

CYCLE

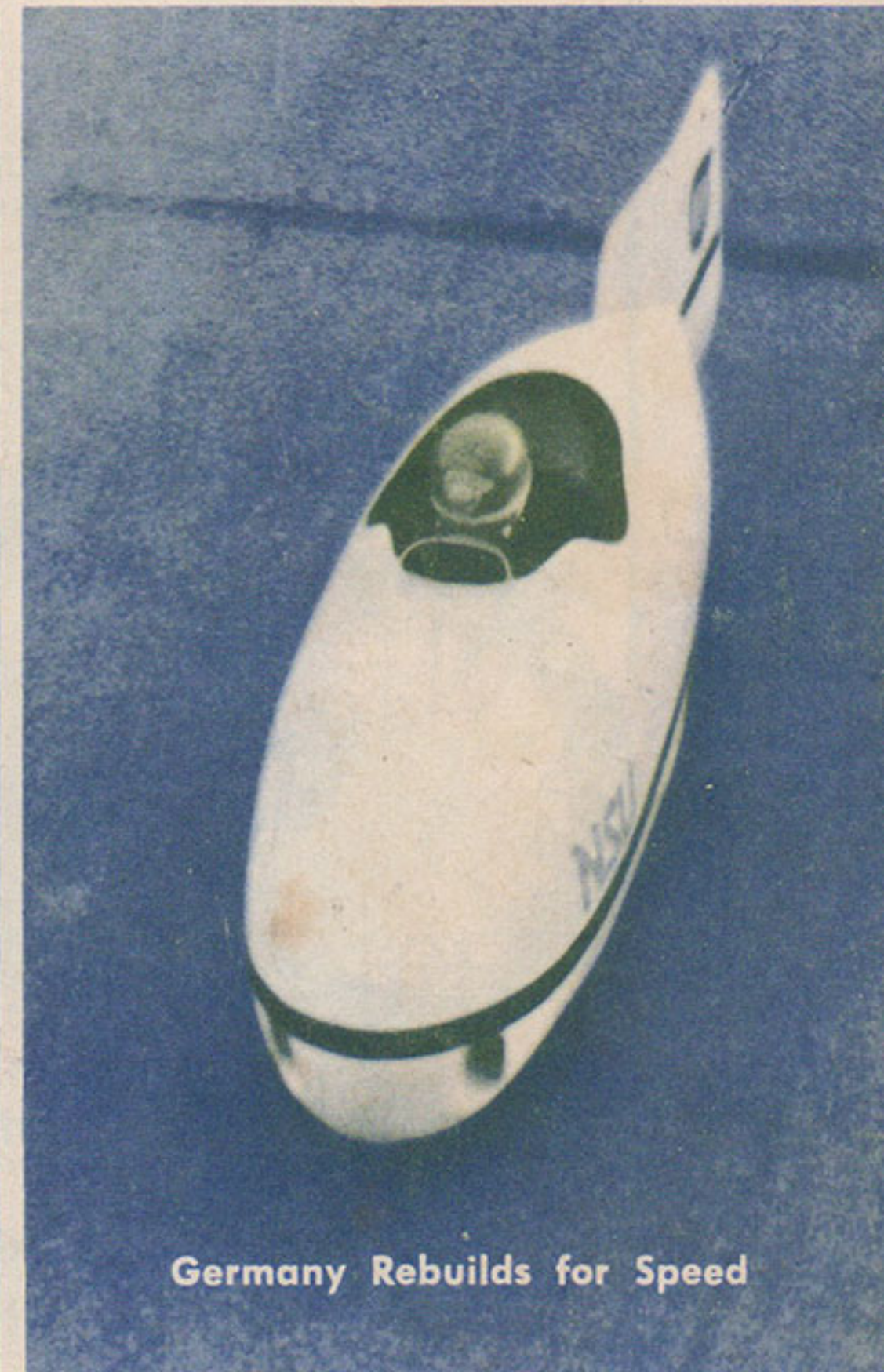
"WORLD'S LARGEST MONTHLY MOTORCYCLE CIRCULATION"

11/7 DECEMBER 1951 35c

**OPEN SEASON
ON RECORDS AS
TRIUMPH-ARIEL
BAG SEVEN**



To End All Enduros—Jack Pine



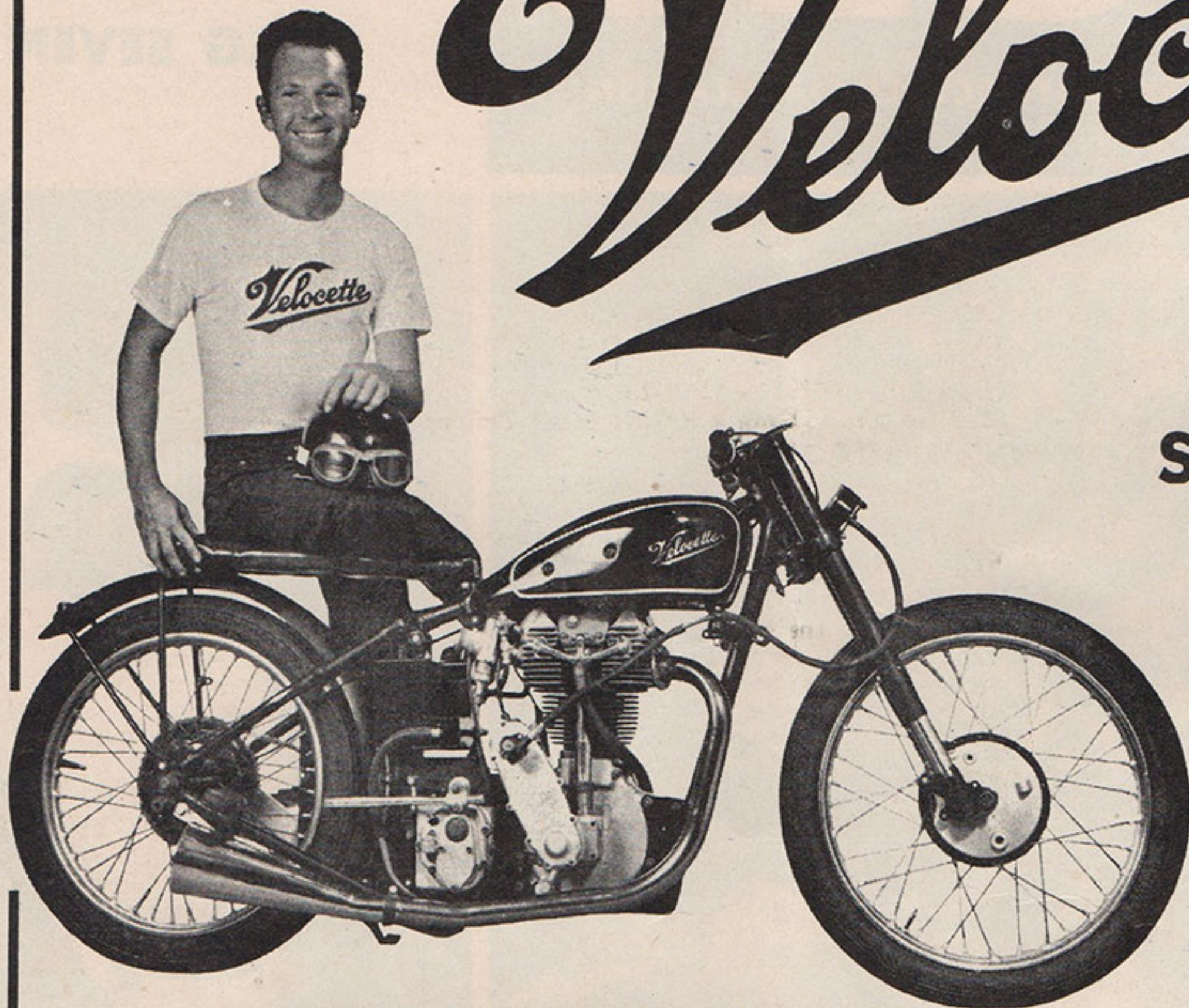
Germany Rebuilds for Speed

90 MPH! ON A NEW 21 CU. IN. SINGLE —Page 20

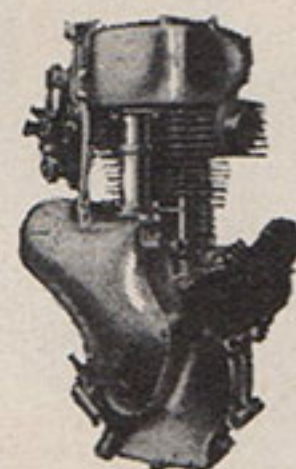


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Speaking Cycle

DECEMBER 1951

CYCLE

VOL. 2 Published Monthly No. 12

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

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CIRCULATION MANAGER—Gordon Behn

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EDITORIAL PRODUCTION—James E. Potter

"World's Largest Monthly Motorcycle Circulation"

WHAT BETTER WAY of beginning the coming year than with a new "baby" in the family? Starting in January, there will be an addition to the CYCLE household. Along with *Motor Trend* and *Hot Rod*, *Trend* publications now makes room for a brand new magazine entitled: *Auto*; featuring wide scope coverage on international sports-car and grand prix racing.

Those of you who are interested in the speed and sport aspect of autos should find this latest publication on the newsstands by the middle of December . . . take a look.

As is always the case, a new addition creates a little change in family routine. With us, it means sending another book to the printer, and CYCLE has stepped aside to give *Auto* our turn on the press. This means a slightly later printing and shipping date. So don't be surprised when your next copy of CYCLE doesn't arrive on its regular scheduled date. Starting with the January issue all newsstand sales and subscription mailings will arrive approximately 14 days later than in the past. The January issue, for example, should be in the subscribers' hands during the week of December 10, and appear on the newsstands about December 21. All subsequent copies will follow at regular one-month intervals.



The ghostly-looking gloves shown above may be new to you; they were to us. They represent one of the most practical contributions to riding safety that has come along in many a moon.

The backs of these leather gloves are impregnated with a reflective material that is visible up to a quarter of a mile when illuminated by the lights of a vehicle at night. This light-absorbing, reflecting material, known as Scotchlite, can easily be washed and is allergy free. Night signals can now really mean something, and it's quite possible that this simple item of apparel can even further reduce our already low accident rate.

Manufactured by the Glo-Glove Company of La Jolla, California, they could conceivably mean a firmer grip on that thing most dear to us: Life.

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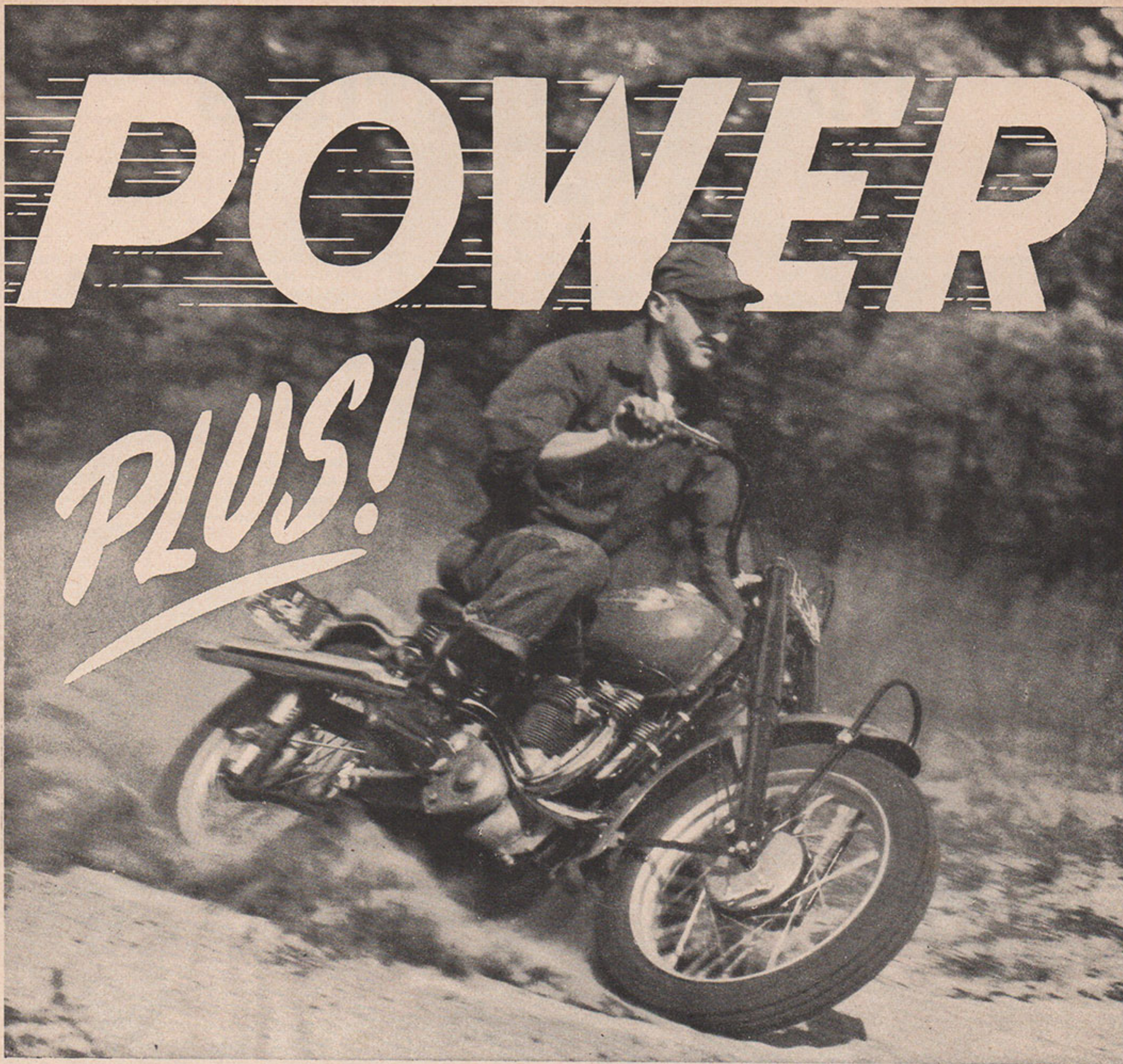
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ON THE COVER

Action is the word for this month's issue. As we near the end of the 1951 sporting season, we only have room to touch upon some of the highlights of a rapidly closing parade of cycle activities. With the establishment of several new world's records abroad and twelve AMA records within the United States, these exciting twelve months will remain as one of the most progressive eras of motorcycle history. Jack Pine photo by Carl Risley; contest photo by James Walter; NSU photo by Herbert Schwarz

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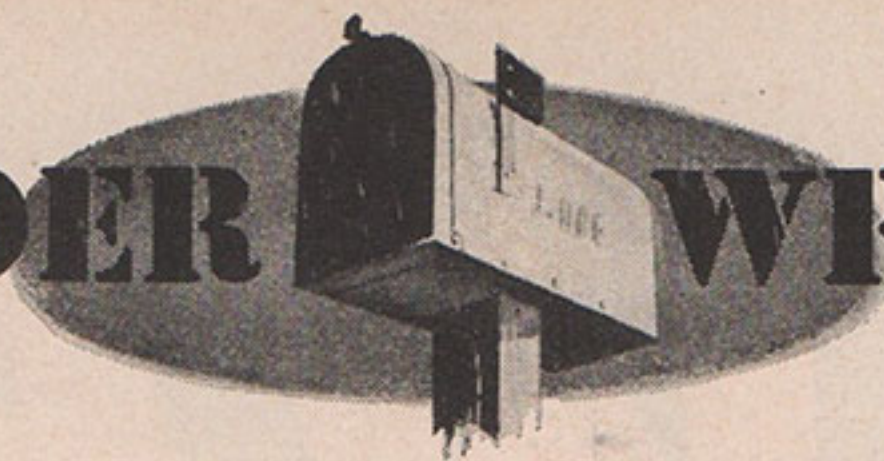


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RIDER WRITINGS



Dear Sir:

I'm re-working a Triumph T-6 and am interested only in $\frac{1}{4}$ mile drag. For this type of machine, what would you suggest as a good running weight for the flywheel? Will this weaken the crankshaft, as the two are a unit in themselves?

Not being able to obtain information from riders at this time, I would very much like to hear from you.

By the way, you've one "helluva" good "mag." I was stationed in Japan and China for three years, and whenever what few riders there were could get a copy, it was a major operation to get it away from them.

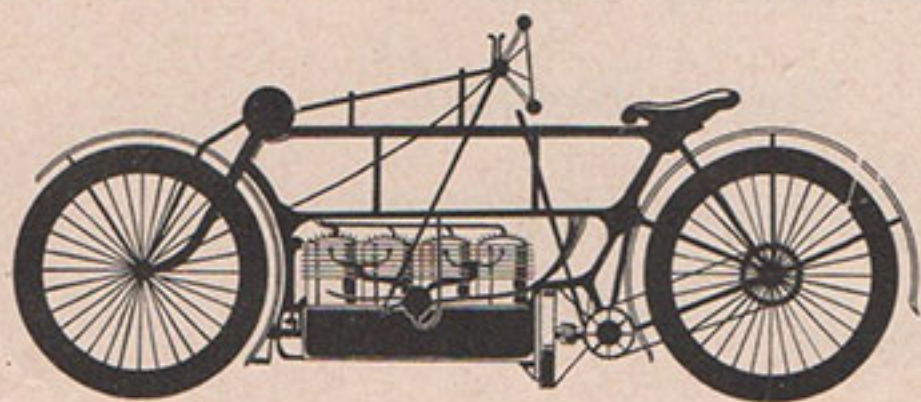
T. W. Parrish SKSN
FPO 793
San Francisco, Calif.

(Advise that you leave the standard flywheel as is. I wouldn't lighten it up for this reason: you'll probably be getting your maximum horsepower between 4500 and 6500 rpm, and you'll be needing all of the inertia that you can maintain within this rpm bracket. Lightening up the wheel might give you a quicker jump at first, but would probably cause the motor to bog down just as you are entering your most efficient power area, where this type of engine (two cylinder) really begins to perform—ED.)

Dear Sir:

I note with great pleasure that a motorcycle has really achieved the speed of 180 mph, regret though that it was not an American driver. Had this record in my mind since way back when, and at last it has been done.

Enclosed find picture of auto cycle I was intending to build back in 1906. As you say, it must have aroused excitement back in those days, but it did not. They thought I had a screw loose . . . I had, at that time, a four cylinder Franklin motor, one of their first models, which set crossways over the front axle. That motor gave me the idea of making a motorcycle do something, but when I searched for parts such as tires, wheels, frame material, etc., all these things were not to be had, so I gave up the idea to build the machine.



The transmission of power was to be an Eclipse clutch, bevel gears and chain to rear wheel . . . I used to race the old type flat and V pulley machines in Chicago. Some that I remember were the big Mitchell, Merkel, Curtis and Hercules, but it seems I was destined to work with automobiles.

I'm happy to have expressed a few notes to someone who understands the problems and pleasures of another, who has always liked motorcycles.

C. L. Kobersteen
Del Paso Hgts., California

Dear Mr. Greene:

I have just sent a letter of appreciation to the SCTA, thanking them for the splendid co-operation we motorcycle riders received at the Bonneville Speed Trials.

Of course I realize that it was through the effort of you and your staff that we were able to participate in this outstanding event. It is hard for me to express my appreciation on paper, but I would like to thank Mr. Ray Bowles for a job well done. (He was like the salt . . . all over the place.)

I don't know of anything in the past years that has created more interest, everybody is asking all about what took place. Of course I was too busy to know myself, but I'm sure we all look forward to seeing your coverage in CYCLE Magazine. If you don't buy an extra pot of ink for this one I'll miss my guess.

Well, Bob, thanks for everything. We did our best to conduct ourselves as gentlemen, and I feel sure that we made a favorable impression on all the SCTA boys.

J. H. Simpson
Stockton M/C
Stockton, California

Dear Sir:

Enclosed please find answers to the questionnaire which ran in your October, 1951 issue, and also \$9.00 for a three year subscription to the best motorcycle magazine anywhere.

Only one complaint: Where is your imagination? Almost all other publications have at least one fiction story, and I would very much like to see some motorcycle fiction in CYCLE. I've spoken with quite a few readers who feel the same way. This would make the mag complete.

Allen Ball
Denver 10, Colorado

(How many other readers feel the same way about seeing a good monthly fiction feature?—ED.)

Sirs:

Please accept my three dollars, and the answers to your questionnaire, in exchange for a year's subscription to CYCLE. I have been buying it at the stands, so far, for the somewhat unsound reason that I supposed if the newsdealer found a good market for it, he would keep displaying it, thereby making more possible the magazine getting into hands it would otherwise not. In other words, I want more people to read, or at least thumb through them, especially those poor souls who have all the common ideas about cycles and cycle riders.

If enough readers answer the questionnaire, you could whip up a very interesting article on the "average" CYCLE reader: just how old he is, and what color, engine displacement will his next motorcycle be, and when will he buy it? Seems to me you could prepare a short bit on the results of the survey, aside from using it as a guide for selecting future material. You'll notice on my questionnaire that I mentioned that the "Western Bob" is under certain handicaps here. Nothing looks sharper than a good chopped motor, sitting in the sun. . . .

Jim Thixton
Tipton, Missouri

Gentlemen:

I've noticed that in many past issues of CYCLE Magazine many readers ask if you would please standardize your acceleration summary. I have taken the liberty to write a short article showing how this may be done mathematically. Because I have an excellent background in mathematics and mechanical physics, I feel fully qualified to write such an article.

David Sobo
Los Angeles 16, Calif.

(David Sobo's interesting notes on acceleration appear elsewhere in this issue and we hope to be able to adapt them to future road test reports—ED.)

Gentlemen:

In regards to the story I gave you about hillclimbing, I note you mentioned that my partner and myself were engaged in the business of selling BSA motorcycles. I do not know where you got that idea, as we have not sold anything but Harley-Davidson motorcycles since 1948.

This mis-information has caused quite a bit of confusion, and we've had to answer a lot of questions as to just what motorcycle we are selling.

I would like for you, at your earliest convenience, to retract the fact that we are selling English motors and say we are selling Harley-Davidson motorcycles.

Windy Lindstrom
Oakland 1, California

(Please accept our apologies. CYCLE goes on record as stating Lindstrom and Self, Harley-Davidson dealers—ED.)

Sirs:

I am enclosing a photo of my mutt "Smitty," who has lots of miles under him, riding on my HD 125. One day I asked him if he wanted to take a ride. He started to get up on my knee, so I put a rubber kneel-



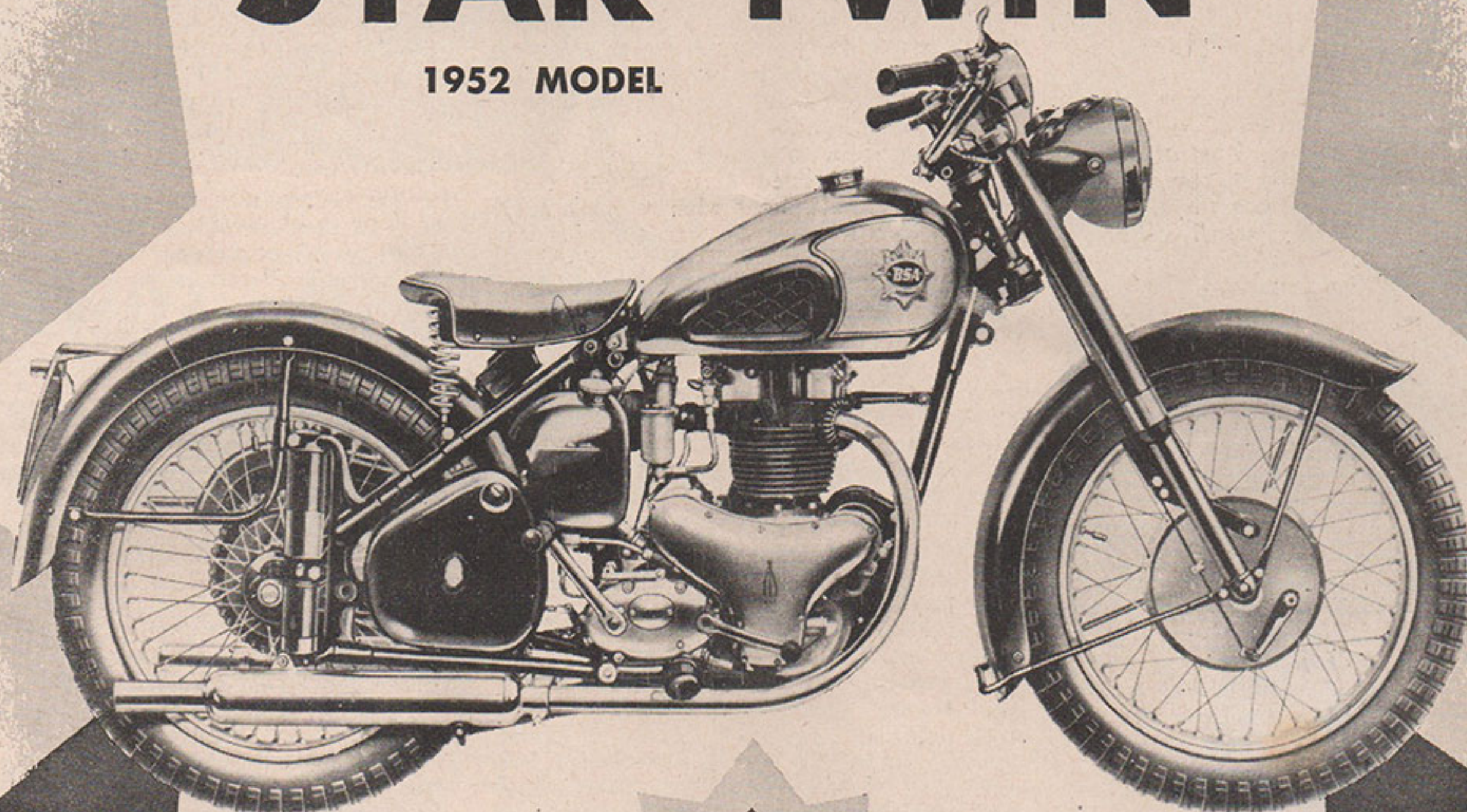
ing pad on the tank and we were off. Since then, whenever he hears the jingle of my keys, he's ready to go . . . He only jumped off once, when we were pursued by a mean little mongrel, but after rolling over several times, decided the cycle was the best place and was after me, barking, before I could even get stopped. Outside of his sneezing when we went through a bunch of gnats, he's a good passenger as any I've ever had, and loves to go riding off the beaten path.

Walter C. Beachler
Phoenix, Arizona

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1952 MODEL



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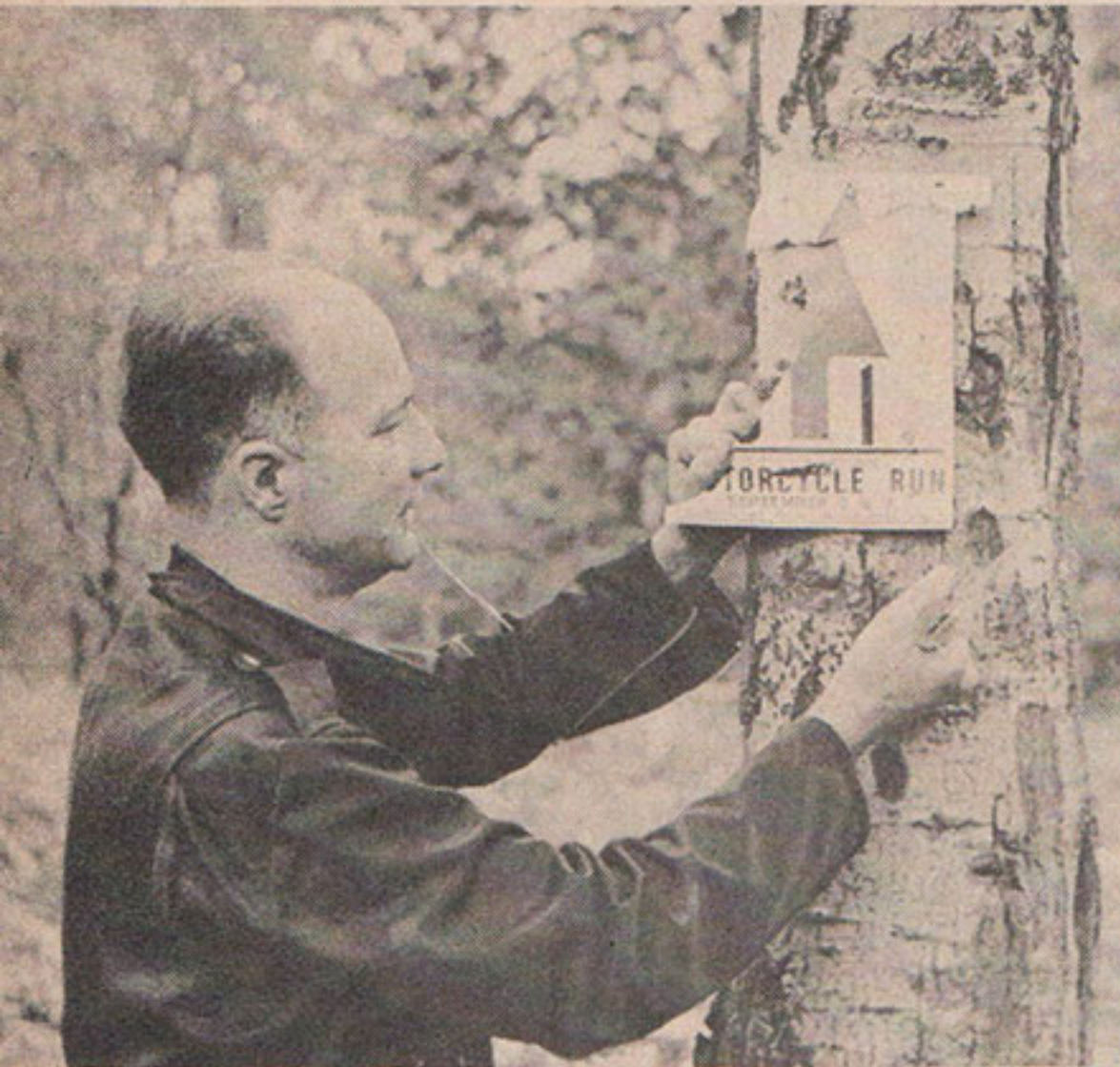
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RIGHT, confused, disappointed riders await instructions at Sterling, town near unmarked area



Markers were stripped from one section of run by malicious vandal. One was found by Al Nolan who holds torn piece for photographer. Much of the schedule had to be abandoned

SILVER CLANG for the COWBELL

JOE GEE, NATION'S TOUGHEST TRAIL FINDER, WHIPS 25TH JACK PINE ON A TRIUMPH TWIN



Photos by Carl Riskey and Eldon Robbins

(To Aub LeBard, sixth-place finisher this year, CYCLE is indebted for much of the first-hand information contained in this account—ED.)

THE BIG MACHINE throttled out of the woods right on schedule. Ahead was a clear patch of low brush laced over lumpy ground, and clearly visible to the rider on the big machine was a competitor up front, making the most of his lead.

Impatient entrants sweat out their call from the starter on a Lansing street. Under new system the record assembly of contestants was dispatched in a trouble-free one hour and 40 min.

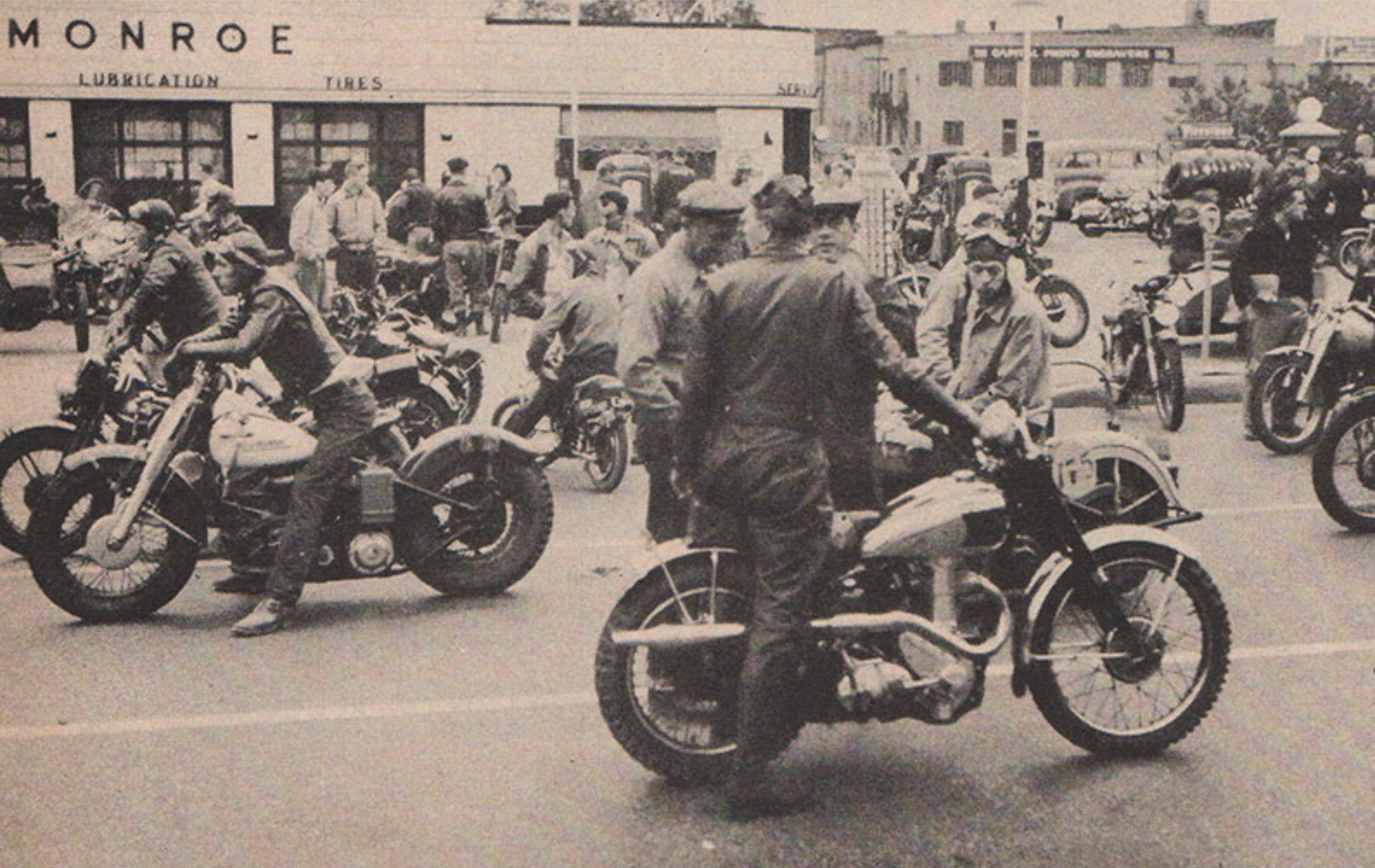
Now the pilot of the big machine was no newcomer to enduros. As a matter of record, he probably has logged more miles on desert and in forest than most of the rest of us have on the pavement. So, naturally, he figured to "blow off" the competitor by the time the cleared patch gave way to tall timber.

