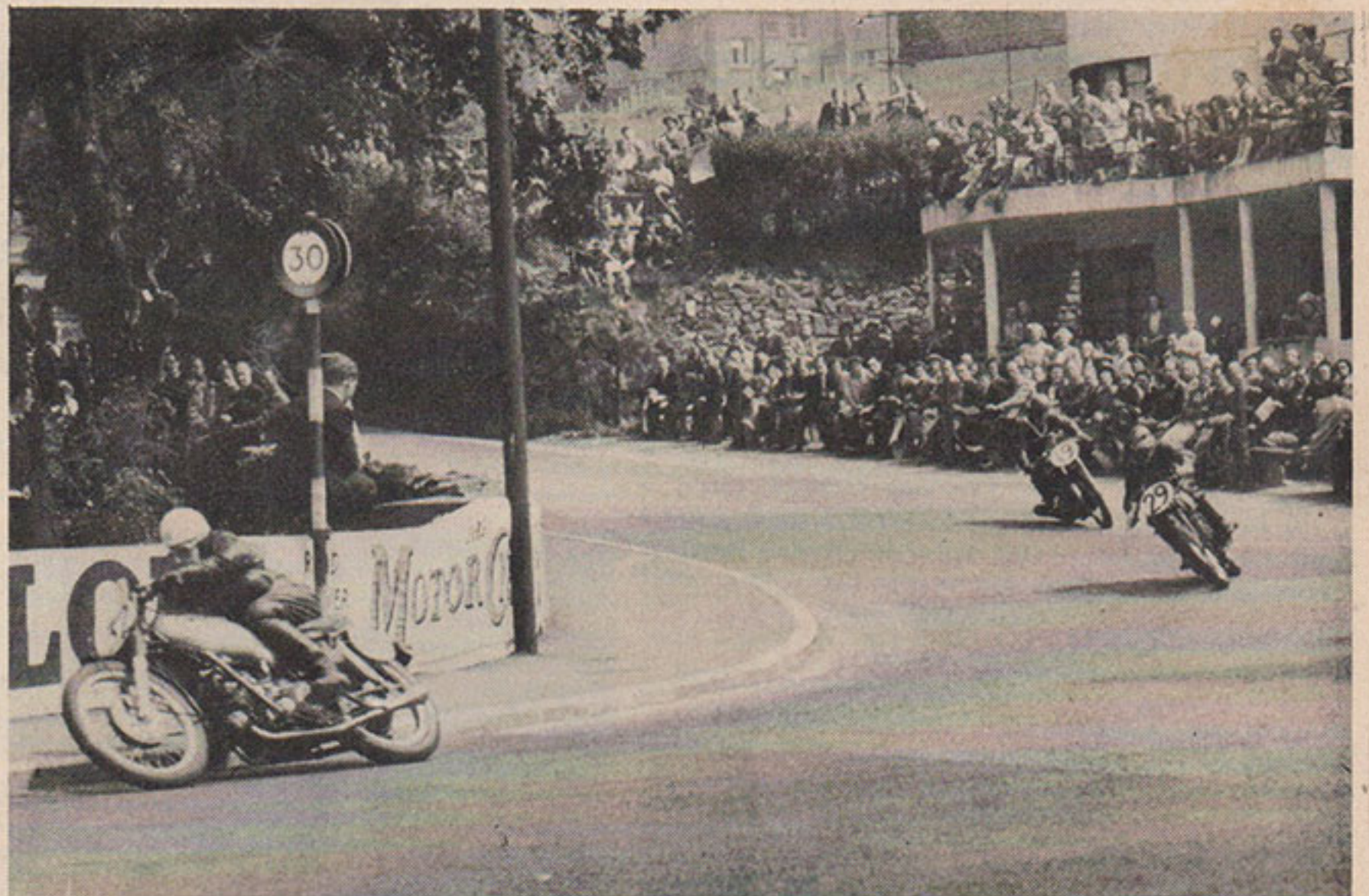
"Make 'em bigger and I'll get inside the ruddy thing," Bill retorted.

With increasing respect for the AJS rider I turned to Doran and made an opening re-

*British expression for racing.



Heavy handed throttle mashers are all subdued by cameraman. Here is the victorious AJS team including Dunlop fitters. Racing manager and chief tuner is Matt Wright, third from right. Both gas and oil tanks are notched for crouched riding position. Diameter of exact proportioned exhaust funnel and length of pipe have direct bearing on engine scavenging



With wheels still on the road, Bill Doran lays well over curb as he seeks groove through corner at Quarter Bridge. Position of pursuers indicate the arc riders scribe at this difficult bend in the famous Isle of Man TT

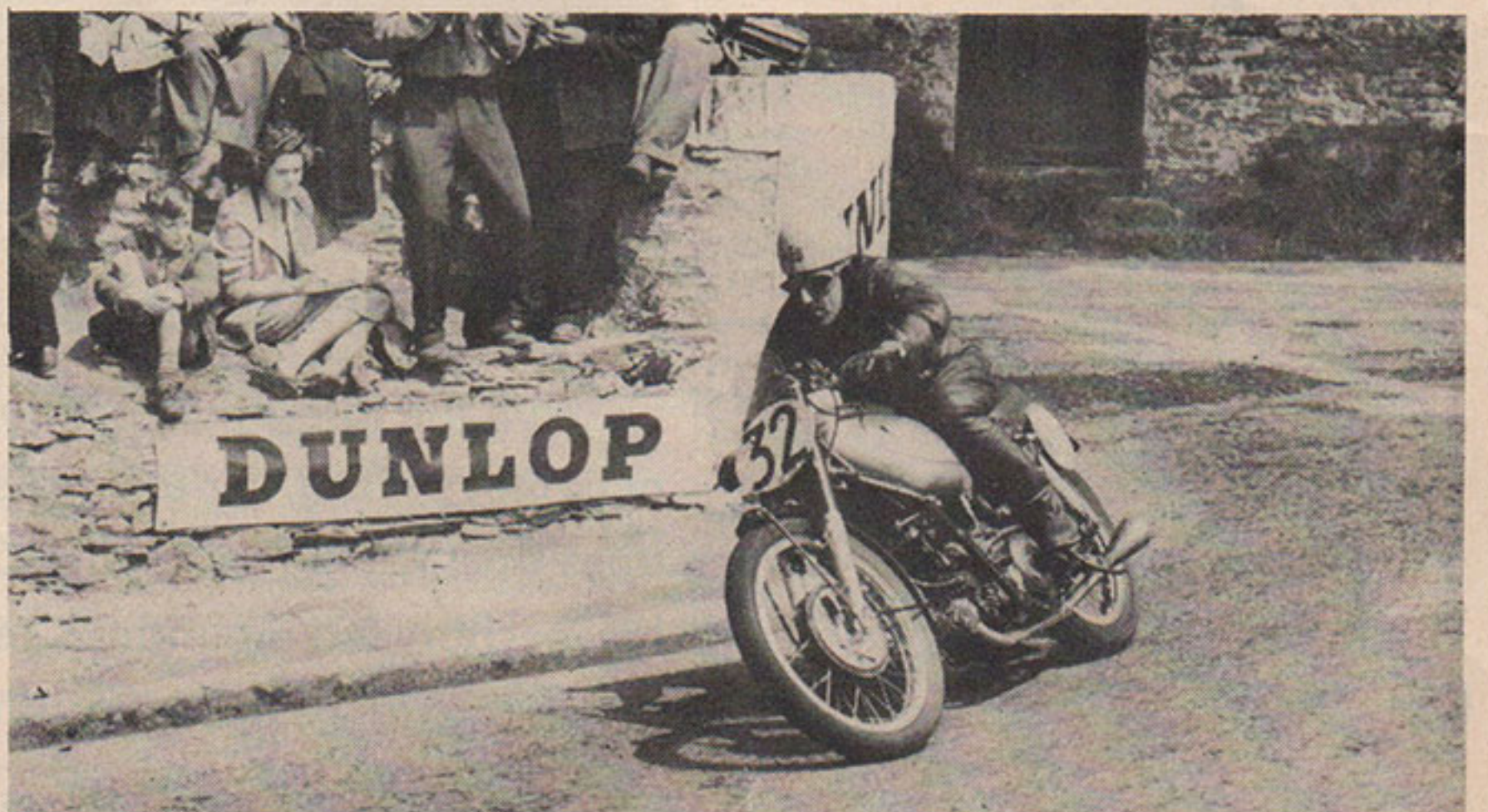


Photo Courtesy "Motor Cycling"

Governors Bridge, sharpest turn of the Isle of Man, calls for terrific deceleration through the gears and masterful braking. Rocketing down brick-lined corridors into corners such as this is like diving into a rat hole at a hundred. Wet course means only few seconds time difference

mark which led to an important lesson in the craft of motorcycling. "Tell me a little about the care and preparation of a racing machine, assuming that having ridden for years, I have a fair knowledge of mechanics."

"Don't wait until the day before a meet to decide to lay a wrench on your machine. You can never guarantee yourself a trouble-free run, but a few minutes spent in examining cables, control levers, and even smaller items, will pay a bonus. Give equal attention to your spares and make sure that they are well packed and accompany you at all meetings. Nothing is more frustrating than to be a non-starter through a mishap in the practice periods. There is one part of the preparation for a race that I make entirely on my own. As I have to ride the machine, I want some things my way. The positions of the saddle, controls, and footrests have to be right. If you are going to be stuck on a machine for an hour or two you want to be as comfortable as possible and be able to drive efficiently with the least amount of strain."

"Talking about comfort, Bill, what about clothing. Does it make much difference what you wear?" This question brought Jock to his feet, and crossing to a cupboard, he tenderly pulled out a large photograph album. "Here's your answer." The three of us clustered



NEW
Paulite
bubble-goggles

- NO DISTORTION
- 100% VISION • DUST PROOF
- PROTECTS EYE GLASSES
- LIGHT • COMFORTABLE • SAFE

Ask your dealer
HE HAS THEM

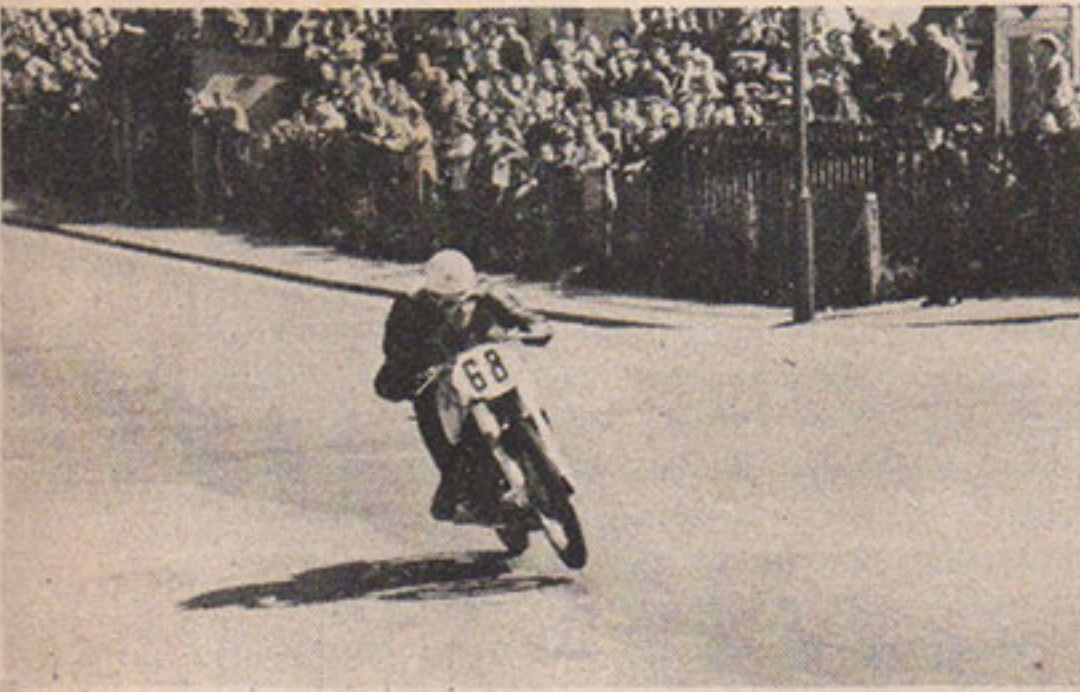
ANDERSON
Motorcycle supply

8314 S. Central Ave., Los Angeles 1, Calif.

FLANDERS MFG. CO.
175 N. Vernon, Pasadena, Calif.

HAP JONES
235 Valencia, San Francisco

FLORIDA CYCLE SUPPLY
1049 Kings Ave., Jacksonville, Fla.



Doran with front wheel aloft at 120 per, buzzing the bottom of Bray Hill during Tourist Trophy meet. At certain points on the course, a turn must be maneuvered the instant the front wheel comes back to earth, calling for critical timing

around his desk to view the thirty-odd-year fashion parade in racing clothing. How they contrasted with the pictures of the record-breaking team in their one-piece, comfortably tight, tailored leathers. Pointing to one Jock said, "See that zipper tab up against my neck? It darned near lost me the race with its irritating flapping." Of another he commented, "After this one I decided never again to wear a narrow leather belt." Turning over a couple more pages he was halted by Bill who said, "What's this, a sea elephant?" There it was—a rear view of Jock. He is not a small man in any sense of the word, and the wind in his large two-piece leather suit had blown it out until he looked like an advertisement for Michelin tires.

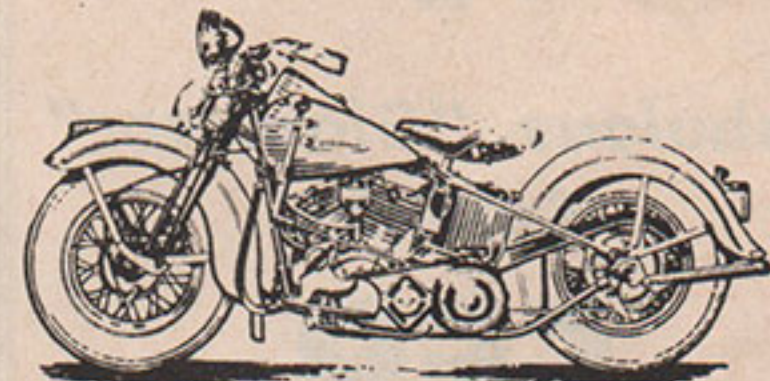
"We used to think we were trying in those early days, but we weren't really." Picking up a record shot once again Jock remarked, "Smart youngster, the Duke, when he came out in the first of these wind cheaters." Bill's reply was, "Ain't the ruddy suit that makes him go, because I've paid for mine too." "Well, Bill, you would be in a stew if the tailor called to take them back during a meeting, for I understand that beneath them you wear only shorts and T shirt." "That's right" he said, "racing is certainly hot work in more ways than one. A helmet, too, can be a bother. Make sure that it's a snug but not a tight fit and, by the same token, not bobbing about like a cork in water." On my inquiry about gloves, boots and goggles, he remarked that he always wears thin-soled boots. These give him a sense of touch in feeling the gear

(Continued on next page)

**FOR YOUR BEST BUY
IN USED MOTORCYCLES**

See Rich Budelier

**1948
HARLEY-DAVIDSON
as low as \$375**



We have a large number of '47s, '48s and '49s turned in on new machines. This is your chance for a real bargain. EVERY MACHINE GUARANTEED — Backed by 30 years of fair dealing at this same location.