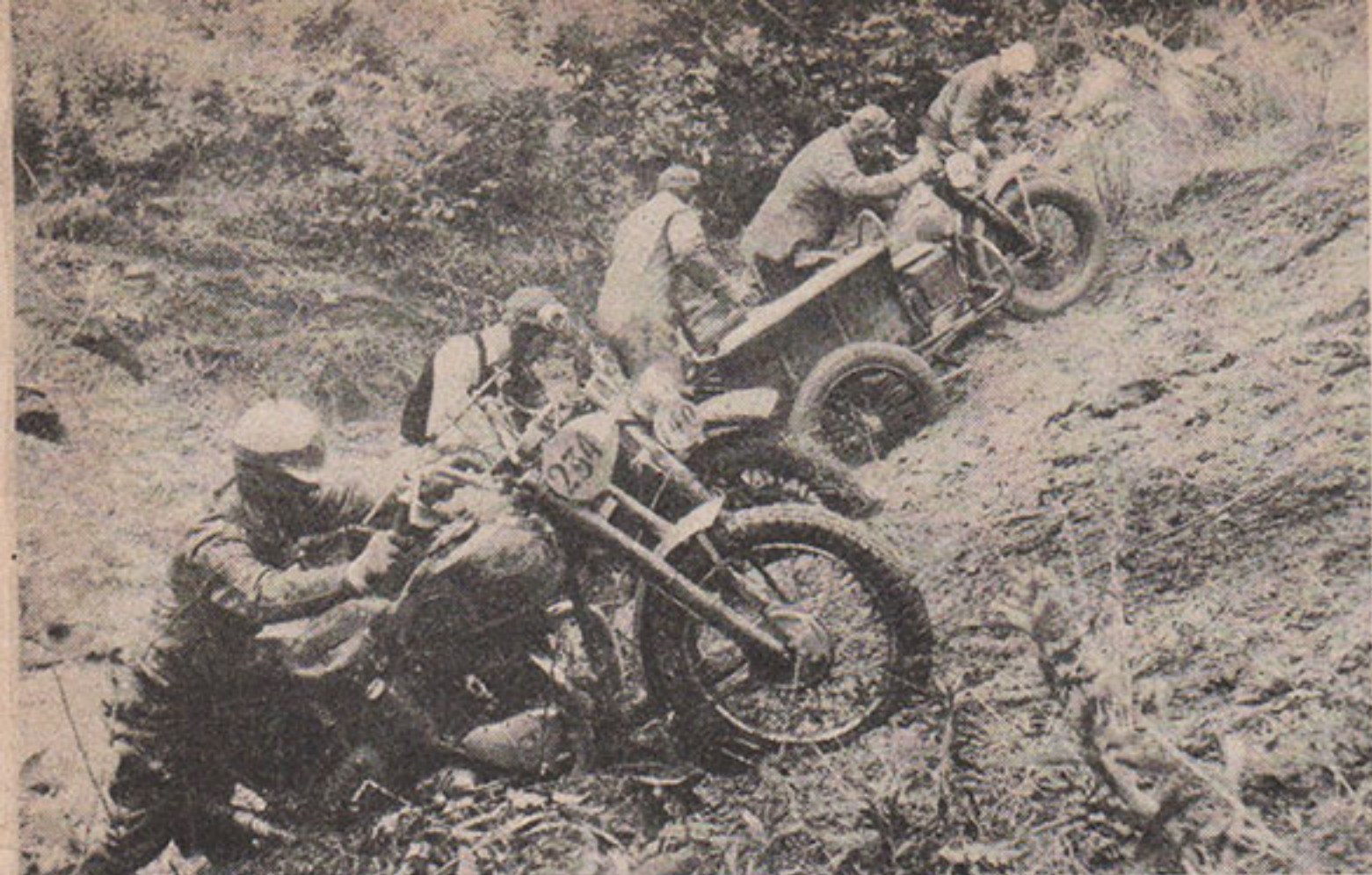
The bike he was riding was good for a top of 100 mph on the open highway and he was navigating through the brush at his absolute safe maximum. Much to his surprise, the man ahead lost no ground during the first mile. Same story second mile. By this time the veteran decided he was up against something special in the way of machines—perhaps a super-tuned cow-trail special. Finally, in the third mile space between the two bikes narrowed. At the fourth mile the overtaking rider was able to examine the amazing motorcycle that had held him behind for so long.

At first he couldn't believe what he saw. Not until he drew up alongside did he concede that he'd been breaking his heart to pass an absolutely stock 125 cc lightweight.

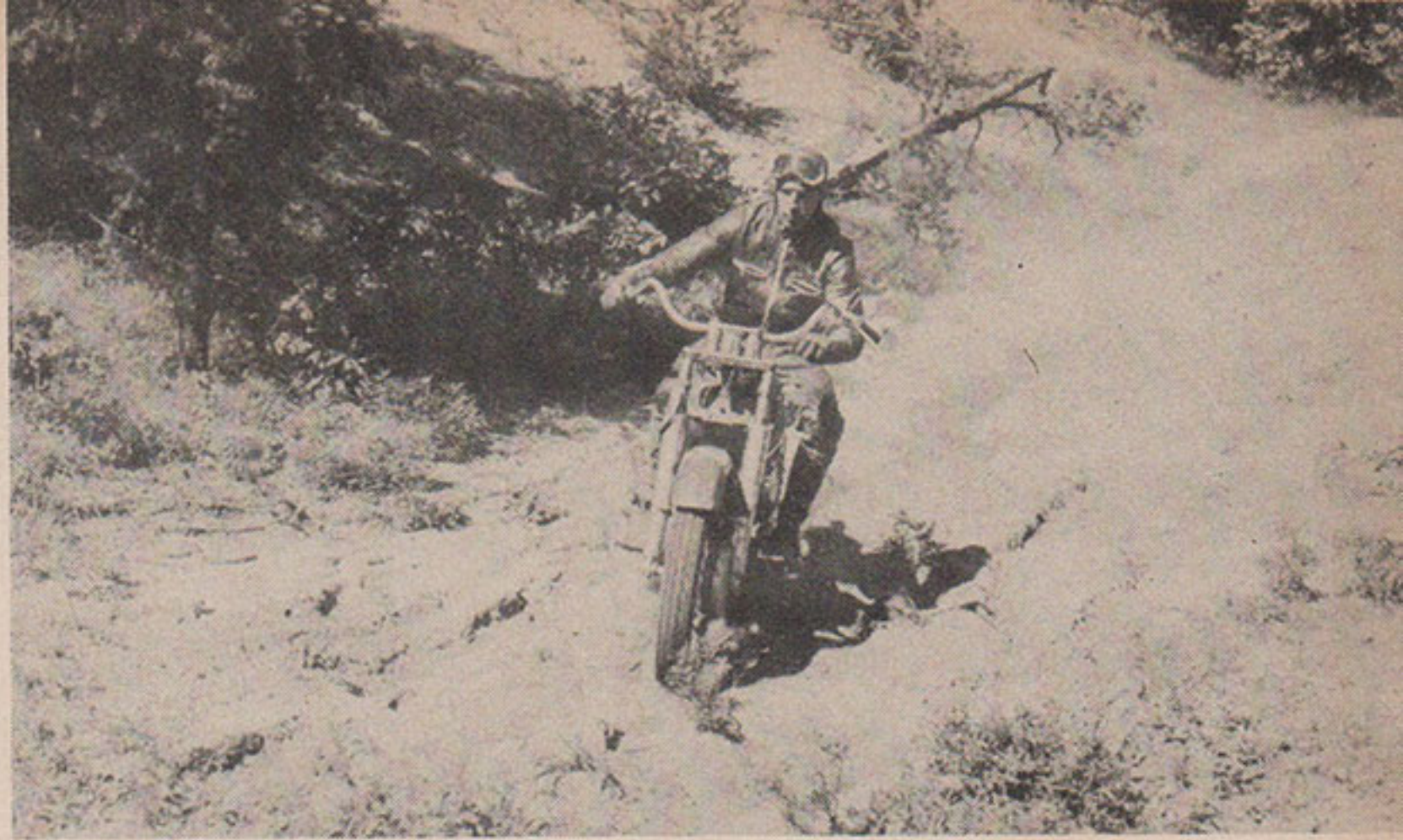
That, gentlemen, is an endurance course for the books. When a crack rider using the best equipment can be held to almost a draw for four miles by a bantamweight, the terrain is something special.

For the past 25 meets, Jack Pine Enduro has been something special. Strongest evidence of this is the fact that the winner of this affair is rated national endurance champ for the year. 1951 is the Silver Anniversary of the ceremony of the famous cowbell and Joe Gee, AMA referee for southern Ohio, racked up a total of 922 points to win the honor of seeing his name inscribed on the symbolic gadget. His will be the last name, since there is no more room for any more names. There will be lots of space for new winners, though, and the members of





Sticky trouble begins on the first morning of the run. Mike Van Damme, 234, started seven minutes before the hack, should be farther along. Next 170 riders will find this trap sloppier



Former National Champ, Bert Cummings, shows form that carried off top honors in '49 Jack Pine

the sponsoring Lansing Motorcycle Club are buying a new cowbell for the next 25 years.

There were 336 hopefuls registered for the fracas and 319 actually shoved off in the cold, gray dawn of September 2. Of this number, 42 were carrying sidecars to try for the Jack Pine jug, awarded to the winning team. Class A sidecar winner was No. 25, a Harley-Davidson driven by Stanley Capell of Ohio and carrying Ellis Clement as passenger. Their score was 437, just 443 more points than the second-place team amassed (-6 points). Only three hacks struggled through to the finish line, another tribute to the excellent course design.

Top finisher in the 125 cc class was Ronald Ciszek with 312 points. Ronald's Harley beat out a field that contained two Cushmans and two Whizzers. One Whizzer bounced for 268.8 miles before it dropped out.

The sweepstakes winner, Joe Gee, rode a Triumph to victory. Almost every make of machine was represented, ridden by eager contestants from such widely separated locales as California, Alabama, Canada, Texas and New York. They came from big cities and little towns—from Brooklyn, New York and Chicago to Energy, Illinois and Eclectic, Alabama. Nobody wanted to miss this big one.

During both days the weather was perfect. There had been no rain for three days, so the ground was just damp and tacky enough to make a good speed surface. The committee had invented a new starting procedure that brought a swift commendation from experienced entrants. Starting time was determined by the last two digits of your number. Numbers 18, 118, 218, 318 all took off together, exactly 18 minutes after numbers 1, 101, 201, 301. Thus no drawing was necessary the second day and each rider could go to bed as soon as he wished at the end of the first day, knowing exactly when he was due at the line the next morning. Score sheets were of different colors. Numbers 1 to 100 were white, 100 to 200 were yellow, 200 to 300 were blue, 300 to 400 were green. Each member of a starting group, therefore, had his own color.

The first 20 miles were devoted to warm-up. Then the trail swerved off the road into a field of high grass and the trouble began. Unwary riders who hit the grass too fast discovered to their sorrow that it was quite wet and slippery. Those who slogged through the grass safely were suddenly met by a small puddle of water. This was an innocent-looking pool, quiet and still in the damp morning air. A few lusty jockeys decided it would be foolish to detour for such a minor obstacle and plunged through. That is, they started to plunge through, but somebody had pulled

the bottom out of the pond and it was saddle deep. Those who rode in, walked out for the most part, after the engine cylinders had inhaled a deep draft of water.

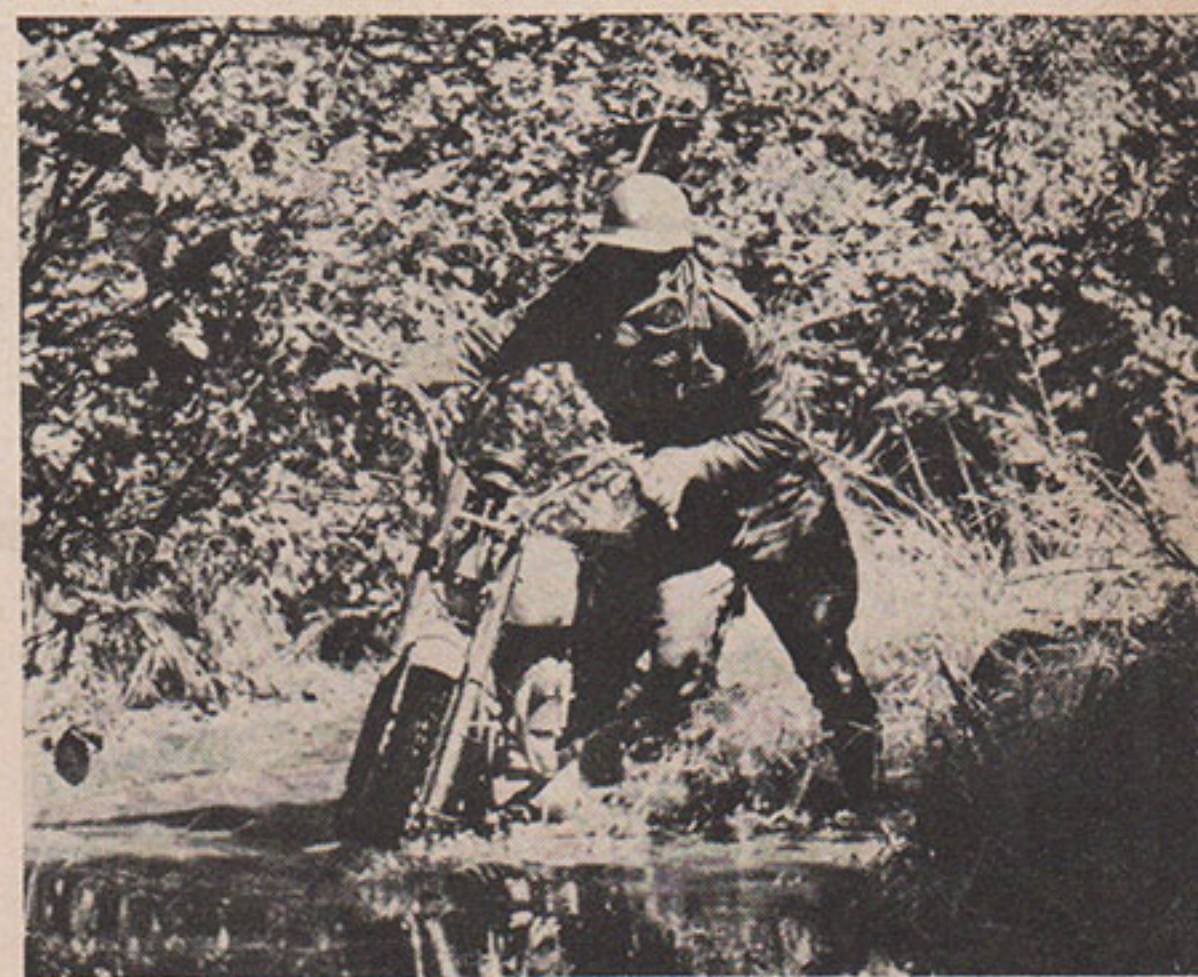
Swampy, bushy ground was next, and the path led along the tops of low dikes. From here, with the average speed set at a smart 24 mph, the crafty layout men had routed the file through what one rider called the toughest stretch in the run. All the eye saw was an undulating field of tall grass. Once in, however, it became evident that this was no ordinary field. Beneath the grass were hummocks—little knolls about two or three feet high. Because of the grass they couldn't be seen, so rider after rider took to the air for a brief flight. To complicate the situation, these hummocks were crammed tightly together like a batch of rubber balls squeezed into a box. There was no level path between hummocks or around hummocks. Nothing to do but throttle down and lose time. Blasting through the patch gained nothing except battered flesh and exhausted muscles. With a 24-mph average to maintain, the best riders dropped to low gear and crawled along at five or six mph.

After the hummocks, the trails seemed almost like pavement. Yet before many of the day's 250 miles had gone by, it was evident to every contestant that even the trails were rugged. Twin ruts had already worn down the trails in previous years of usage, so that the rider could take his choice of channels. But—from each side of the road, heavy branches hung across at arm and head height. No matter where the motorcyclist rode, he got whipped. It was a little like running a gantlet but it lasted a lot longer.

For the rest of the first day, the tired group wandered through occasional swamps, more rutted roads and over a few dirt-gravel roads where it was possible to make up a little lost time. The Chippewa river crossing, originally scheduled, was cut out before the run began because the water was too high. Then, about three miles northwest of Sterling, Michigan, everything became complete confusion. Riders milled around, lost, waiting for someone to direct them. It was discovered, eventually, that the signs, so carefully posted and checked, had been ripped off the trees by a person or persons unknown.

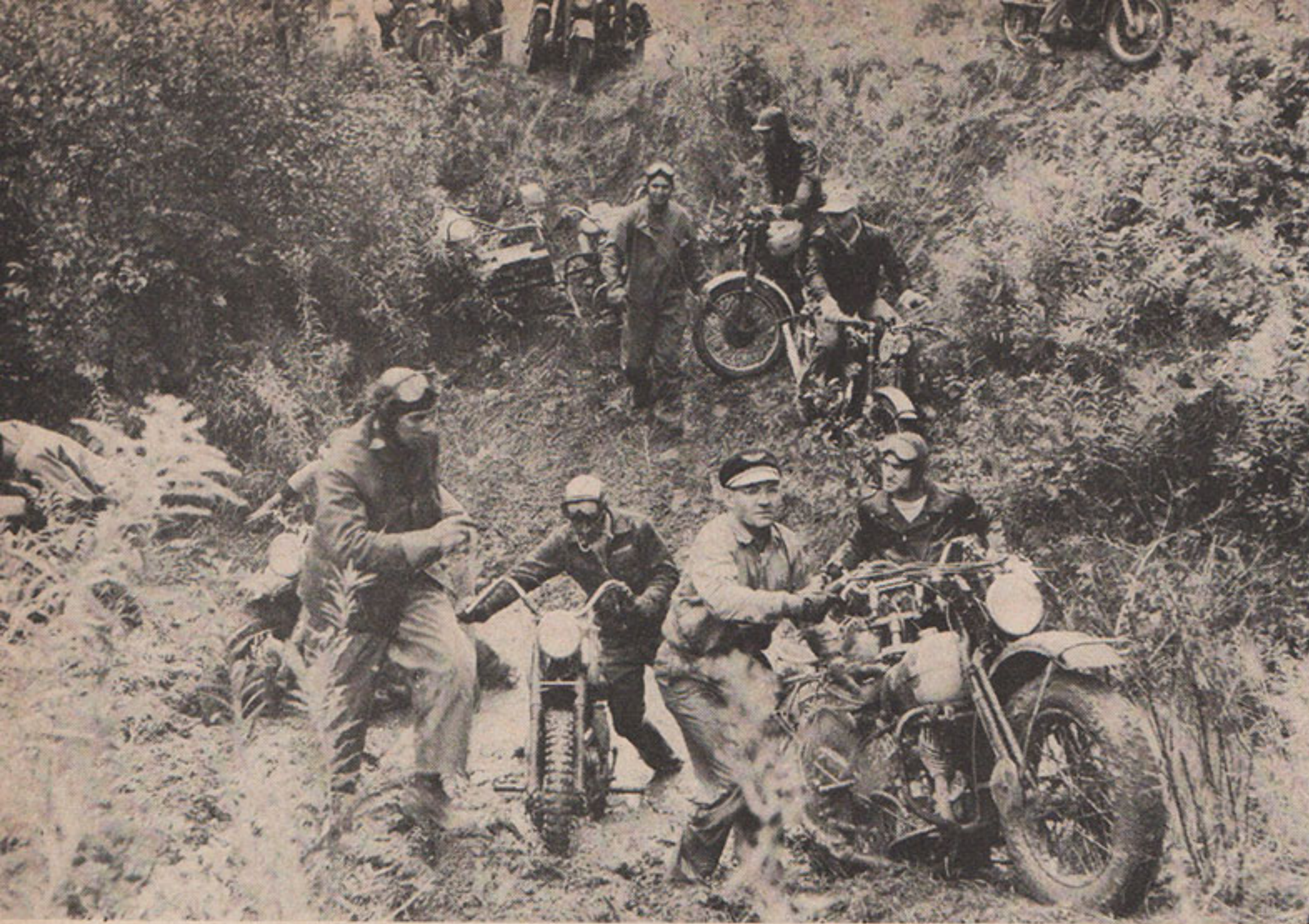
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Weary, mud-spattered competitor slogs down a firebreak during second morning. Course leads right up to top of next hill and down again. Firebreak crosses highway at bottom of canyon



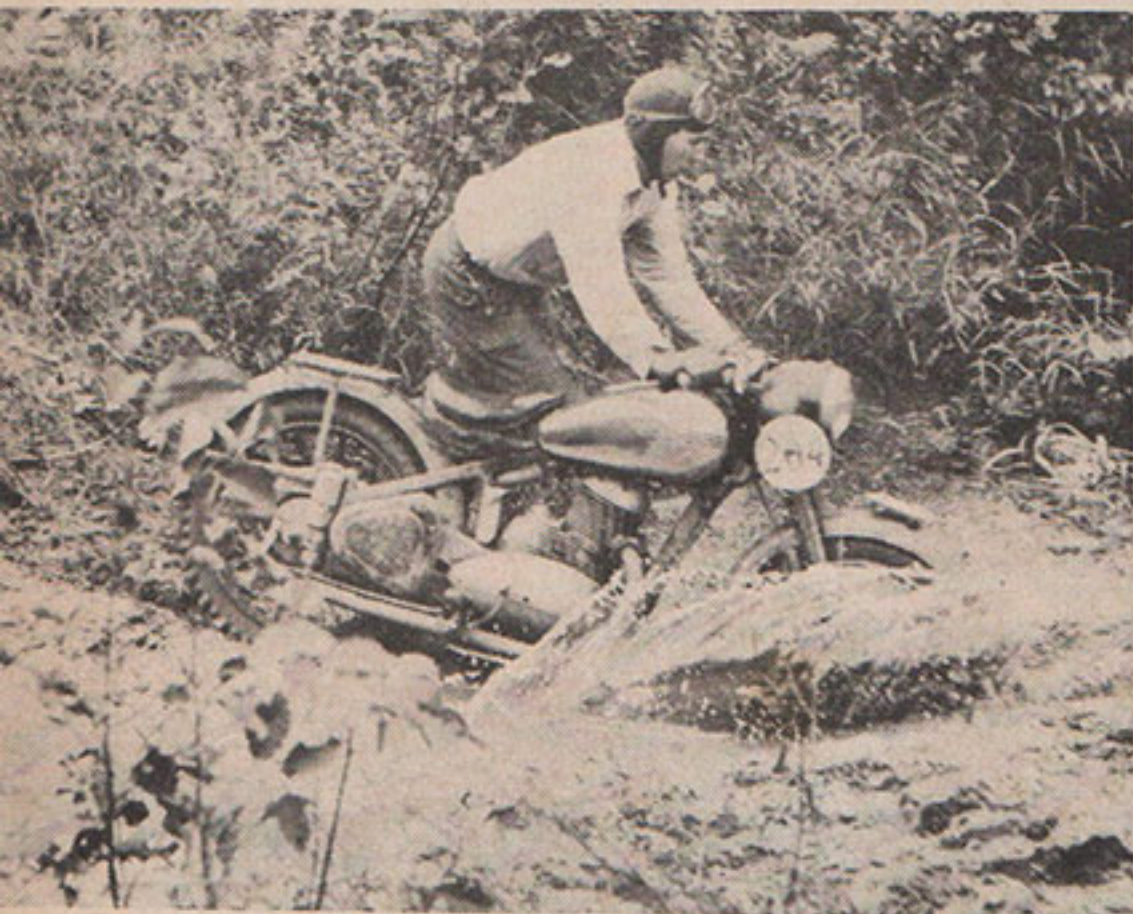
Dead Stream swamp brings out the cautious instincts of the best riders. Here, Red Wood, who placed 16th in Solo Class A and was part of the winning team, eases his Triumph through





California's Aub LeBard seems to have found something absorbing in pines, finished sixth

LEFT, Jammed up in the slough. A case of first in, first out, for hacks and solos alike. Many sidecars carry block and tackle for such emergencies, may even uncouple hack as last resort



T. A. Hanford goes in fast, will come out slow. Finished in 24th place, Class B, with his Jawa

Lightweight leaves deep trail through mushy earth, as Milton Usherwood trundles his Puch to firmer ground. Milt covered 139.2 miles to cop ninth place out of 16 entries in Junior Class A

SILVER CLANG (Continued)

There was nothing to do but assemble in Sterling and await a decision. Theoretically there were still a few hours of the run remaining that day, but the committee wisely decided to give everybody free passage into the stopover town of West Branch.

The little village of West Branch deserves some kind of special award from motorcyclists. Once a year the citizens go all out for the sport. Each rider is quartered in a private home there, assigned to him before the race begins. When he gets into town there is a meal waiting for him at the community church—and, from all reports, the meal is something worth the 250 miles of pounding to get there. The ladies of the community have prepared it and there are mashed potatoes, a meat course (ham for 1951), vegetables, and all kinds of pie. This meal is served hot and it is served immediately—a big consideration to all the men who have spent the day on the trail.

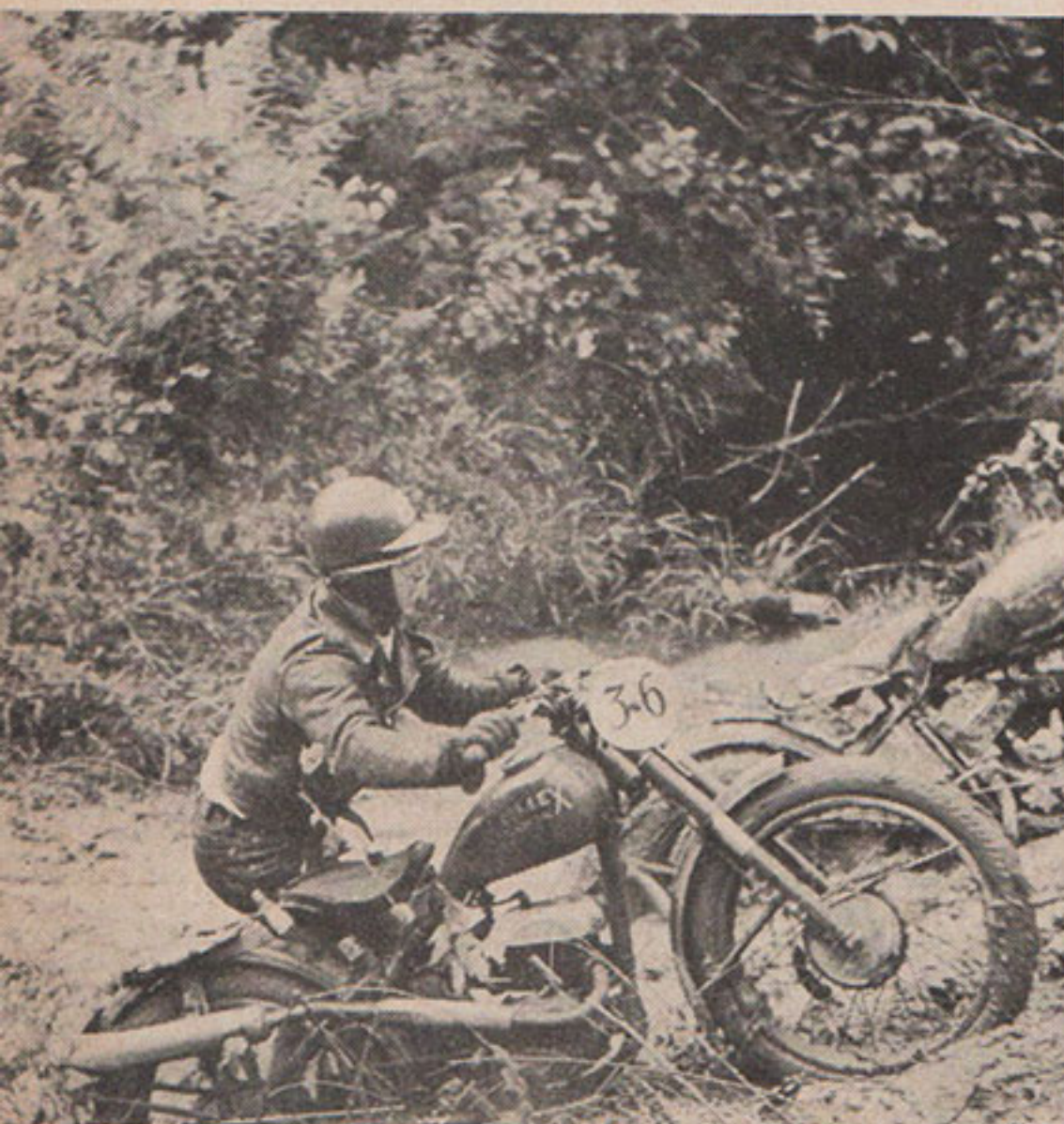
Early the next morning all is quiet except for the creaking of muscles as the early starters walk to their machines. It is no secret that bending over to wash the face that second

morning is a difficult operation because more than a few arms and backs are held stiff and straight by complaining muscles.

The course for the next six hours is not designed to pamper morning stiffness either. Through a corral, across a meadow, up and down the fire breaks between lanes of tall trees winds the trail. Mountains are steep and high; fire breaks were not originally designed for pleasure cruising. The sun, filtering through the greenery, casts alternate light and dark shadows across the path, hiding deep, dangerous holes and highlighting small, harmless depressions. It's strictly a case of "damn the torpedoes, full speed ahead" for anyone trying to hold to schedule. There isn't time to get off and examine each dark shadow for danger.

(Continued on Page 31)

Winning hackers, Stan and Clem, blast their way out of a sand trap. Rugged pair from Ohio man-handled their heavy rig for the full distance and a score of 437 to annex coveted Jack Pine jug



L. to R., Front row, Al J. Lewis, Buddy Parriott, Dan Busby, Ed Brady. Standing, Sam Parriott, Blackie Bullock, Cal Makela, Pete Coleman, Bus Schaller, Otto Crocker (timer), Tim Witham

(Things happen fast at Bonneville Salt Flats. Through the stimulation of the Southern California Timing Association's annual speed meet last August, at least twelve new records were established, the last five of which, the 10-20-30-40- and 50-mile records, set by Eugene Thiessen on a Class C 40-cubic-inch BSA Golden Flash, arrived too late for our November deadline.

Since that time the 61-cubic-inch Class C straightaway, 40-cubic-inch Class C straightaway, and 40-cubic-inch Class C 10-20-30-40- and 50-mile records have been cracked. Here are the results of this latest assault—ED.)

SPEED HUNGRY Blackie Bullock, mashed flat against a Triumph Thunderbird, ploughed under the short-lived 40-inch Class C straightaway mark, when he averaged 132.1607 both ways through the measured mile; and Sam Parriott tooled his favorite 61-cubic-inch Ariel Square 4 through at a 131.9539 mph average, to tie up the 61-inch Class C record.

Bullock then concentrated his efforts on the Bonneville 10-mile circuit and smashed all existing Class C standing start scores, from 10 through 50 miles, with a speed of 117.9554 for 50 miles from a standing start.

Officiating again as AMA referee was speed merchant, Bus Schaller, who was on hand to make sure that all equipment complied with Class C regulations, taking pains to see that compression ratios, bore and stroke sizes, and fuels, fitted national requirements.

Bullock's second charge at the newly established 40-inch straightaway run paid dividends. Not satisfied with merely breaking Thiessen's recent record, Bullock went out again and again, actually breaking his own new record twice.

At sun-up the next day, Sam Parriott dampened Marty Dickerson's 61-inch mark when he hit 131.9539, slightly higher than the best time recorded by Bullock's Thunder-

RIGHT, Only a few days before, Gene Thiessen started "Flash" vs "Bird" speed duel when his BSA touched 128.95, then Blackie Bullock sped his Triumph Thunderbird at a 132.16 average

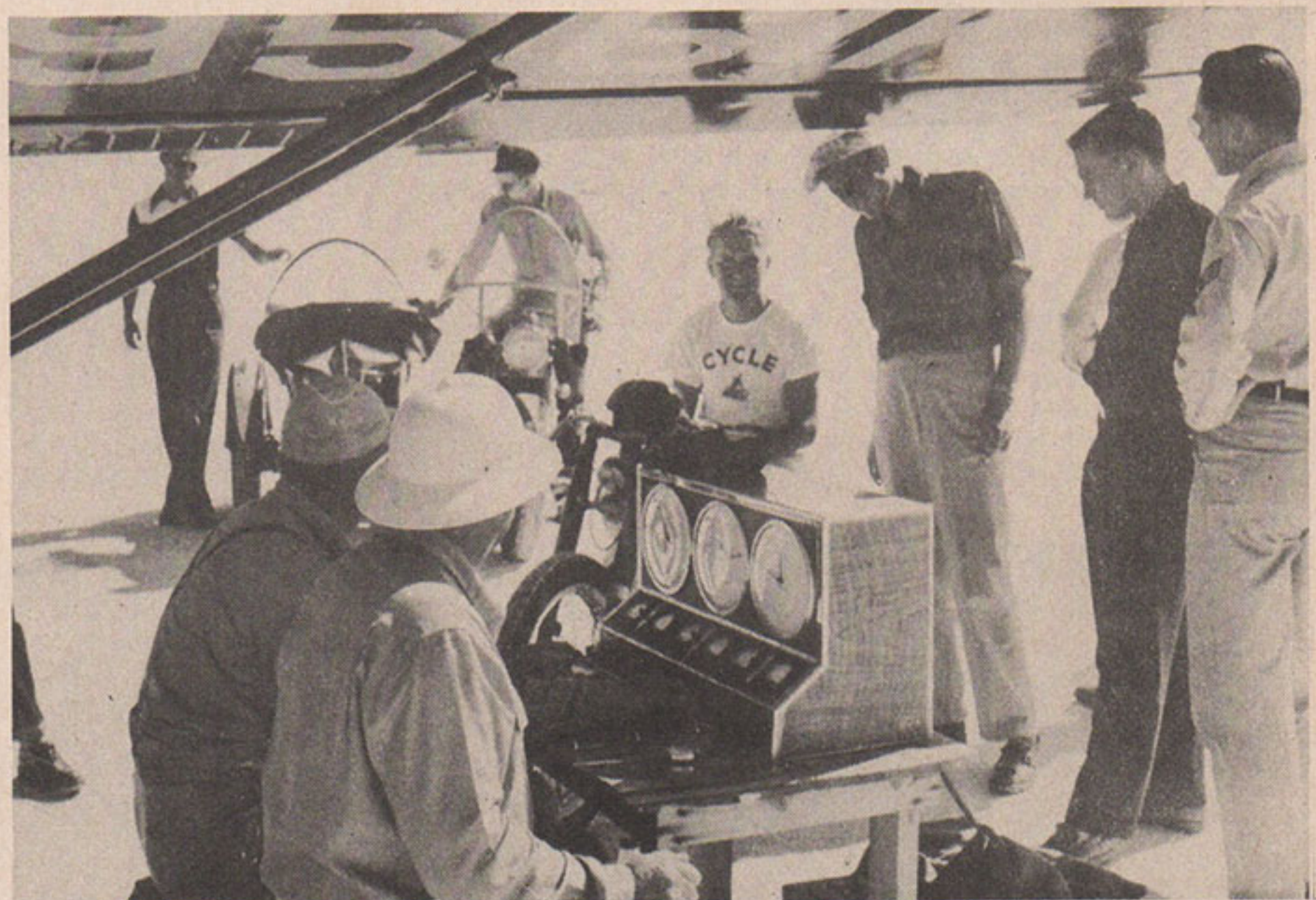
Bullock's bullet and the men behind the gun. Pete Coleman and Cal Makela served as Blackie's pit crew as he won six national records



THE BIG CIRCLE

**BLACKIE BULLOCK AND SAM PARRIOTT
BLAZE CYCLE HISTORY AT BONNEVILLE
ESTABLISH 40 AND 60 CU. IN. MARKS**

By Pete Coleman



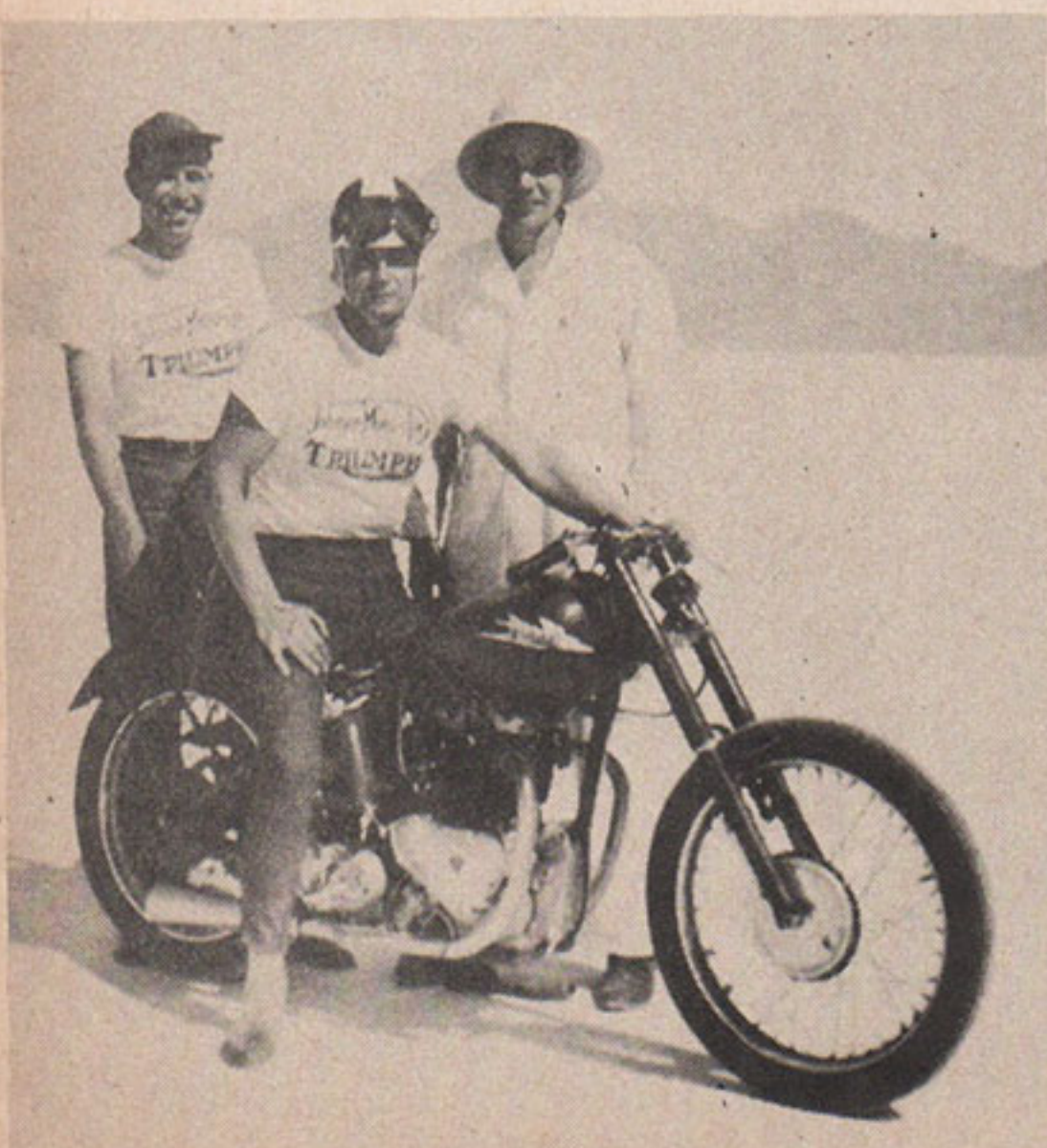
bird. Bullock, not satisfied with merely holding the record 40-inch time, went out again to better Parriott. His first ride fell short, but Blackie finally crowded under the paint, and topped Sam with 132.6944 mph. His return trip was made about five minutes later with a westerly speed of 131.6270 mph. This gave Bullock and his 40-inch Thunderbird a new average of 132.1607, which broke the existing time for C bikes in America, regardless of displacement. Referee Schaller rushed in for a compression check on the "Bird." Measurements showed it to be 7.9 to 1, and within Class C limits.