**BRING THIS AD TO RICH
BUDELIER**

it will entitle you to
18 Months to Pay and Bank Terms

RICH BUDELIER

2531 South Main Street

Los Angeles, Calif.

PRospect 6235

BUY DIRECT FROM THE MANUFACTURER

Men's and Ladies' Jackets



- Men's front quarter horsehide....\$27.95
- Ladies' front quarter horsehide.. 24.95
- Detachable fur collar..... 7.00

WE MAKE 'EM
Our lowest price
on this motorcycle
jacket in fifteen
years!

Our own design made expressly for America's leading motorcyclists! Cross zipper front! Windproof zipper sleeves! Plenty of zipper pockets! All wool lining! Belt loops at waist. Double action back: Black or cordovan. Sizes 34 to 44.

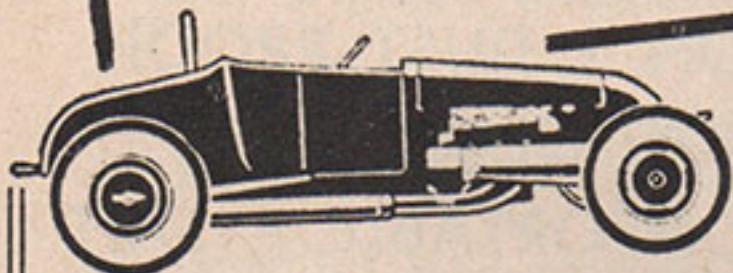
A DEPOSIT REQUIRED ON MAIL ORDERS

Will send postpaid if cash accompanies order. Add 3% for Calif. state tax. When ordering by mail, give weight and height. Jackets by the thousands. For immediate delivery. Also made to your measure.

Trojan Leather Sportswear

1101 South La Brea, Inglewood, California—OREgon 8-3596

**GET READY!
IT'S BIGGER!
GREATER!**



**Third Annual
NATIONAL
Roadster
SHOW**



**Fabulous "Glamotor"
Exhibits!**

**FEB.
19-24**

For information on entries (all cars compete for awards) or data on commercial exhibits, write to National Roadster Show, Exposition Building, 918 Fallon Street,

**OAKLAND,
CALIFORNIA**

FOR SALE: At dealer's cost, new 1951 Indian TT Warrior never removed from original crate. A real buy for cash. No trade in.

JOE HILL
11311 S.E. Division, Portland 66, Oregon

**ROBBINS
PISTONS**

Write for current price list

ROBBINS MANUFACTURING COMPANY
1530 Spence Street, Los Angeles, California

"DICING" WITH DORAN

(Continued from page 25)

lever. He likes gloves to be thin but strong. Quite a discussion followed about goggles, a subject to which more space is devoted later in the article.

"Now that I look the part, how about a spot of 'dicing,' Bill? Start at the beginning, for I have never put a machine into action with the 'run and bump' of the race game. Is it as easy as some of you fellows make it look?" "Well," he grinned, "a good start is most important. A race can be chucked away with a bad one. As for being easy, watch Fergus Anderson for split-second reaction at the fall of the flag. Though I have practiced starts for hours on end, I have never developed his uncanny sixth sense in knowing the starter's mind."

"Suppose I have that sense but fail to get away because I haven't the knack of getting the engine to fire?" "Hmm," Doran chortled, "maybe you forgot to put in a plug when you intended to change it after the warm-up. Many make the mistake of flooding the carburetor too soon. In fact, I have been guilty myself." Turning to Jock he said, "Give him the drill. I can stand hearing it once more."

"Be brutal and really abuse the clutch in your initial get-away. Keep the thing on 'full noise' and remember that you have little power below four to five thousand revs. Make sure that your motor is on the compression stroke and beat the flag if you can. Most starters have some peculiarity that gives a warning that his arm is about to fall. Take it from me, a good start is half the battle especially in short circuit events. One further point, in these days of the megaphone you cannot use your ear to judge the revs, so if your counter 'goes up the spout' you may as well pack in before you wreck the machine."

Now thoroughly fascinated and already feeling as if I could beat a dozen starters, I began to think about that first corner and the many others that would follow. Turning to Bill I said, "Essentially a sidecar man myself, I feel alarmed at the way you fellas heel over in a bend. What enables you to keep up at that angle, and how do you decide what line to take?" He looked a bit thoughtful before replying, "There is a lot said about this line business but on the wide aerodrome tracks you could take a dozen different ones, all equally correct. In road racing it is generally accepted that the only way is to brake while the machine is still following a straight line and in an upright position. Then make for a spot deep in the corner, turn short, and clip the opposite side of the road well past the apex of the bend as you open the taps once more. If two or more corners follow in rapid succession and one must be taken on the wrong line, always make it the first one. Providing you follow these essentials, modern tire design will keep you from biting the dust, but at all times go in slow and come out fast—making sure you're going to last."

"Bill, your idea of slow does not measure with my own. What if I tailed a man of your caliber into a bend, then found I couldn't make it?" His reply suggested that I should not try to run before I could walk, but if I got in a spot, the best thing to do was to straighten up and make for the open spaces. Should I take a toss, I must endeavor to throw the machine away from me before landing, with body relaxed.

I next chipped in about a braking point and this caused Jock to reenter the conversation. "Of course, that theory about spotting a braking point in advance has been exploded. Braking is done, in most cases, by the wind resistance of the human body as one straightens up to a sitting position and by change through the gears. The two methods apply when dropping from around the 120 mark

to about 70 or 80. When you are obliged to use the anchors, follow the method stated by Bill.

Again I tackled Bill. "You spoke about line as if it were your own particular piece of road. Suppose a rider ahead decides to take your line and he is riding slower than you?"

"In that case decide your line for passing well in advance and do not change your mind. A man who continually alters a decision cannot last long in the game."

"But Bill," I protested, "I have often seen you approach a rider on one side, then with a sudden change of direction, pass on the other. Isn't that suicidal?" "So you've fallen for that too" interrupted Jock. "It's funny that the spectator never seems to realize that a racing man's speed is only relative to that of other competitors in the event. To Bill, the other fellow is practically stationary, while he himself might be moving four or five miles faster. If you forget the speed, the same kind of passing takes place on the open road every day. It's only Bill's quicker reaction that makes it easy for him to do at 120 what ordinary folks do at 40. Bill made up his mind on how he was going to pass during the approach, and really he takes no chances."

My next query was directed to Jock. "How on earth do racing men manage such fantastic speeds in the rain? Even in your early days, when tire design was not so advanced, wet weather could not bring down the curtain on a day's program." "No" said he, "nor fog either. I can remember the marshals going up the mountain, carrying flares in the 1932 Manx Grand Prix. But let's get back to your question. Speed in wet weather is no more dangerous than under normal conditions. A driver naturally brakes earlier and perhaps corners a little slower. Bill, you tell him about the real curse of wet weather riding." At once came the one word "Goggles."

"Goggles are perhaps the most important item in a racing man's kit, and are often the most neglected. Choose a pair that form to your face, afford full vision, and are unbreakable. Prepare them properly before each event, not forgetting to check the elastic and clips. Whenever it rains you are bound to have goggle trouble, and blurred vision can't be avoided. When this happens don't get into a panic and above all, don't lift them while you are moving. Sometimes it's a big temptation to do so, but it is best to leave them alone. Drive as fast as you can with respect to your safety, and content yourself that a fresh pair will be available at your pit."

Leaving Bill to ponder over the problems of wet weather and goggles, I turned to Jock and asked about riding positions. "Well, my aim is to cheat the wind as much as possible. Remember the NSU record run with a fully streamlined sidecar outfit, and look at the many tests that have been made in the wind tunnel at the Guzzi factory! Here are some astounding figures of resistance achieved merely by the body of a rider shifting from the crouch to a sitting position."

Bill's answer to my next question was surprising. I said, "Of course one must be physically fit for the game, but what special preparations do you make?" He had trained all last winter with one of the great London soccer teams and as a result his reactions had increased and his body become more flexible and less likely to cramp. Then he stated, "The most important thing is to develop your powers of concentration. Once the race has started, you are a man alone. Many things are apt to pass through your mind as you battle along hour after hour in a race. Train yourself to think of nothing but the job in hand and you will clip seconds off your lap time. I have had it drilled into me so much by the Guv'nor here that now I don't even recog-

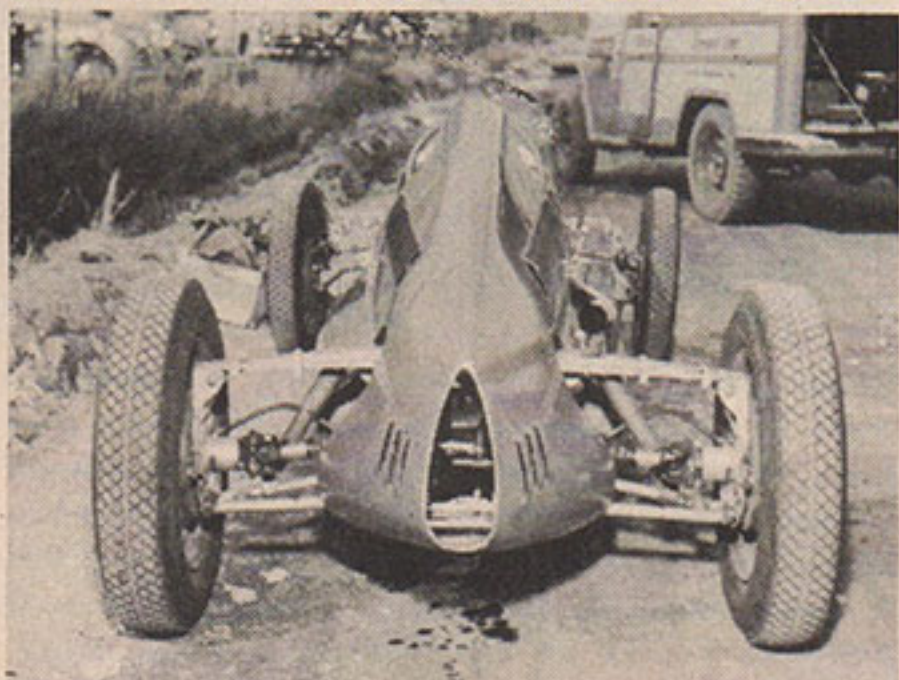
(Continued on page 32)

JAP IN JAG'S CLOTHING

(Continued from page 17)

The JAP motorcycle engine whined up to peak almost instantly in first gear. While I shifted to second I began to pass more MGs, all of them revving and shifting as I was. The Cooper caught one after the other without apparent effort until, by the time the first turn loomed near, I had taken all but one. I caught him just going in, then suddenly realized that I was too far in, going too fast to make the turn. I could stand on the brakes and slide it, but I might get the MG in trouble if I did that. So, I figured, what the heck? I wasn't competing for money or glory and the guy behind me was. If he got in trouble because of me, he'd be very unhappy and so would I. So I took the escape road off the corner at top speed and let him go around with a clear road ahead.

As I stopped and turned back to the track, I began to reflect a little. I had just driven the first 300 yards in the first road race I had ever seen, let alone entered, and I was driving a car that could not be entered in sports car competition for several reasons. For one thing, sports cars must run on pump gasoline and the Cooper demands a steady diet of methanol with a one-percent solution of castor oil for top-engine lubrication. Besides, the Cooper carries only one man, preferably a small one, and sports cars are defined as having a body for two or more passengers. Then there is the little matter of a top, windshield, headlights, spare tire, etc. So all the



Springing front and rear is identical. "A" frames form lower support with transverse leaf springs above. Magnesium artillery type wheels are used for extreme lightness. Will the advent of a cycle-powered racer mean more interest and an earlier entrance of bike enthusiasts into the long awaited paved circuit type of racing?

Cooper could do at Reno was scamper around the course for show and the MGs were playing for keeps.

When I re-entered the course from the escape road, I was again dead last. Now, however, the sports cars were going full-bore and it wouldn't be as easy to catch them. The Cooper doesn't shine in top-speed contests.

Despite that, so incredible was the cornering of the little car that it began to crawl up on the others immediately. As I began to pass again, the MG drivers would look over and crane their necks down to stare at me in astonishment. By the time the starting line whizzed by, Cooper led the field again.

Once I was ahead, the pit gave orders to take it easy. For a couple of laps I loafed around, never in danger of losing the lead. On the next circuit, the blackboard was up and it read, "one fast lap." With the heat turned on, the little JAP engine pushed around the 2½ miles in just a little over 2½ minutes, only a little slower than the fastest lap of the day, set by a Cad-Allard. Five hundred ccs almost tied 5,000 ccs.

Credit for the showing at Reno rightly belongs to the Cooper body and frame and the JAP engine. Those of you who have followed

(Continued on page 33)

AMERICA'S
NEWEST
LIGHTWEIGHT!

AMBASSADOR MOTORCYCLE

Equipped with the world famous 197 cc Villiers Engine. 90 miles per gallon. A lightweight with big machine performance.

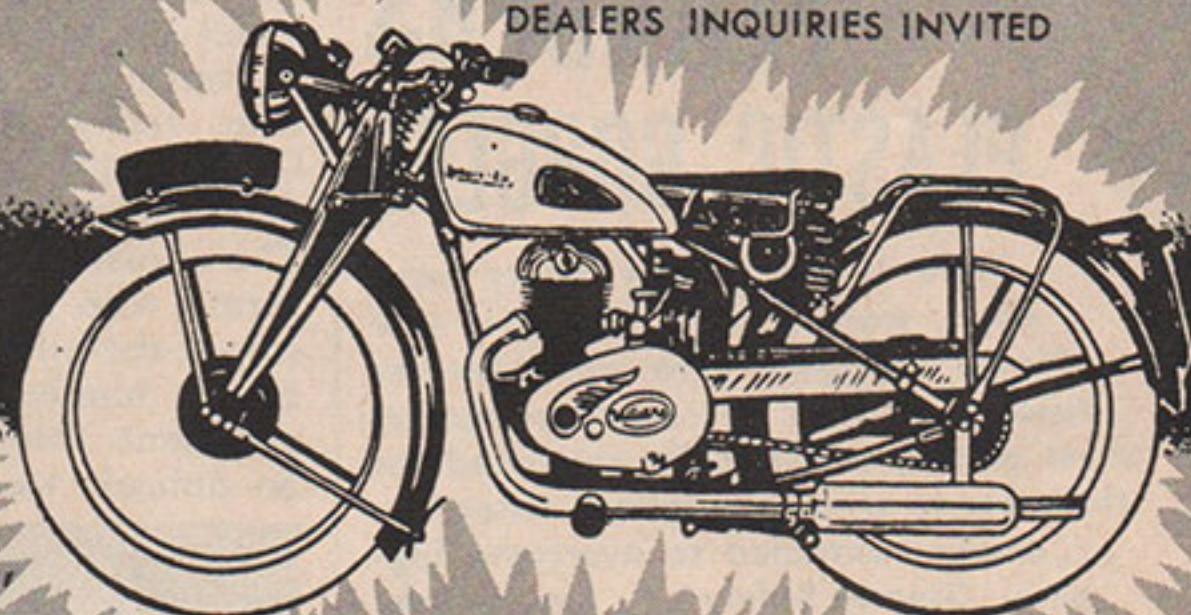
\$351 Retail Price

Including Federal Excise Tax
F.O.B. San Francisco
DEALERS INQUIRIES INVITED

United States Distributor

HAP JONES

235 VALENCIA ST.
SAN FRANCISCO 3-C,
CALIFORNIA



FAMOUS **JAMES** MOTORCYCLES

AND

Villier's Engine Parts

FOR ALL MODELS, NOW AVAILABLE • Write or Wire Today

— See The New —

COMET 98 cc — 2 Speed

CADET 125 cc — 3 Speed Foot Shift

CAPTAIN 197 cc — Deluxe

Telescopic Fork, Rear Spring Action

MIDWEST IMPORTING CO.

THE MART

MUSKEGON — MICHIGAN

Dealer Inquiries Invited

Prompt Service
on Mail Orders

PARTS — TIRES
BATTERIES

See It — Ride It
You'll Buy It

CONVENIENT,
GUARANTEED
DELIVERY . . .

AT A REAL SAVING.
YOU WON'T MISS A
SINGLE COPY WHEN

CYCLE



▶ YOU USE THE
HANDY ORDER CARD
IN THIS ISSUE.
GET YOUR COPIES
FIRST . . .
SUBSCRIBE TODAY!



RETAILS FOR

96c

FLANDERS PLASTIC GOGGLES

Here is the goggle riders have been waiting for. Flanders new Plastic Goggles give you: Clearer Vision . . . They are made of special sheet plastic, scientifically controlled for thickness to eliminate optical distortions . . . amply ventilated to overcome fogging. Greater Safety . . . Sponge rubber face bearing area practically eliminates danger of injury. Can be worn over ordinary glasses.

See your
Flanders Dealer today.

The Seal of Quality

MOTORCYCLE ACCESSORIES

FLANDERS MFG. CO.

PASADENA 3, CALIFORNIA

ED KRETZ

ARIEL & TRIUMPH DEALER

Prompt Mail Order Service

On All Speed Equipment

Cams, Pistons, Manifolds, Etc.

417 East Garvey, Monterey Park, Calif.
ATLantic 4-5680

KEEP YOUR MOTOR YOUNG with

"LIMEX" brand
COMPOUND 9

Containing the genuine "dag" COLLOIDAL GRAPHITE as manufactured by ACHESON COLLOIDS CORP., London
Reduces friction to a minimum.
At your dealers.....75c
By mail direct.....90c

LIMEX (Sole U.S. Distributors)
242-25 Braddock Avenue; Bellerose, New York

FRAMES and FORKS

Repaired by EXPERTS

— Mail Orders Accepted —

Returned As New

MODERN CYCLE WORKS

LOUIE THOMAS

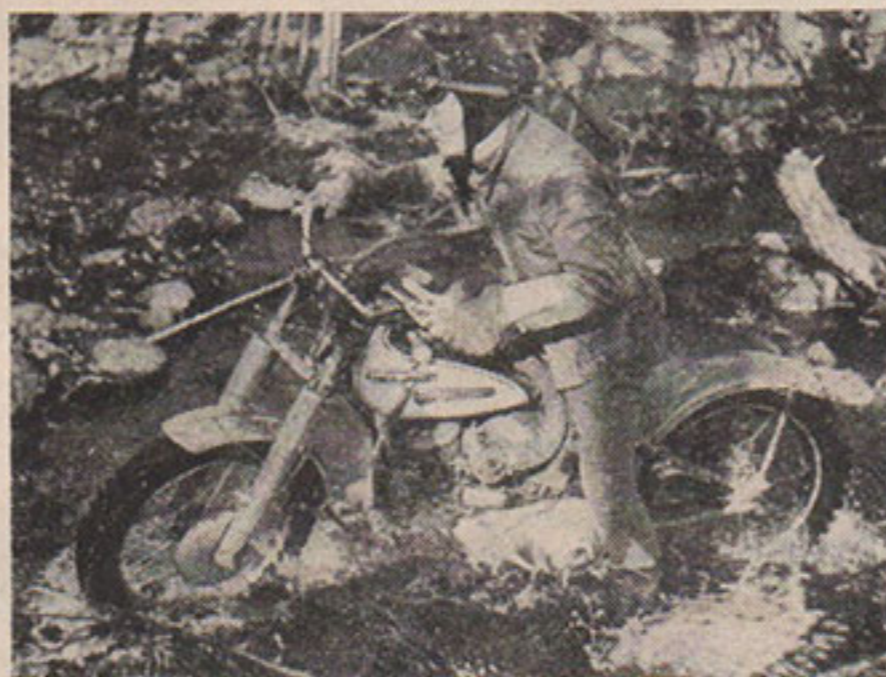
345 So. Atlantic Blvd. Los Angeles 22, Calif.

SPORT SCENE . . .

COLD TURKEY

YONKERS TURKEY RUN" are magic words to the stump-jumping contingent of the Northeastern States, conjuring memories of Tompkins Corner Hill, Ardsley Woods, and many similar well-remembered but not always so-well-loved places. For three years past, this enduro has been the Northeastern States Championship event, but this year the Springfield, Massachusetts club lost the honor of staging the event. Despite this lack of championship prestige, 80 contestants proved, by showing for the 20th annual running, that the Yonkers Run is still about the most popular hereabouts.

Starting in bitter, near-freezing temperature, riders soon felt the need for some "rough stuff" to warm up. Some 8½ miles from the start, they got it—with a vengeance. The Ardsley Woods sections were in rare form, with thick, sucking mud and slick side-of-the-hill trails, and accounted for a goodly number of the less fortunate or less persistent riders dropping by the wayside. So difficult was this section that not one of



Equipped with flexible hose carburetor snorkel and big twin hydra-glide forks, Don Pink was up to his old trick: that of winning. Precautionary measure included the taping of a spare clutch handlebar lever to the rear frame tubing

the sidecar entries reached the second check on the wood's far side. The 125cc crowd, however, was in good shape; all 11 staying within the one-hour grace period.

Alternating between hard, cold riding on the roads, and the many "left into woods—follow markers" sections, the mud-spattered trailmen wound and struggled their way over 120 miles of resisting countryside. Rocky hills and creek crossings, some terrifically tricky gumbo-glazed climbs, topped off with a worse than usual ascent of the famous Tompkins Corner Hill, added up to a run that the 28 finishers were proud to have covered.

Of the Class A men, Don Pink, Harley-Davidson mounted, has now had Thanksgiving dinner on the Yonkers M/C for the fourth time in succession, with this year's high score of 972 out of a possible total of 1000. Second was Drew Smith. Matchless—

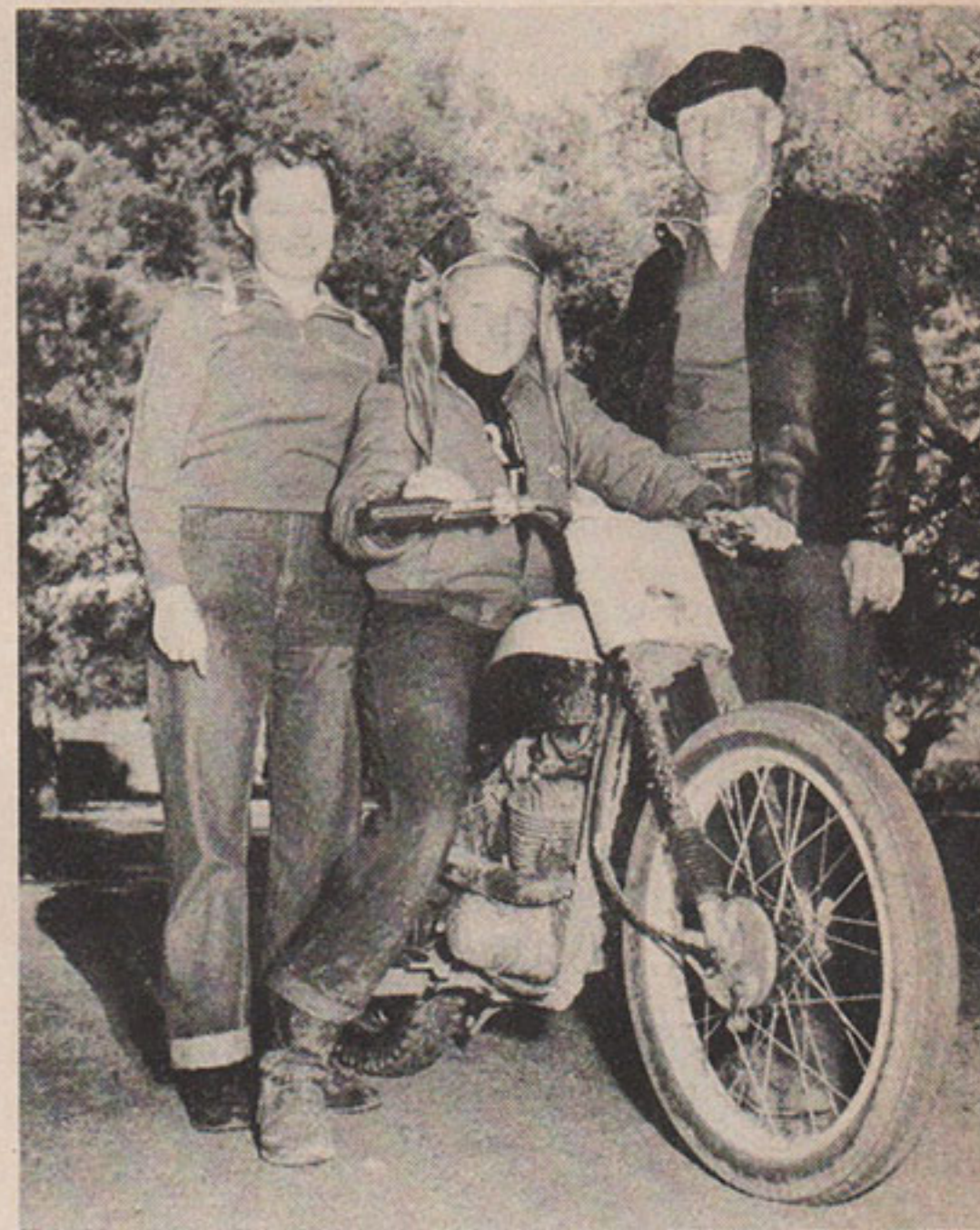


Al Kroeger blasts up a wet ravine in search of more course markers. Note huge car-type speedometer fitted atop front forks of his Triumph

967; then Dorrance Wood, Triumph—965.

In the Class B John Velsor cleaned up with 958 points, Otto Sternberg with 956, and Warren Sherwood with 955. The 125 crown was annexed by Julius Kroeger, BSA—961 points; Milt Usherwood, Puch—946; and George Hengst, BSA—933.

Metropolitan Harley-Davidson Dealers Association Team Prize Trophy was taken home to Binghamton, New York, by the Tri-States Sports Riders Team of Dorrance Wood, for Otto Sternberg and Fritz Wheeler had a total of 2868 points.



Tired but happy after completing her first enduro is 12-year-old Gayle Belin of Santa Barbara, Calif. The event was the third annual Turkey Run sponsored by the Los Gauchos Motorcycle Club of Santa Barbara. Gayle made a good showing for herself over the rugged 100-mile course of back roads and fire trails, even though she was riding in much older and more experienced company. On hand to greet her and her 125 Harley at the end of the run were her parents, Swede and Winnie Belin

NORTON TEAM FOR '52

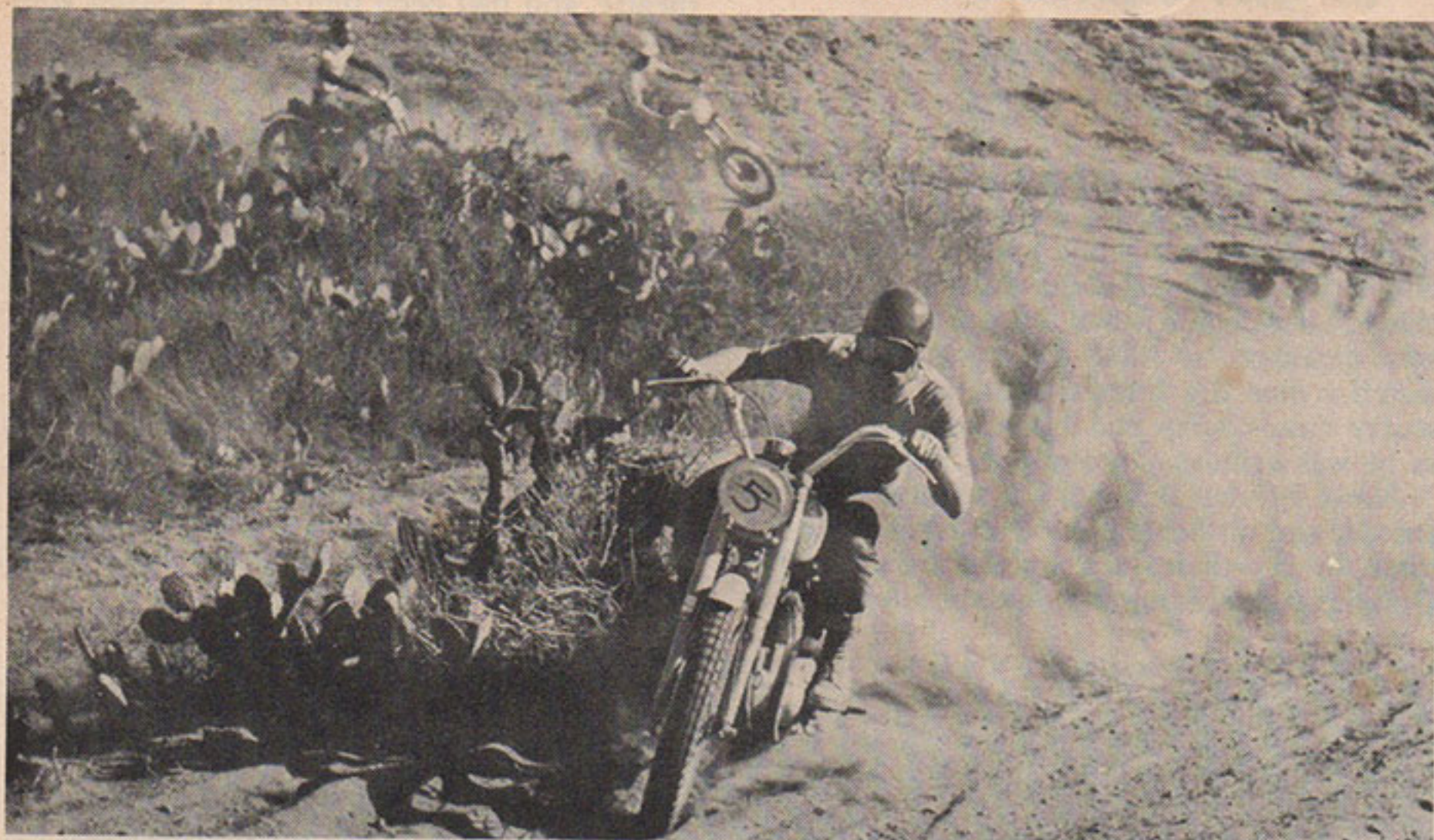
A CABLED "YES" from a young man in Australia made possible an official announcement of the Norton motorcycle racing team for the 1952 international road races.