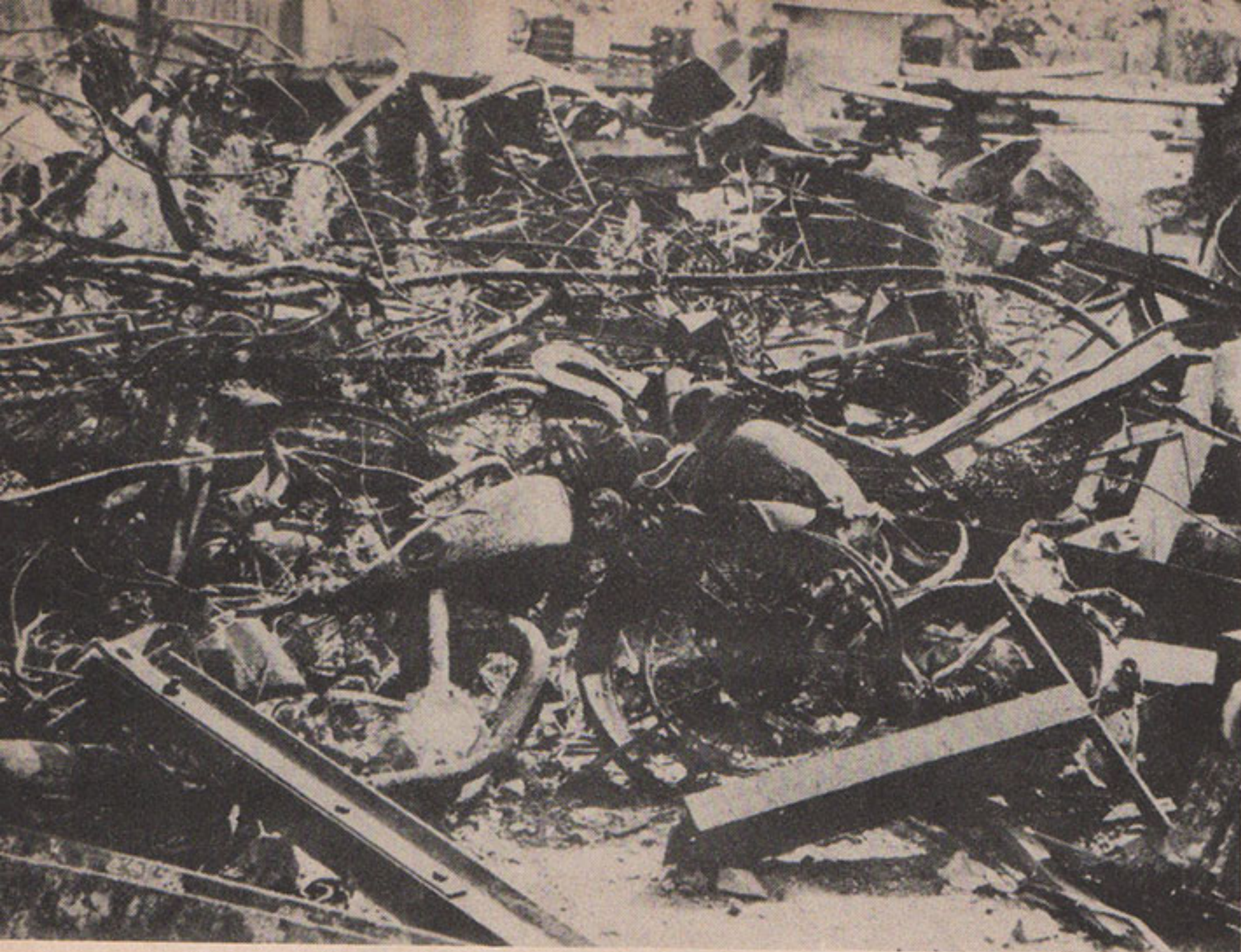
While the famous Crocker electric timing

instruments were being moved to the Bonneville 10-mile circular course, Pete Coleman and Cal Makela, mechanics on the Bullock Thunderbird, began the grueling test of thoroughly checking each and every nut and bolt on the motorcycle, and safety wiring all nuts that might be apt to work loose during the 50-mile run. The carburetors were both richened a small amount, and slightly colder spark plugs were installed in the motorcycle to ensure a safe journey.

Bullock made a test lap on the 10-mile circular course to find a proper riding posi-

(Continued on Page 29)





Not the end, but the beginning. In pile of rubble among charred ruins of NSU factory, Herz found enough parts and material to assemble engine which eventually broke absolute world's speed record for motorcycles of any class

the dramatic story behind nsu, their unshaken faith and ultimate victory

By Herbert Schwarz

RUINS TO RECORDS . . .

GERMANY, spring of 1946, Wilhelm Herz, well known as a flashing motorcycle racer before the war, had just returned from a POW camp to the small town of Hessen, Lampertheim, where he was born. After the first joy of seeing his home and family, he realized that he needed more than just friends and his home, and decided to bicycle to Neckarsulm. This was the former factory town where the fast NSU racers were made, and on which he had driven to many victories, before the man with the unkempt look started things popping.

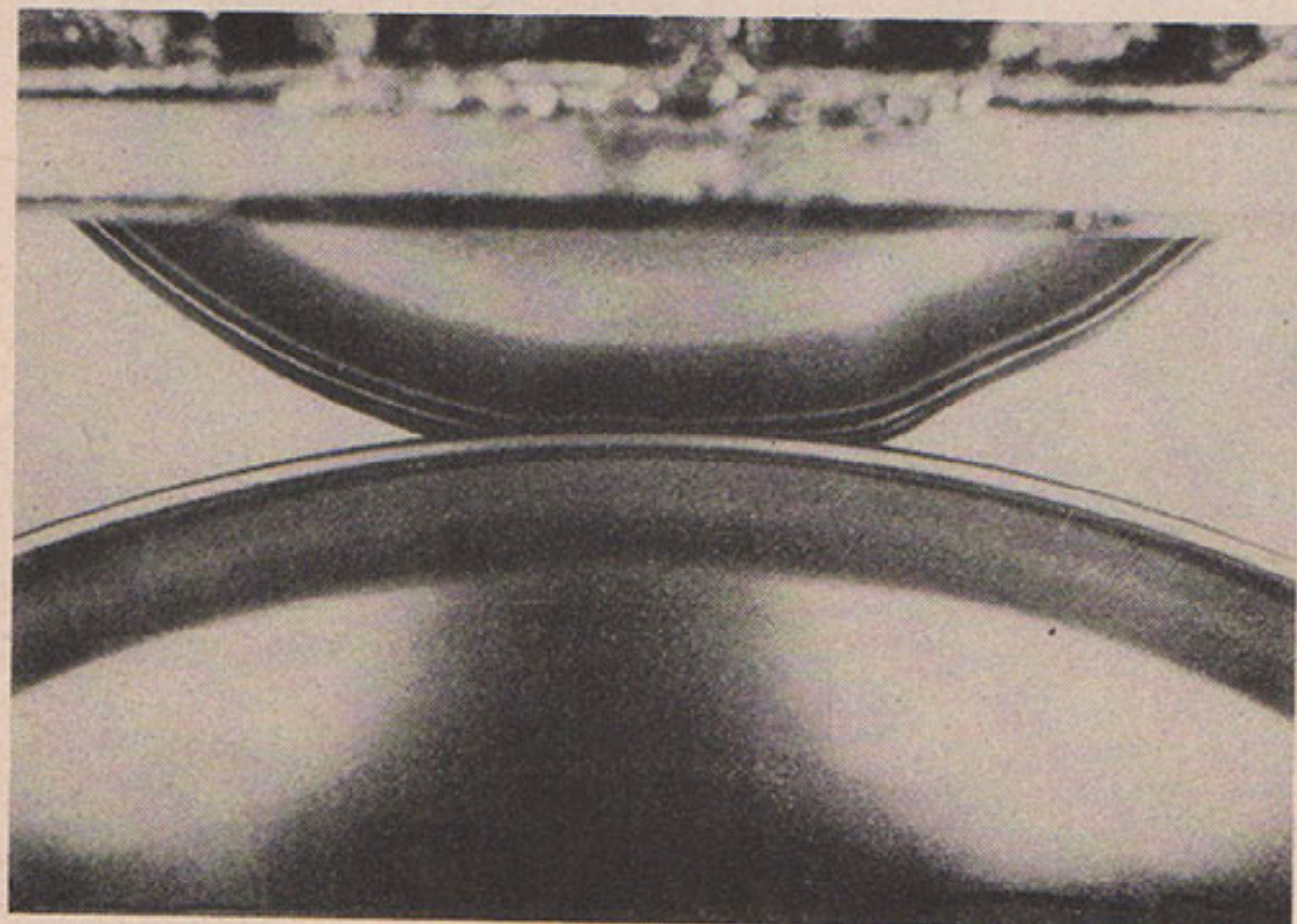
Four miles this side of Neckarsulm, he stopped to pay a visit to his old friend and tutor, Otto Mack. Otto used to be chief mechanic at the NSU works, and somewhat of a godfather to all the young racers. Otto's uncanny ear detected many a defect before it actually occurred, and innumerable races were won because of his last-second adjustments. When Willie found Otto at home instead of the shop, he knew all was not well. After the preliminary "howdydo's" he started to ask

questions. How was the factory? Where were the racers, etc. The answers were disheartening. There was little left of the proud NSU works, almost as little as of Wilhelm, who weighed just 110 pounds when he returned from camp. The dream of victories and renewed success collapsed. All the hopes of the last four years vanished. There was one ray of hope, however, Master Mack and his helpers had "preserved" the famous racers—but where they were, nobody could say. There was nothing for Herz to do but to ride back home and wait.

January 18, 1912. A lusty wail came from an upstairs window of the century-old house, where Herz's father and grandfather had founded and operated a carpenter shop. "Founded 1836" a sign proudly proclaimed. That was the birth of Wilhelm Herz. An uncle, one of the pioneers of motorcycling in Germany, managed to scrape together 30 marks (about \$7.50) and bought something

that could pass for a motorcycle for Willy's 15th birthday. The Germans had rather backward ideas regarding drivers' licenses and such—so young Herz did without for two years. One day he was caught and had to pass a difficult test, but finally obtained the permit. The young fellow had little else on his mind than pattering with engines, trying to make them better and faster. He was so busy with this hobby that little time could be found to devote to the paternal business enterprise, which made father Herz none too happy.

In 1932, Junior, riding a 500 cc (30.50) Opel, started in his first race but not under his own power. Two husky friends pushed the mighty bike to the pits—no money to buy racing plugs. At the very last minute, family and friends pitched in and raised 45 marks to purchase the vital candles; this instituted Herz's debut, which was also his first victory. Winning prize was a mantel clock;



While NSU groomed men and machines for the world record, The Continental Tire Co. experimented with a tire which could withstand the terrific speeds anticipated. Our speed-camera picture shows a tire at 200 mph is not round, but is an odd shape, fighting friction, heat and centrifugal force. Each wheel had to withstand a 600 pound pressure. The tire finally chosen sustained a speed of 250 mph for over 30 minutes



In the absence of expensive wind tunnels, an experimental shell was pulled through waters of a lake to determine proper streamlining of all-important hull. An example of infinite care to detail

and when Herz Senior saw that practical value could be derived from his son's hobby, he gave in to a new DKW, first seen with Herz in 1936. So successful was Willy that DKW engaged his services as a factory-sponsored rider from 1937 to 1939. Then NSU "bought" him to race on the newly constructed blown twin; but war was declared and the dream of thundering engines, victories and triumphs was temporarily ended.

1939 to 1945. France, Poland, Russia invaded, and Herz a POW—time to think how to ride faster and faster—how to improve the supercharger. By the spring of 1947 Willie could stand it no longer and again made a pilgrimage to Neckarsulm. Where were the machines? What had become of them? Upon arriving at the factory grounds, he saw men working with pickaxes and shovels, trying to pry the useful from the ruins. All metal was piled into a large scrap heap. He felt certain that the scrap pile contained the famous engine. Checking them over carefully, Herz found plenty of demolished engines, frames and forks, but all were very rusty and seemingly just old pieces of iron. He begged for permission to purchase the scrap metal and was allowed to do so. As he loaded the rusty mess onto an old, borrowed truck, he heard a snickering remark, "That junk isn't worth two pennies." He took the 'junk' to a shop at Lampertheim, and there the task, which in its magnitude would have discouraged bigger men, began. Herz was so convinced that he would eventually find what he was looking for that he worked for a period of five whole months. He scrubbed, wire-brushed, cleaned and polished. Wire brushes wore out; oil and kerosene, already scarce, had to be obtained in the black market. Even Mother's washtub was pressed into service.

Finally, the unbelievable came true. One early morning, in the fall of 1947, he took the new 350 cc supercharged NSU racer to the Autobahn for its first road test. Not only had he managed to assemble a first class motorcycle from junk parts, but he had also completely re-designed it. "Privately measured," the NSU reached a speed of over 150 mph. Herz was still not satisfied and worked on this new supercharger until finally an engine of such perfection was developed he

was convinced that it would be capable of the world's record. In April, 1948, he reached an average speed of 130 mph during a race, and the idea was born that he should attack the record. That same year brought a chain of victories, and when the rebuilt NSU factory nominated a new Werkes factory team, he was right there. He returned his "adopted baby" to its real "parent"; as the home of his motorcycle would now be his home. The "home" was quite a thing, to be sure. Anyone who had seen the destruction of 1945 would not have believed that such a change was humanly possible. Again, thousands were busy in well lighted and designed shops, turning out swarms of bicycles and motorcycles, where only a few short years ago there had been nothing but twisted girders and smoking ruins. Here was no "ersatz" and no makeshift tools. Real raw materials and real money from the Marshall Plan were used to the best advantage.

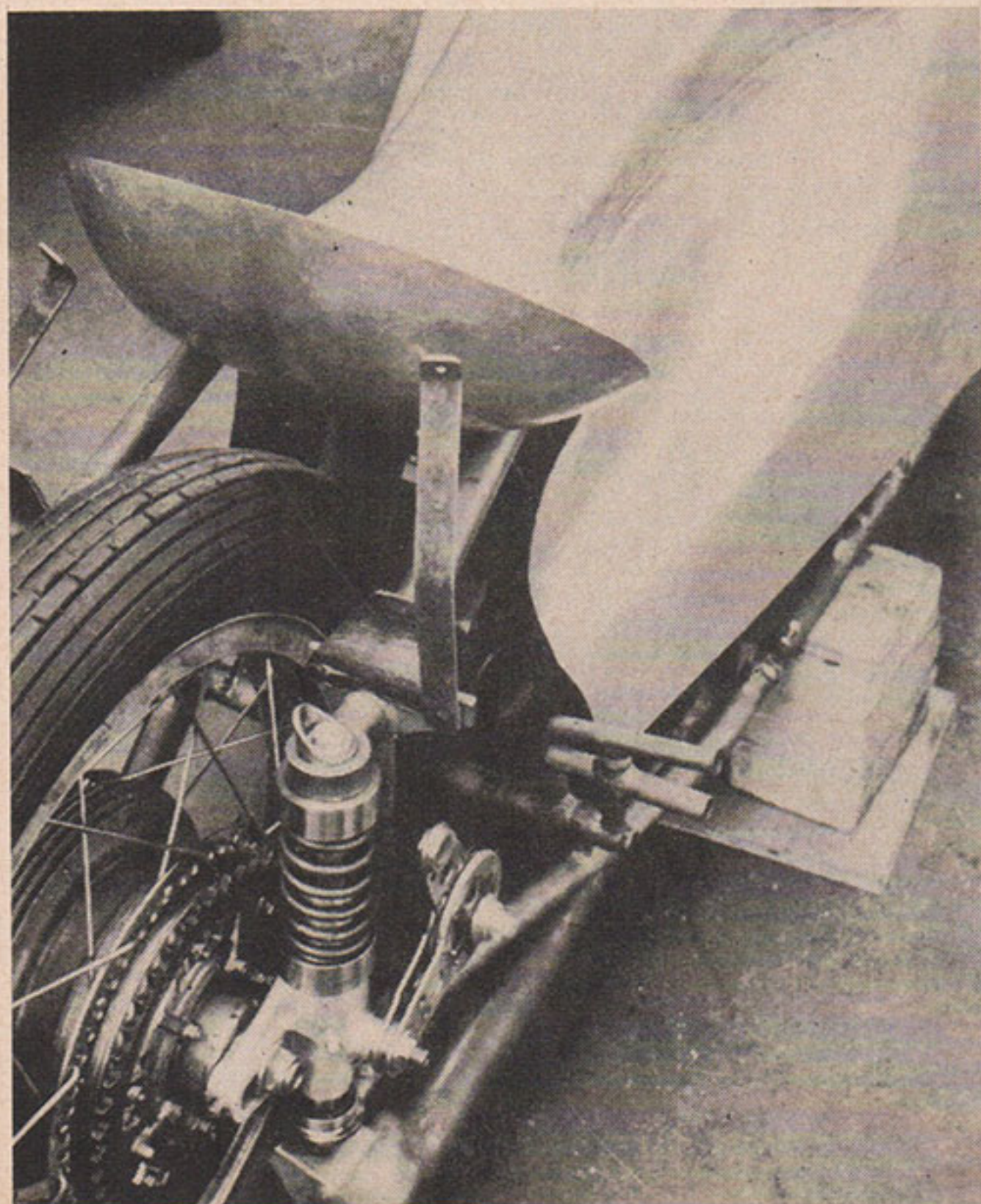
Shortly after Herz's re-association with NSU, he told of some ideas for world records and the sports-minded brass at the factory were immediately enthusiastic. It was decided not to experiment with half-finished products or unsafe machines. A complete division of the factory was set aside to tackle project "World's Records." The project consisted of various phases: to set an engine with over 100 hp into a frame; to bring the power of this engine on to the road; to enclose the whole thing in a shell, which would overcome all wind resistance and still stay on the ground. All this took time, but with typical German persistence, there was no hurrying and no waste. Everyone in the team knew his job and everyone did his very best. While the technicians and only a small circle of initiates worked on the future record machine, Herz was busy gathering victor's laurels. That was in 1949. The last race of the season brought tragedy; during training for the Cologne race, Willie fell and suffered a complicated break of the left arm. So serious was his injury, there was talk of amputation, and little hope that he would ever race again. Forgotten was the world's record. One thought remained: how to save that arm. When the plaster cast was removed, Herz was horrified that he was not able to move wrist

or hand. It seemed there had been a mistake in the therapy. Back he went to another hospital, specialists, and operation. In 1950, after months of exercises and a magnificent display of willpower, he was well again. Then, training was started such as Willie had never known before. Each morning he helped a baker friend knead the dough to help strengthen the atrophied muscles. He took very hot mud baths, lifted tremendous weights, sawed wood, and finally was rewarded with an arm strong enough to grip the handlebar of any motorcycle, even the fastest mount on earth. The spring of 1951, Herz was in real training again.

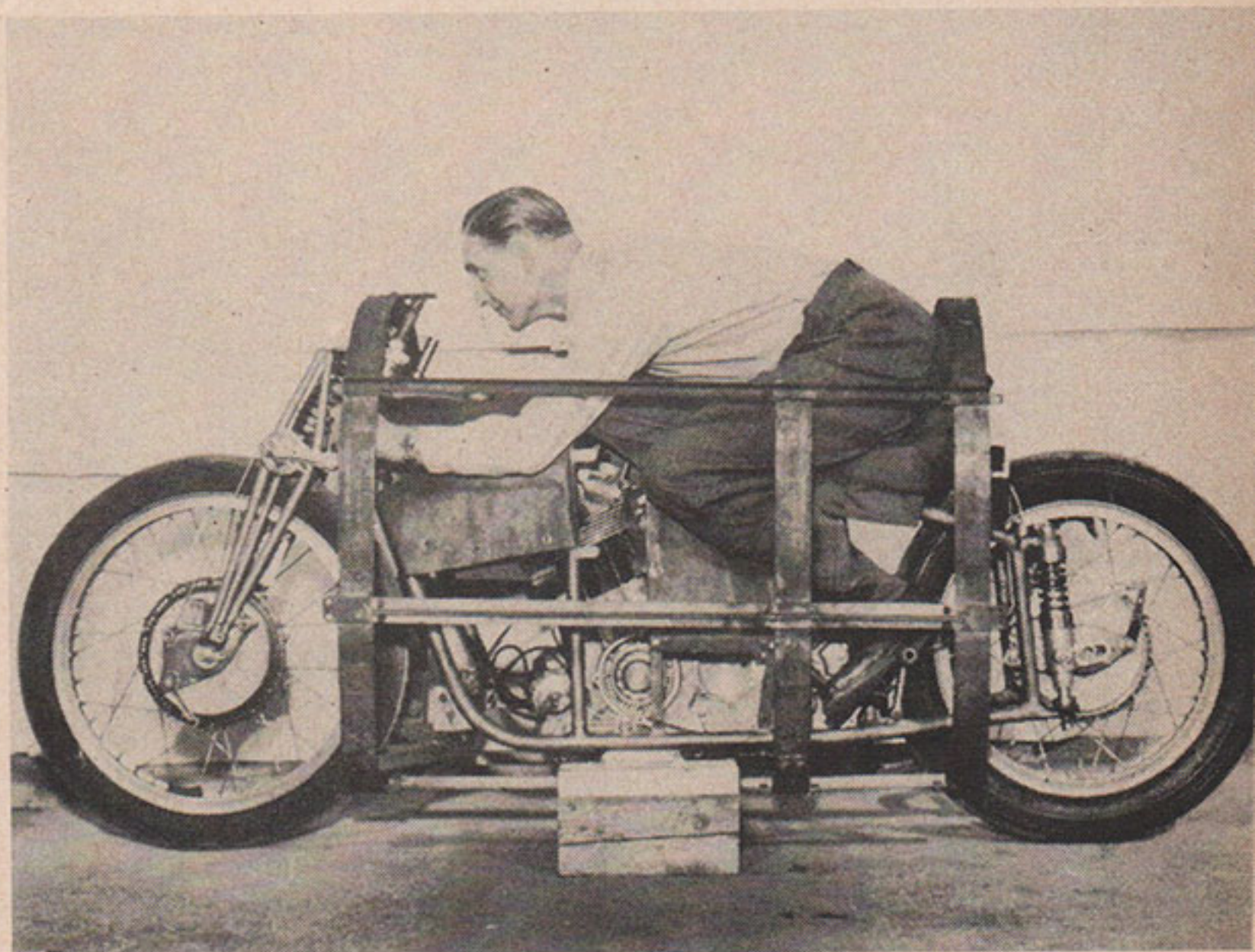
Meanwhile, work had progressed at the factory. 105 horsepower had been developed, but that was not enough; the biggest problem being to keep the two-wheeler on the ground, and this was where the driver himself had to literally enter the picture. With Herz lying prone in the framework of the machinery that was to shatter all records, the engineers designed a "body," which would not only overcome most of the air resistance, but would help press the engine to the road. Twenty-three designs had to be discarded until finally one fitted rider and cycle just right. Herz tried the motor in the wind tunnel to get an idea of what pressure to expect during the actual ride. He was well aware of the fact that considerable danger was attached to the project and that some of his predecessors had suffered accidents and even death. But with nerves like steel, his mind was made up to do the job and do it well.

February, 1951, X-Day was closer. Herz took the "thing" out into the open. There was no doubt that this was the fastest motorcycle ever built. Was there a man who could make use of all that horsepower; one who could keep that monster under control long enough to shatter a record and tell about it? And where, in war-torn Germany, was there a road that was straight enough and smooth enough for the trial?

(The second half of this authentic story behind the NSU—180 mph world's record holder—will be told in January CYCLE. Mr. Herbert Schwarz, in direct contact with the factory, will reveal the many exacting trials and ultimate victory experienced by these explorers in speed—ED.)



LEFT—Ideal streamlining to the end. The seat complies in every detail with Wilhelm Herz's posterior anatomy. Note rear traction chosen. Springing of rear wheel controlled by friction shocks.



Fitting became constant routine until every fraction of an inch was trimmed to Herz's body. Blower prevented rider from sitting lower



A Race and a Half for Huber

RAINED OUT AFTER 44 MILES, BILLY HUBER RETURNS NEXT DAY, TAKES NATIONAL 100-MILE CLASSIC WITH EASE

Text and Photos by Wallace Driver

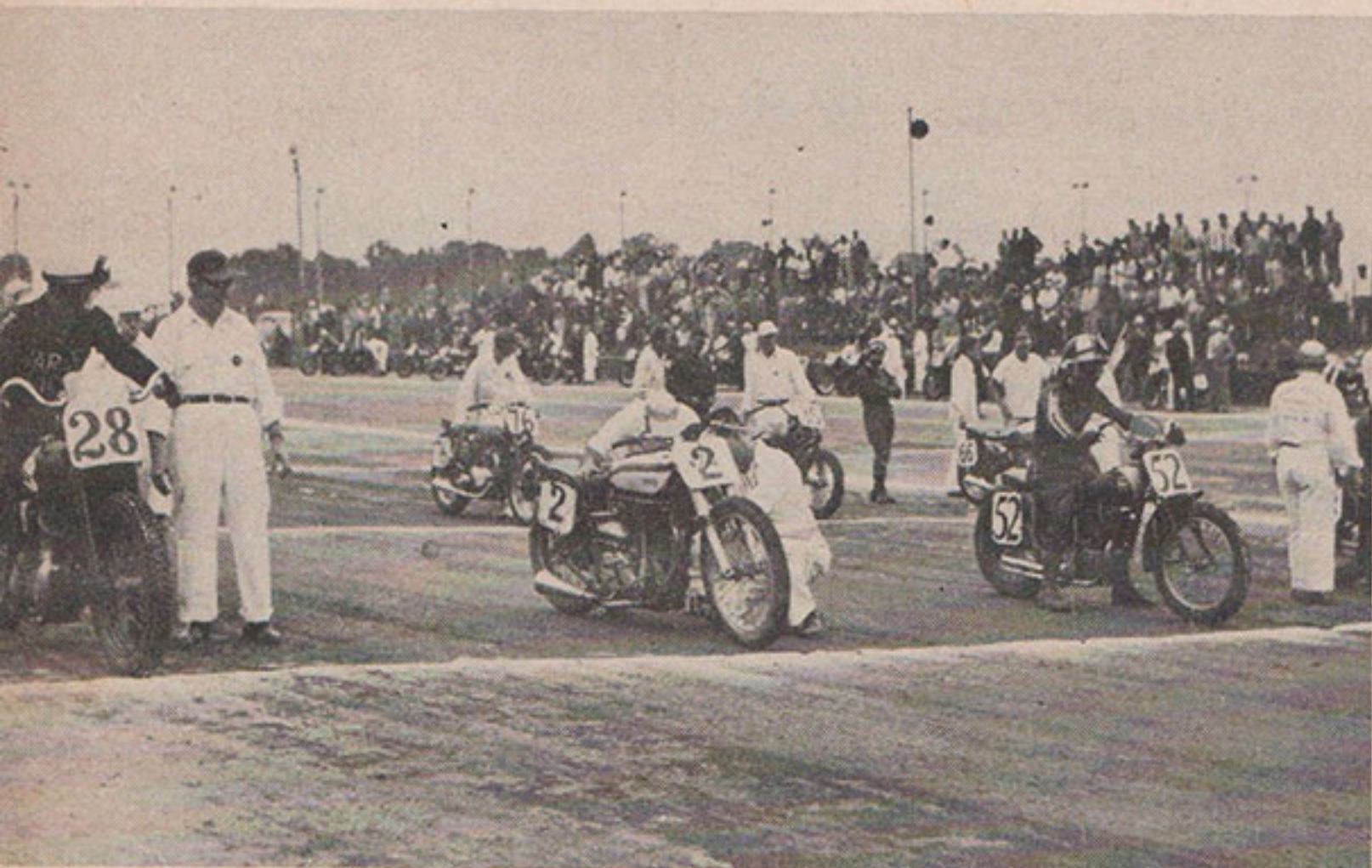
IT TOOK 144 bone-jolting laps (miles) for Billy Huber, veteran Reading, Pa., racer, to trigger the checkered flag in the recent 100-mile National Championship on the Langhorne, Pa. Speedway. The crowd of almost 15,000 saw Billy lead the field for 44 laps, only to be rained off when a threatening sky unzipped its bottom seams. Billy came back the next day to hang up a new record of one hour, six minutes, 17.30 seconds, again under rain-laden skies.

Billy took the lead in the 12th lap and fed dust to the field for 88 more, crossing the finish line almost a full mile ahead of second place winner Bill Miller of Mountville, Pa. Two miles back in third place was Paul Albrecht of Sacramento, Calif. Fourth and fifth slots were filled by Don McHugh, Toronto, Ont., and Babe Tancredi, Woonsocket, R. I.

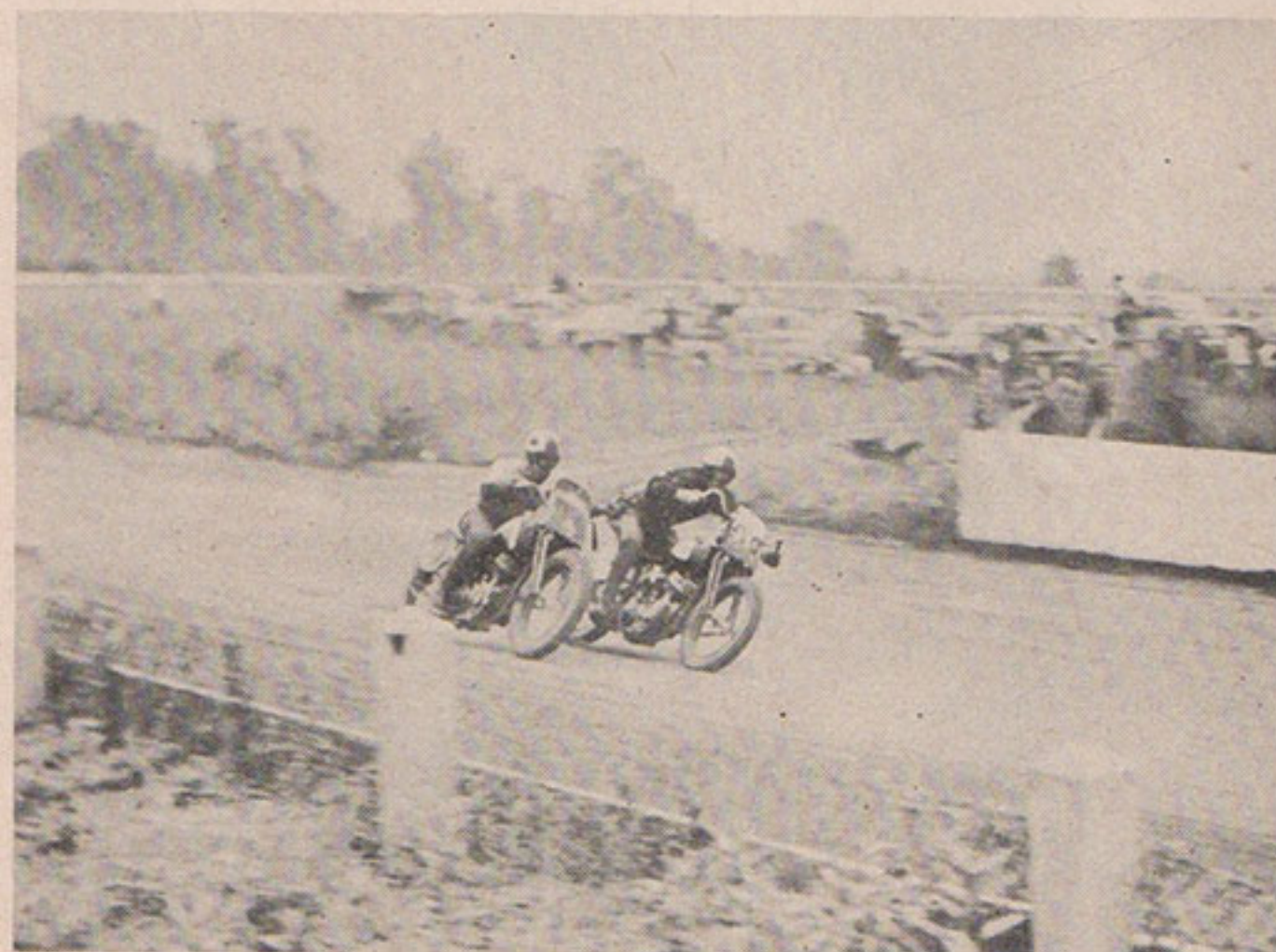
"It sure feels good," was Billy's reply to the obvious question—he won the

1950 duel on the Bucks county oval, and was primed for a repeat performance. "It hurt like the dickens to have to quit yesterday," said Billy.

Starting in the pole position by virtue of his top time trial run of 39.459 secs. for one lap, Billy took the lead on the first turn of the 12th lap and held it tenaciously to the victory flag. With better weather conditions, he might have lowered the track record even further.



Calm before the storm. Riders were drenched after forty-four laps, and starting-line butterflies were all in vain. Race was entirely re-run next day



Nerves were ready to blow during the tense re-run Monday. Battles raged at every point on the track, but swift Billy Huber was long gone

LEFT, crowd disappears as the heavens empty. Water only served to whet Huber's resolve to spike national tourist trophy championship

A slight rain was falling when the 35 riders lined up for the start of the second day re-run. It continued to fall on and off during most of the afternoon, although never heavy enough to stop the struggle. Dick Klamfoth, Groveport, Ohio, who started in fourth position, jumped out to a quick lead on the first lap and turned the first mile in 41 secs. He held the lead until the third circuit when Albrecht took him in the back stretch. Albrecht fought bitterly to hold on to his lead, but lost it to Huber on the first turn of the 12th lap. Once in front, Billy poured on the coal and was never headed again.

Huber turned the mile in 39 to 41 secs. for the remainder of the race, and the clock indicated a track record on the 50th lap. At that point, he was clocked at 32 min., 49 secs., which surpassed the old standard of 34:32.11 set by Jimmy Chann in 1949. From the 15th to the 77th lap Huber was pushed hard by Klamfoth, but the challenge was eliminated when Dick spun into the rail on the fourth turn. He was not seriously injured, but could not continue the race. At the time he spun out, Klamfoth was only 25 yards behind Huber and a good quarter mile ahead of Chann, Miller, and McHugh. These three were taking turns at third spot for the better part of 45 miles. Chann finally took a firm grip on the third on the 76th tour, but was forced from the race on the 79th lap because of a flat. Although he did not continue, he still finished 16th. With Chann and Klamfoth out of the running, Miller hung on to finish second. Albrecht bulleted up through the pack to take over the third position, ahead of McHugh and Tancrede.

Three amateur class records were shattered during the three day speed-fest. On Sunday, immediately before the 100-mile classic was sent to the showers, the five and ten mile records were broken. The 15-mile event was held on Monday.

Ralph Mooers, Bend, Ore., set the five mile record when he navigated the course in 3 min., 36.25 secs. The old mark of 3:58.47 was set by Sharkey Bennett, New Bedford, Mass., in 1950. Pete Froytag, Teterboro, N. J., finished a close second and was followed by Clyde Keeney, York, Pa., and Dave Bell, Yorktown, Va.

In the next event, cooled by a slight drizzle that made the circuit treacherous,

RIGHT, Champ and enthusiastic wife, Mary, embraced by Red Wolverton who helped Billy and brother rebuild Har-Dav. that carried him to win

Charlie Boterf of Mansfield, Ohio, set the 10-mile record a notch higher when he won that event in 7 min., 16.66 secs. He lowered the mark from 7:17.29, set by Bill Machuck, London, Ont., last year. Second to Boterf at the finish line was John Droneburg, Frederick, Md. Droneburg was followed by Charlie Botts, Terre Haute, Ind., Edwin Fisher, Parkersburg, Pa., and Jim Gregory, Philadelphia, Pa.

The 15-mile sprint was held following the 100 miler. Sid Swan, Wellesley, Mass., won the race in a blanket finish over Hern Eckersley, Middletown, Conn., and Harry Van Doorn, Chatham, Ont., Swan's time of 10 min., 18.94 secs. bettered the previous record of 10:22.81.

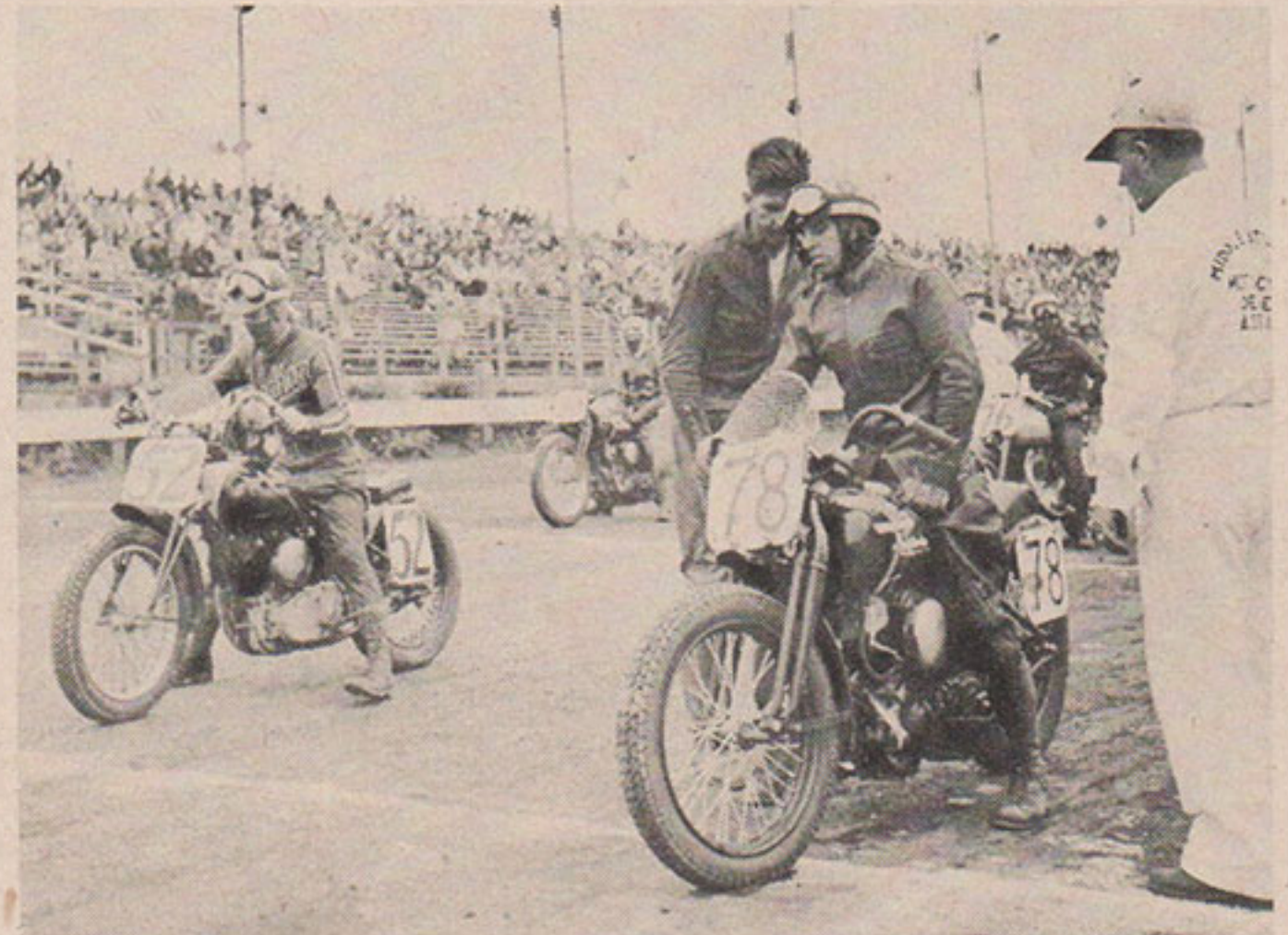
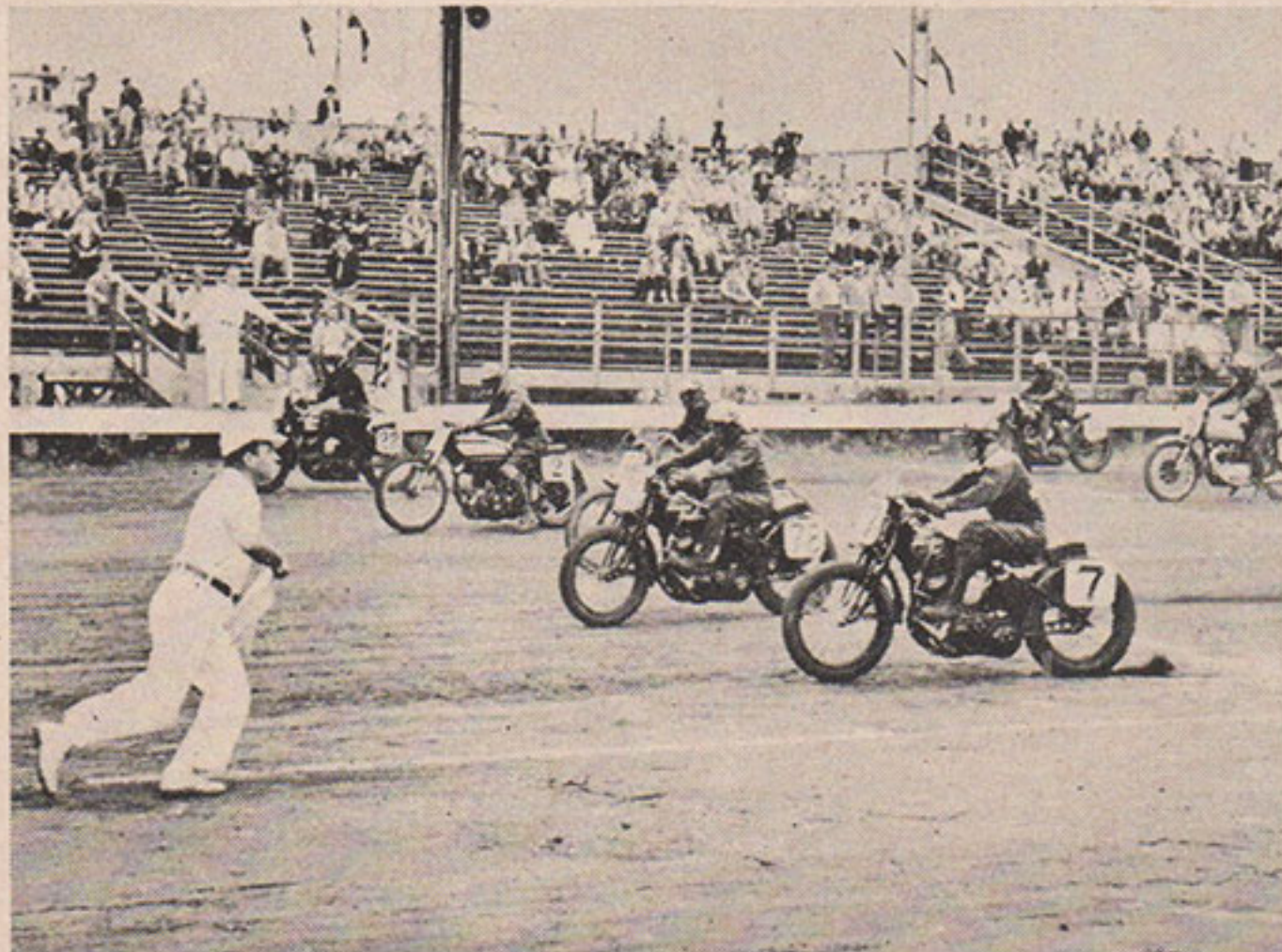
The 15-mile amateur race was one of the finest ever seen at Langhorne. At the finish, Swan was barely three feet ahead of third place finisher Van Doorn. Swan, Eckersley and Van Doorn were only a few feet apart throughout the entire race. Van Doorn led until the sixth lap when Swan took over. Van Doorn again assumed lead on the seventh and held until the final 250 yards, when Swan shot into the lead. At the completion of the race, just beyond the starting line, Eckersley and Van Doorn bumped together and almost locked bars, but did not spill.

Van Doorn set the pace during the amateur time trials with a one lap (mile) clocking of 40.674 secs. Second position was taken by Swan with a 40.969. He was followed by Eugene Hakala, Maynard, Mass., with 41.118; Eckersley at 41.127, and Charles Wood, Newport News, Va., 41.815.

Five novice class records were set on the first day of the Langhorne meet. The climax 15-mile championship race was won by Marlin Risser, Elizabethtown, Pa., in the record time of 10 min., 37.78 secs. Risser's winning time was an automatic track record, for it was the first time that a 15-mile novice race was held at the track. Besides Risser's 15-mile mark, records were also set in the fourth and fifth five-mile qualifying heats, and the first and second 10-mile semi-final races. Harold Wallmar, Bloomfield, N. J., set the first record when he was clocked in

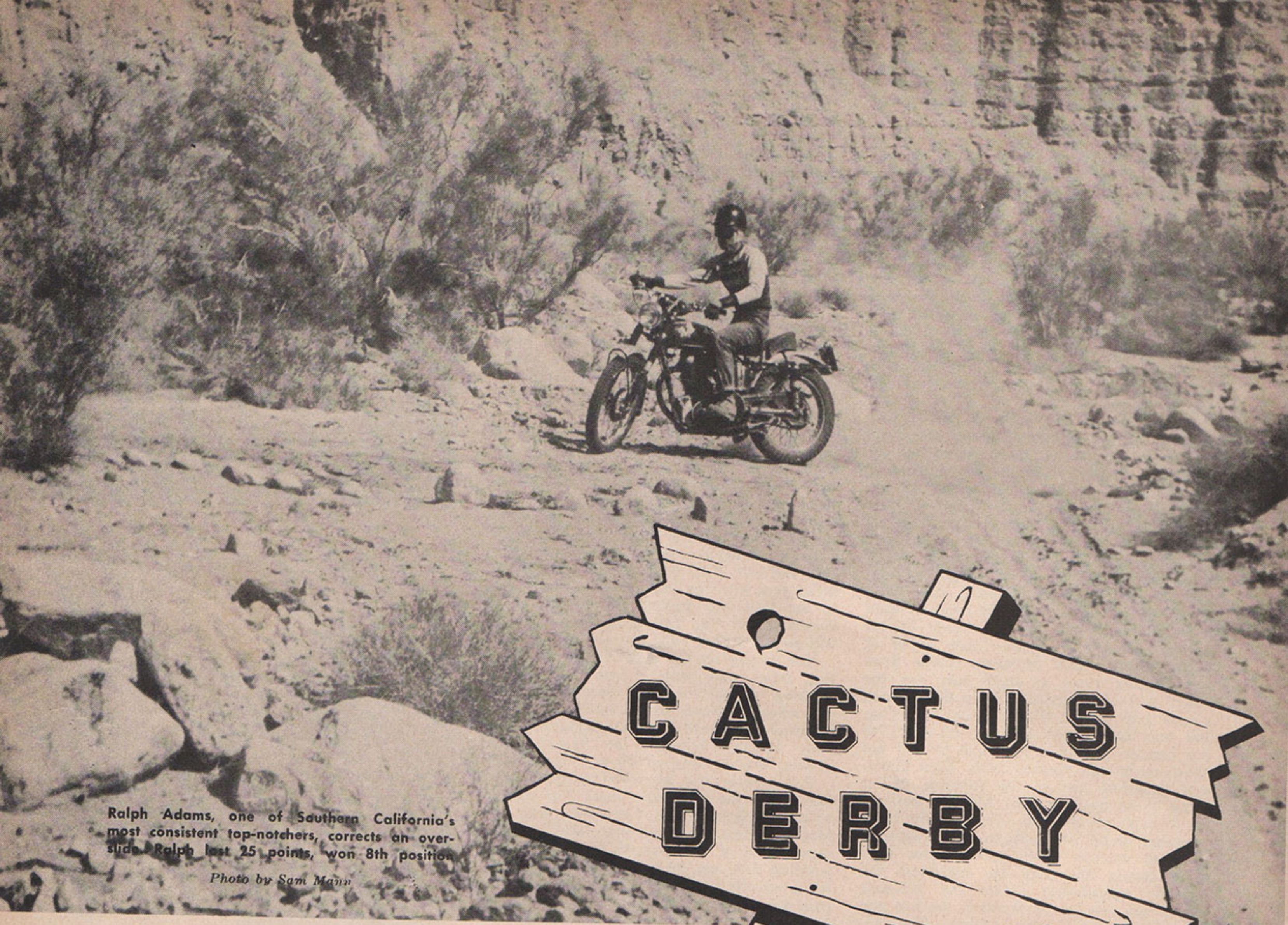
(Continued on Page 32)

RIGHT, Temporarily more important than the trophy. Billy chips away track-encrusted mouth to accept drink. Time: 1 hr., 6 min., 17.30 sec.



How it all started. Huber, No. 7, won pole in the main with a 39.459 in time trials. Langhorne is reputed to be fastest dirt mile in U.S.

Albert Peterson, Springfield, Mass., on an Indian, and Paul Albrecht, Sacramento, Calif., Har-Dav., sweat it out on line. Albrecht placed third



Ralph Adams, one of Southern California's most consistent top-notchers, corrects an over-slide. Ralph lost 25 points, won 8th position.

Photo by Sam Mann

CACTUS DERBY

FLESH AND BONES RESOUND TO BOMBERS' RUGGEDEST CROSS-COUNTRY IN SIX YEARS. VERN HANCOCK, AJS, WINNER



DERBIES COME in almost as many different shapes as there are men to wear them. A bowler for the sophisticate, black felt for the New Yorker, or soft grey for morning wear. This year, however, the derby came in its newest state yet—the West's toughest enduro.

Starting on a balmy Saturday at midnight, the Riverside Bombers Sixth Annual Cactus Derby led 214 of the West's gamest saddle punchers a merry chase over Southern California terrain that not only separated the men from the boys but the supermen from the men. Loaded with endless sand, shale, rock, and pitfalls, the riders conceded that while it was tough, it proved the Bombers really know how to throw a well-marked enduro.

Starting at their immaculate new clubhouse, the trail led down a lane of flash-lit riders and spectators, through a non committal opening that gave little hint of the tough route which followed. After the first night gas check, about 30 miles out, things toughened

(Continued on Page 34)

Wild Walt Harper and his homogenized sidekick, Walt Moore, were hard to knock out. Once, when Moore was piloting the rig through a hectic boulder-strewn gulch, Harper looked up horrified . . . his buddy was gone, knocked off 50 feet back while bike ricocheted on

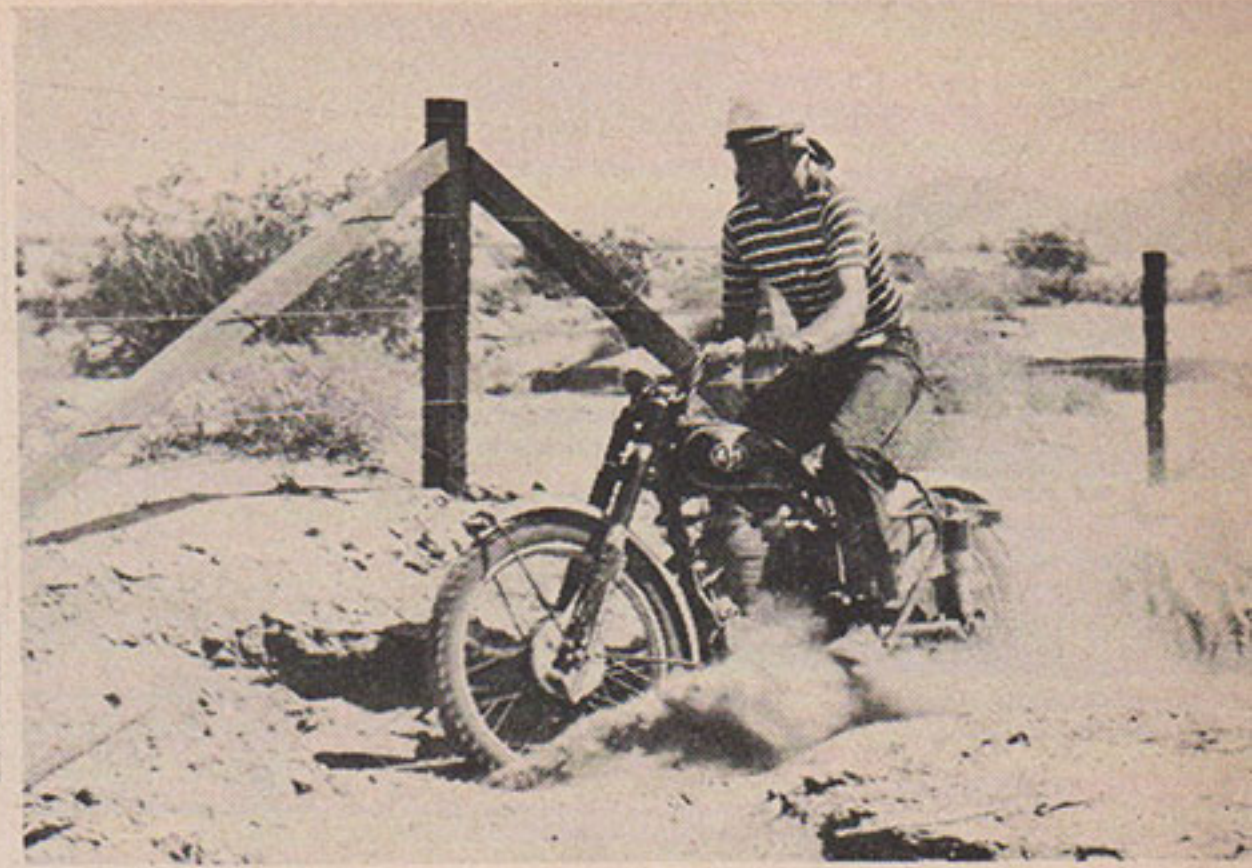
Text and Photos by Bob Behme



Photo by Sam Mann
Cooling Thousand Palms water crossings were welcomed obstacles to McClintock's hot feet



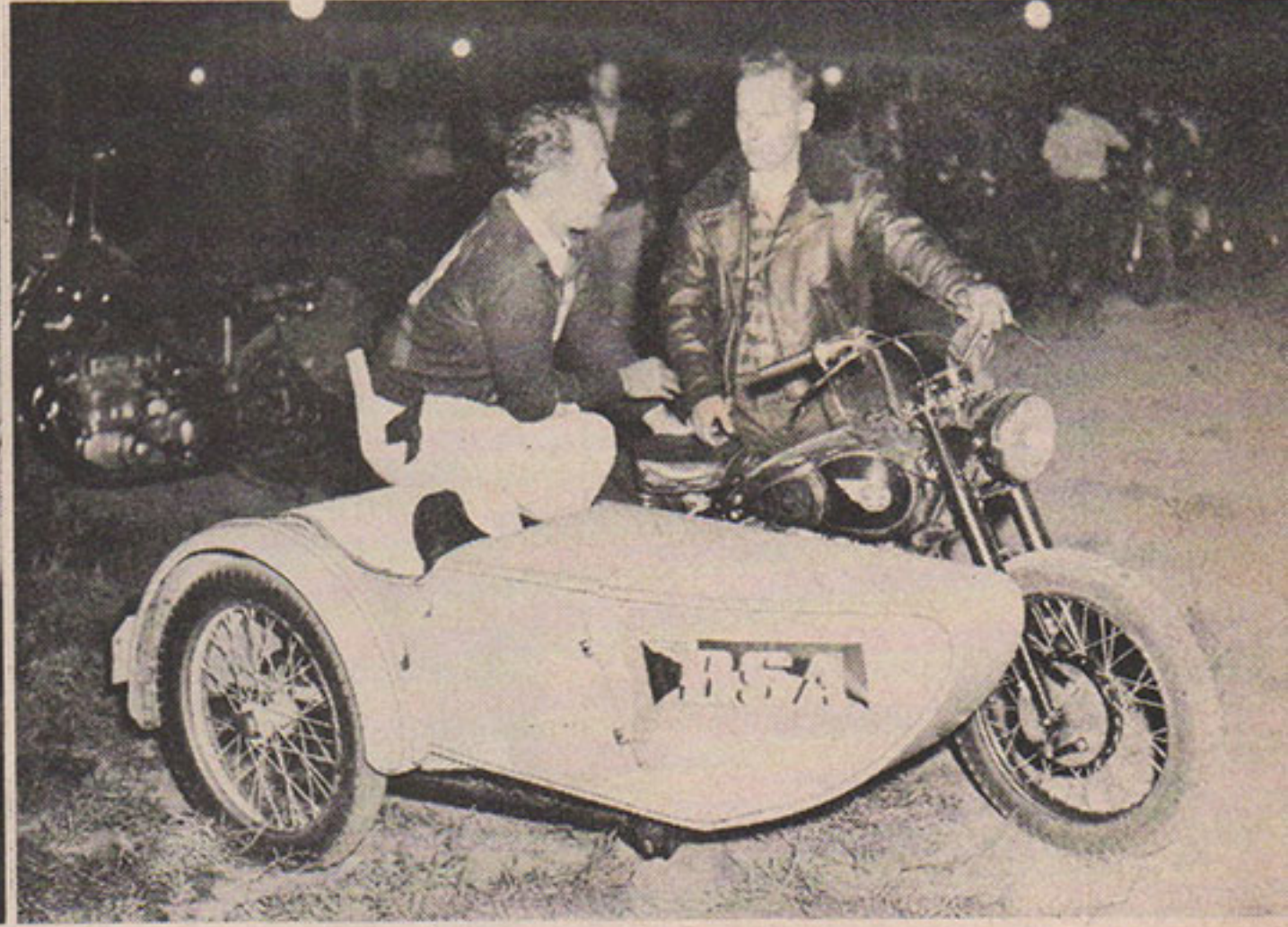
Only half of Mac McLaughlen's riding time was earthbound. Holding to the fast schedule meant scalloped rims and two callused hands



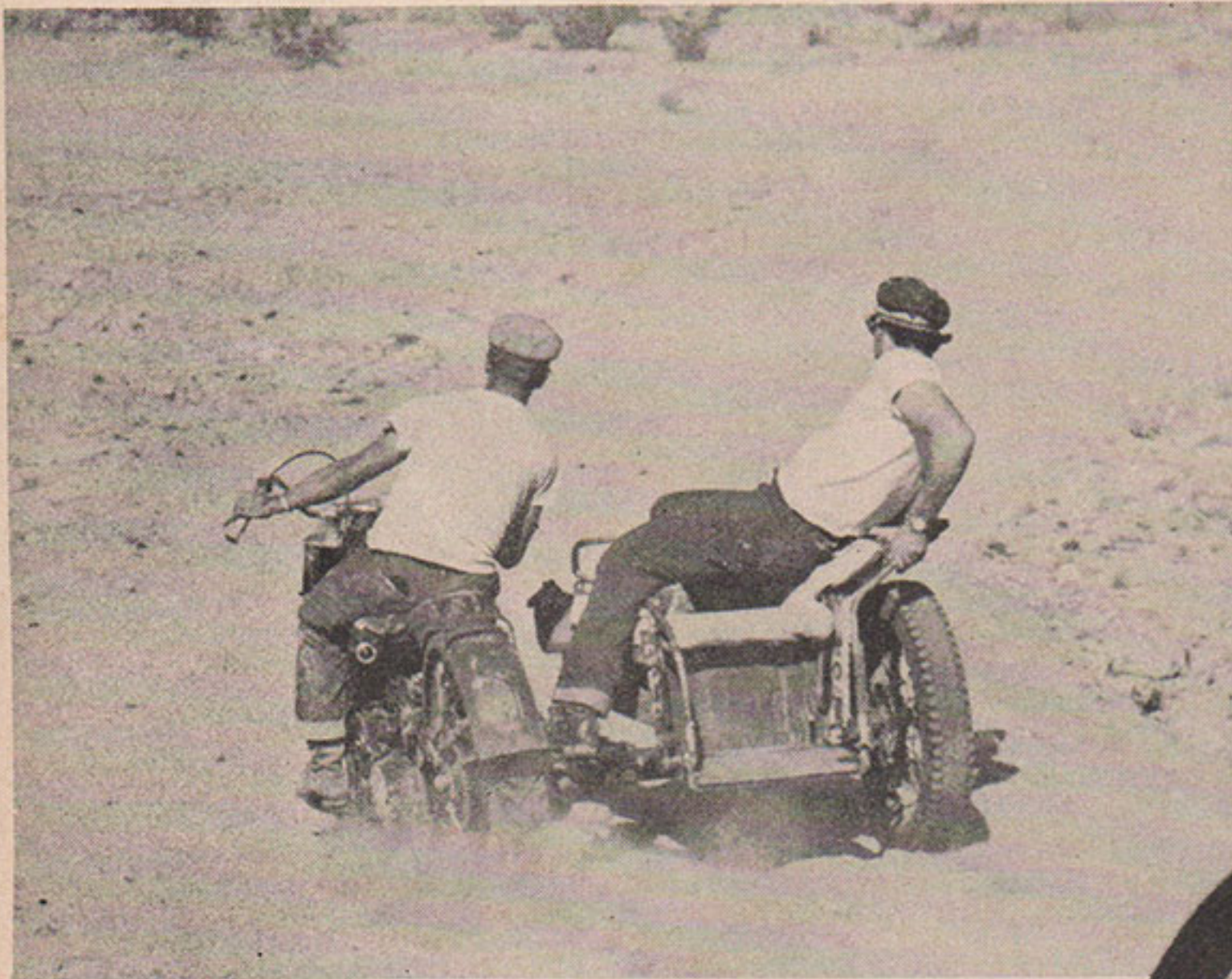
Ellis Cline makes like one of nature's elements as he hacks at a sand bar, and the tenth spot



Enduro rider's helper includes mileage-time calibrated clock, speedo, light, map, route card

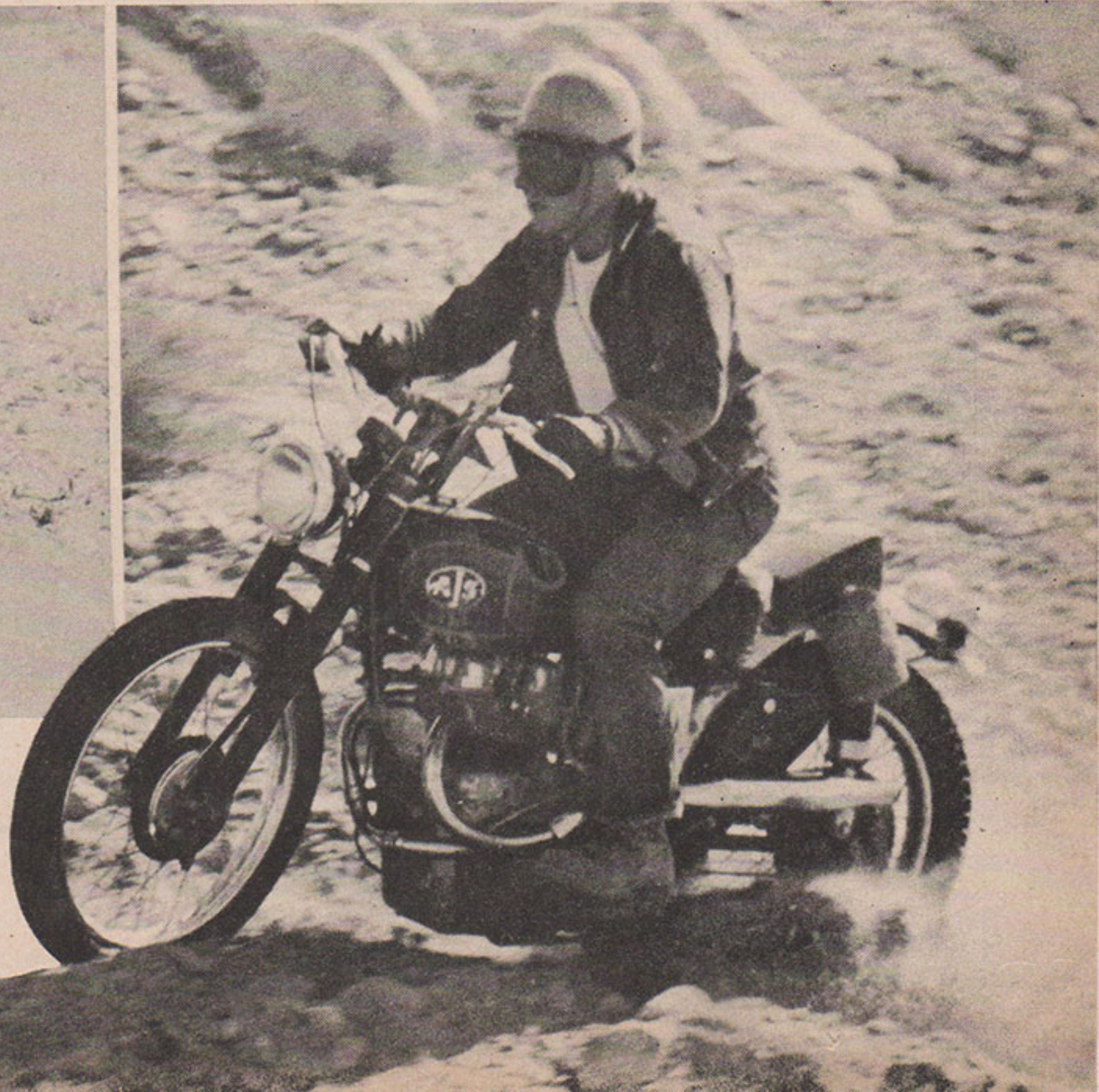


No stand-ins on this set! MGM star Keenan Wynn and track racer Tom Bamford plot their three-wheeled attack on history's toughest Derby



The bucket brigade calls for big tires and bulging biceps. Hacksters have more fun and more aches than the rest, swap turns at handlebars

RIGHT, Floyd Burke, snapped just before he ground-looped over a boulder at about 40 per. Floyd went on to finish second endurance run