The cable from Ken Kavanagh of Melbourne, Australia, reached the Birmingham works of the Norton company, which last year won Manufacturers' world titles in three classes. Ken's brilliant performances in major road races this past year, on his first racing trip to Europe, earned him an invitation to join the Norton corps d'elite. Kavanagh, who is 27, will sail for England on February 23.

Double world champion Geoff Duke will lead the team, which includes two more newcomers to the Norton Works ranks. Beside Kavanagh is Reg Armstrong, 23-year-old salesman employed in his father's motor and accessory business in Dublin, Ireland, and already experienced in international road racing, and Dave Bennett of Birmingham, England, 22-year-old development engineer who works with Duke in the Norton factory. As did Duke a couple of years ago, Bennett graduates to the Norton Team after winning last year's Senior Manx Grand Prix.

At the age of 35, Johnny Lockett, an electrical engineer of Oxshott, Surrey, retires from the team of which he has been a member since 1939.

ORANGE COUNTY SCRAMBLES



Walt Moore, Hilltoppers M/C of Long Beach, hustles up a cactus-lined hill during Orange County M/C scrambles. Russ Goode on a BSA made off with first place in the main event. 20 inch class went to Walt Fulton, Mustang mounted, and Glenn Clinton bested the 11 inch group with a Puch



Can't blame this tangle on women drivers. Proximity of cactus to course made falling a ticklish proposition in Orange County scrambles

'49ERS HARE 'N' HOUNDS

A GULLEY PROVIDED tense moments near the finish as Triumph-mounted Bill West and AJS rider Willie Wilson battled for top honors in the Forty-Niner third annual Gold Rush Hare and Hound.

The hunt for the "pot o' gold" began at 11:10 with all the popular brands, including a German BMW sidecar, competing. Vern Hancock, AJS, struggled through tough competition and a hazardous three miles of desert prior to picking up the lime. Hancock continued his fast pace as he led the pack

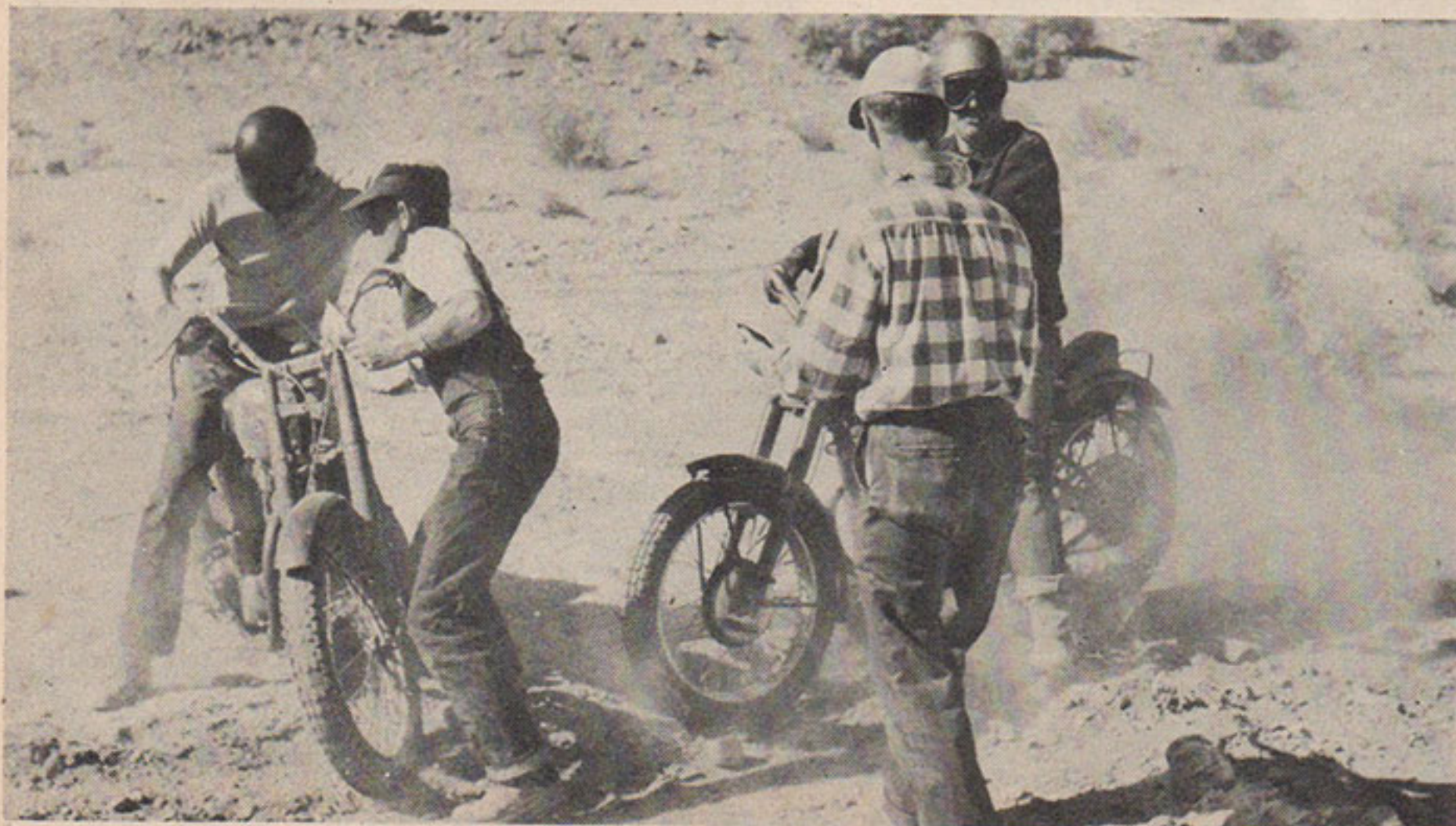
into the first check, assured of the first trophy.

The familiar cry "here they come" broke the monotonous calm at the finish line. Wilson and West were so close it was hard to see who actually retained the lead. The two, almost side-by-side, were quickly closing the gap between them and the finish, when a gully loomed ahead. Wilson, with victory seemingly within his grasp, headed straight for the crowd. Then it happened! Wilson hit the gully full throttle and was downed with a spectacular spill. He remounted and was gone in seconds. The time taken had been just long enough for West to stretch a victorious distance between them.

Out of the 136 starters, 106 were to finish, with Bill Woods on his Harley-Davidson destined to cop the 45 cubic inch trophy and Bob Meyer cinching the 126 cup. George Harrison topped all in the 15-inch class with Kieth Meker and Bill Gillian winning 49th and 69th coveted positions respectively.

A slightly humorous human-interest drama was injected into the day's festivities when one lonely rider, bewildered and lost, wandered onto the military reservation at the Muroc Air Base and was quickly surrounded by armed soldiers with a serious intent to kill. However, a sergeant who had been informed of the day's activities quickly came to his rescue. Fortunately his benefactor was not a recruiting officer.

(Continued on next page)



Staking a claim in Gold Rush Run, two cyclin' "sourdoughs" pause for verification at desert check

RIDE A
Mustang



... for fun, for sport,
for dependable
low-cost transportation.

Flashing performance. Only American machine with British Burman 3-speed, toe-shift gear box. 70 miles PLUS per gallon. 60 miles PLUS per hour. Low center of gravity for safe easy rider control. Telescopic fork. Big, comfortable cross-country saddle. Ask your dealer for a demonstration or write for free circular.

MUSTANG MOTORCYCLE CORP.

Dept. CM

635 W. Colorado Blvd., Glendale 4, Calif.

From Germany
THE HOREX



Built by Motorcyclists
For Motorcyclists
KEN KAY

Importer and Distributor—State of California
13319 Ventura Blvd., Sherman Oaks, Calif.
Phone STate 4-9249

Save that Head - -

Any iron or alloy cyl. head reconditioned with valve seat inserts. Our service makes it possible to restore your customer's engine to new condition at a price he can afford.

HUDSPETH MOTORCYCLE SERVICE

3540 No. Figueroa Los Angeles 65
Phone CAPitol 2-6256

Westerns

Start your 1952 riding season in comfort with a pair of the original custom made Langlitz WESTERNS . . . the all purpose slack type horsehide pants, built by motorcyclists, for motorcyclists, by the only firm in America today devoted exclusively to the production of custom made leather clothing for motorcycling. WESTERNS, a proven design, made of the finest jacket weight black horsehide, are expertly tailored to your measurements. Whether you are a cow trailing artist, a commercial rider or a tourist, WESTERNS are the answer to your slack problem when motorcycling, in 1952 and for years to come. No laundry or dry cleaning expenses, no skinned knees, no pockets to rip off, and no unnecessary cuffs to catch on pegs or collect dirt. Sensibly good looking, sensibly priced at \$30 per pair, postpaid. Yes, WESTERNS are custom made for the ladies, too. Note box below.



Write today for folder and measuring chart. Sorry, no dealers—factory to you only. Allow 14 days for delivery.

Langlitz Leathers

633 S.E. Morrison St., Portland 14, Oregon

Stilwell HITS ROCK BOTTOM WITH ALL PRICES!

New Indian Chief engine complete with primary, transmission and distributor . . . 1944, \$150.00.

Late model Indian Chief rear cylinders. New. Complete with pistons, pins and rings . . . \$20.00.

- ✓ 40% discount on all Indian parts.
- ✓ Complete line of Triumph parts.
- ✓ One day service on all mail orders.

STILWELL MOTORCYCLE SHOP

239 No. Los Angeles St., Anaheim, California

Old Antique Pedal Motorcycles Wanted, Any Condition. Will Pay Top Cash. Also Cash for Information. Marion Diedriks, 1827 Broadway, Seattle, Wash.



Wear a REAL CRASH HELMET

Like Race Drivers and Jet Pilots Tough, rugged plastic helmet in red or white colors, cushioned with soft sponge-rubber. Is adjustable for perfect fit. Protects against hard bumps while riding Bicycles, Motor Bikes, Motorcycles, Motor Scooters, Motor Boats, Hot Rods, etc.

Wear It for Safety!

Sorry No C.O.D. - Money Back Guar. only
WAL-MAR PRODUCTS COMPANY
10023 S. St. Lawrence Ave., Dept. M-3 **\$2.98**
Chicago 28, Illinois

WHEN IN SAN FRANCISCO STOP AT
FRANK SERVETTI'S
TRIUMPH, ARIEL AND MUSTANG
SALES AND SERVICE

375 Valencia St., San Francisco, Calif.
Market 1-9918

SPORT SCENE (Continued)

CANADIAN BACKWOODS

APRIL FOOL'S DAY turned out to be no foolish date for the British Empire M/C, which held its first closed club scramble. The circuit was nearly one-half mile long and included grass, mud, sand and sharp turns. It was arranged so that the spectators could watch a man dig himself into the mud, then scurry cross-course and catch him again just as he was grinding through the sand pit.

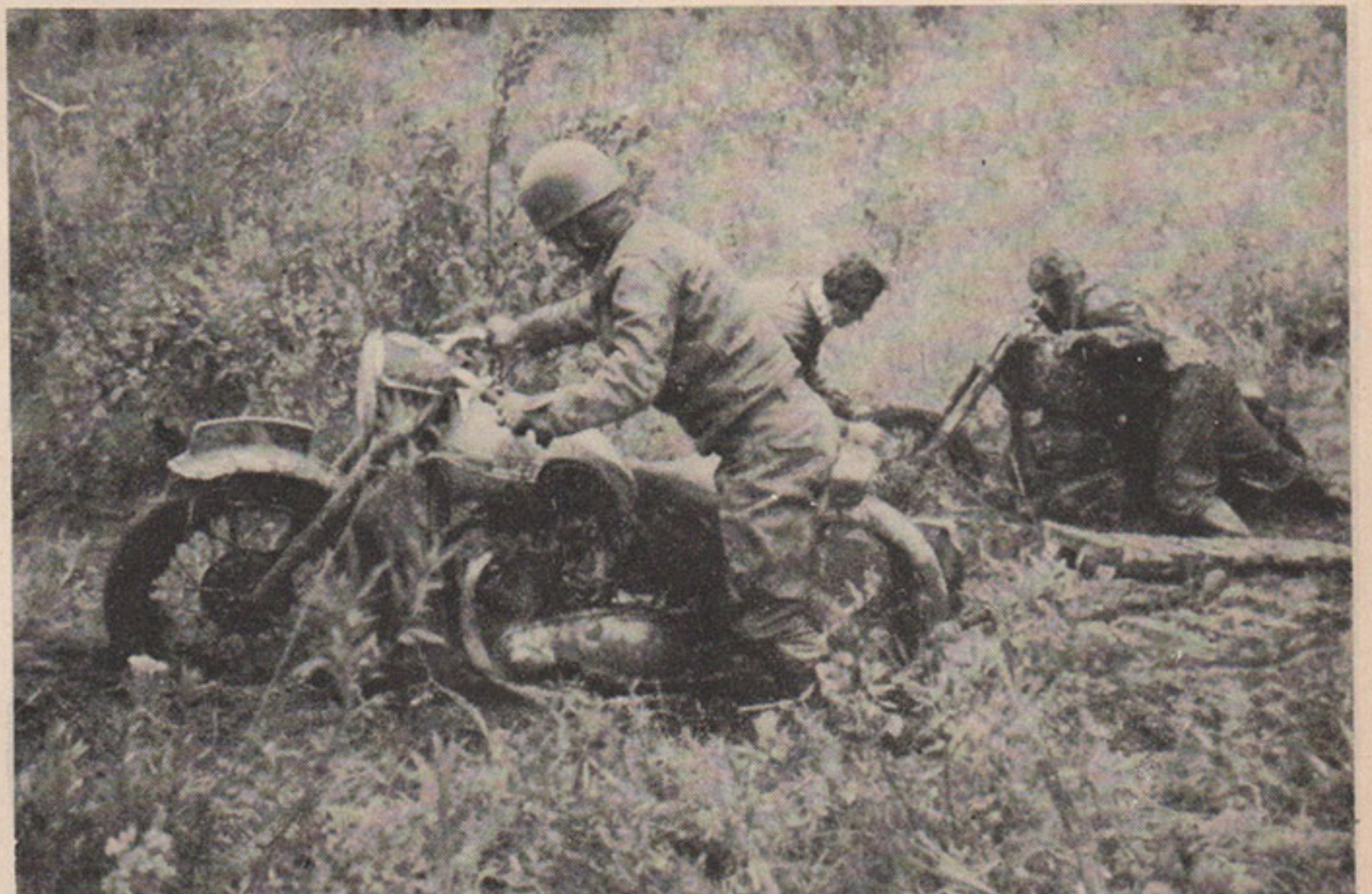
News of the B.E. M/C's successful show spread, and on September 1 all clubs were invited to try their luck in the first Ontario Grand National Scramble, alias the "mud bath."

The field chosen formed a natural amphitheatre, and had been thoroughly soaked with a prolonged downpour the night before. Riders could not be distinguished from their machines until a generous layer of mud had been scraped away. As one observer was heard to say, "I helped two riders out of the mud and turned to chat with a friend, only to find a Triumph under the surface. I had missed it the first time I looked." Then there was the James rider, who dropped his two-stroke in the long grass, then ran frantically 'round in circles trying to find it.

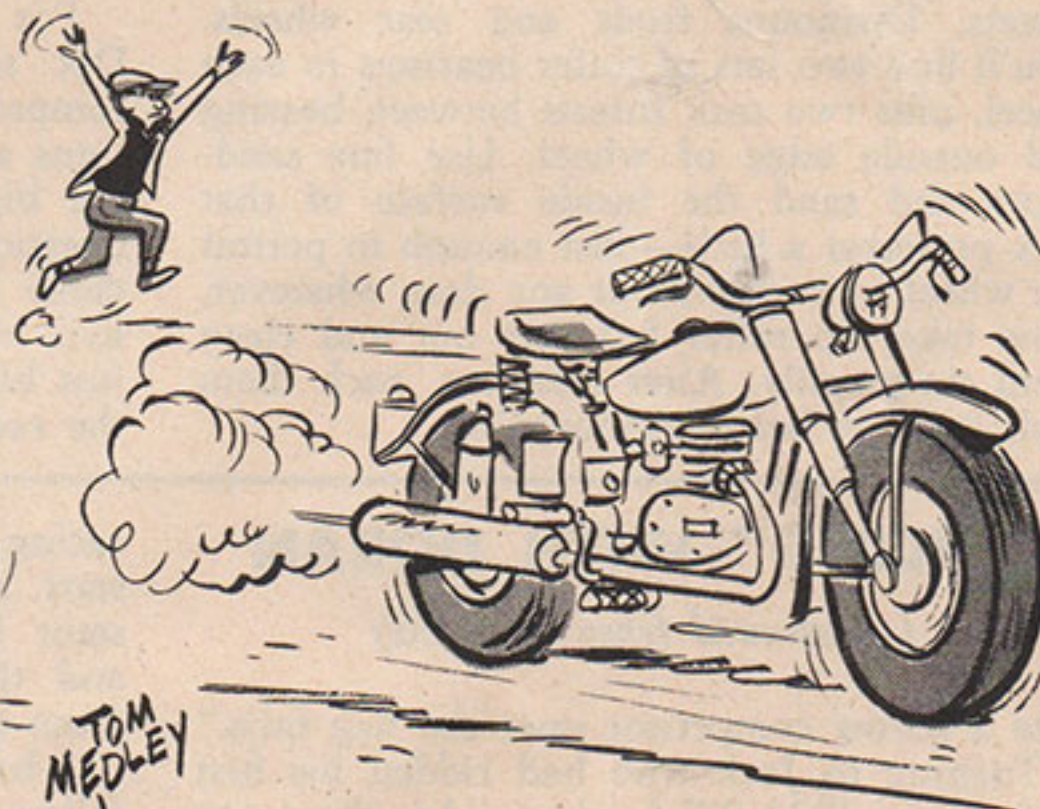
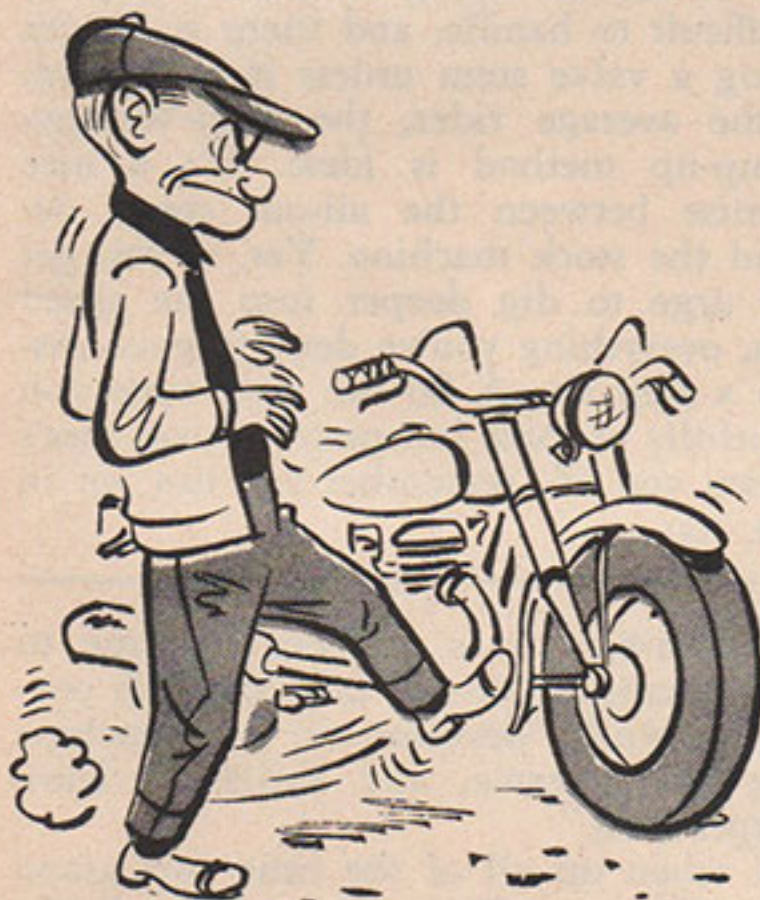
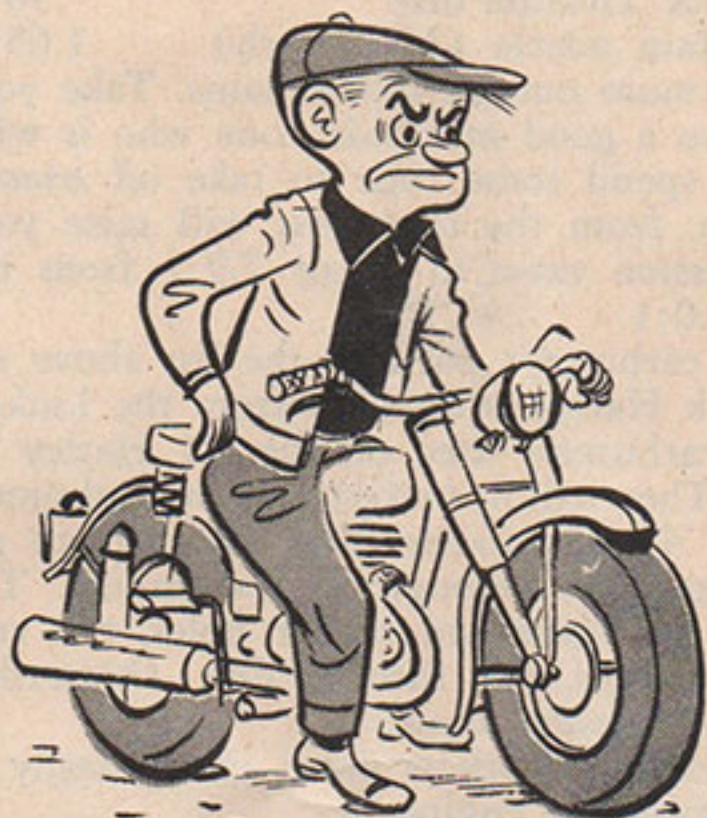
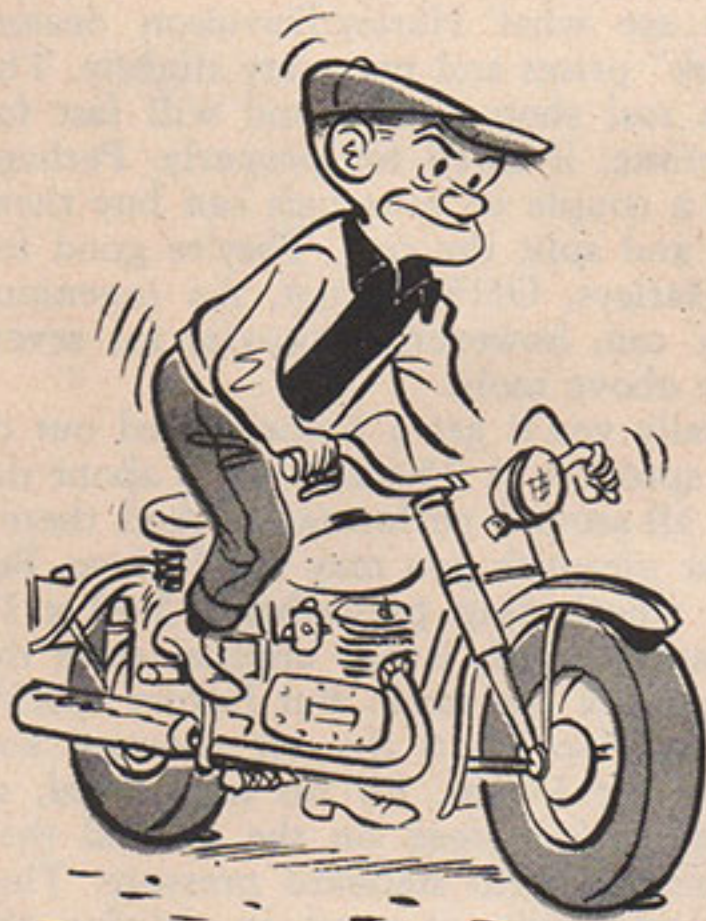
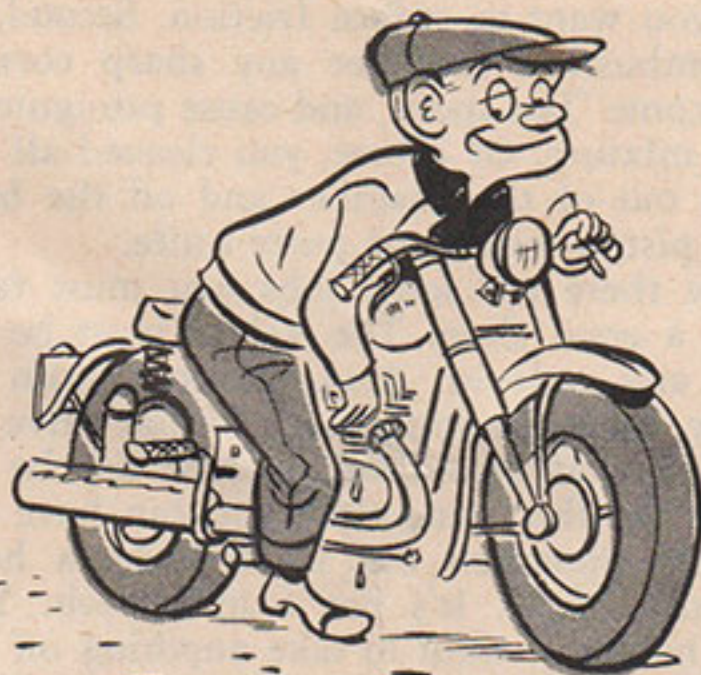
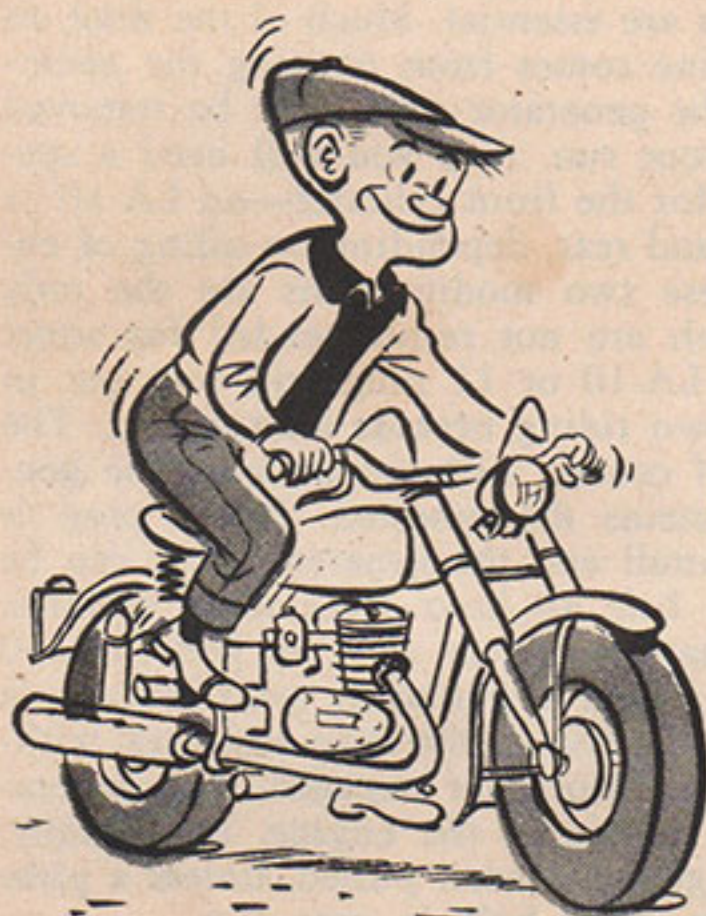
Since this time, the British Empire M/C has gone to the field twice more. Their members are learning to ride, and spectators love it; latest request from the enthusiastic onlookers being, "Cut down the weeds so we can better see them fall."



"Come on, drop that flag!" Professional looking Canadian clubmen suspiciously eye the starter. Scrambles events over a closed circuit are gaining wide popularity up north, can be made to favor riding skills equal to any event, while at the same time permit maximum audience



Jim Verrall grabs his Tiger by the mane, while Bob Ferguson is speechless over his Matchless after missing the ramp at a juicy mud hole. Sections such as this make outcome of event less predictable



TOM
MEDLEY



MOTORCYCLE BATTERIES

For U.S. & British Machines

Complete line for all models. Extra heavy duty. High capacities. Patented hard rubber top and cover assembly prevents spillage. Exclusive features to cushion vibration and shock. Premium quality materials and workmanship.

- HEAVY, RUGGED PLATES
- FIBERGLAS INSULATION
- CAN BE TIPPED HORIZONTALLY
- GUARANTEED



MADE BY WEST'S LARGEST INDEPENDENT BATTERY MANUFACTURERS

Sold through motorcycle dealers only

STATES BATTERIES, Inc.

SAN FRANCISCO
SEATTLE

LOS ANGELES
PORTLAND

**SALES VEN-Zar SERVICE
MOTORCYCLES**

Complete Engine Rebuilding
Specializing in Competition Bikes

- Cyl. boring and sleeving, hi. com. pistons
- Valve seat inserts, large valves made
- Flywheel balancing
- Carburetor and magneto experts

Write for Complete Information

RAY VENETTOZZI

6646 E. Clara St., Bell Gardens, Calif.
Phone TO 2-6227

**HARLEY-DAVIDSON
SALES AND SERVICE**

MOTORCYCLE SPECIALTIES CO.
7748 E. Garvey Garvey, Calif. AT. 44675

BSA
Parts and Service in Michigan
S & K MOTORCYCLE SALES
18290 Livernois Avenue
Detroit 21, Michigan

Ken Kay for

Matchless NSU
13319 Ventura Blvd.
Sherman Oaks, Calif.
Phone State 4-9249

Your Beauty and the Beast!