GEARED for 1952

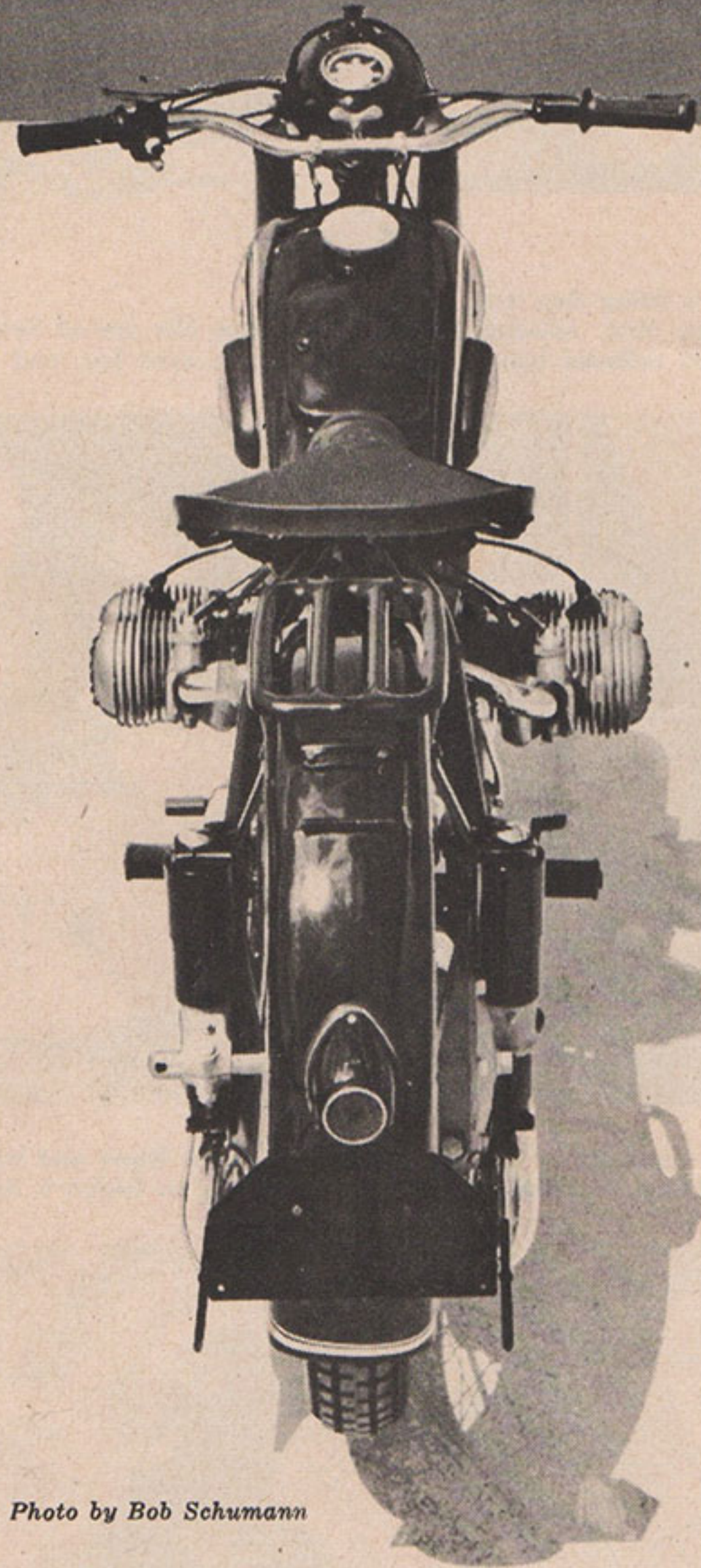
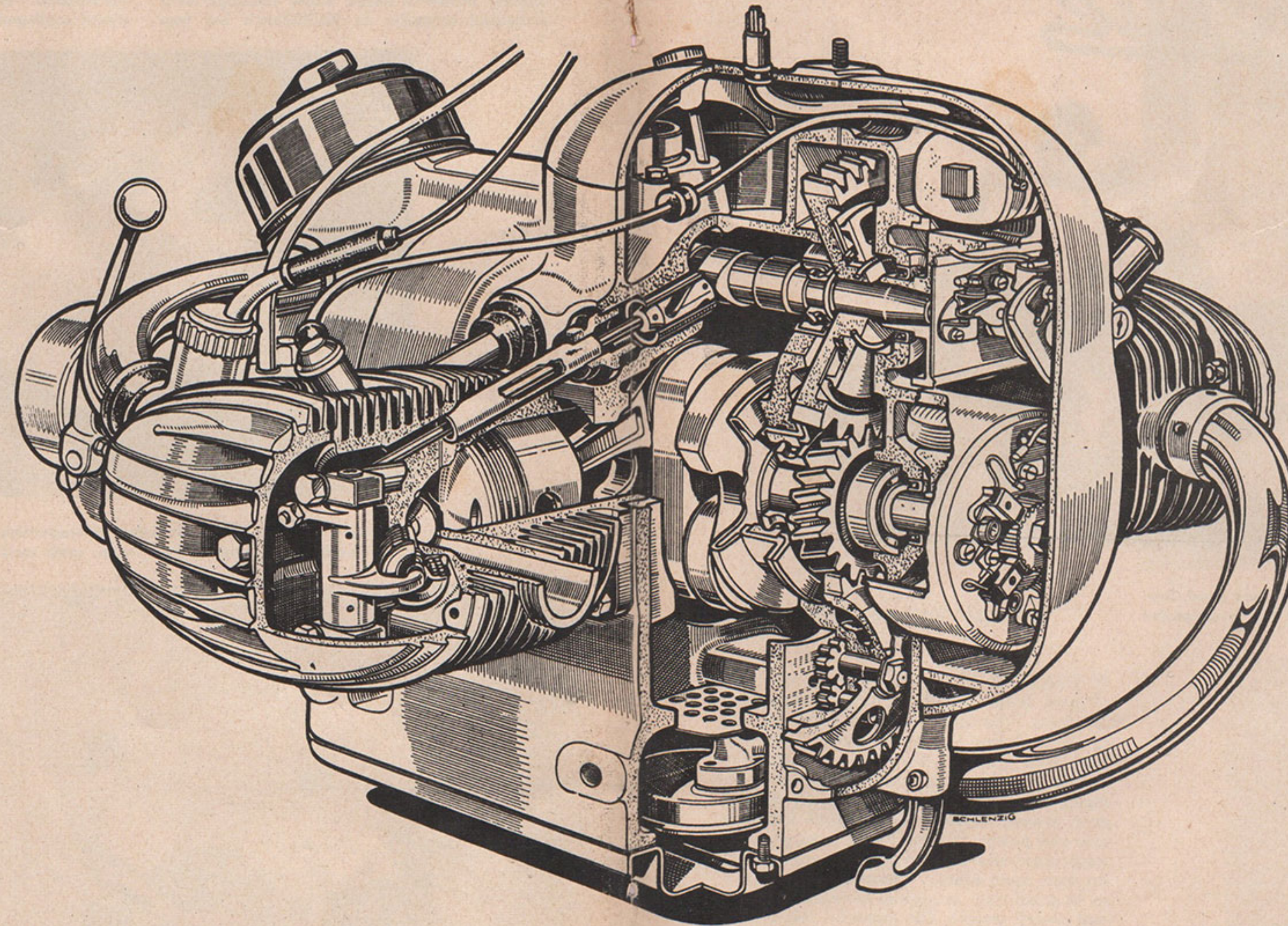
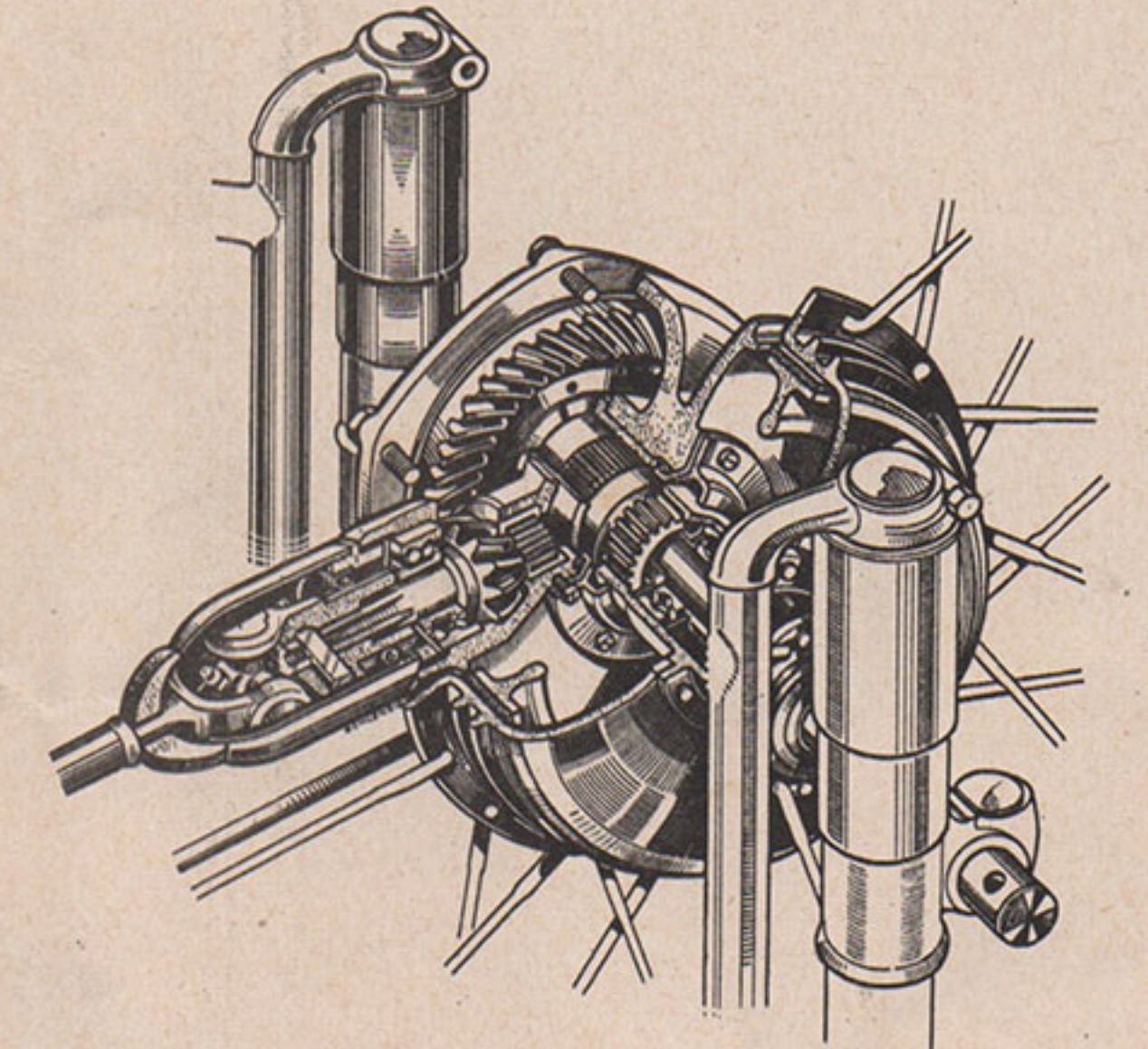


Photo by Bob Schumann

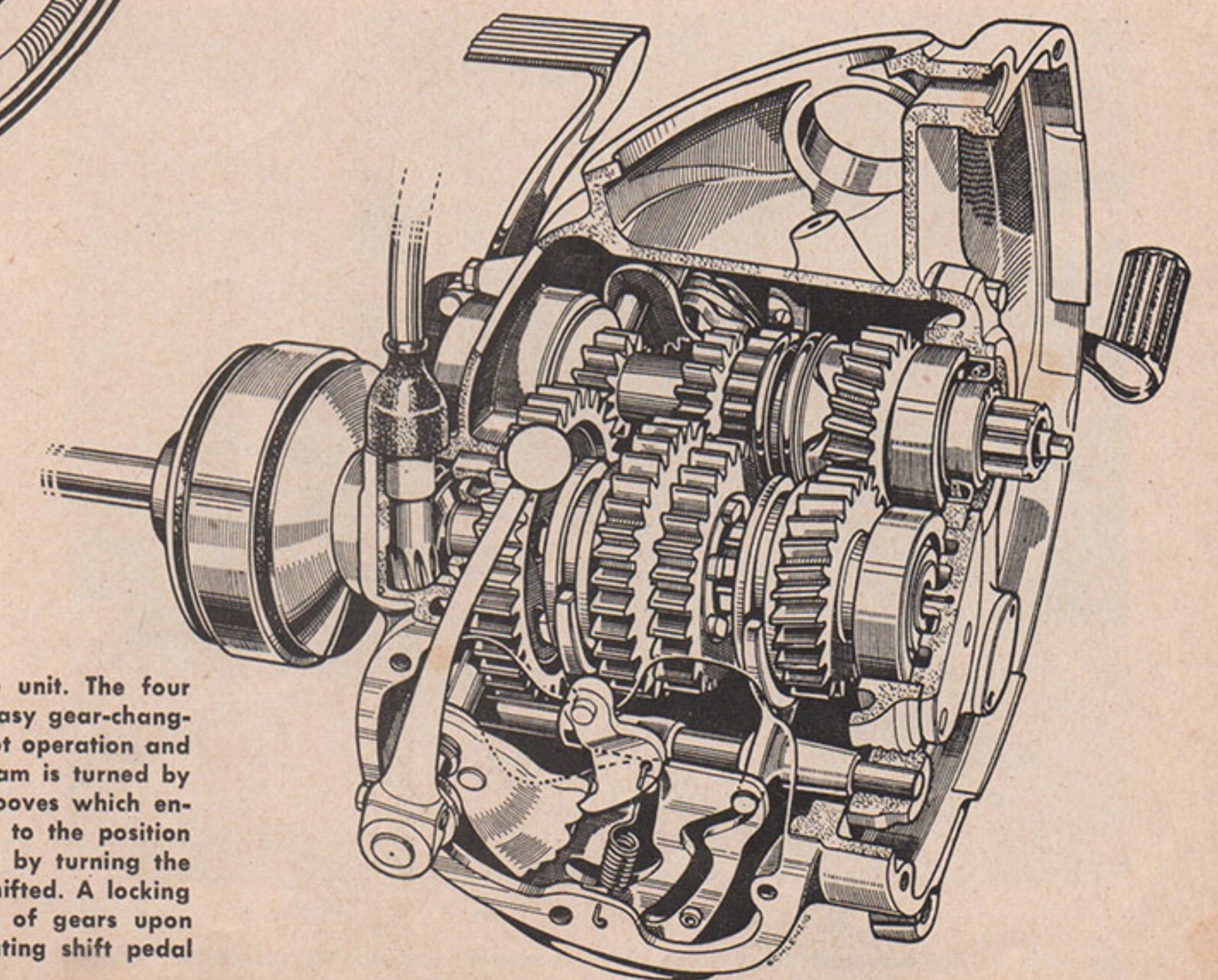
ABOVE, Culmination of 25 years' labor—appears sleek and powerful from any angle. From the beginning, the Bayerisch Motoren Werke of Germany has pioneered in reliability and the application of advanced mechanical refinements. The R 51/3 and R67 models are identical except that the R 51/3 contains a 500 cc displacement, while the R67 is of 600 cc. The 67 was primarily introduced for sidecar work and has a 1 to 5.6 compression ratio, not susceptible to octane fluctuations. The 500 cc unit has a higher ratio of 1 to 6.3. Basic appearance over previous year's models is barely discernible, but upon going inside, you will find many advancements



ABOVE, Chains of '51 have been shed in favor of gear drive from main shaft. Camshaft, ignition, magneto, and oil pump are now all driven by helically toothed spur gears (compare with cutaway shown in BMW road test—CYCLE, July, 1951). Sectional steel crankshaft runs on hardened journals in two ball-bearings. Hardened connecting rods run on roller bearings, and along with pistons, piston pins, cams, pushrods, rocker arms and valves, are splash lubricated. The splash system is motivated by a pump that sends oil under pressure through a passage-way in crankshaft housing to two splash lubricating rings on the crankshaft, to an injector nozzle on front crankshaft bearing cover for the spur gear drives, and to left cylinder for additional oil to that barrel



ABOVE, The famous BMW shaft-drive rear spring unit. Propeller shaft running from transmission to rear wheel has elastic rubber coupling to reduce power impulse vibrations and compensate for change in length of shaft during operation. Rear end of shaft terminates in universal joint with easily removable dust-proof cover. Driving pinion and disc gear are helically toothed, running silently in oil bath. Disk gear runs on needle bearings in rear wheel drive unit, on ball-bearings in housing. Gearing can be changed here



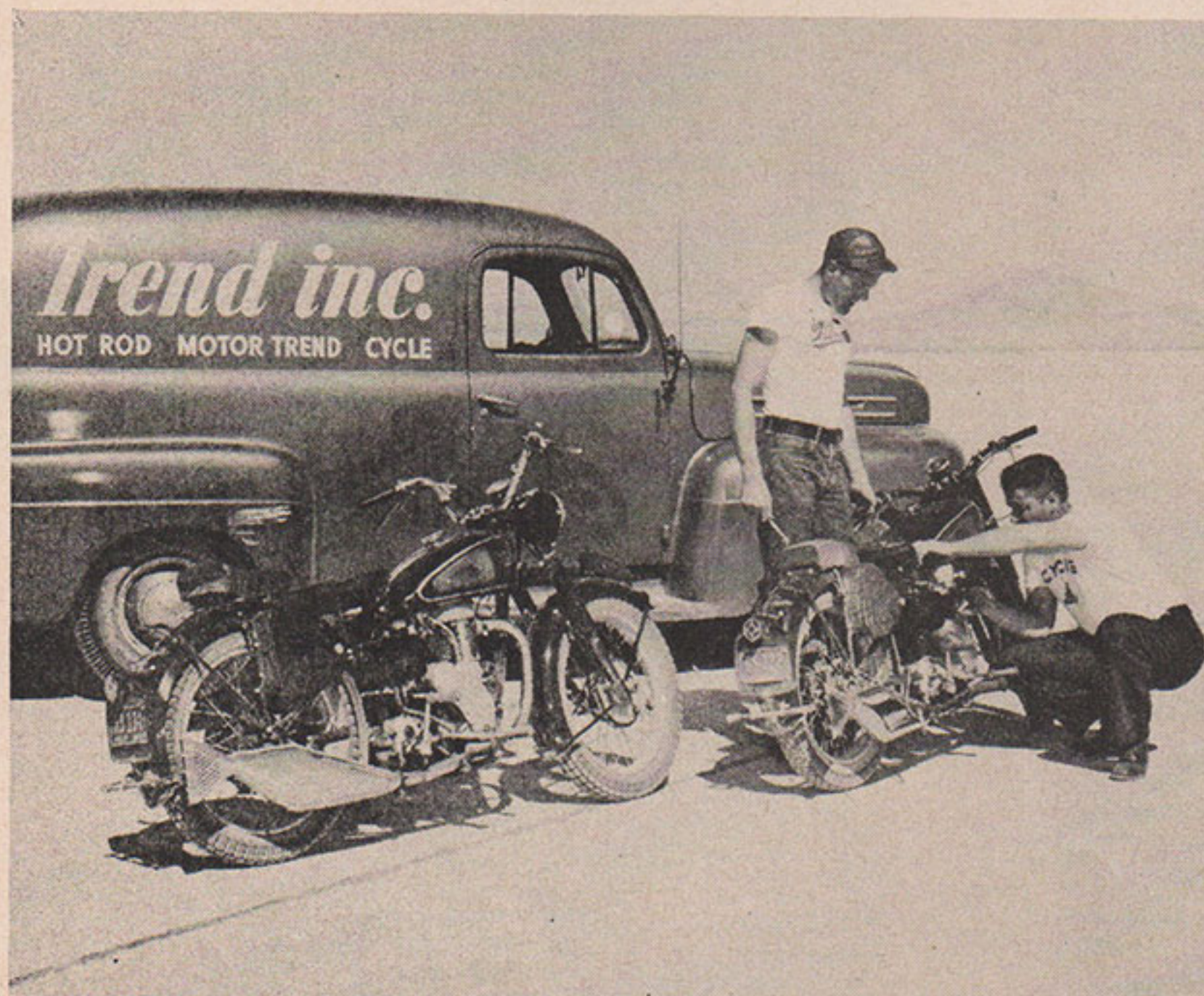
RIGHT, Transmission and engine housing comprise one unit. The four gears are obtained with constant mesh pinions giving easy gear-changing. Transmission is equipped with a ratchet shift for foot operation and auxiliary hand shift lever. When pedal is operated, a cam is turned by a toothed segment. This cam has two milled, curved grooves which engage carrier pins of two gear shifting forks. According to the position of the curved grooves, gear shifting forks are operated by turning the cam, and engage or disengage spur gear pairs being shifted. A locking device and ratchet holder enable the proper selection of gears upon shifting to the next higher or lower speed when actuating shift pedal



**STANDARD TWENTY-
ONE-INCH SINGLE
IS SMOOTH AT NINETY**

Near perfect disposition of weight gives Velocette enviable handling qualities. Bike has good, low-slung feel and steers with an absolute minimum of effort. Half size larger rear tire is suggested

By Bob Greene—Editor



Photos by Felix Zelenka

Dry tank on dry lake calls for bike to bike refuel with use of photographer's flash reflector. Service Manager Bill Lewis changed stock 130 to 150 jet. Retained KLG FE 70 plug

THERE'S A TREAT in store for you who have never ridden the new storm-packed '52 Velo. The first time I climbed on one of their singles was to compete in the Big Bear Run almost a year ago. The memory of that ride, even under the circumstances, remains as an exciting and pleasant experience, mainly because of the bike's handling ease and power delivery. Thus, from previous experience, and the results of our current test on their latest edition, I have found Velocette to be small only in regards to engine capacity and overall weight. The powerful response of the throttle makes it hard to believe you're astride a 21 cuber; and acceleration is not all! A top speed figure of 90 flat proved this lunker a real deep breather at the other end of the scale. The nicest part of it all is that its comparatively small cubic capacity holds vibration to a low level at any cruising speed.

The MAC is a smoothy even with its boosted 7.6 to 1 compression ratio. This jump in pressure, plus improved cam contouring is mainly responsible for the increase in acceleration and top speed performance.

To even further insure long life, dependability and cooler running, the gear type oil pump has been stimulated to circulate twice the regular amount of oil. A light alloy cylinder head and barrel are now more pleasing to the eye and help shed eight pounds of weight over last year's MAC. The resulting cooler performance, strangely enough, is not

offset by a noticeable increase in engine noise.

Rather than a super streamlined appearance, Velocette follows a more classic line; impressive looking, yet practical. The extremely long fenders, for example, permit the bike to be followed closely over secondary roads without being doused by gravel.

In accordance with the request of U. S. distributor, Lou Branch Sales & Service, new models are being fitted with either high or low handlebars to suit the individual. With the high bars fitted, I found that the Velo had the very rare characteristic of feeling more like a low-slung American heavyweight, with no sensation of top heaviness. On the pavement, this bike handled beyond my highest expectations. It maneuvers with practically no effort at all and is one of the safest feeling bikes in a corner I've ever ridden.

Although the manufacturers of this machine undoubtedly take great pride in offering their purchasers the utmost in quality and performance at the very reasonable price of \$570.70, there is one addition that I think would warrant added cost—a good rear spring frame. On bike size dips, or choppy macadam, the rider is obliged to post on the foot-pegs to overcome bounce or jar.

Immediately noticeable is the ease with

which the Velo gear box shifts. This is a real standout feature. It ordinarily pulls up for low and ratchets down through high; but if the other direction is preferred, inside shifting mechanism can be rearranged to shift in the opposite direction. Neutral could be found without guess work and none of the gears showed tendency to hang up. The entire box can be gutted by simply removing the right side cover plate, making for simple repairs.

Front brake application could be done with utmost security. On front brake tests, the tire could be made to squeal at almost any speed. While not even under the heaviest hand did the front end tend to flip or cross up, and straight line stops were customary.

With a half size larger rear tire, it was felt that the rear braking figure could be lowered and overall stopping efficiency increased. A larger rear boot would also undoubtedly compensate to a certain extent for the bike's rigid rear fork.

The fact that this MAC model has necessitated very little change in the past 20 years other than refinements of basic structure is strong proof of its universal acceptance and practicality of design. It's light as a feather on its feet, handles to perfection, and goes like a bomb. Here's a bike that has long been

under-estimated in America; one that is rugged and capable of outstanding solo work. The common remark at the end of many club rides . . . "Say that little Velo really steps!"

PERFORMANCE SUMMARY

Maximum in low.....35 mph
 Maximum in second.....51.42 mph
 Maximum in third.....75 mph
 Maximum in high.....90 mph

Braking

From 25 to stopped, rear brake only....37' 1"
 From 25 to stopped, front brake only....22'
 From 25 to stopped, both brakes.....18' 5"

Acceleration

* $\frac{1}{10}$ Mi. Drag (10.7 sec.) 33.64 mph avg.
 9.22 ft. per sec. (avg. velocity change rate)
 ** $\frac{1}{4}$ Mi. Drag (18 sec.) 50 mph avg.
 8.14 ft. per sec. (avg. velocity change rate)
 *Low and second **Low, second, third

Slow Running

High gear without snatch.....13 mph

Turning Circle

Minimum Diameter.....12' 8"

Mileage

Per gallon of gas (in city traffic) 50 mpg

General Specifications

ENGINE. 21.30 cubic inches (349cc); Bore 2.67 in. (68mm); Stroke 3.77 in. (96mm). Compression ratio 7.6 to 1. Overhead valves are operated by enclosed push rods, and with the rocker gear are totally enclosed in the new aluminum alloy cylinder head casting which has a one-piece cover plate. The cylinder head crowns an entirely new cylinder barrel, also of aluminum with a liner for the bore. Cam followers have stellite tip. Valve seats are austenitic iron, shrunk in. Longer duration cam. $1\frac{3}{8}$ -in. crank pin. Wellworthy pistons of slipper design.

CARBURETOR. Amal needle type, controlled by quick action thin twist grip and having a starting and slow running throttle stop. A separate air control lever is on the handlebar.

DRIVE. Both front and rear chain $\frac{1}{2}$ x $\frac{3}{16}$ in.

TRANSMISSION. Velocette, foot operated, four speed with gear change mechanism enclosed in the gearbox. The kickstarter has a folding crank and the seven-plate clutch, which is hand controlled, has an extra strong operating cable. Gear ratios with the standard 19-tooth sprocket; top 5.5, third 7.3, second 9.6, first 14.1 to 1.

LUBRICATION. Dry sump system with constant circulation by a double capacity gear pump from the half-gallon oil tank. An oil bath case encloses primary chain and the gearbox is filled with oil. Grease gun lubrication for other parts.

IGNITION. Gear drive, flange mounted BTH magneto with automatic ignition timing control.

ELECTRICAL. All Miller 6-volt, 60-watt, lighting equipment including generator with voltage control. Battery 13-ampere-hour. Headlight seven-inch diameter with dip switch and parking light. Illuminated speedometer. By simple re-wiring, generator can be connected through voltage regulator without using battery.

FRAME. Velocette cradle type with brazed joints, giving very sturdy construction.

FORK. Velocette telescopic with oil damping.

TANK. Black with gold lines, three gallons capacity.

FENDERS. Round section six-inch width. Detachable rear portion to rear guard, tubular stays.

SADDLE. Flexible top Lycette, adjustable fixing.

BRAKES. Seven-inch front, six-inch rear, each

with hand adjustment and provision for keeping mud and water from the brakes.

WHEELS. Rims chrome. 3.25 x 19 tires. Quickly detachable rear wheel is mounted on two journal bearings and when removed leaves brake drum, shoes, sprocket and chain in place.

FOOTRESTS. Steel forgings, rubber covered and adjustable.

EQUIPMENT. Complete with sprung pillion seat, side pillion pegs, side stand, rear stand, folding kickstarter and horn.

FINISH. Black and chrome.

TOOL KIT. Complete for all running adjustments, carried in large metal box with spare room. Grease gun and tire pump.

WEIGHT. Dry, 330 lbs.

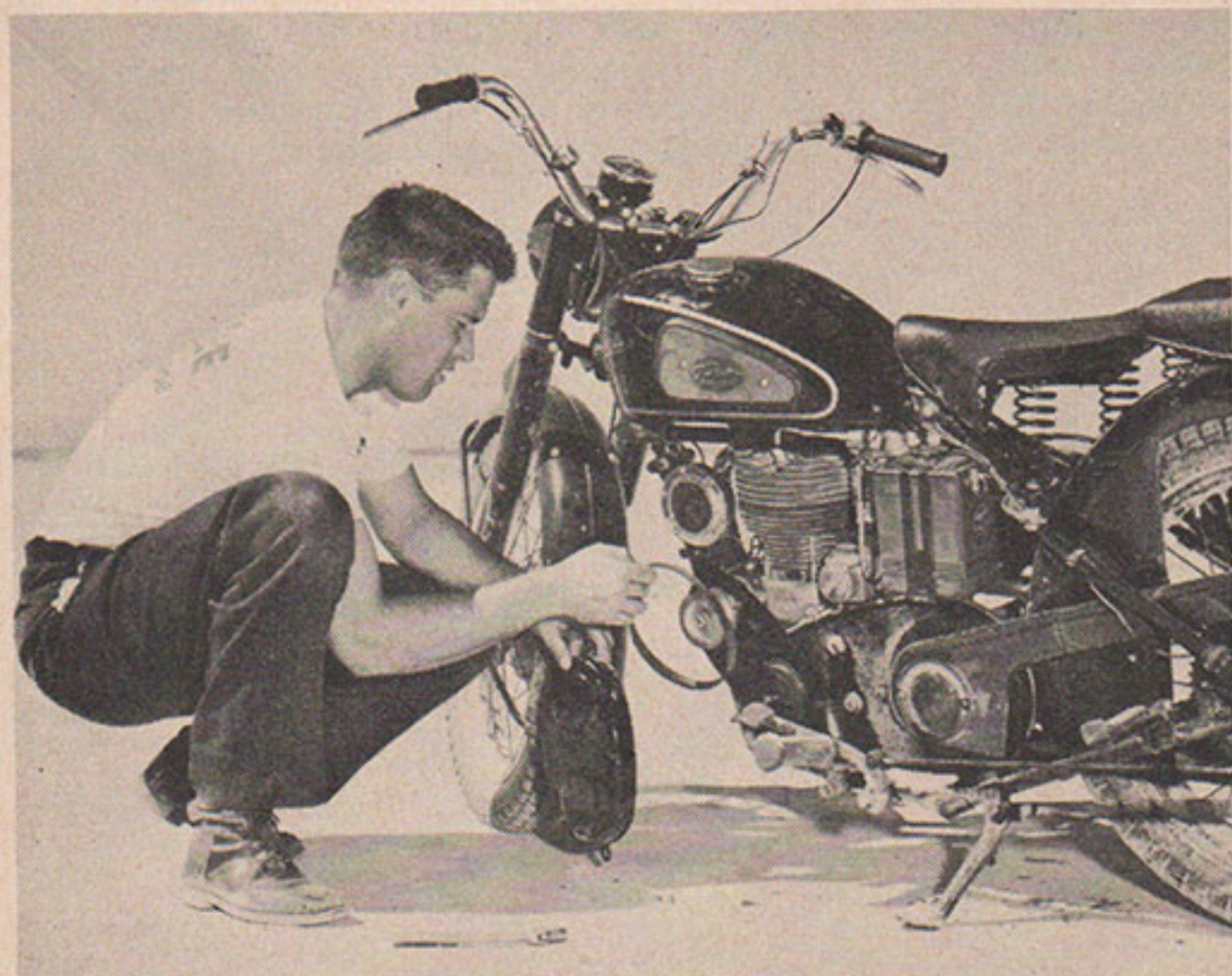
WHEELBASE. 52 $\frac{1}{4}$ inches.

OVERALL LENGTH. 81 $\frac{1}{2}$ inches.

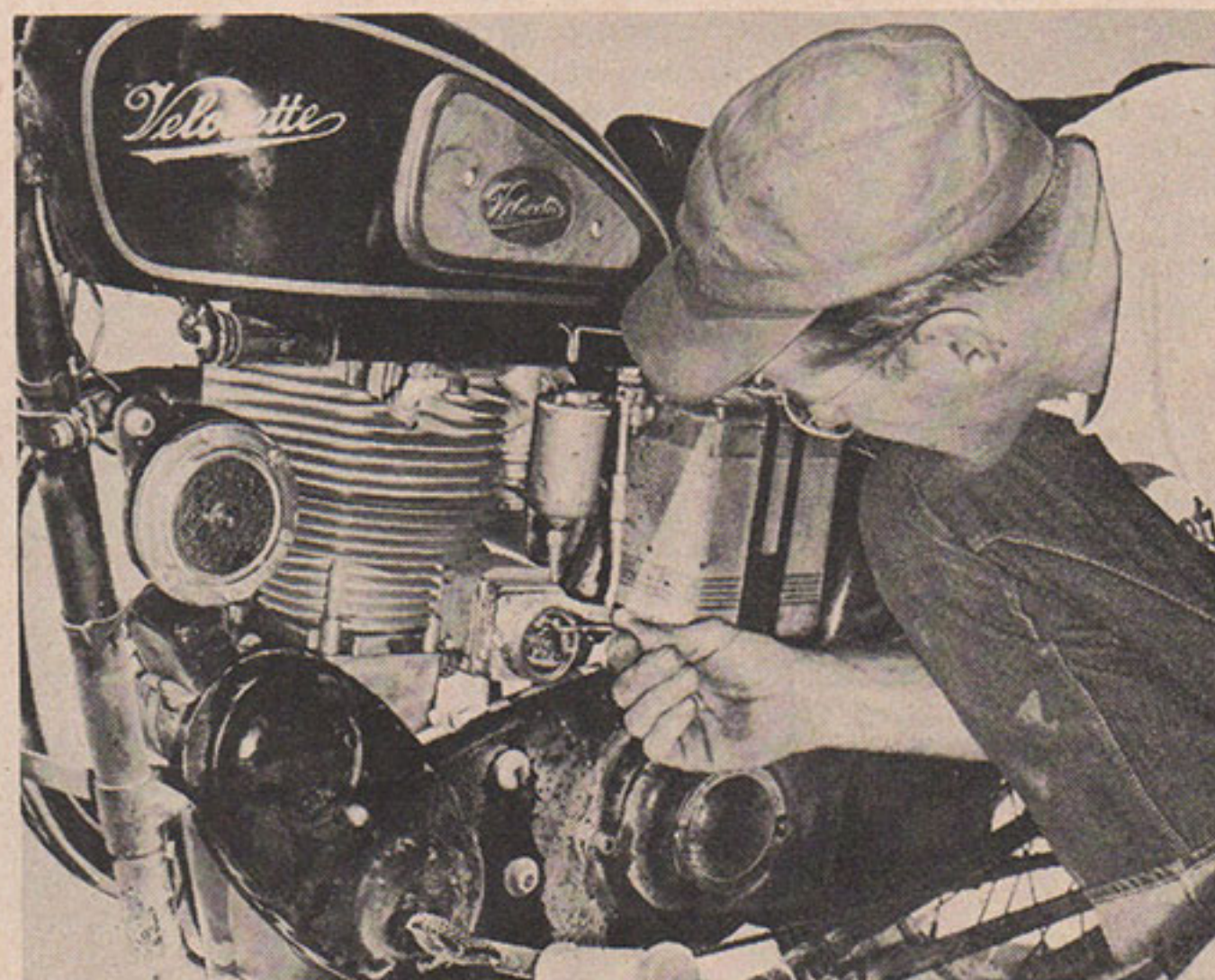
OVERALL WIDTH. 30 $\frac{3}{4}$ inches.

GROUND CLEARANCE. 5 inches.

SADDLE HEIGHT. 29 inches.



Novel feature is quickly detachable generator belt, eliminating dynamo drag. Lower end assembly retains $1\frac{3}{8}$ inch crankpin. Cam followers have stellite tip, eliminating wear from neglected tappet adjustment



BTH mag is easy to adjust. New jet feeds oil under pressure directly to cam surface besides retaining former method of internal oil to cam. Double source insures fool-proof oiling to cam surface and cam followers

LEFT, crowd disappears as the heavens empty. Water only served to whet Huber's resolve to spike national tourist trophy championship

A slight rain was falling when the 35 riders lined up for the start of the second day re-run. It continued to fall on and off during most of the afternoon, although never heavy enough to stop the struggle. Dick Klamfoth, Groveport, Ohio, who started in fourth position, jumped out to a quick lead on the first lap and turned the first mile in 41 secs. He held the lead until the third circuit when Albrecht took him in the back stretch. Albrecht fought bitterly to hold on to his lead, but lost it to Huber on the first turn of the 12th lap. Once in front, Billy poured on the coal and was never headed again.

Huber turned the mile in 39 to 41 secs. for the remainder of the race, and the clock indicated a track record on the 50th lap. At that point, he was clocked at 32 min., 49 secs., which surpassed the old standard of 34:32.11 set by Jimmy Chann in 1949. From the 15th to the 77th lap Huber was pushed hard by Klamfoth, but the challenge was eliminated when Dick spun into the rail on the fourth turn. He was not seriously injured, but could not continue the race. At the time he spun out, Klamfoth was only 25 yards behind Huber and a good quarter mile ahead of Chann, Miller, and McHugh. These three were taking turns at third spot for the better part of 45 miles. Chann finally took a firm grip on the third on the 76th tour, but was forced from the race on the 79th lap because of a flat. Although he did not continue, he still finished 16th. With Chann and Klamfoth out of the running, Miller hung on to finish second. Albrecht bulleted up through the pack to take over the third position, ahead of McHugh and Tancrede.

Three amateur class records were shattered during the three day speed-fest. On Sunday, immediately before the 100-mile classic was sent to the showers, the five and ten mile records were broken. The 15-mile event was held on Monday.

Ralph Mooers, Bend, Ore., set the five mile record when he navigated the course in 3 min., 36.25 secs. The old mark of 3:58.47 was set by Sharkey Bennett, New Bedford, Mass., in 1950. Pete Froytag, Teterboro, N. J., finished a close second and was followed by Clyde Keeney, York, Pa., and Dave Bell, Yorktown, Va.

In the next event, cooled by a slight drizzle that made the circuit treacherous,

RIGHT, Champ and enthusiastic wife, Mary, embraced by Red Wolverton who helped Billy and brother rebuild Har-Dav. that carried him to win

Charlie Boterf of Mansfield, Ohio, set the 10-mile record a notch higher when he won that event in 7 min., 16.66 secs. He lowered the mark from 7:17.29, set by Bill Machuck, London, Ont., last year. Second to Boterf at the finish line was John Droneburg, Frederick, Md. Droneburg was followed by Charlie Botts, Terre Haute, Ind., Edwin Fisher, Parkersburg, Pa., and Jim Gregory, Philadelphia, Pa.

The 15-mile sprint was held following the 100 miler. Sid Swan, Wellesley, Mass., won the race in a blanket finish over Hern Eckersley, Middletown, Conn., and Harry Van Doorn, Chatham, Ont., Swan's time of 10 min., 18.94 secs. bettered the previous record of 10:22.81.