Triumphant Riders use Herbert cams to make their Triumphs even better. For the fastest time in the drag races for both the 30:50 and 40" class, use the cams and tappets that made the Beast famous.

ROLLER TAPPETS & CAMS

Triumph Thunderbird.....\$65.00
Triumph Tiger.....\$65.00

All tappets have roller bearings. Cams are heat treated. Steel billets. Eliminates tappet wear.

If you've got a Triumph, let the little beauty and the Beast put their heads together and some real valve action will send the rpm sky-high and you will get the thrill of being out in front with a winner.

THE BEAST! FASTEST MOTORCYCLE ON EARTH*

152.54 M.P.H. at Rosamond Dry Lake for the best time ever turned by a Motorcycle on a dirt course.

CHET HERBERT

10215 So. San Pedro, Los Angeles 3, Calif.
Phone Plymouth 5-9469

*Dirt (Re: Webster)



CROMWELL CRASH HELMETS

Approved for all sports by Competition Technical Committees

Model A—Without Visor.....\$21.00
Model B—With Visor.....\$22.50

Sizes 6³/₄ to 7⁵/₈

FREE . . . We process your new Cromwell in color with a brilliant glazed finish. We re-finish your present helmet for \$4.00. Not a paint or lacquer. We cannot rush the processing so ORDER NOW for prompt service. State color and size. Money order or 25% deposit, balance COD. Check our personal design service.

AL and DAVE'S

524 High Street Fairport Harbor, Ohio

Serving Detroit's East Side
Accessories - Parts - Repairs
POP'S HARLEY-DAVIDSON SALES
17155 E. Warren Detroit, Mich.
Tuxedo 2-8652

DIRECT TO THE RIDER

BY MAIL ORDER

Complete lines of the country's biggest distributors. Beck, Buco, Superior, others. Parts, Accessories, Apparel. Everything for the rider of Imported or Domestic cycles. Send for large Illustrated Catalog, 130 pages. 50c

LIMEX

"The House of Chrome!" Bellerose, N.Y.

AL RODI

Indian Motorcycle Sales

Complete Mail Service

Atlanta, Georgia
311 Spring Street N.W.
CYpress 1144



BREAK 115 WITH YOUR HARLEY

(Continued from page 11)

grinder to wind in and out of the tortuous channels. Work from hard to soft with your tools—from rotary file right down to the cloth bat. Make it shine.

Then polish pistons and combustion chamber, using only a very fine sanding wheel and the cloth bat. You do this for two reasons. First, you want to reduce friction. Second, in the combustion chamber any sharp corners can become "hot spots" and cause pre-igniting of the mixture. Of course, you cleaned all the carbon out of the chamber and off the head of the piston with your putty knife.

Now there are some jobs you must farm out to a good shop. The valves must be re-seated and re-faced. Also, for maximum efficiency, have the inner edge of the valve relieved so that incoming gas will not be restricted. At this same time you can have the cylinders smoothed out inside with a hone for about \$1.00. It's not a major job. You don't, however, want to take anything off the walls except the slight roughness that will be there. Check cylinders for condition and if badly worn a re-bore job will be needed before smoothing out. While you're in the shop, buy the following items. These are approximate book prices.

- | | |
|--|--------|
| 1. Chrome rings | \$4.50 |
| 2. Engine top overhaul gasket set | 2.20 |
| 3. 1 ⁵ / ₁₆ -in. Venturi | 2.75 |
| 4. 9-X Throttle disk | .50 |
| 5. Main nozzle (M-75 carb) | 1.65 |

One more outside job remains. Take your barrel to a good machinist, one who is willing to spend some time to take off *exactly* .093 in. from the top. This will raise your compression ratio to about 7.9:1 from the stock 7.0:1.

The carburetor parts in the list above are all stock Harley equipment from the Linkert M-75 carburetor used on the '41 Harley 74 OHV. They will fit perfectly in the carburetor on the '48-'51 models. You use them to get more gasoline through to the engine. The nozzle has more and bigger holes, the venturi is larger, the throttle disk (butterfly) sits at a different angle.

When this work is done, you're ready to re-assemble the engine.

For timing, turn engine until timing mark just enters timing hole in crankcase, with front cylinder on compression stroke. Center-punch flywheel directly in center of timing hole. Then rotate flywheel until center-punch mark is just visible at rear of timing hole. At this time circuit breaker points should just be braking on narrow lobe of cam.

Now you've got some work to do on the wheels. Dismount front and rear wheels. You'll find two sets of roller bearings in each wheel, plus two cork inserts between bearing and outside edge of wheel. Use fine sandpaper and sand the inside surface of that cork protector a little—just enough to permit the wheel to run without any drag whatever. Now take the roller bearings out and clean them thoroughly. After cleaning, pack them with vaseline before remounting.

"DICING" WITH DORAN

(Continued from page 26)

nize a fellow competitor once the flag falls."

Turning to Jock who had ridden his first AJS in the 1933 TT I asked, "Are there any points you can stress that would benefit a cyclist who is bent on a racing career?"

"I would probably say, *don't*, but if you must, make up your mind to win. You need push and the guts to forego most of the ordinary pleasures of life. You must also decide to devote every minute to the job of

The next step is to make sure that drive chains and rollers are free. Then, before remounting, soak the chain in a good grade of penetrating oil.

That's it—you're ready to go on the street again. For the high-speed run, two more operations are essential. Much of the drag on the machine comes from running the generator, so the generator gear must be removed for a flat-out run. And you will need a special plug for the front cylinder—an LA-10 or 11 front and rear, depending on oiling of engine. These two modifications are the only ones which are not recommended for street use. The LA-10 or 11 plug will foul out in around-town riding because it's too cold. The battery, of course, will run down if the generator remains disconnected. But a plug is easy to install and the generator gear can be pulled in half an hour with some practice. A well-charged battery can run you for 250 miles, so if you aren't using your lights you can make the trip to the strip and back without the generator gear engaged. The generator must remain in the engine, incidentally, after the gear has been pulled, unless a plate is made to cover hole in gear case.

Now for those special tools. Let's face it—they're absolutely essential. Here's the list:

Gear puller	\$6.50
Manifold wrench	4.40
Cylinder base nut wrench	6.30
Cylinder head nut wrench	3.30

Those are what Harley-Davidson dealers call "book" prices and may vary slightly. The tools are real shop quality and will last for your lifetime, if cared for properly. Perhaps you and a couple of your pals can buy them together and split the cost. They're good for all 74 Harleys, OHV or not. An ingenious mechanic can, however, improvise for several of the above tools.

Naturally you'll get a higher speed out of a larger sprocket. A 25-tooth job is about the best for all-around performance. And there's one other gimmick you may not believe. For the rear wheel, Skip prescribes a 5.00 x 16 tire. That, in itself, is not unusual since the wheel and tire are stock. But factory specifications call for 14-16 lbs. air pressure and Skip calls for 11 lbs. for his high-speed, so that there is less tread on the ground than when running with standard pressure. Thus there is less friction at speed. In addition, the getaway is quicker because the soft tire is flatter on the ground at a standstill and there is more traction until speed is reached. CYCLE does not recommend that you run with the low pressure, even at speed, unless you know what you're doing and have experience at flat-out riding. The bike may be more difficult to handle, and there is danger of pulling a valve stem unless it is secured.

For the average rider, the Skip-Wimpy-Doc soup-up method is ideal. It's a nice compromise between the all-out speed designs and the stock machine. Yet, if you get the big urge to dig deeper into the speed question, everything you've done to your machine is a step ahead. So the next time you look wistfully at some hot piece of iron that's just blown you off, remember you can get in the race, too.

racing, otherwise it is a waste of time to start. A champion is made only through constant hard work, devotion to his machine and the racing game, and ability to learn from experience."

I had taken up all of the time two grand fellows could spare. They accepted my thanks with a "Not at all, only too glad to oblige." As I walked away I turned to give a final wave, and had to smile as I saw them both turned away from me, their eyes once again taking in the happy moments of their racing days, enshrined in the album of thrilling memories.

JAP IN JAG'S CLOTHING

(Continued from page 27)

track racing know the JAP well—it's the banger that powers almost all the short-track motorcycles in the world. When 500cc racing became popular in England after the war, it was almost a foregone conclusion that the Cooper firm, after they'd built the frame, would choose the tested competition engine.

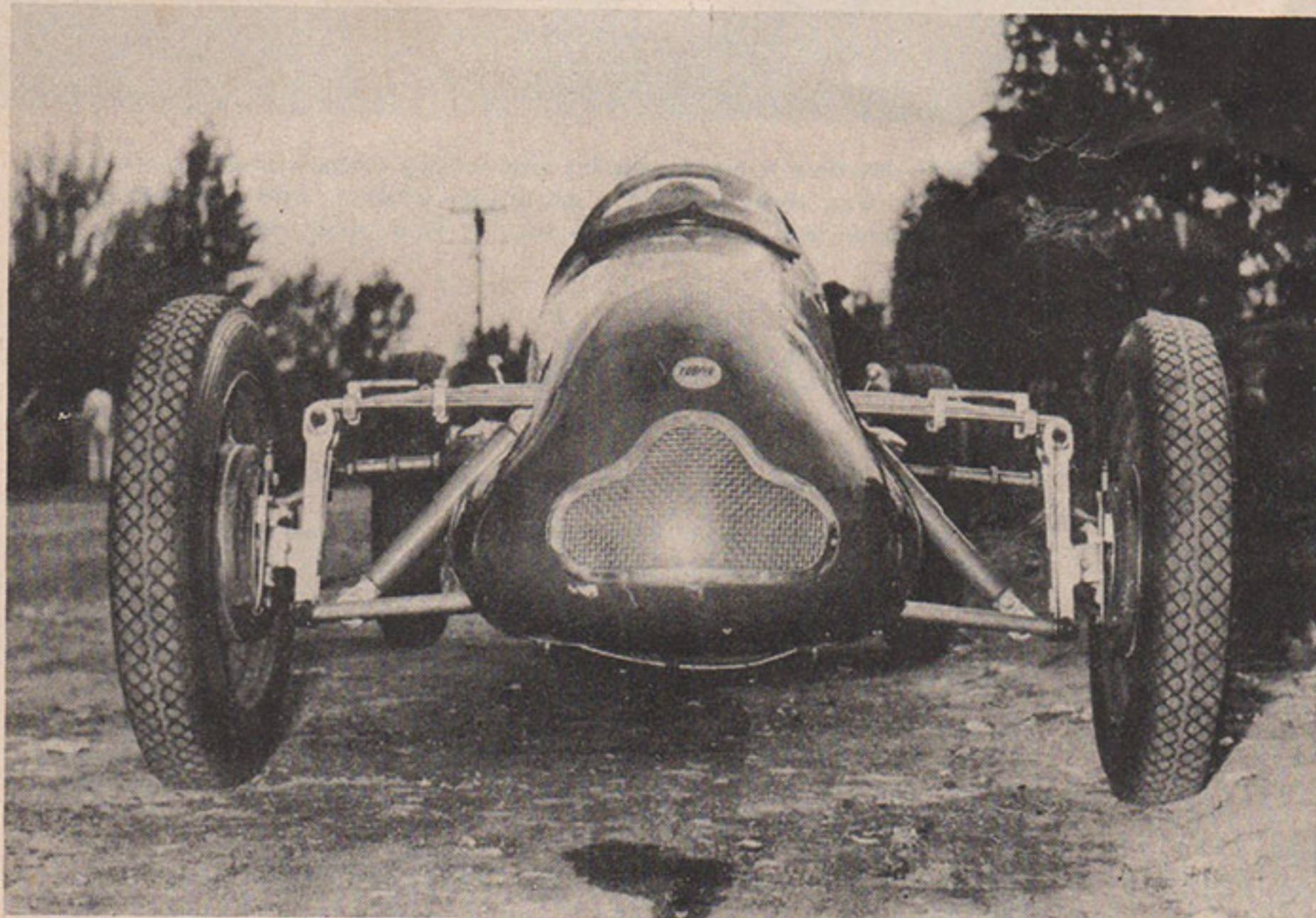
When Bill Breeze first brought the car to San Francisco a week before the Reno race, I took the engine apart to check it. It's a stock JAP except for the cam. The buyer of one of these engines can pick up three cams—motorcycle straightaway, motorcycle track, Cooper track. I tried to time it with the motorcycle catalogue and it was several troublesome hours before we realized our cam was different.

For all its 14:1 compression ratio and racing cam, the JAP (J. A. Prestwich) engine is as dependable as the equipment on your washing machine. It's a design that has won almost universal acceptance in the mo-

as motorcycle turning. It reminded me of a motorcycle, yet those two wheels were there in front. The best definition for it is, "It's almost a perfect cross between a motorcycle and a car."

At Reno, and later at Palm Springs, I learned quite a lot about driving. That's something a lot of motorcycle riders could do well—road racing in this fast-growing 500cc class. There are a few important things to learn, though. One is cornering—I spun out in front of an MG during practice at Reno. I hit the light gravel on the top of the curve. Luckily for me, he was right on the ball. He put on his brakes hard and cut in under me.

Then there is the weird feeling of the engine in the rear. At Reno, during the race, I was getting a big charge out of the affair when I suddenly noticed my rear wheels on a sharp, left corner. They were scraping a curbstone. In a rear-engine car, rear wheels don't stay in the same place as in a conventional car. With that extra length, the rear goes out farther, cuts closer. Once I was used to it, I found that I could pass cars either inside or outside on the corners at will. At



Remember how they laughed when you wanted to build a small motorcycle-powered-racer in your younger days? The Cooper is just that, but it's taken as a serious threat now by everyone who competes against this Tom-Thumb special. Chassis is built with lightness in mind, note springing

torcycle world for speed, endurance, simplicity. For small-bore racing it's a natural—though recently some Cooper owners have been experimenting with the Norton dual-overhead-cam setup.

We could have made a better showing at Reno if we had been able to get the proper gears. Our 19-tooth motor sprocket was probably intended for a 1/2-mile sprint and the long straight stretched 3/4 mile—a natural distance for a 21-tooth sprocket. In the Cooper, all four sprockets are changeable—motor, clutch, countershaft, rear drive—which makes splitting teeth a comparatively simple process. And the changing is a simple matter, something that can be accomplished on the morning of the race, as we did at Palm Springs.

To an old motorcycle man, driving a Cooper is a revelation. I knew it was a motorcycle engine in back of me, complete with motorcycle gearbox; but in front of me there were two wheels. It's not like driving a car either—the two wheels out there in front are naked and each one is bouncing at a different rate, thanks to a flawless, delicate independent front suspension. Yet the front end is very stiff, despite its precision of design and manufacture; the steering is almost as quick

Palm Springs, I finally got the cornering technique down to a science. Just before the turn, I'd hit the brakes hard (and the Cooper really obeys that stopping pedal), buzzed down to the proper gear, and let off on brakes. Most corners were right for second gear, but one could be taken flat-out in third, about 75 mph with the gearing I was using. I broke traction each bend, but never went into full slide—it just doesn't pay on pavement.