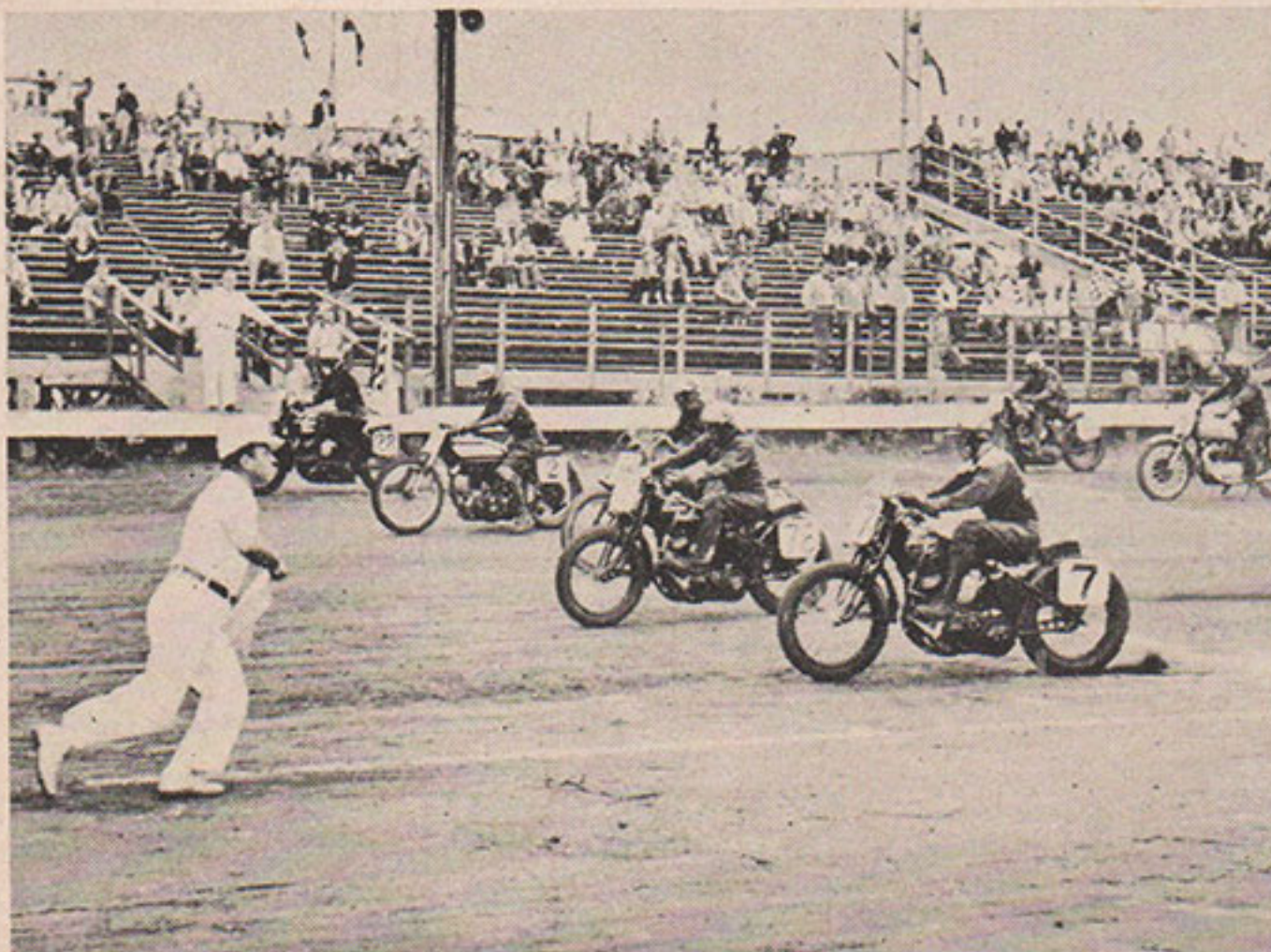
The 15-mile amateur race was one of the finest ever seen at Langhorne. At the finish, Swan was barely three feet ahead of third place finisher Van Doorn. Swan, Eckersley and Van Doorn were only a few feet apart throughout the entire race. Van Doorn led until the sixth lap when Swan took over. Van Doorn again assumed lead on the seventh and held until the final 250 yards, when Swan shot into the lead. At the completion of the race, just beyond the starting line, Eckersley and Van Doorn bumped together and almost locked bars, but did not spill.

Van Doorn set the pace during the amateur time trials with a one lap (mile) clocking of 40.674 secs. Second position was taken by Swan with a 40.969. He was followed by Eugene Hakala, Maynard, Mass., with 41.118; Eckersley at 41.127, and Charles Wood, Newport News, Va., 41.815.

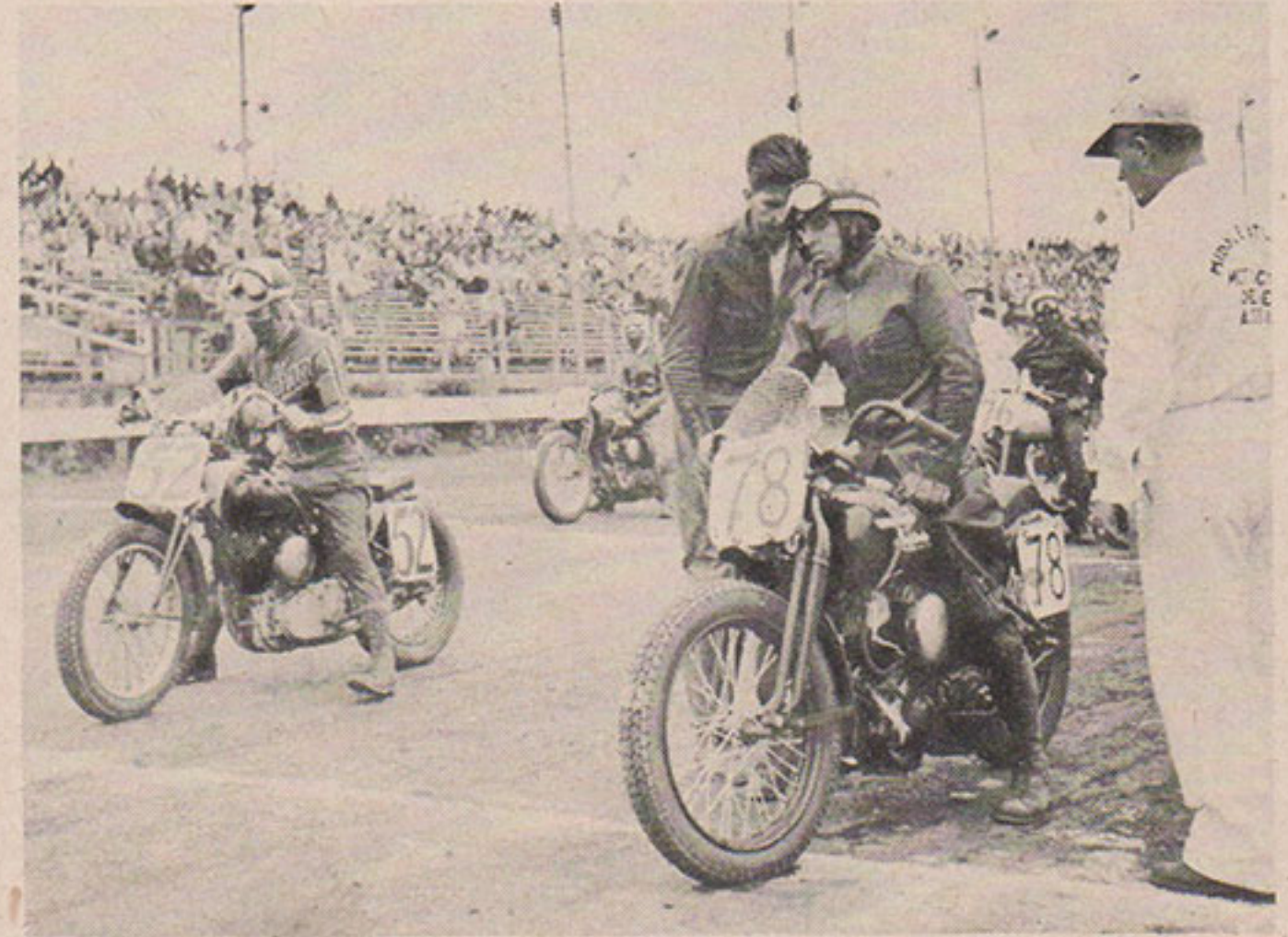
Five novice class records were set on the first day of the Langhorne meet. The climax 15-mile championship race was won by Marlin Risser, Elizabethtown, Pa., in the record time of 10 min., 37.78 secs. Risser's winning time was an automatic track record, for it was the first time that a 15-mile novice race was held at the track. Besides Risser's 15-mile mark, records were also set in the fourth and fifth five-mile qualifying heats, and the first and second 10-mile semi-final races. Harold Wallmar, Bloomfield, N. J., set the first record when he was clocked in

(Continued on Page 32)

RIGHT, Temporarily more important than the trophy. Billy chips away track-encrusted mouth to accept drink. Time: 1 hr., 6 min., 17.30 sec.



How it all started. Huber, No. 7, won pole in the main with a 39.459 in time trials. Langhorne is reputed to be fastest dirt mile in U.S.



Albert Peterson, Springfield, Mass., on an Indian, and Paul Albrecht, Sacramento, Calif., Har-Dav., sweat it out on line. Albrecht placed third

a toss and broke up a promised Norton 1-2-3-4. Last year's Champ, Bob Foster, had a brief look-in following Brett's mishap in that he took over fourth spot, ahead of Doran and Armstrong. Near mid-distance both Duke and Kavanagh fueled up; the latter's time of 19.6 seconds being two seconds faster than that of the leader. Lockett, a most consistent and little lauded member of the Norton team, led Kavanagh in both the sixth and seventh turns, but the Australian forged to the front once more: Probably riding strictly to plan, there were never more than a few yards between them throughout the race. An equal spectacle was provided by Doran and Armstrong, on AJS machines, in fourth and fifth. Changing places frequently, they were both credited with 93.94 mph at the start of the last lap. This, after nearly 200 miles, put them quite a distance behind Duke, who was averaging exactly three miles an hour faster.

Velocette luck has been out. Bob Foster, having pulled up to fourth, retired a lap later, fifth, with a split tank, and Cecil Sandford, though not on the leading board, retired at the pits in the tenth with a fluttering front fender.

The Duke, in winning, added one more course record to his laurels. His average was 96.85 mph with his fastest lap whittled away in 10 min., 4 sec., to give him the lap record at 98.40 mph. Incidentally, he was clocking through the timed kilometer before the stands at 114 plus.

RESULTS

G. E. Duke	Norton	96.58
K. Kavanagh	Norton	95.21
J. Lockett	Norton	95.20
R. Armstrong	AJS	94.02
W. Doran	AJS	94.02
J. Brett	Norton	92.95

500 cc SENIOR CLASS

This event, run in torrential rain, was perhaps the hardest task set to riders this season and it is not surprising that many riders or machines succumbed to the conditions. Despite the weather and the fact that the Guzzi machines had returned to Italy following the death of one of the team, thousands of enthusiasts along the 16½-mile course cheerfully bore a thorough drenching in order to witness the end. Les Graham once again was a forced spectator, the MV Agusta machines being non starters, probably owing to the fact that the gearbox trouble had not yet been rectified. This was a pity, for Graham is at his best in the rain and would most probably have been the main menace to the eventual winner, "The Duke."

As in the Junior event, it was Ken Kavanagh who took the initial lead, and what is more, led Duke for the whole of the first lap. Milani, his Gilera sounding in great fettle, was third past the post some way ahead of Doran, on the leading Ajay. A second machine of this marque, piloted by Rod Coleman of New Zealand, was next in line ahead of Umberto Massetti, Gilera. This state of affairs promised a real triangle battle, having its result in "the lap of the Gods."

Johnnie Lockett looked, and no doubt felt, extremely worried. In this respect he was not alone, as faster riders sped through the spray of an opponent, motoring just a little slower, with perhaps a prayer that the vital electrics would survive the deluge. In several cases it was the machine that was passed that either coughed and spluttered, or cut out dead, resulting in one more rain-soaked, shivering rider retiring to the pits. Duke and Kavanagh held first and second

(Continued on Page 29)

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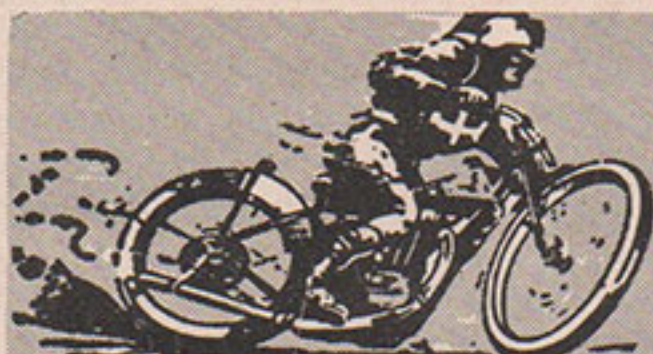
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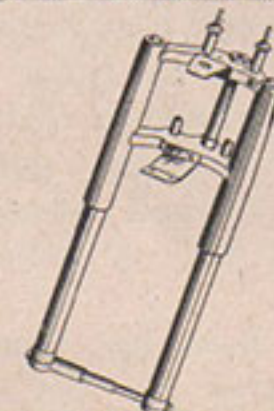
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LEFT, Kraus and Huser broke up sidecar event. In Germany, family hack teams are not uncommon; some even man and wife combinations

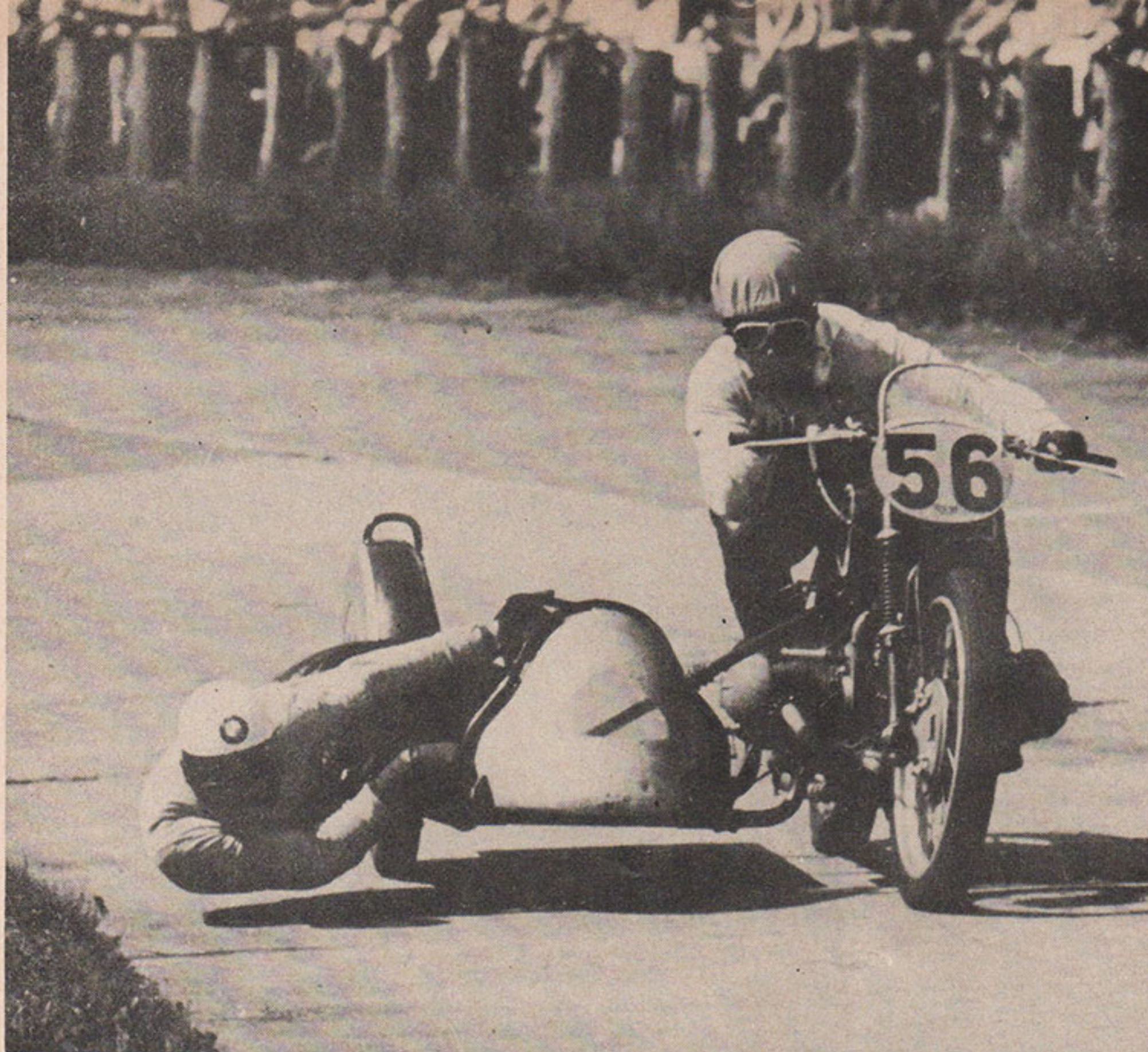


Photo by A. Woda

der SCHOTTEN CIRCUIT

An Eye Witness Account of Germany's First Post-War International Road Race

By John L. Nance

GERMANY'S PRESTIGE suffered earlier this year when her Veritas Auto racer did not outrun the Italian Ferrari. She was hungry to recover some of that lost prestige and at the same time prove superiority of man and machine.

The house of BMW wanted to show its heels to rival NSU, who had earlier broken the long standing BMW record. Equally significant was the attitude of the German people. Here was a country smashed in war, now regaining her position as a nation of the world. Here were people who could forget animosities, cheering the performance of former enemies in a fine show of sportsmanship.

"Rund um Schotten" was important to me since it was the first continental road race that I had the opportunity to see. I was not disappointed. Organization and policing were excellent. A large crowd arriving on special trains, busses, cars, and cycles was skillfully guided through the hospitable town of Schotten to the track. Picturesque old houses and narrow cobblestone streets were hung with gay decorations. Refreshment booths served beer, cognac, and wine—and not a drunk in sight. Sputtering two-strokes echoed through the early morning drizzle. Many sidecars, pulled by vintage 250 cc bikes, arrived bearing whole families. Luxurious 500 cc bikes were not too plentiful.

Friday and Saturday were set aside for practice days and for the running of the 125 cc event. Giant loud speakers interrupted Sunday morning's early race-time excitement, warning spectators to be on the alert and to keep all livestock off the course. Finally the start was announced in

French, English and German. In short order the leaders of the 250 event were screaming toward our corner, entering the turns cautiously on the slippery pavement, some extending a helpful leg, speedway style. Despite the drizzle, their speeds were surprising, and in hardly no time had covered the 10 miles over hills and through the village to bring the leaders in view again. It was a hotly contested race which was finally won by a Moto Parilla. DKW, Moto Guzzi, and Parilla were the main performers of the show.

Coffee time called for a stretch before the 300 cc event. The British bikes had the upper hand in this department, with Velocette, AJS, and Norton comprising the field in that order of popularity with the exception of one Parilla ridden by Ron Schnell, who gave a good account of himself. No more rain had fallen and the track was almost dry, but not quite enough to prevent a three-way spill at the feet of our photographer. Ken Kavanagh of Australia led for the whole race to win on a Norton.

A real treat was in store for the next 750 cc sidecar challenge, with a top-heavy entry of 22 BMWs pitted against a sole Norton. Two minutes later the 500 cc jobs were turned loose, putting a lethal number of machines on the track at one time. Here too, BMW was favored for rapid transport, with NSU, Norton, Gilera, and a single BSA, to contest their ability. It was a few seconds before we saw them snarling through the woods below us. Like a flash they were in our turn, tires squalling as machines bunched up in haste, pulling up out of their slides. Hack passengers were stretched taut, and I am sure that more

than one hip pocket must have been left on the track, as they attempted to maintain balance before jumping back aboard for the straight. Turns were soon blackened with a rubber plating, as the boys kept power on all the way around. Spectators were fascinated by the various techniques of the passengers as they bounced on the rear wheel of the bike to aid traction when the driver dumped it on coming out of the corners. Others dropped flat against the boards to reduce wind resistance, and some beat their fists on the bike in frenzy to stir it to greater efforts. A few of the more hopeful frantically fiddled with carburetor adjustment as they whizzed down the course. Sidecar racing had been taboo in Germany before the war, being considered too dangerous. Fortunately no accidents marred this day, but excitement was over-whelming.

If the preceding races were exciting, the next one was doubly so; for this was the 500 cc main solo event of the day and naturally the fastest. It was to prove or disprove Germany's claims to leadership in motorcycling. For weeks I had been told that George Meier was certain to win without any guess work. He was, of course, familiar with the run, holding the record time for it. Further significance for this race came with the first performance of the new blown NSU four-cylinder powerhouse in the able hands of Fleischman before a crowd of 30,000. Making it even harder for Herr Meier were the riders from other representative nations, including Ken Kavanagh, who had just won the 350.

The start was announced. Gears jammed, tires screeched, and the crowd went up as Kavanagh appeared around the bend with Meier and Zeller nipping at his tail—the hotly tuned BMWs sounding like mad hornets. This fast riding trio had disappeared before the rest of the pack cautiously entered the turn. The hot Guzzis, Triumphs, Gileras, and Nortons were drowned out by a whining, roaring monster breathing down their necks—Fleischman on his NSU. Oh's and Ah's issued from everyone who watched as this shimmering missile jetted up the straight, trying to skirt the slowest traffic before the turn. A few seconds past, and a mighty roar went up as it was broadcast that Meier had passed Kavanagh, and in a few seconds his BMW was cornering beau-



Photo by A. Woda

George Meier accepts victor's wreath after breaking lap record set by a blown job. Zeller, far right, Meier's hottest competitor, looks on

tifully in front of us, with Zeller riding in his shadow. Kavanagh was spotted 300 yards behind, not able to get the acceleration from his Norton that the two factory tuned BMWs had shown, although his top speed was perhaps as good.

Working up through the mob from 11th place was the crowd-pleasing NSU. Fleischman would enter our turn on someone's heels and "drag out" down the straightaway. As the rpms mounted and he got "on the meg" (all four of them), he would literally scream past to lead the way into the next turn. The crowd applauded hysterically each time he challenged, which

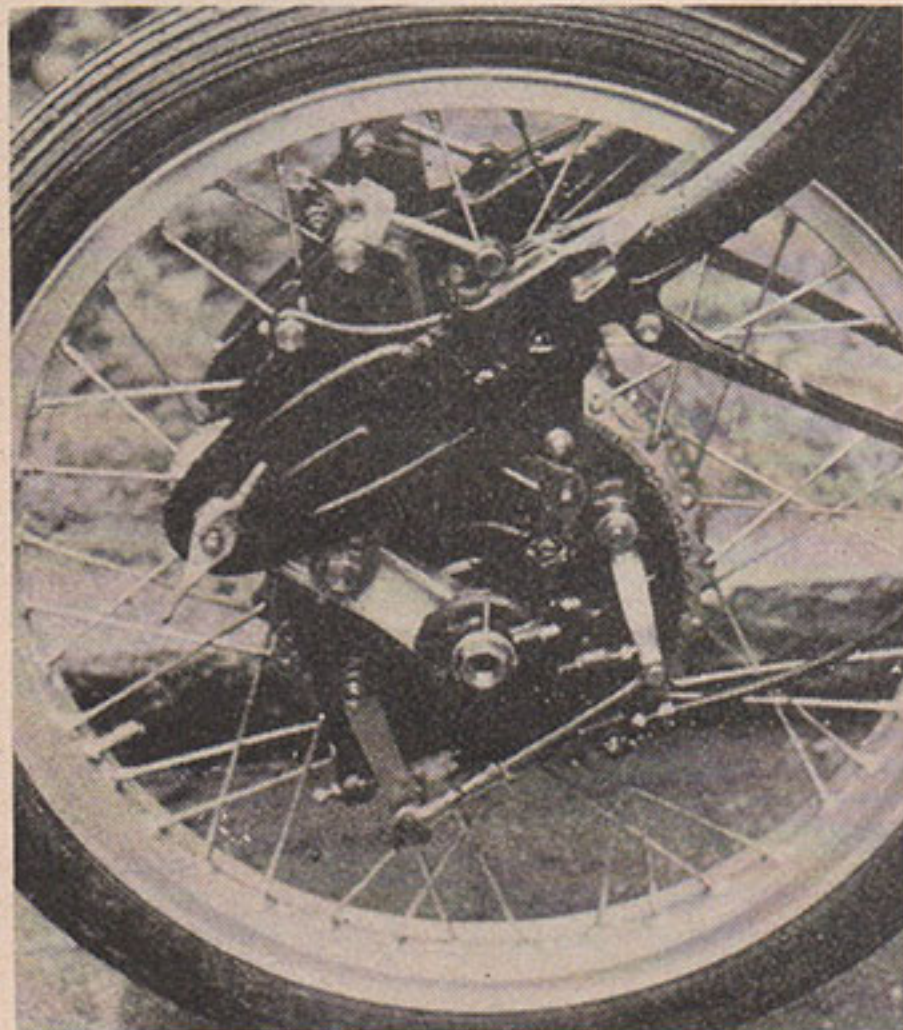


Photo by Kurt Wörner

Latest German NSU conception of front end racing suspension is light, has little effect on fork geometry. Each set of brakes operated by individual cam insures positive, uniform action

was almost every lap—a good rider and a sensational machine. I do not have the technical data, but it sounded as though it was clicking 8000 rpms or better. As the race progressed, Meier and Zeller increased their lead over Kavanagh. This was the race! You could not tell who would be leading on the next lap. If Meier went too wide on a turn, Zeller could cut inside and sometimes outrun him by the time they reached the next turn. Meier had the slight edge on him, but never have I seen ninety miles of such closely matched racing, with only inches separating the two.

Whatever Germany lacked in auto racing she did not in motorcycling, for the crowd was right—Meier garnered the victor's laurels, and deservedly so. Zeller was next over, followed at some distance by Ken Kavanagh. After Kavanagh, came the snarl of a hornet's nest and a flash of light—the NSU. If it had been in a favorable starting position, I am sure it would have pushed the leaders hard. As it was, from 11th to 4th place was a moral victory. This is a machine to watch. Fifth over the line was Heath, who rode well and consistently, as did A. Goffin (Belgium) on his Norton. Behind them were Triumphs, BMWs, and a Guzzi.

All these men were cheered lustily; and Meier, of course, was a hero. He and Zeller were flawless riders and a pleasure to watch—world beaters. In fairness to the international scene, I would like to note the absence of certain names from the entry which was disappointing to many of us, i.e., Duke, Daniell, Lorenzetti, Ambrosini, and Maurice Cann, who were on the entry but did not ride for some reason. It will be well worth watching when some of these men get together the next time, for Germany's racing star is definitely in the heavens of motorcycling.



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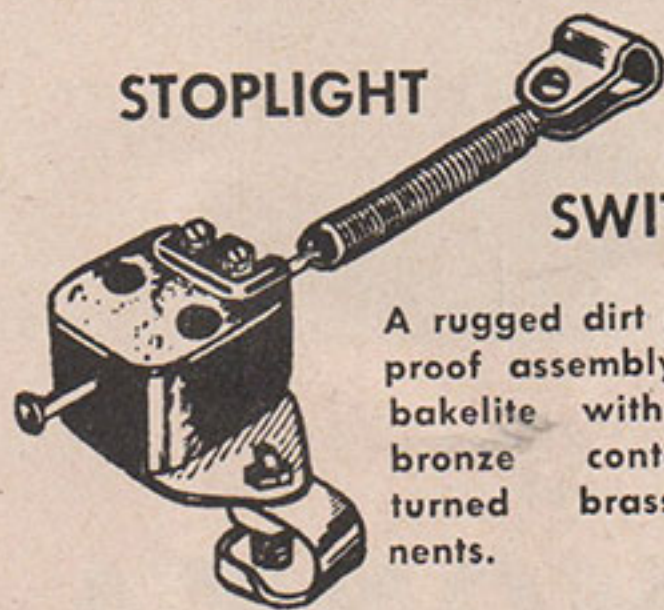
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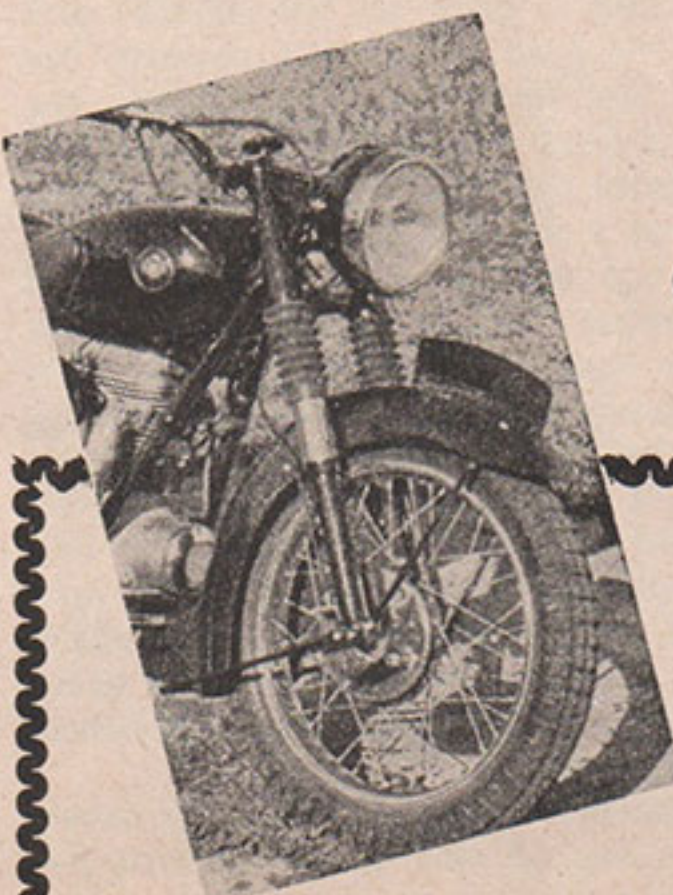
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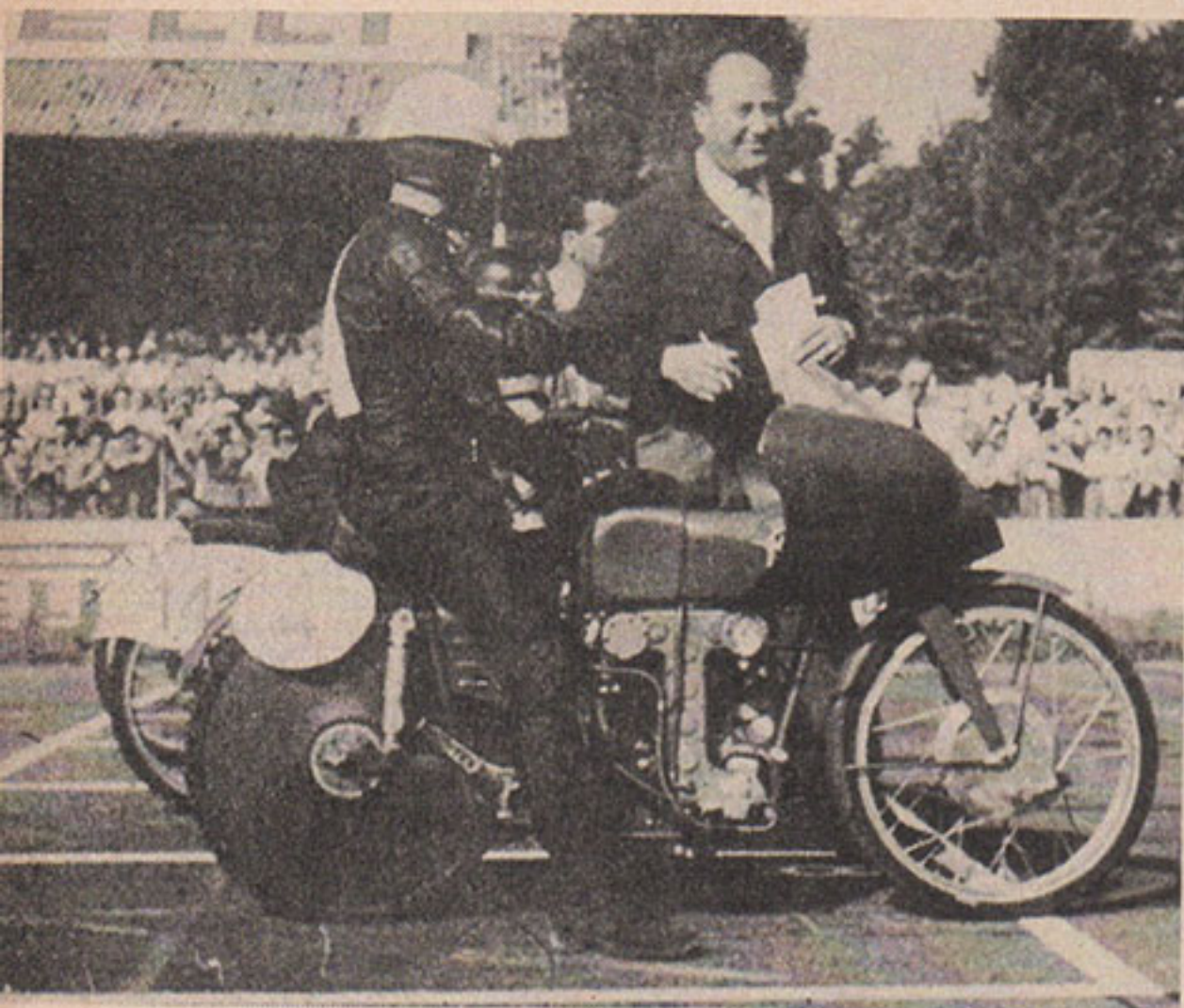
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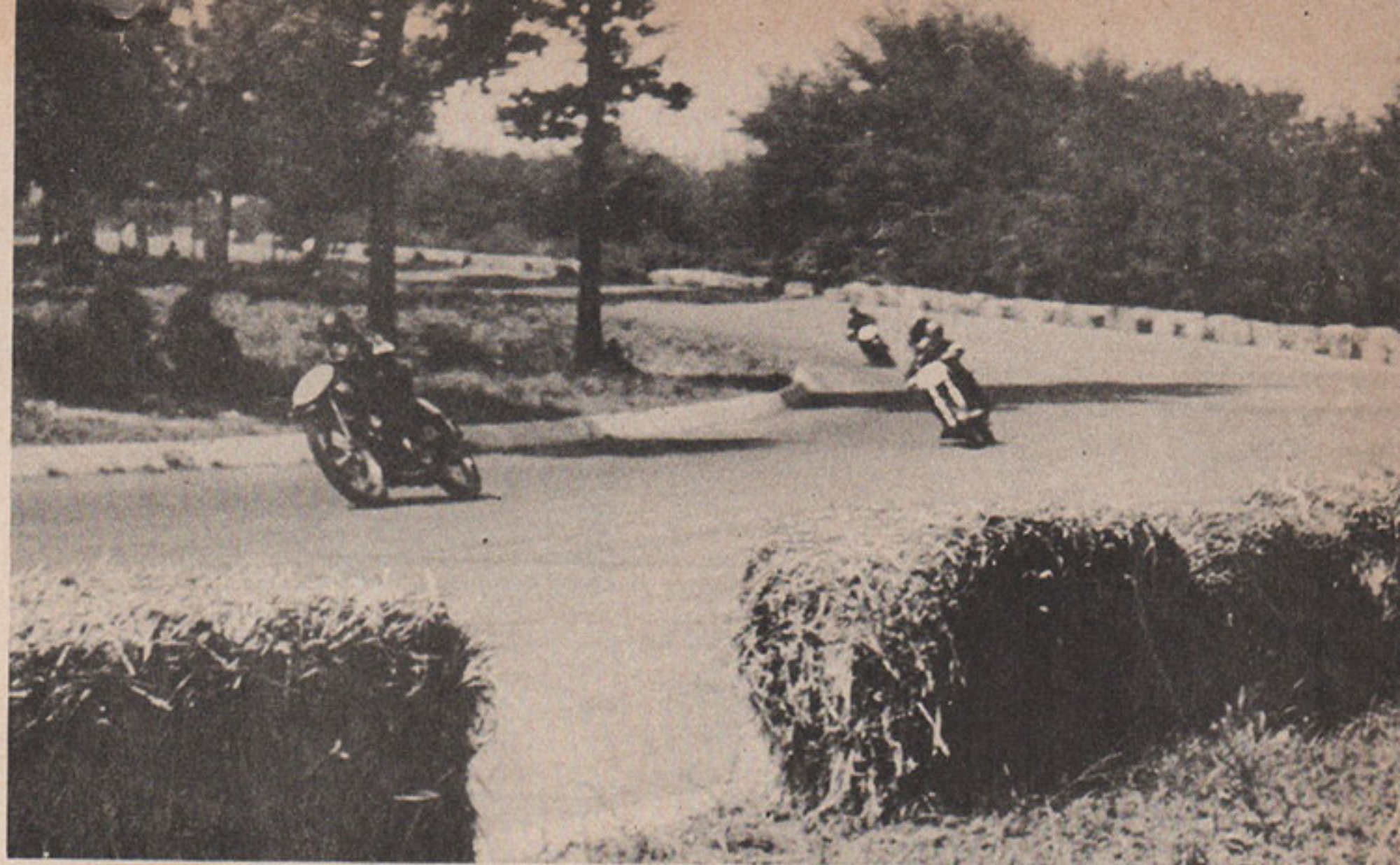
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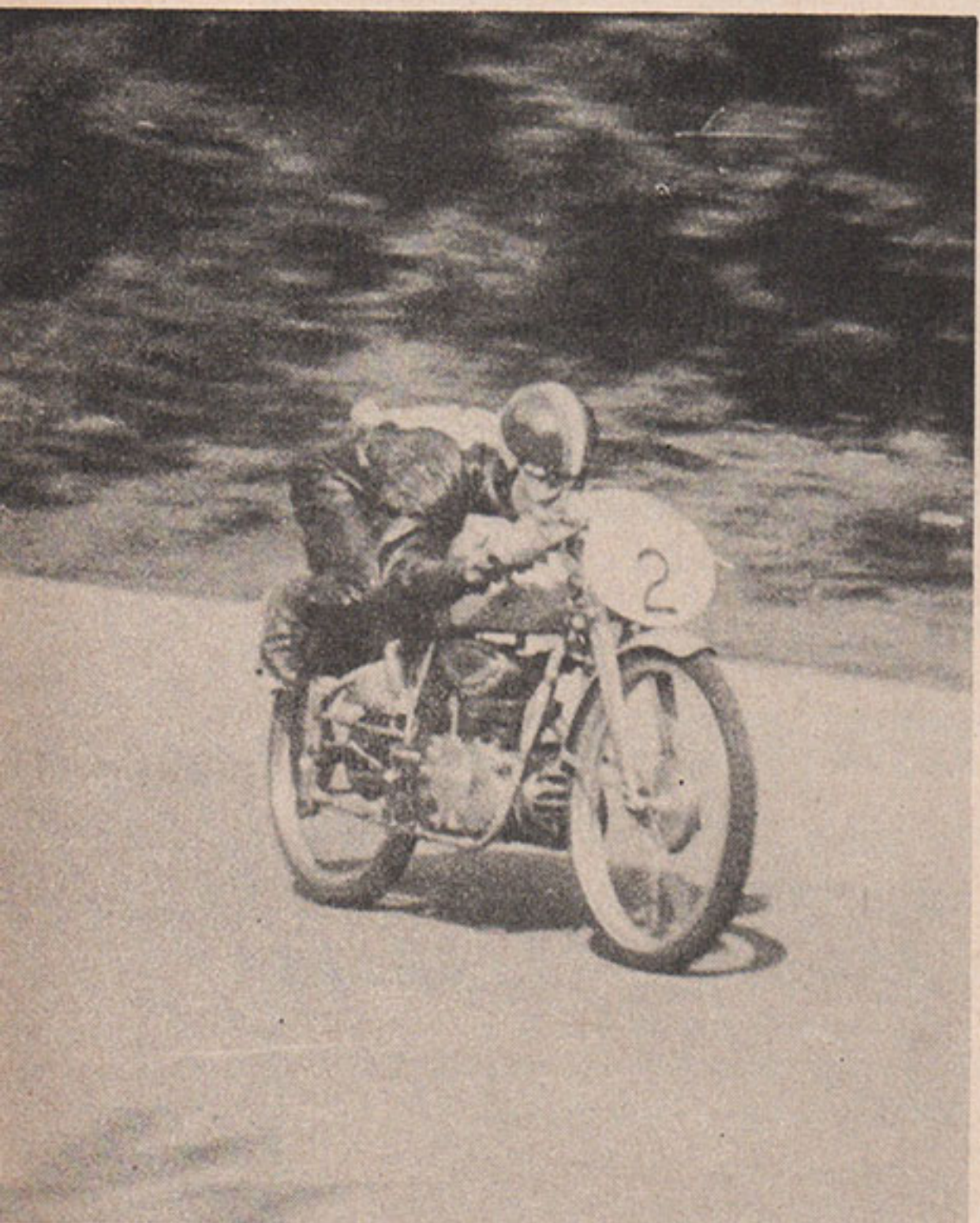




Vicious-looking MV entered in 125 cc race, ridden by Les Graham, sickened after third lap. Note elaborate mill, disc wheel and cowling



Opposed to five all-conquering Mondials, were five Italian MV's and three Morinis in the light-weight line-up. Winner averaged over 84 mph



Still on the megs after sixty-two miles, Italian ace, C. Ubbiali, gets the last ounce of energy out of his Mondial 125, sets a new race record

MONZA MADCAP

ITALIAN TORPEDOES SCREAM FULL SPEED
AHEAD AT GRAND PRIX DES NATIONS.
MILANI'S GILERA LAPS AT 107 MPH

Text and Photos
by William Onslow

EVEN AS THE earliest temperamental Latin enthusiasts entered the huge park at the Monza course in Italy, competitors from the cooler countries perspired. Stripped to the waist, they strove to make last minute adjustments in the stringent shades behind the pits. A heat haze shimmered over the 3.9-mile "L"-shaped track containing two fast left hand bends and four slower rights.