It's a lot of fun to see the reaction of other drivers. When we went for an airing on Skyline Drive, a few of the passing civilians thought we were getting ready to enter the Soap Box Derby with a new kind of no-power design. On the track, in practice, the big cars hate to see you go by. They refuse to shut off for a corner until you do. Result—MGs, Citroens, Specials get in trouble flipping, sliding, going off the course while the Cooper never lifts a wheel.

\$3000 is a lot of money, but the Cooper—JAP is a lot of car. Go out and take a look at one at the next event in your neighborhood. I think, and so do many others, that 500cc racing is the coming thing for the low-budget enthusiast. And the Cooper is the best 500cc machine around these days.

**YOU ARE SAFER!
WHEN
YOU WEAR...**



The new patented "GLO-GLOVES" and "GLO-STREAMERS" represent two of the most practical contributions to Cycling "Night Safety."

The reflected CAUTION HAND SIGNAL of a rider wearing "GLO-GLOVES" can be seen by other motorists . . . UP TO A QUARTER OF A MILE!

The backs of these fine leather "GLO-GLOVES" are made of "GLO-TEX" a reflective material that is as durable and easy to clean as the leather itself.

GIVE YOURSELF that MUCH NEEDED Nite-Time "SAFETY" while Driving, Walking or Cycling. This "GLO-TEX" life insurance could add many years to your PRECIOUS LIFE. Guaranteed to give you satisfaction or your money back.

If your dealer cannot supply you, send us your check or M.O. and we will mail them to you post-paid.

Men's & Women's Introductory Special (Specify Size).....	\$4.95 Pr.	Deluxe Style.....	\$5.95 Pr.
Glo-Streamers for Motorcycles (Jumbo Size).....			\$1.50 Pr.
Glo-Streamers for Bikes & Trikes (Junior Size).....			\$1.00 Pr.

THE GLO-GLOVE COMPANY

7462 Girard Ave.

La Jolla, Calif.

**If Harley-Davidson makes it,
WE CARRY IT...**



WAGER & WALKER

FOR FRIENDLY HAR.-DAV. SERVICE

419 East 4th St., Santa Ana, Calif.

1 Day Mail Order Service

on Indian parts and accessories. Armature and generator exchange, motors reconditioned, cylinders rebored. Send for lists from the largest and most complete stock of Indian parts in the Middle West.

Indian Motorcycle Sales Co.

2701 Truman Road Kansas City 1, Missouri

WANTED: First class mechanic for permanent year-round employment in America's finest Triumph & Ariel Service Department. Best working conditions and benefits. Write us listing qualifications and references.

JOHNSON MOTORS, INC.

267 West Colorado St., Pasadena, California

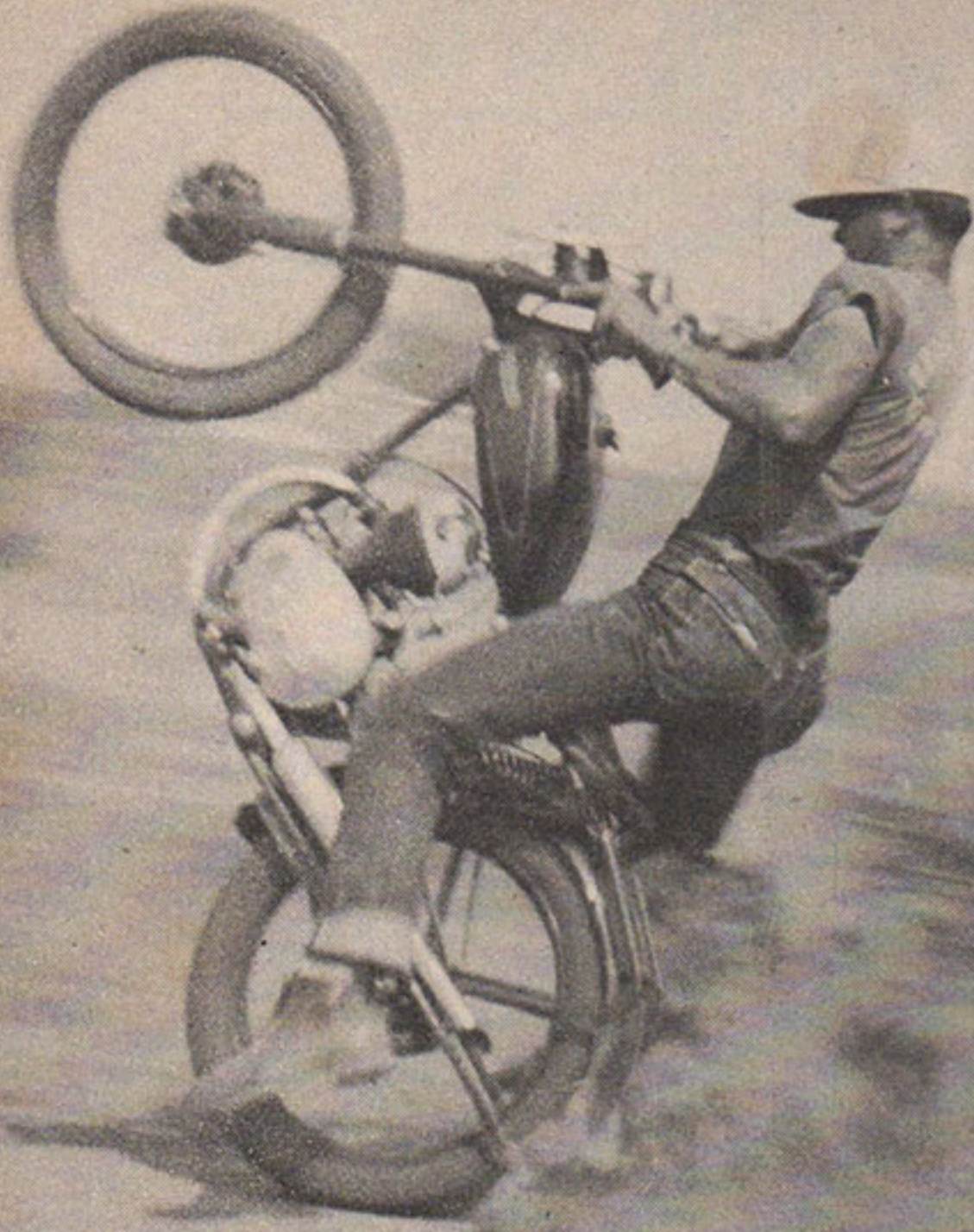
Ship to us from anywhere—1-day service on
FRAMES & FORKS WHEELS & RIMS

BROWN'S

Frame and Fork Repair

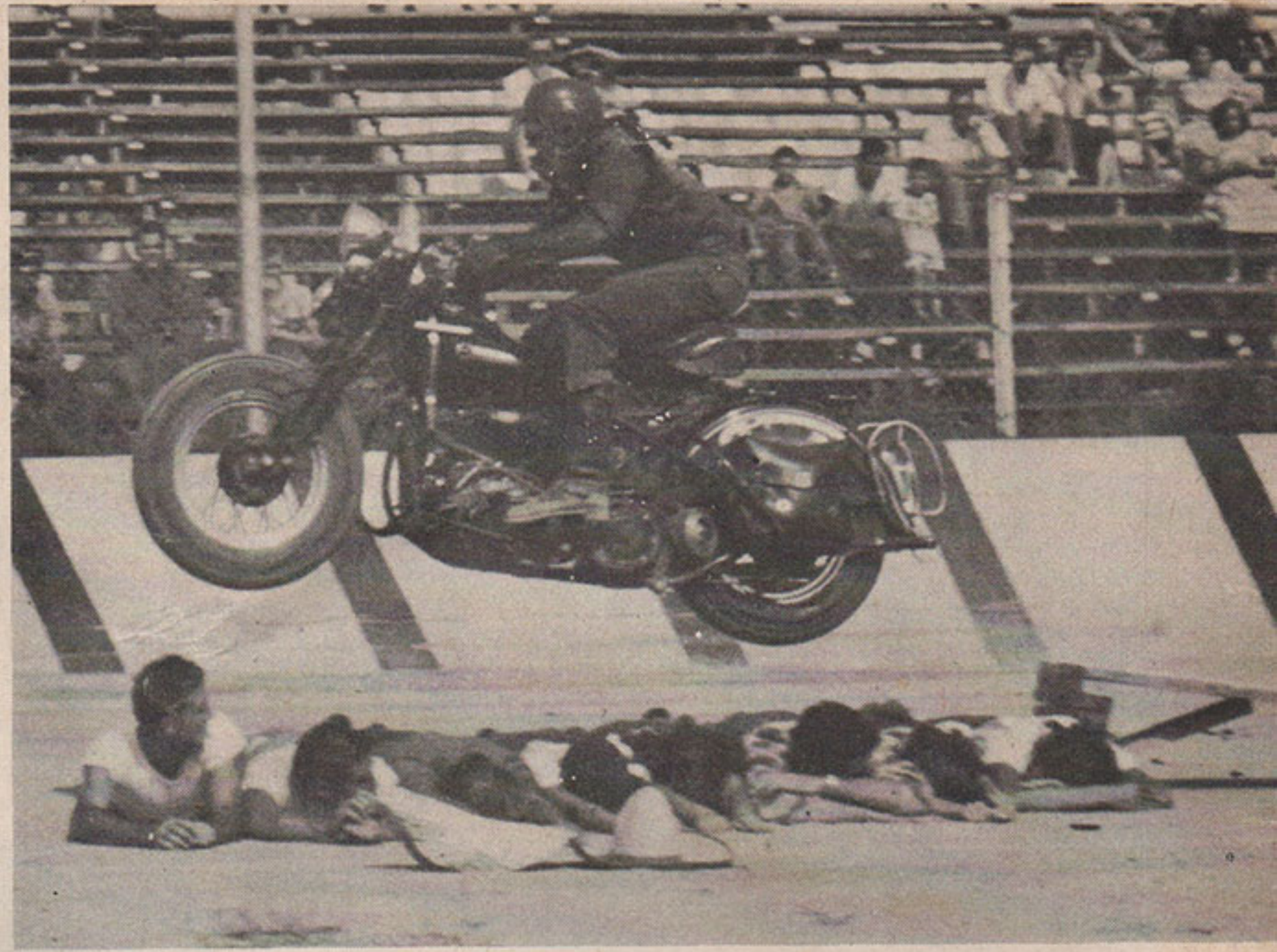
M. W. BROWN
AT 9-0983

901 E. Garvey Blvd.
Monterey Park, Calif.



HONORABLE MENTION—Clara Lucas, Los Angeles, Calif., proves expensive equipment not necessary for good action shots. She caught Johnny Quick, Rough Riders M/C, stunting on the rear wheel, with an ordinary full-view box camera, using 120 Eastman verichrome film

1ST PRIZE PROFESSIONAL—"Man Overboard" at San Jose Hill Climb. Ray Kennedy, San Francisco, Calif., obtained sharp detail on everything from rider's belt buckle to spinning spokes with 4x5 speed graphic, using focal plane shutter at $\frac{1}{550}$ sec., F22 using super double X pan film. Notice clear detail on foreground and background as well as on the moving subject



1ST PRIZE AMATEUR—Hurling humans calls for nine willing subjects and a good camera. Gus Phillips, Augusta, Ga., stops rider in a precarious position with Rolleiflex camera equipped with 3.5 Tessar lens, shooting $\frac{1}{500}$ sec., at F5.6 using medium yellow filter