125 cc RACE

Departing in the well known musical buzz of the "tiddlers," Ubbiali was quickly to the front, intent on capturing the 125 crown. Mendogni, oiled a plug on his Morini and was left on the grid for over a minute, but despite this he had soon overhauled the Dutch rider Zylard whose MV had "mice in the motor" from the start and had faded into the distance at a touring speed.

Feet well up on the back pegs, Ubbiali had considerable lead in the opening lap, ahead of his team-mate Ferri, who in turn was hotly pursued by Zanzi on the leading Morini. On the back straight an MV faltered and came to a stop. A hectic second lap by Zanzi enabled him to pass Ferri, but this tired his motor and he lost three places during the third turn, which also saw the retirement of Les Graham at the pits. The order now was Ubbiali, Zinzani, Ferri, Spadoni, Zanzi and Mattucci.

With screaming motor, Ubbiali, in covering the sixth lap in two minutes, forty-five and three-tenths seconds, set up a new record at 85.05 mph, the previous one being 84.24.

RESULTS

- | | | |
|--------------|-----------|-----------|
| 1 Ubbiali | (Mondial) | 84.52 mph |
| 2 Ferri | (Mondial) | |
| 3 Zinzani | (Morini) | |
| 4 McCandless | (Mondial) | |
| 5 Spadoni | (Mondial) | |
| 6 Mattucci | (MV) | |

250 cc RACE

Bruno Ruffo (Guzzi), leading in the world championship, seemed most likely to succeed in this race. At the fall of the flag, Ruffo took a commanding lead ahead of Lorenzetti. Tommy Wood, Francisci and Montanari, all astride Guzzi machines, and Art Wheeler's Velocette were some way behind. For the first fifteen laps the order was unchanged, and then an anti-climax. Ruffo, who had set up a new lap record in the tenth, overdid things in a fast bend and slid to the ground. Officials and a few spectators dashed to the rescue, causing consternation to the riders following. Manzoni (Guzzi), hitting the spilled oil, crashed heavily, his machine fired and burned completely. Rolly Pike braked heavily to avoid a spectator, crashed, and badly damaged the Rudge.

This event left Wood, who had passed Lorenzetti, in the lead while Ruffo, having remounted, set off to cover the three spots he had lost. The two leaders were now neck and neck, final excitement coming in the last few yards. Wood, leading Lorenzetti, heard his motor splutter and had the mortification of being passed almost at the flag. Ruffo, in

LEFT, Although Italians scored highest at Monza, standing at end of world meet proved Duke 350 and 500 champ, Oliver again king of sidecars

passing Montanari in the ultimate lap, gained third place and the class championship.

RESULTS

- 1 Lorenzetti (Guzzi) 89.29 mph
- 2 Wood (Guzzi)
- 3 Ruffo (Guzzi)
- 4 Montanari (Guzzi)
- 5 Francisci (Guzzi)
- 6 Paciocca (Guzzi)
- 7 Wheeler (Velocette)

350 cc RACE

Twenty three riders from eight countries came to the line in this 24-lap race and, with the exception of the German rider Schnell, astride a Parilla, all were mounted on British machines. As at the Ulster, the Norton team took the initiative with Duke leading Kavanagh and Lockett. Behind them the AJS trio: Coleman, Doran and Armstrong raced head to tail. Kavanagh was the only serious challenger to Duke and held the lead for three laps. In the last circuit he attempted to pass the leader in a bend when well out of line. Grazing the straw bales, he zigzagged for hundreds of yards before regaining control and lost his chance.

The Leeds rider, Jack Brett, from a poor start, succeeded in passing all but the first two Norton boys by the end of the fourth. Lockett, troubled by his "feather bed," gradually lost yards until he retired with mag trouble. Duke set both new lap and race records.

RESULTS

- 1 Duke (Norton) 97.98 mph
- 2 Kavanagh (Norton)
- 3 Brett (Norton)
- 4 Doran (AJS)
- 5 Armstrong (AJS)
- 6 Coleman (AJS)
- 7 Graham (Velocette)

SIDECAR RACE

This was to be the race of the day. The English champion, Oliver, and Italian three-wheel king, Frigerio, were level points, and upon this race depended the laurels of a world championship. The Norton took the lead, but Milani on a second Gilera four was hot on his tail. Frigerio made an indifferent start and his motor sounded rough as he rounded the bend. The trouble became worse and this likeable Italian, unable to display his great ability disappeared with mag trouble. Meanwhile, Milani passed Oliver and, to the cheers of frantic Italians, was first past the stands. These riders were well ahead of Harris (England) and Swiss champion, Haldemann.

Behind these, a bunch of seven were nose to tail, with first one and then another pulling out of line to try for a spot up front. The Gilera evidently had superior speed on the single cylinder Norton and only by hectic cornering was Oliver able to snatch a lead in six laps. Realizing in the early stages that he had not the steam of the four, he was content to sit in the slip stream of the flying Italian. It ended with the Gilera leaving the last bend about two lengths ahead of the Norton. In the last few yards Oliver pulled out and had the mortification of missing a gear, falling short of winning by a few feet.

RESULTS

- 1 Alberto Milani (Gilera) 89.39 mph
- 2 Oliver (Norton)
- 3 Harris (Norton)
- 4 Haldemann (Norton)
- 5 Drion (Norton)
- 6 Murit (Norton)
- Oliver—Record ninth lap 91.04 mph

(Continued on Page 33)



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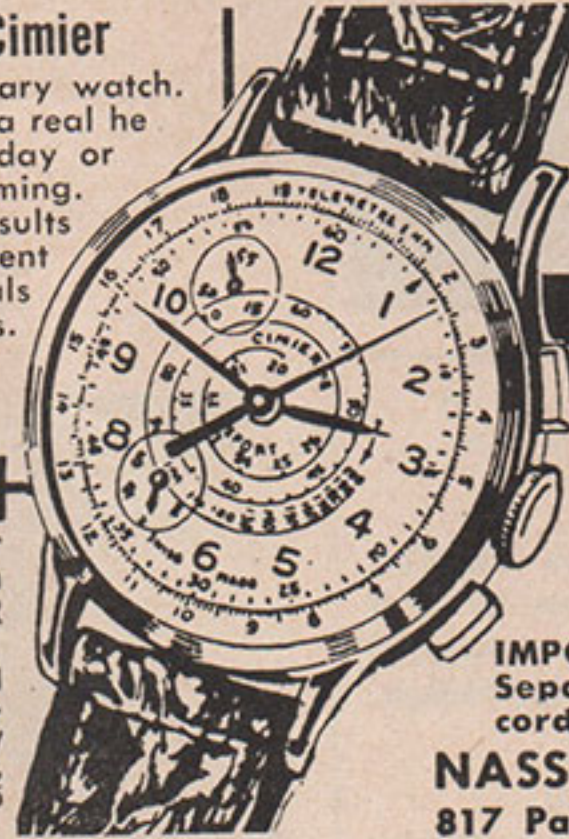
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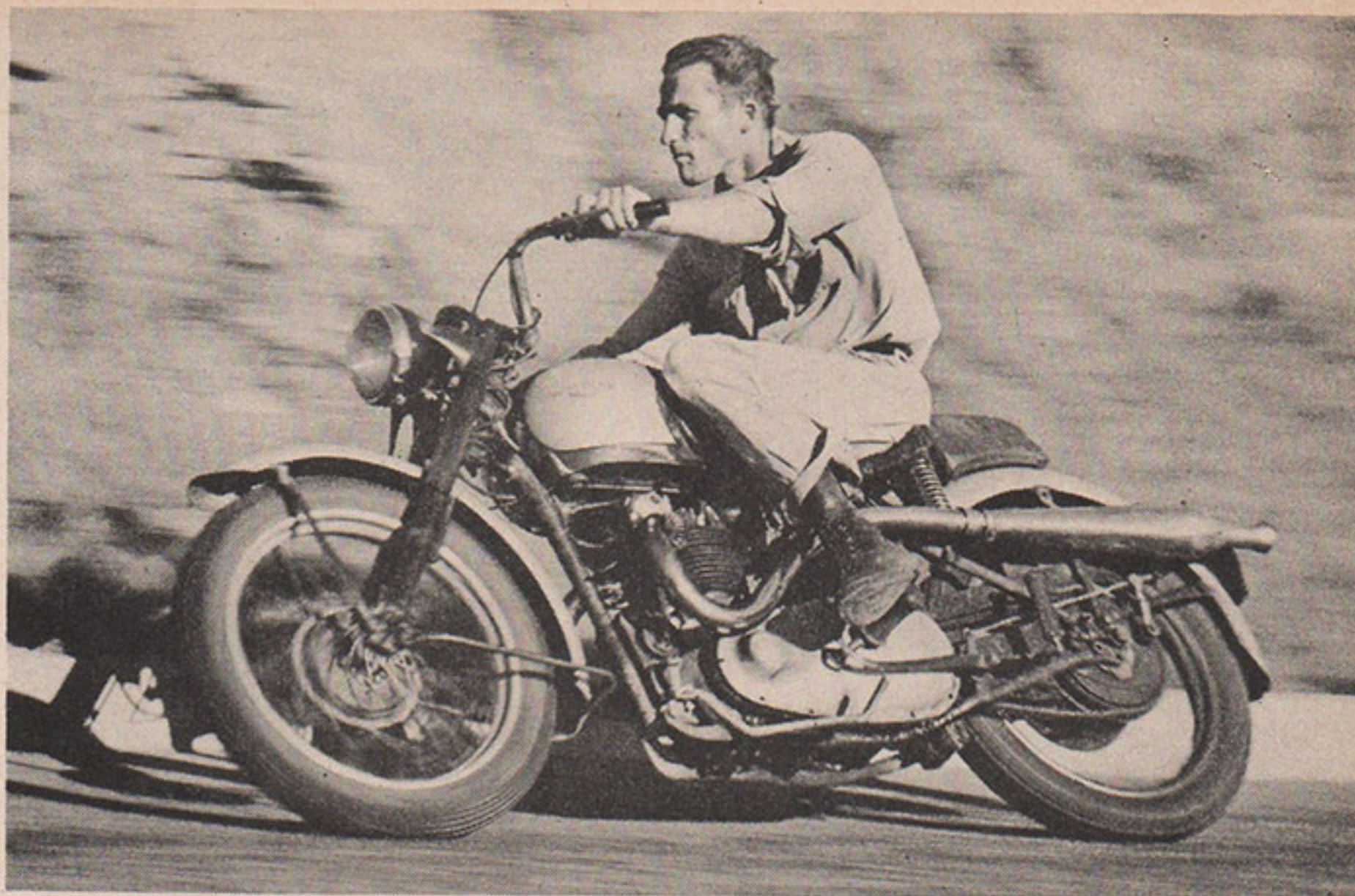
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1ST PRIZE PROFESSIONAL and TRI-ANNUAL WINNER. Fergus Peters of Santa Barbara, California, breaks into the winner class (after receiving two honorable mentions) with a perfect pan shot. This puts him in the money with a \$25.00 bond and \$10.00 in cash. Speed Graphic 4x5, using Super XX film, 1/400 sec., at F9. Fellow with the determined look and handful of throttle is Jimmy Clearwater. Tracking camera with moving subject, infers great speed with blurred background

FERGUS PETERS HITS TRI-ANNUAL JACKPOT IN Cycle Photo Contest

1. A contest open to both amateur and professional photographers.
2. Any entrant earning more than 40% annual income from the sale of photographs considered a professional. (Please state your classification.)

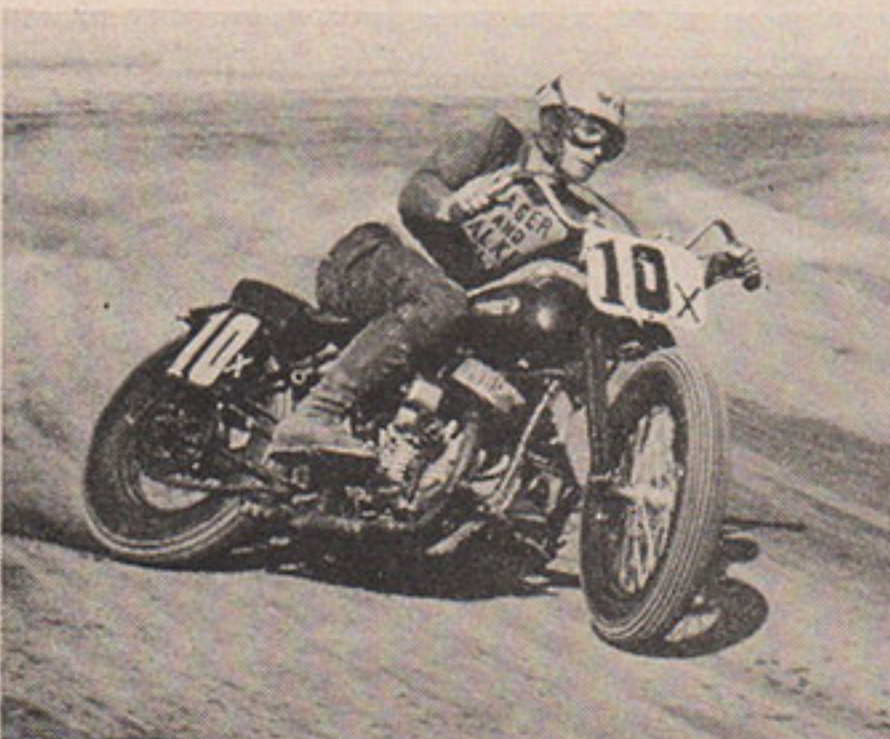


1ST PRIZE AMATEUR. "Just short of the tape." Perfectly timed action by A. Chiapparelli of San Francisco, Calif., shows Cliff Ricker acting up at Franklin Canyon Climb. 35mm Lieca with 135mm telephoto lens used—1/500 sec. at F6.3

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 receive \$10.00 cash. Then, every four months, winners vie for a \$25.00 savings bond. At the end of the year, the tri-annual awards will compete for the BIG PRIZE, \$100.00 bond.
6. Honorable mention pictures receive \$3.00. Send all photographs to:

CONTEST EDITOR, CYCLE MAGAZINE

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HONORABLE MENTION. The perfect broad-slide by the competition star, Win Young, at Lincoln Park Stadium. Photo by Bob Magill of Long Beach, using Super XX Medalist, 1/400 sec. at F11



HONORABLE MENTION. "Along the Mexican Coast." Ray Porter takes delayed action shot of coastline, self and Drew Skinner. 2 1/4 x 3 1/4 Speed Graphic: Super XX film pack, 1/100 sec. at F16



Since 1922, when first Ulster Grand Prix was promoted, event has become world-renowned, with thousands of spectators on hand annually

PAY-OFF AT ULSTER

(Continued from Page 23)

spots till the end, while third was held by Doran, Milani, Coleman and Massetti.

Doran stopped at the pits at the completion of the initial lap. His halt was brief, just long enough to snatch a clean pair of goggles, though long enough to put him off the leader board for eight more terrible 16½-mile laps.

Reg Armstrong, an early casualty at the pits, reported that his "Porky" took turns in firing in one pot at a time, as he wrung a couple of pints of water out of his gloves and poured a gallon or so out of each boot. His team pal, Bill Petch, was also in trouble around the course, and after changing several plugs, turned it in when he found that H₂O ousted the gas in his carbs.

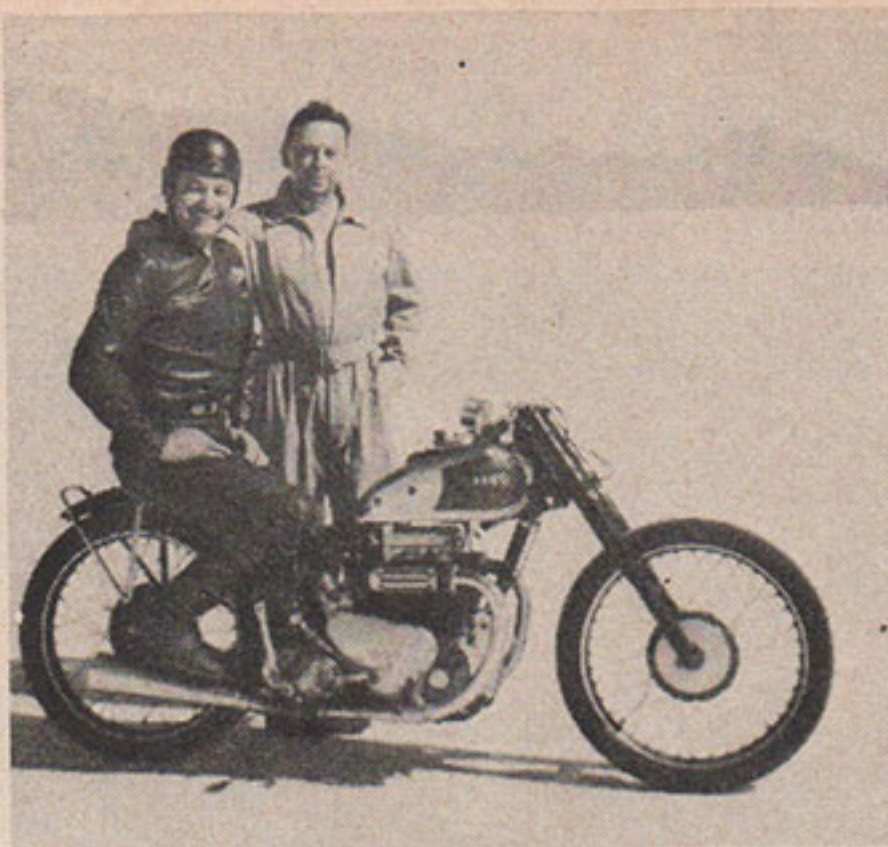
Rod Coleman, on the fourth Ajay, was having a better break and in the third turn passed Milani to take third place. Three laps later Massetti had the spot, leading the displaced Coleman, Brett, and Lockett. Doran, lying well back following three changes of goggles, was motoring quite smartly, catching up the last two works Nortons, hand over fist. The end of the eighth lap spelled finish to Jack Brett, for he pulled to the pits with cramps, and had to be helped from his machine. This Norton retirement let Doran into fifth spot, and one turn later that worthy one had gained just one more, owing to a mishap to his teammate Coleman who had dropped the model.

Duke, by now, was out alone but Massetti seemed to be gaining on the Norton newcomer. It was Milani, however, who was really going places. Rather a favorite for the race, he held tight to fourth spot in laps three and four, then he seemed to fade away for a while. A hectic ninth turn at 97.27 (fastest of the day) put him in fifth position between Doran and Lockett, and just three turns later was handed fourth, when the Porky rider ran out of road.

Positions remained unchanged during the last 33 punishing miles for those fortunates left in the hunt (only 19 of the 38 starters circulating at the end), each one a hero to battle against blinding rain for nearly three hours, little knowing when brakes or ignition would suddenly give up the ghost. Still, thanks to that grand comic of the tracks, Bill Doran, the ghastly day ended with a laugh. Having received one more pair of goggles, he set off on his last lap, but a few minutes later the loud speakers blared out, "Bill Doran has left the course at Muckamore and is proceeding to his hotel under his own steam!" (Riders are flagged in once the winner has passed the post, and the wily Bill knew that he could not possibly lose his sixth position.)

RESULTS

G. E. Duke	Norton	95.18 mph
K. Kavanagh	Norton	93.49 mph
U. Massetti	Gilera	93.14 mph
A. Milani	Gilera	91.29 mph
J. Lockett	Norton	89.24 mph
W. Doran	AJS	14 laps completed



Record smasher Sam Parriott, with an Ariel 4, receives warm welcome after 131.95 mph trip by Bill Johnson, President of Johnson Motors

THE BIG CIRCLE

(Continued from Page 11)

tion, and on his return to the pits announced that the chin pad on the gas tank was in the wrong position. The chin pad was moved from the right side of the tank to the left so that Bullock could lay his chin upon the tank and enjoy his 50-mile jaunt.

It was a tense moment for everyone when Bullock warmed up his Thunderbird at the starting line, for everyone knew that he had a record to beat on that first 10-mile standing start lap of almost 115 miles per hour. Referee Schaller gave the starting signal, and Bullock was off. All ears were turned so that each throb of the motorcycle could be heard as it roared off on the first leg of its 50-mile run. The Thunderbird never dropped a beat for 50 miles, except as Bullock would momentarily hit the mag button three times in each 10 miles, so that the engine would receive adequate lubrication.

Bullock's first 10-mile lap was turned at an average speed of 116.0915 miles per hour, which established a new 10-mile record for Class C motorcycles from a standing start. Bullock picked up slightly on the second lap, and had an average speed of 118.4990 miles per hour; but on his third lap he was in trouble. His riding position was uncomfortable and while attempting to find a proper riding position, he dropped down to his slowest speed for any flying ten mile lap of 118.3043 miles per hour. His fourth and fifth laps were both ridden with the greatest ease in the very high 118-mph brackets, and he completed his 50 miles with a new American Class C record of 117.9554 mph for 50 miles from a standing start.

Even the fact that Parriott and Bullock had established new American Class C records did not seem to satisfy them, for they immediately began to talk about new records that could and would be made in the future, and began to plan for the alterations that would have to be made for the coming year.

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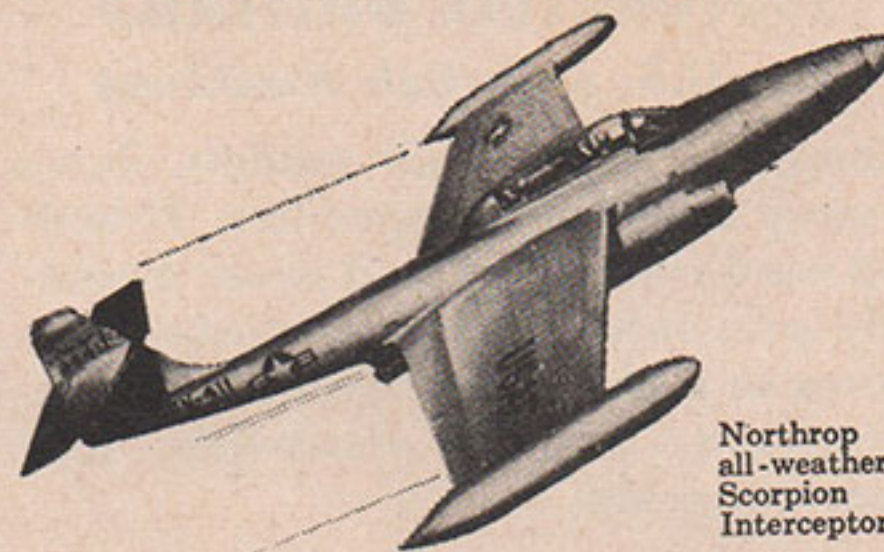
10 mile standing start	116.0915 mph
20 mile standing start	117.2952 mph
30 mile standing start	117.9319 mph
40 mile standing start	117.9561 mph
50 mile standing start	117.9554 mph

60-CU.-IN. CLASS C STRAIGHTAWAY

Over the measured mile trap:

Average speed attained	131.9539 mph
Highest speed east	133.2839 mph
Highest speed west	130.6240 mph

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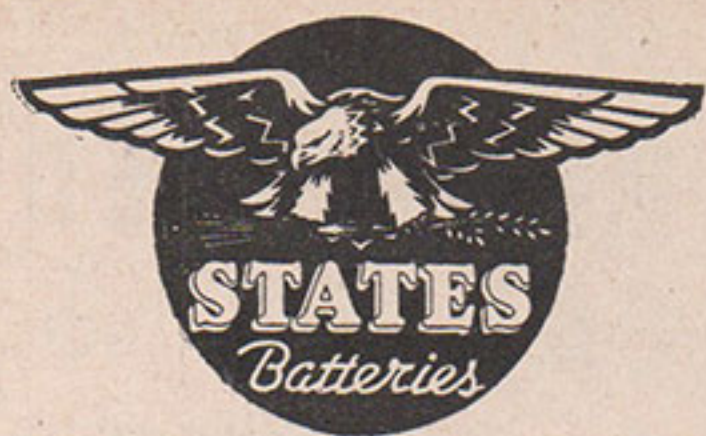
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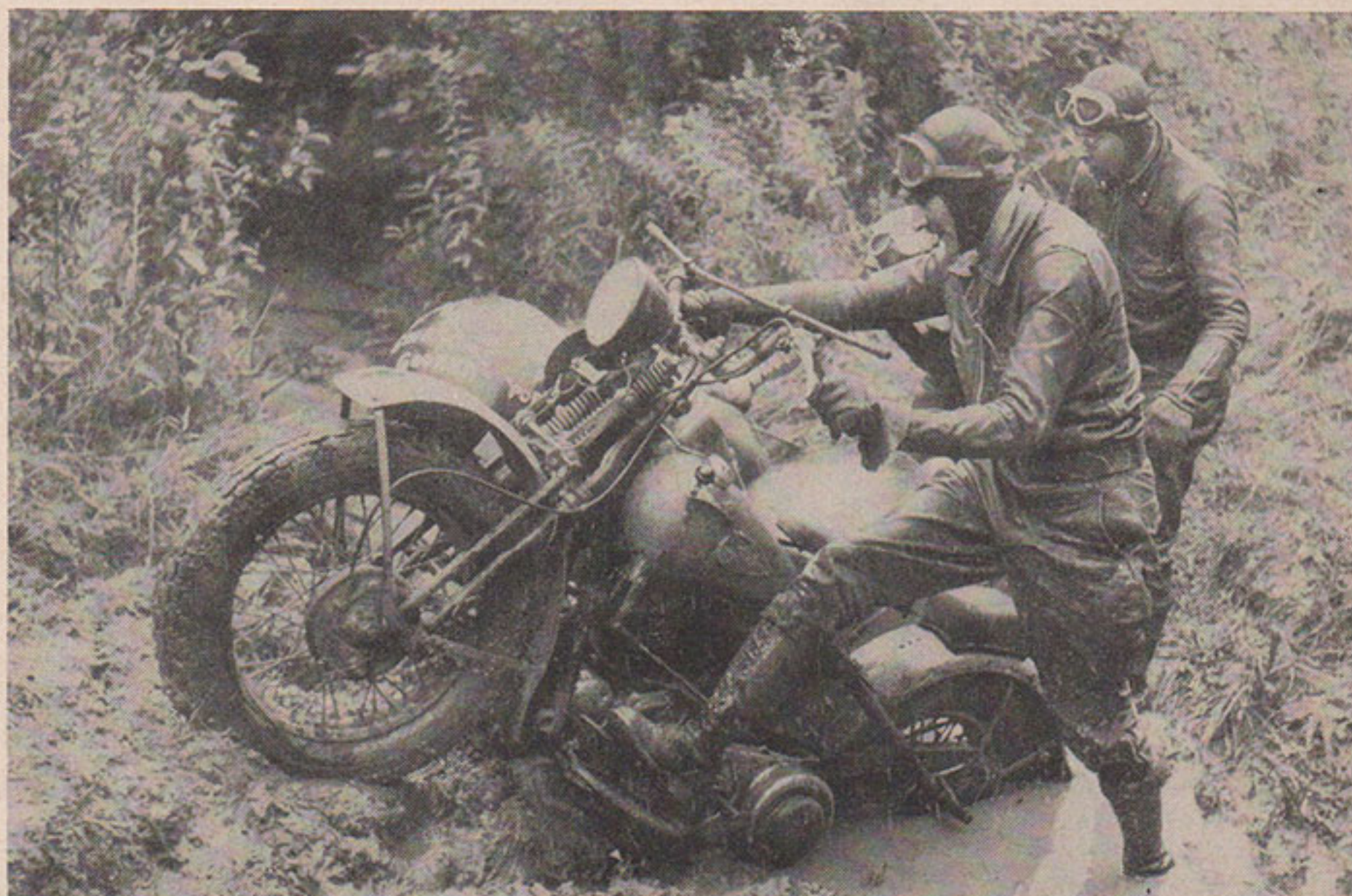
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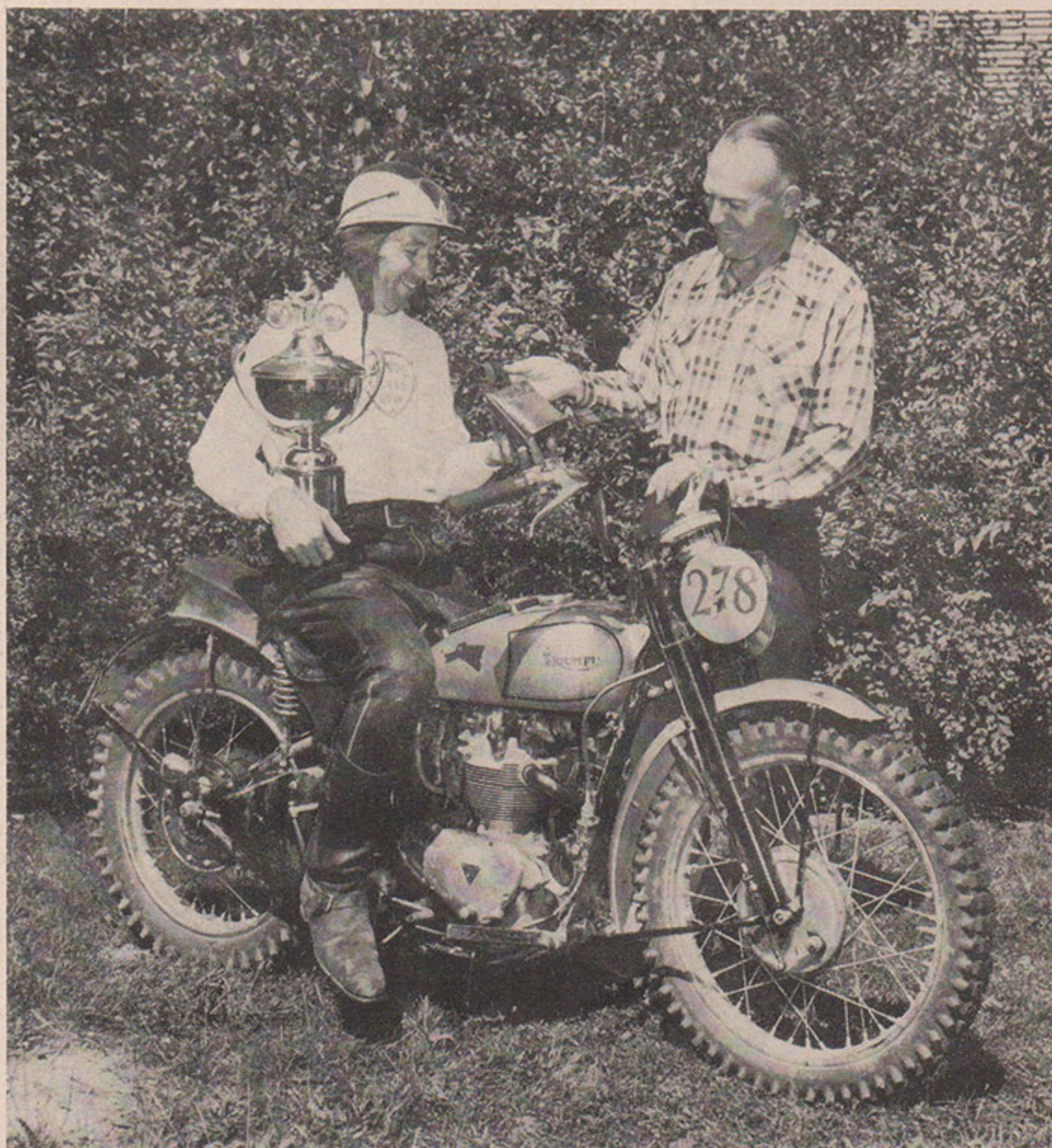
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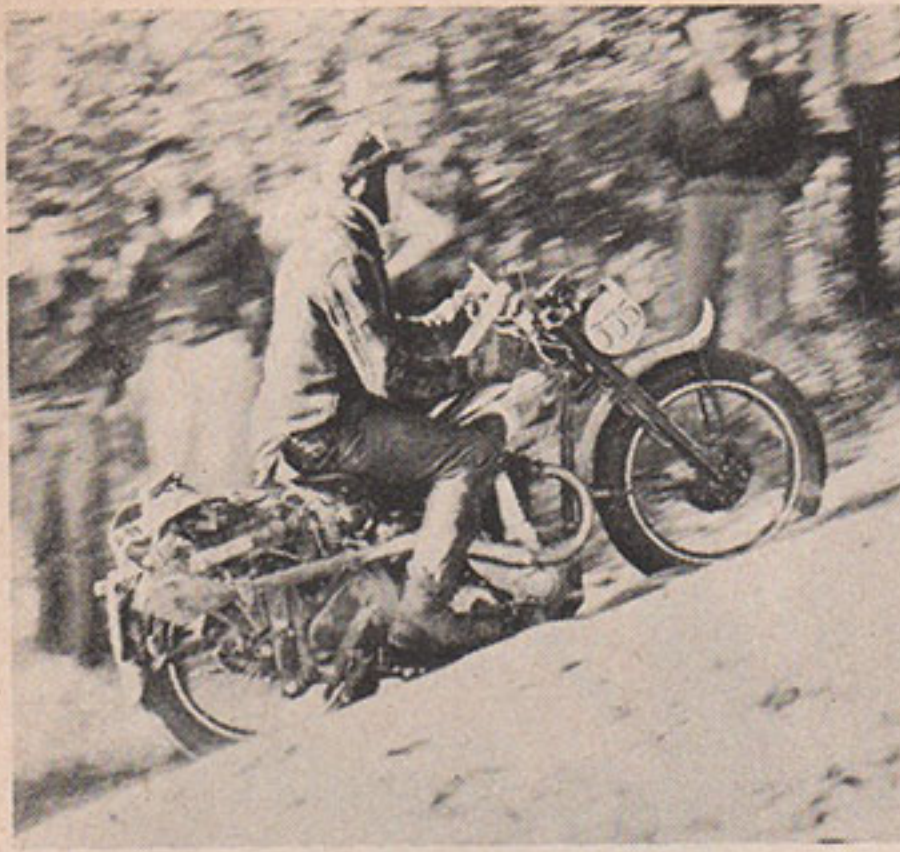
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A happy Joe Gee accepts his reward for winning the National Enduro Championship. Donor is Oscar Lenz, six-time winner of the Jack Pine run and still active in planning and staging the event



Up the fire lane speeds Bill Penton on his way to a solid second place trophy in Class A Solo

SILVER CLANG

(Continued from Page 10)

This rugged morning is instrumental in separating the men from the boys. Those who make it through to the noon check find the rest of the trip rather uneventful, the idea being to get everybody back to Lansing by nightfall.