Photo Contest Winners

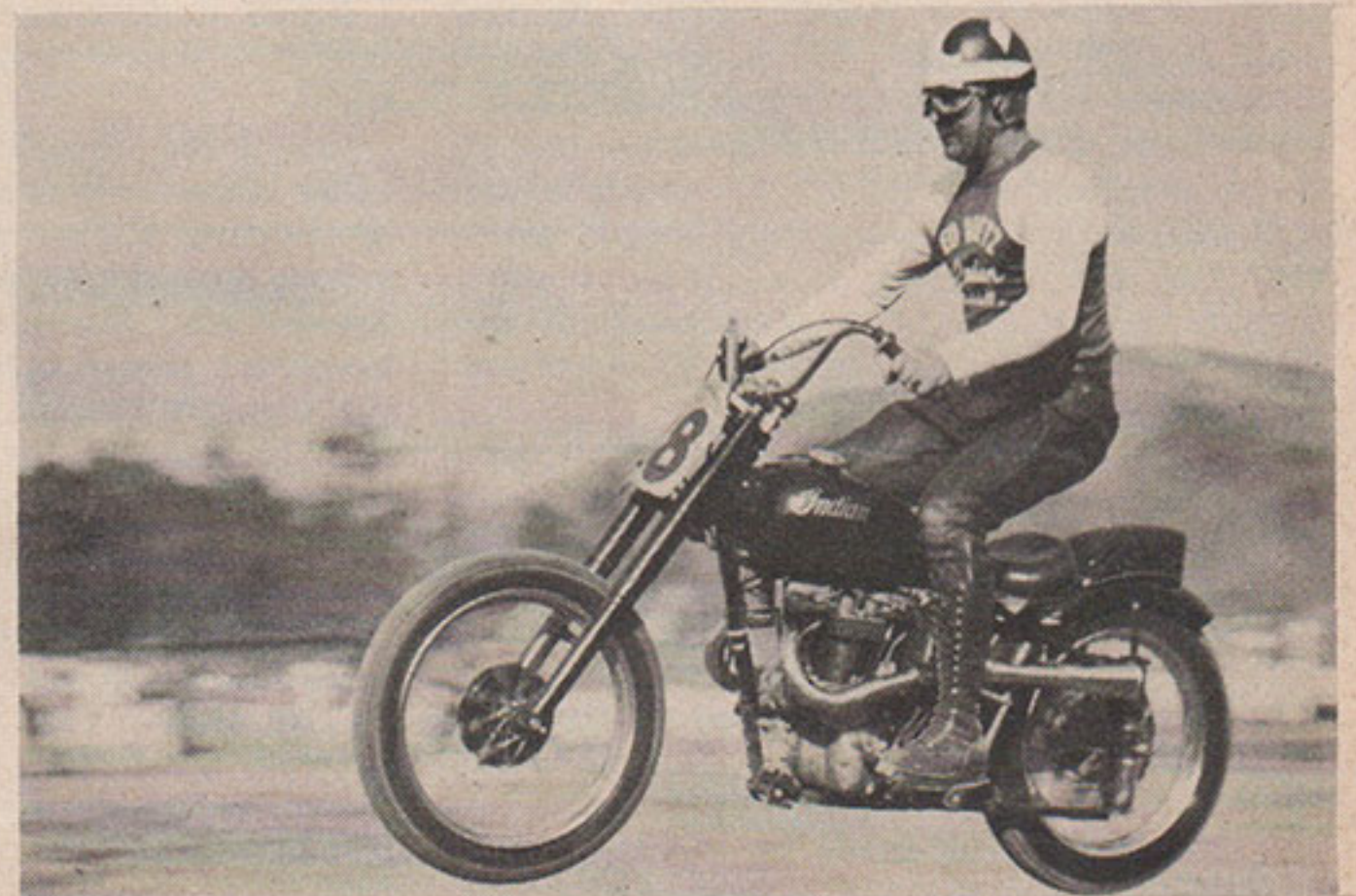
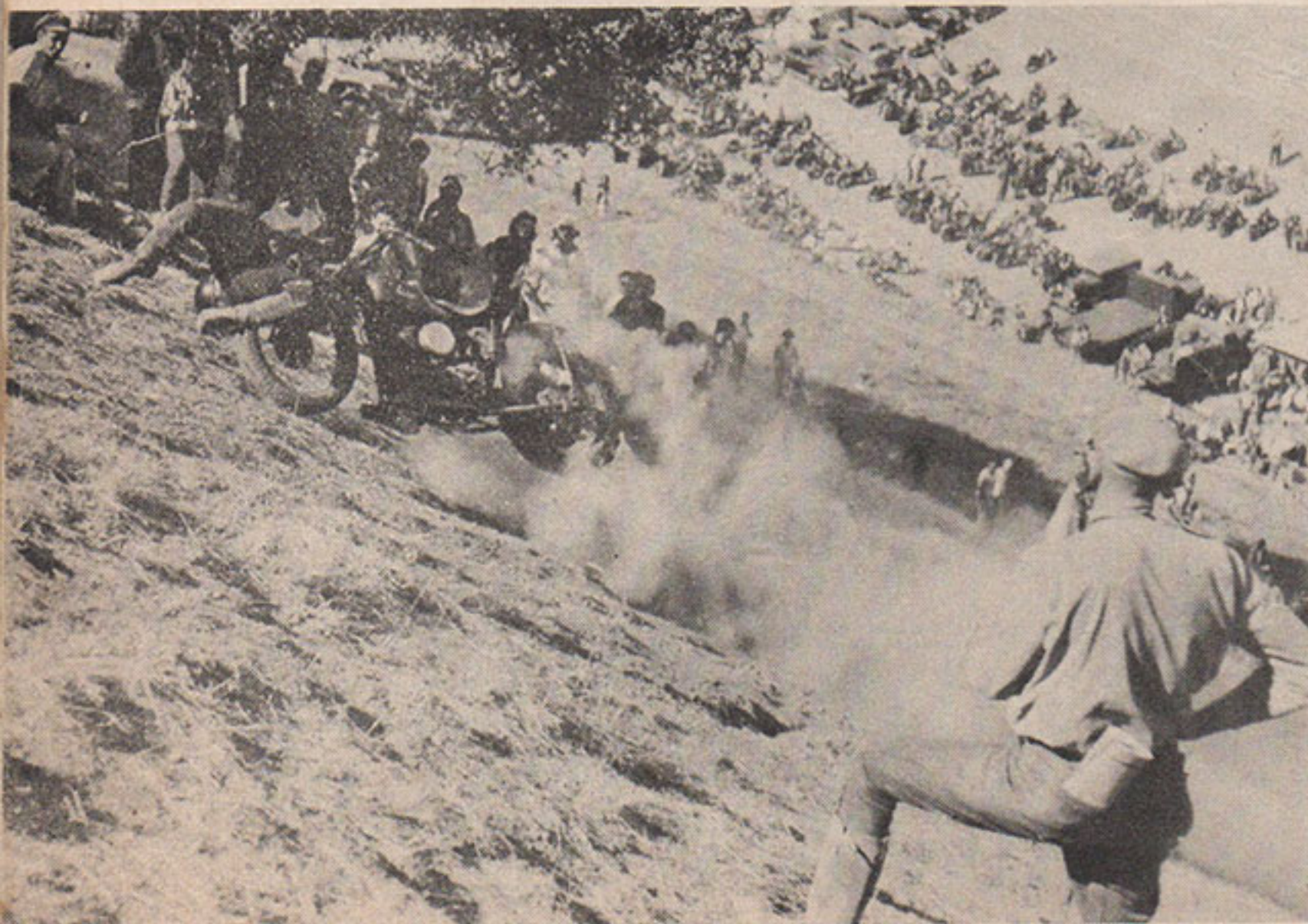
1. A monthly contest, open to both amateur and professional photographers.
2. Any entrant earning more than 40% of annual income from sale of photographs will be considered professional. (Please state classification.)
3. Photographs should include a cycle in the composition. Send any number.
4. Caption all photos in detail so that the judges may fully evaluate its interest
5. Winners in each class every month will receive \$10.00 in cash. Then, every four months these monthly winners will vie for a \$25.00 savings bond, and at the end of the year the tri-annual awards will compete for the BIG PRIZE of a \$100.00 savings bond.
6. Any one picture may earn anywhere from \$10 to \$135 for YOU. Send them to:

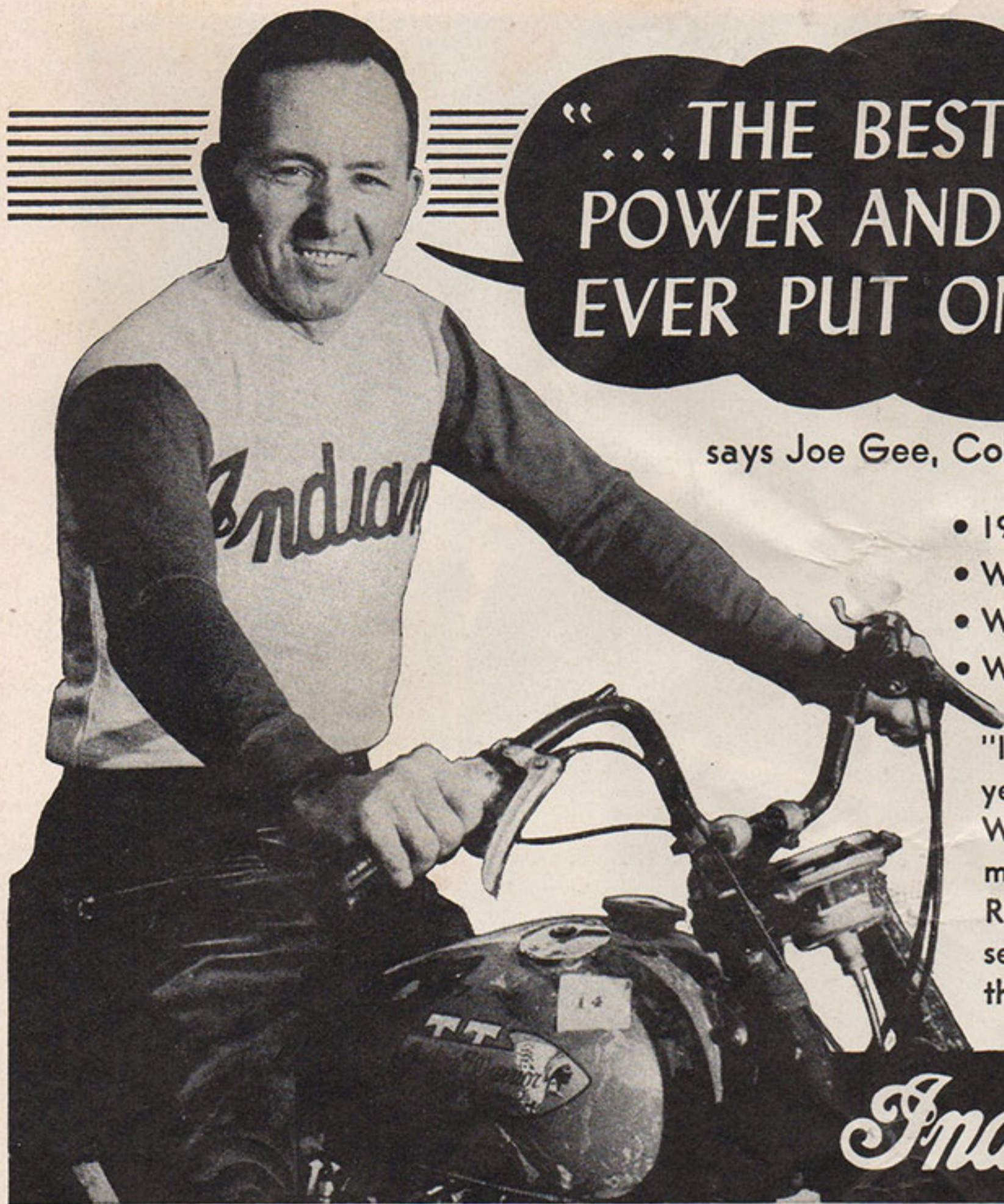
CONTEST EDITOR, CYCLE MAGAZINE

5959 Hollywood Blvd.

Los Angeles 28, Calif.

HONORABLE MENTION—Moving camera at same rate of speed as subject brings out pin-point detail of Ed Kretz and his Warrior as they rocket out of under-pass at Lincoln Park figure 8 track. Panning camera creates blurred background, adds to feeling of speed. Taken at $\frac{1}{400}$ sec., F11 with super double X film by Bob Magil, of Long Beach, California





"...THE BEST COMBINATION OF POWER AND MANEUVERABILITY EVER PUT ON TWO WHEELS!"

says Joe Gee, Columbus, Ohio

- 1951 National Jack Pine Champ
- Winner Ohio State Championship
- Winner Athens "Milk Run"
- Winner Golden Arrow "Rockin' Chair Run"

"I've ridden a lot of motorcycles over a period of years," says Joe, "but I believe my Indian T. T. Warrior has the best combination of power and maneuverability ever put on two wheels."

Ride a Warrior T. T. in your next enduro. It's the sensational motorcycle that can't be stopped when the going gets tough. See your Indian dealer.

Indian

SALES CORPORATION
Springfield, Mass.

New pages in automotive history:

Hot Rods 75c

COMPLETE DATA ON OUTSTANDING STREET AND COMPETITION HOT RODS

160 PAGES!

BUILDING TIPS—ENGINE AND CHASSIS

HOW TO BUY A CAR 75c

by the Editors of MOTOR TRENDS

TREND BOOK NO. 105

USED CAR

WHAT TO LOOK FOR WHEN YOU BUY YOUR NEXT CAR—NEW OR USED

TRICKS OF THE TRADE • USED CAR PITFALLS
ENGINE REPAIR RACKETS • LEGAL RED TAPE

Custom Cars 75c

TREND BOOK NO. 101

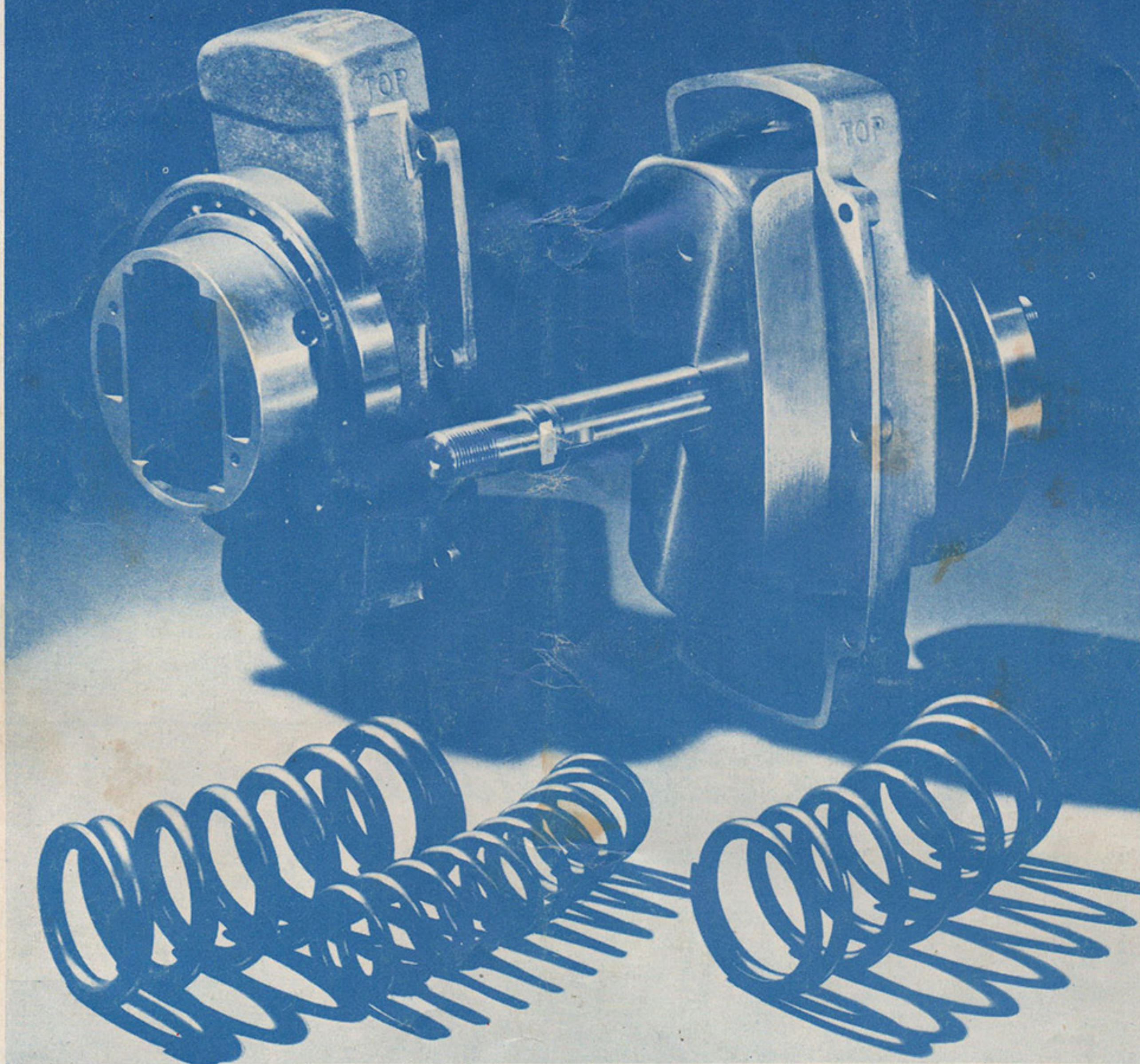
LOWERING
CHOPPING
CHANNELING
INTERIORS
PAINTING
ACCESSORIES

HOW TO CUSTOMIZE YOUR CAR!

on your Newsstand Now!

If your dealer cannot supply you, send 75c for each copy desired to Trend Books, 5959 Hollywood Blvd., Los Angeles 28, Calif.

Precision Manufacture



THE SPRING WHEEL. This Triumph invention provides the most practical answer to the peculiar complexities of motorcycle rear suspension. Smooth, robust, efficient and immaculate, its manufacture involves several interesting departures from orthodox engineering practice.

THE BEST MOTORCYCLE
IN THE WORLD

TRIUMPH

DEALERSHIPS AVAILABLE: Write for complete information

Johnson Motors, Inc.

267 WEST COLORADO STREET
PASADENA 1, CALIFORNIA

The TRIUMPH Corporation

TOWSON, BALTIMORE 4 MARYLAND