Regardless of how far they rode, everybody involved had a good time. That's the point of enduros. It's not for money, it's just for fun. And, when an experienced group like the Lansing club does the planning and necessary labor, the result is a smooth, pleasant affair. Daddy of the Jack Pine is Oscar Lenz, six-time winner of the event and official Pathfinder and Advisor to this year's Silver Anniversary run. A happy birthday to your robust child, gentlemen. We'll be there next year to help you celebrate the twenty-sixth return of the day.



Joe Gee finds little comfort in the cradle knolls outside Dead Stream swamp near Houghton Lake. Note daylight beneath front wheel. Joe came through all obstacles with top score—922



Harold Rohrer goes trout chasing the second day. With perfect form as shown, he scored 524

PEORIA

NATIONAL TT

RED-SHIRTED Jimmie Phillips, speedster from South Pasadena, California, who doesn't like to stay in the background, had his own way yesterday afternoon before 10,000 people at the Peoria Motorcycle Club track, as he roared to both championships in the National TT meet. After hitting second in the opening trials, Phillips never trailed at any time, as he won both elimination races and speeded to win the finals of the 45-cu.-in. and 80-cu.-in. affairs.

In the smaller cycle race, Bill Miller, the ex-champ from Mountville, Pennsylvania, provided steady competition all the way. Miller was close to Phillips' exhaust pipe for the first ten laps and threatened him until the very end. Phillips, however, was not pressed in the least during the 80-cu.-in. grind, as he left the field at the start, churned to a large lead before one lap had been completed. The total take for Phillips, aside from a room full of hardware, was \$858.00 which included \$850.00 for each of his championship victories, and \$75.00 for each preliminary, plus an \$8.00 time trial prize.

Others were Walt Fulton, San Bernardino, on a Triumph, and Ed Kretz, Jr., Monterey Park, also Triumph mounted. Fulton was No. 2 money winner, as he picked up \$350.00 and finished first in the elimination races in both events; third in the 45-cu.-in. national; and fourth in the 80-cu.-in. championship. Kretz picked up fourth money.

So fast was the competition that Roger Soderstrom, the defender in both events, from Normal, Illinois, was blanked. Soderstrom didn't get into the championship event in the 45-cu.-in. class and finished fifth in the 80-cu.-in. event.

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1. The names and address of the publishers, editor, and business manager are:

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Editor: Robert L. Greene, 838 Craig Avenue, La Canada, Calif.

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Theodore A. Johnson, Business Manager
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(SEAL)

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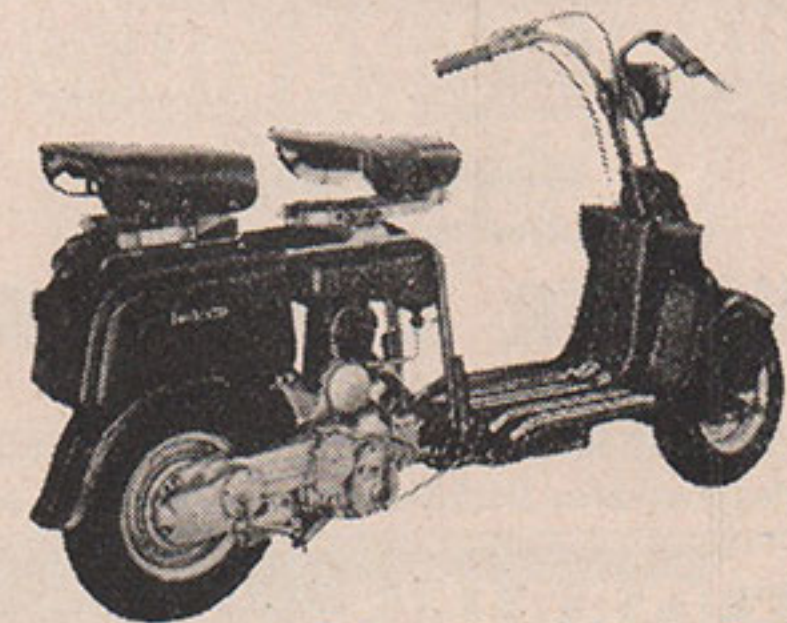
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A Definition . . .

ACCELERATION

by
David Sobo

THE TERM acceleration is used by many
avid speed addicts, but how many know
what the word actually stands for, or how
the acceleration of a motorcycle over a defi-
nite distance may be found. Acceleration is
defined as change of velocity, with respect to
time. The units of acceleration are feet per
second per second, the term used to repre-
sent change of velocity.

Now the question arises, can acceleration
be found easily? The answer is yes; it is
easily found by simple multiplication and di-
vision. Acceleration cannot usually be read
off a meter, so it must be computed math-
ematically. There are two simple formulas to
be used:

$$\text{Formula A . . .} \\ \text{Acceleration} = \frac{2 \times \text{distance}}{\text{time} \times \text{time}}$$

Formula A is used when only the distance
and the time are known. The distance must
be in feet, and the time in seconds.

$$\text{Formula B . . .} \\ \text{Acceleration} = \frac{\text{velocity} \times \text{velocity}}{2 \times \text{distance}}$$

Formula B is used when only the final
speed of the bike at the end of the distance,
and the distance are known. The distance
must be in feet, and the velocity in feet per
second.

The following point must be emphasized.
When comparing the acceleration of two or
more bikes, the distance traversed must be
the same. In other words do not test one
bike over a distance of $\frac{1}{4}$ mile and com-
pare its acceleration with another bike whose
acceleration has been measured over $\frac{1}{10}$
mile because this will not be a true compar-
ison.

Examples:

Norton Dominator, $\frac{1}{4}$ mile, 18.25 seconds.
Use formula A because a distance and a time
are known.

$$\frac{1}{4} \text{ mile} = 1320 \text{ feet} \\ \text{accel. } \frac{2 \times 1320}{18.25 \times 18.25} = 7.92 \text{ ft. per second} \\ \text{per second}$$

The "Beast," $\frac{1}{4}$ mile, 129.49 miles per hour.
Use formula B because a distance and a final
velocity are known. To convert miles per
hour to feet per second, multiply miles per
hour by 1.467.

$$129.49 \times 1.467 = 189.96 \text{ ft. per second} \\ \text{accel. } \frac{189.96 \times 189.96}{2 \times 1320} = 13.66 \text{ ft. per} \\ \text{second per second}$$

Of course the motorcycle which reaches
the highest top speed in a given distance, as
compared to another motorcycle over the
same distance, will have a higher accelera-
tion. It is very interesting to watch your ac-
celeration change as changes are made in
gearing, fuel, weight, etc. Another thing
worth mentioning is that when cruising at a
constant speed, the acceleration is zero. This
is because there is no change in velocity,
therefore, no acceleration.

Acceleration ties in directly to one of the
most fundamental laws of physics: force =
mass \times acceleration. It can be easily seen
that by decreasing the mass and increasing
the force the acceleration must increase.

A RACE AND A HALF

(Continued from Page 15)



Albert D. Gerber, co-promoter of track, gives
trophy for club having largest attendance to Bob
Becker and Helen Applegate of Jersey Jets

3:39.37 in the fourth heat. He bettered the
old mark of 3:42.87 set by Warren Sherwood
of Cornwall, N. Y.; Marvin Twigg, Hagers-
town, Md., then broke Wallmar's record in
the next heat when he was caught in 3:36.41.

Risser set a 10-mile mark when he won
the first semi-final event in 7:09.91. This
was also an automatic record, being the first
time that a 10-mile event was held for nov-
ices at Langhorne. Twigg broke this record
in the next semi-final event when he was
clocked at 7:02.92.

Steve Halewich, Quakertown, Pa., won the
first heat in 3:41.23. Risser took the second
heat in 3:36.86; John Hood, Trenton, N. J.,
won the third heat in 3:55.12, while the
sixth heat was won by Francis LeBlanc,
Wellesley, Mass., in 3:41.87.

The novice races were first started in
staggered style, with five or six cycles in a
row. After the first three heats had been run,
the start was changed to the mass style and
the races run over. This accounts for the
fact that Risser's time in the second heat
was not a record. For scoring purposes the
first three heats were kept as such, although
they were completed after the fourth, fifth,
and sixth heats.

RESULTS

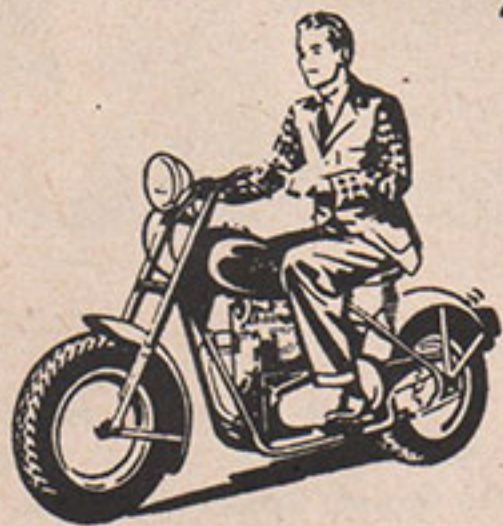
100-MILE CHAMPIONSHIP

- | | |
|---------------------|--------------------|
| 1. Bill Huber | Reading, Pa. |
| 2. Bill Miller | Mountville, Pa. |
| 3. Paul Albrecht | Sacramento, Calif. |
| 4. Don McHugh | Toronto, Ont. |
| 5. Babe Tancrede | Woonsocket, R. I. |
| 6. Leon Applegate | Burlington, N. J. |
| 7. Buck Brigance | Charlotte, N. C. |
| 8. Rodman Burkhardt | Reading, Pa. |
| 9. George Heck | Pottstown, Pa. |
| 10. Leon Newhall | Lynn, Mass. |
- Time: 1 hr., 6 min., 17.30 secs. (track rec-
ord).

FIVE-MILE CHAMPIONSHIP

- | | |
|------------------------|------------------|
| 1. Ralph Mooers | Bend, Ore. |
| 2. Pete Froytag | Teterboro, N. J. |
| 3. Clyde Keeney | York, Pa. |
| 4. Dave Ball | Yorktown, Va. |
| 5. Richard Bettencourt | Avon, Mass. |
- Time: 3 min., 36.25 secs. (track record).

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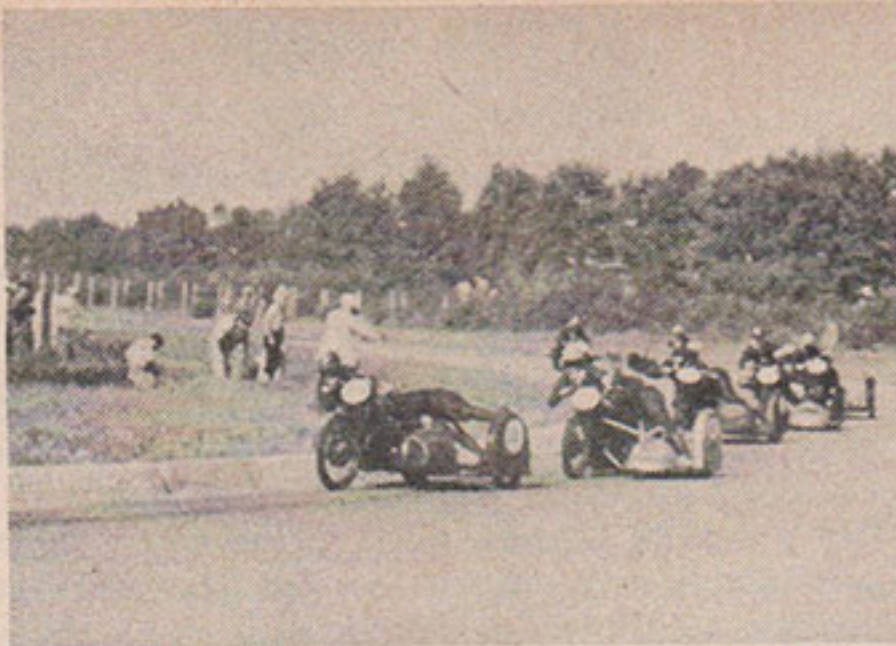
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Italian charioteer Galbiati, Guzzi, and Frenchman Drion, Norton, squirt ahead of pack. Drion finished fifth. Winner Milani's speed: 89.39 mph

MONZA MADCAP

(Continued from Page 27)

500 cc RACE

Resounding cheers echoed through the stands as Duke, already the 350-cc and 500-cc world champion, came to the grid in his position of honor among the 35 riders of seven nations represented. The race, with a full contingent of Gilera, Guzzi, MV, AJS, and Norton works machines, made a fitting end to the European Road Racing Season.

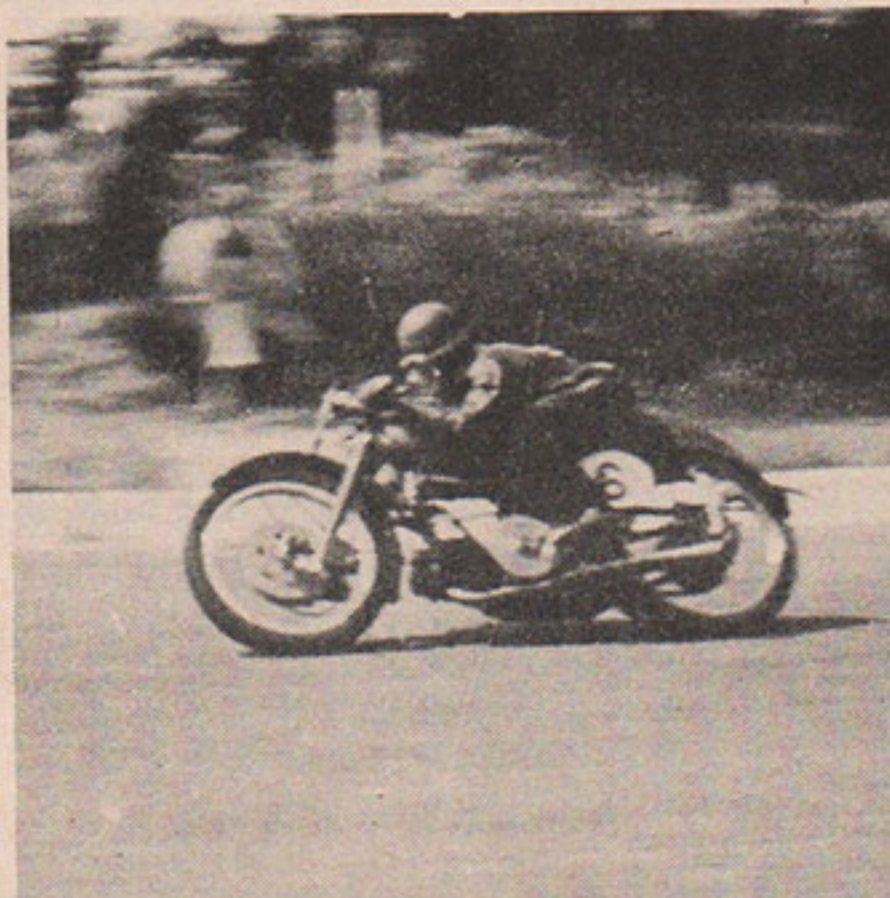
Alfredo Milani boomed into the lead with his Gilera's screaming exhaust note completely drowning the bark of the Nortons of Kavanagh and Duke, in his wake. The crowd shot up as Milani appeared around the distant right hander, well ahead of Kavanagh, Duke, and Artesiani on an MV. A lap later Massetti (Gilera) had ploughed through to take up second position, while Duke had dropped back to sixth behind Kavanagh, Pagani and Coleman.

Within five laps it was evident that the Nortons had not the speed of the Gileras and were steadily losing ground with the MVs and Guzzis out of the first eight. Milani held the lead from flag to flag and Pagani and Liberati alternated second and third spots for the first 25 laps. Later, misfortune struck the Nortons and Guzzis; Kavanagh retiring from fifth spot and Lorenzetti pulling in shortly afterwards.

RESULTS

- 1 Alfredo Milani (Gilera)
- 2 Massetti (Gilera)
- 3 Pagani (Gilera)
- 4 Duke (Norton)
- 5 Ruffo (Guzzi)
- 6 Doran (AJS)
- 7 Liberati (Gilera)

105.19 mph average—fastest lap 107.19 mph

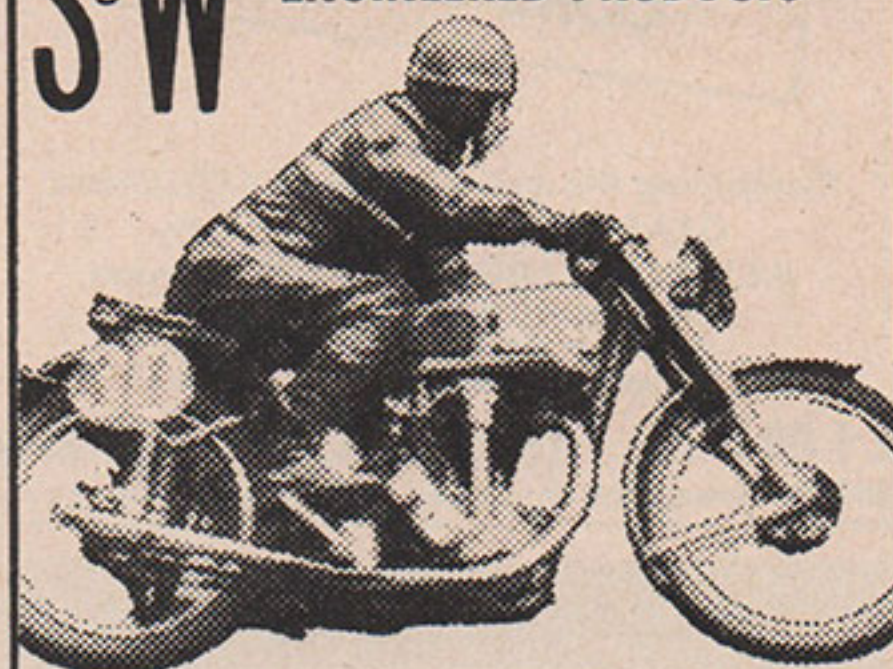


First six spots in the 250 cc thriller went to Guzzi riders. Here, B. Ruffo of Italy imparts tremendous feeling of speed as he streaks to third

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CACTUS DERBY

(Continued from Page 16)

up, as the markers pointed over the slippery, boulder-strewn hill at Cabazon.

The first real jolt came shortly thereafter when the boys caught sight of a string of taillights bobbing up a 3/4-mile, deep-dirt hill. Columns of dust filled the air, as big knobby tires churned and thrashed, and engines screamed at peak revs. Some bikes shot over like a rocket. Others, with the wrong weight per traction ratio, or too low center of gravity, chugged helplessly to a stop, while their owners dismounted to push and look frantically from side to side for better traction.

The toughest stretch came just before dawn. A long down-grade section of bottomless sand finally leveled off and swept up an equally treacherous climb that terminated in a secret highway check. Several of the lads never made the check. Many recognized this stickler as the same hill that had nearly whipped them two years ago, charged the down-grade section with determination and flew over the top, barely being able to stop in time for the check topside.

As always, the sidecar teams gave a fine show of sportsmanship and endurance, several coming very close to finishing the run.

James Smith and passenger, Earl Leeper of the Hilltoppers M/C were most generous of all. They threw their chance in the run to take on the trying task of picking up Stan Constans, who had crashed hard against a ditch. They carried him gently over some of the course's roughest terrain onto the nearest highway. From here, Highway Patrolman Chuck Pollard, who always seems to be there at the right time, chauffeured him to the Riverside hospital.

It's generally conceded that this year's Derby was the toughest ever, and most amazing of all was the fact that two girl entrants, Dot Ellison and Betty Vorst, both finished the run, although Betty was legally KO'd for riding the pavement in the last six miles, after battling a flat tire for several miles previous.

Once the test was over, the first of the 40 finishers tore into the last check at the Bombers' clubhouse at 4:30 Sunday afternoon. Then the bench racing took over. Competing for 26 trophies in all classes, those who won them felt they were justly earned.

"I'll never forget the Bombers' run," said first place winner Vern Hancock. "What a way to get a hat!"

SOLO WINNERS

Vern Hancock	985	Matchless
John McLaughlin	983	Har-Dav.
Dave Doney	979	Matchless
Wally Albright	979	AJS
Al Copping	979	AJS
Bob Sothern	976	Triumph
"Skeeter" McClintock	976	Indian
Ralph Adams	975	Matchless
Charles Howseman	969	BSA
Ellis Cline	968	AJS
Russ Good	966	Norton
Earl Flanders	965	BSA
Jack Stebles	964	Triumph
Bud Dalton	963	BSA

SIDECAR—No Finishers

- 1—Larry & Michael Lewis Triumph
- 2—Rex Baker & Gordy Simmons Har.-Dav.

CLUB TEAMS—no finishers

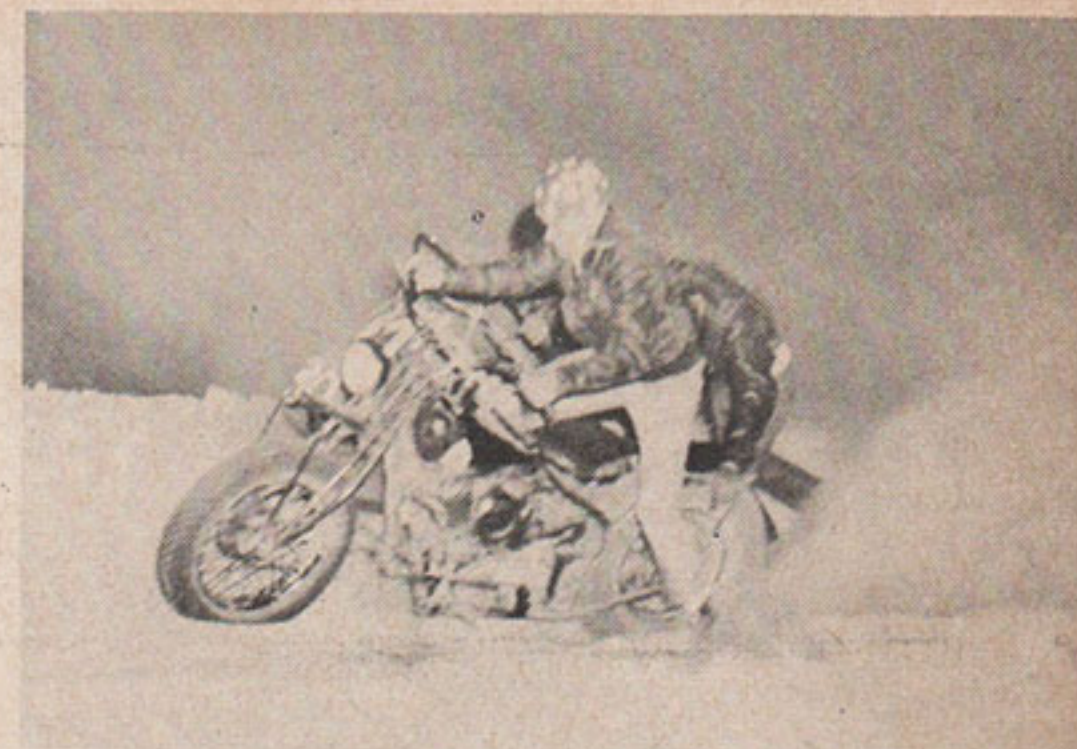
- 1—San Gabriel M/C
 - 2—TriCity M/C
 - 3—Rough Riders M/C
- Most finishers—Pasadena M/C

1st TIME RIDERS

Ellis Cline	968	AJS
Jack Stebles	964	Triumph

GIRL FINISHERS

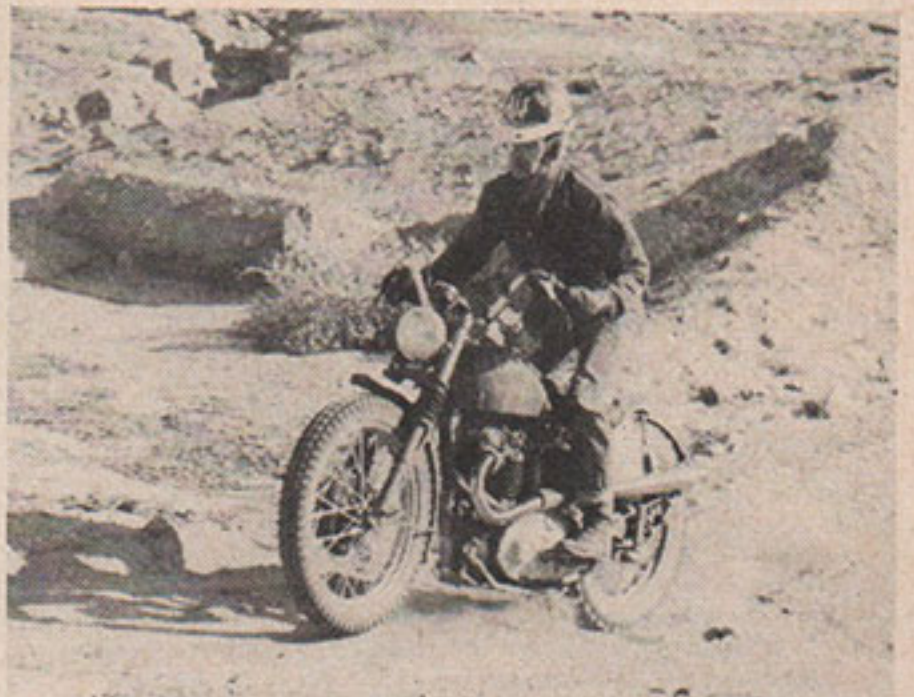
Dottie Ellison	549	
Betty Vorst		



Worst sand hill often required extra "horsepower." At the top was secret check where some took the count. Looks like real fun, eh?



Human proving grounds was this shake-down trail. Riders combat arm fatigue by gripping tanks hard with knees and relaxing hands



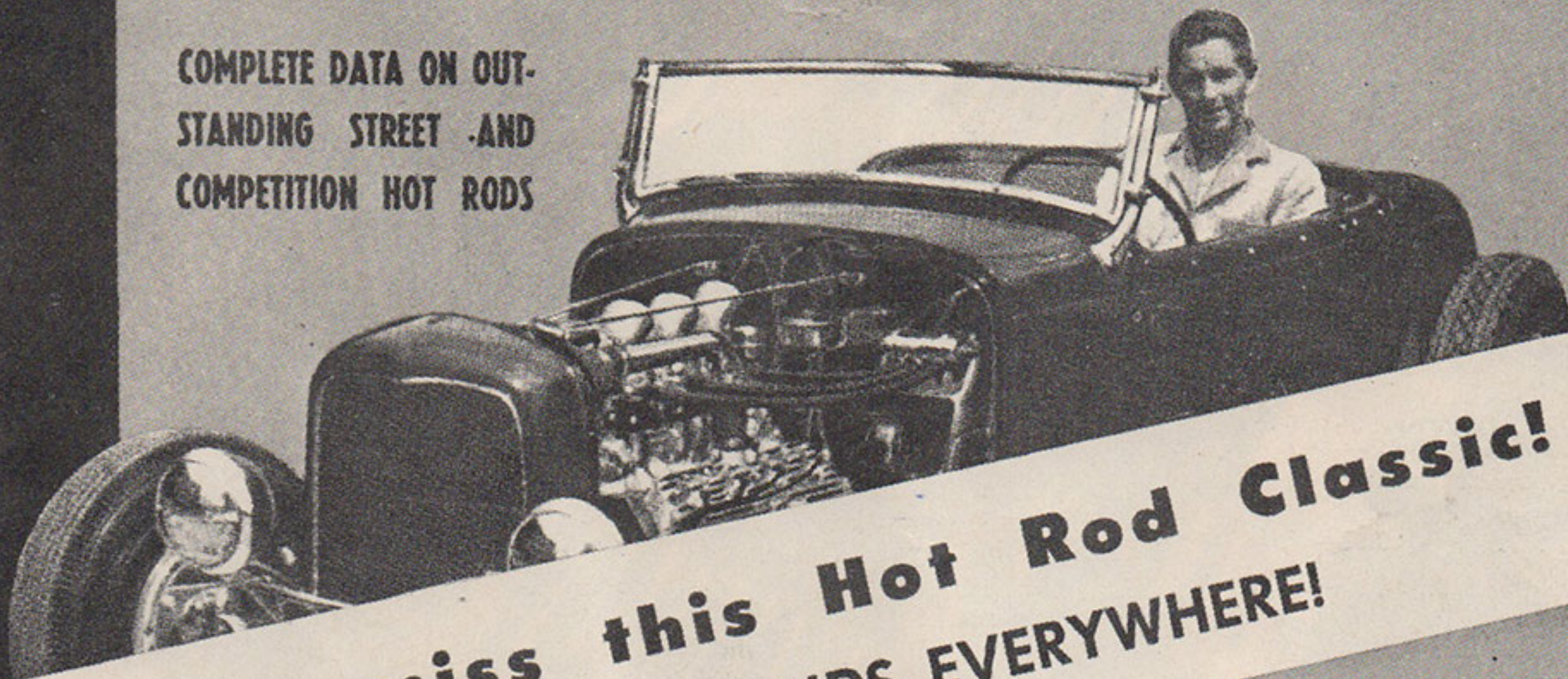
Short tracks through the wilderness were from skipping wheel of Lammy Lamoreaux's snarling T-bird. You name the event—Lammy can ride it



Jimmie Opp finished just out of the money, looked freshest of all at the home check. Note homemade cross-over pipes and big front hoop

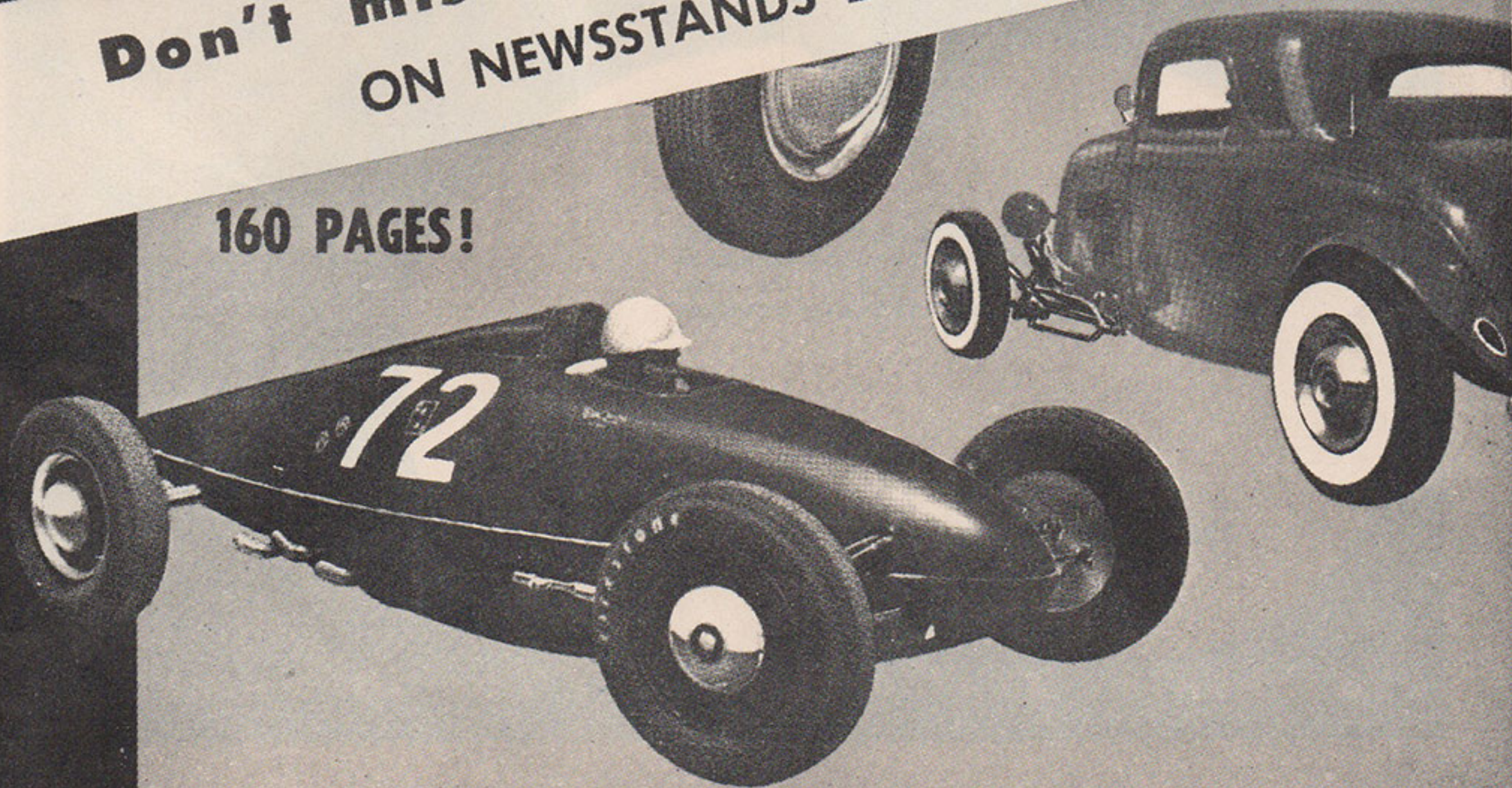
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