

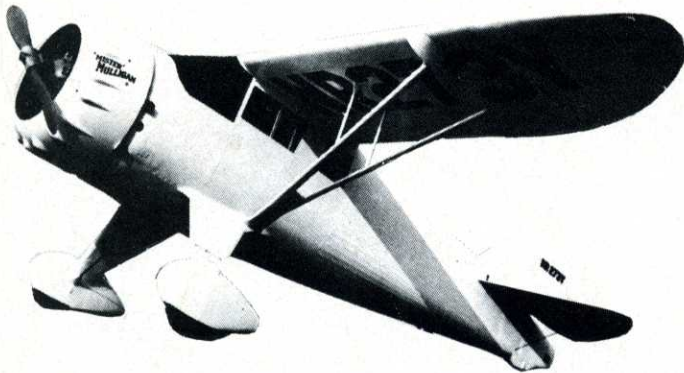
DAMNED GOOD AIRPLANES

Ben Howard's flying Irishmen rode roughshod across the pages of aviation history, like the legendary "Four Horsemen of the Apocalypse." Never had there been such racing planes as these. Never was there to be again. They were the unique product of intuitive designing skill and tempered by the deliberate analytical genius of one of the greatest aircraft engineers of all time. Ben Howard designed his airplanes. Gordon Israel, his (alter ego), engineered them.

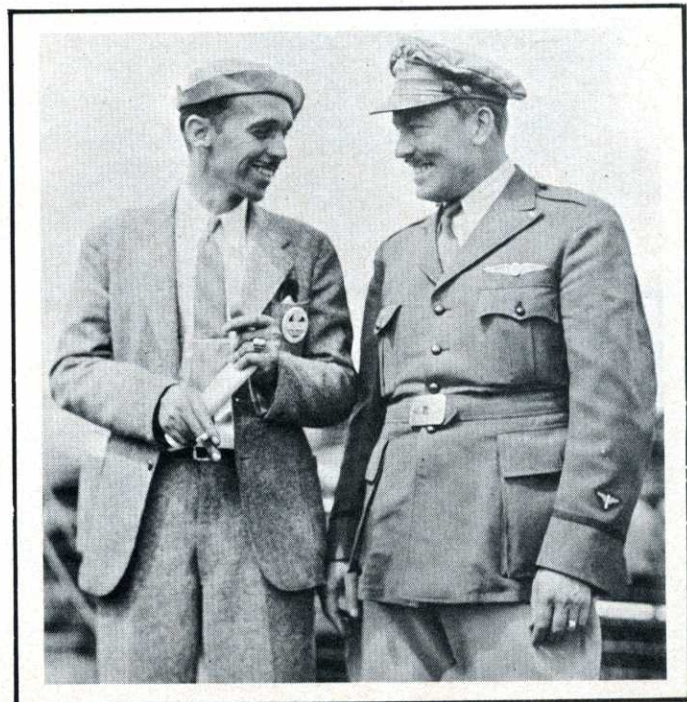
Ben O. Howard was born in Palestine, Texas on February 9, 1904 and spent twenty years of his life in that state. Ben was one of those persons born to fly. He fell in love with airplanes the first time he saw one and from that moment on there was no doubt about what he wanted to do with his life.

Forced by family economic circumstances to quit school after the eighth grade, Ben went to work at the highest paying position a grade school graduate could find in 1919. He became a roustabout on a Texas oil rig. The work involved long grueling hours of hard, sometimes dangerous, labor. It was hot, and a man would finish the day covered head to foot with greasy crude oil. But a man could make twenty dollars a week, and live on ten. The other ten could be put away to buy an airplane.

By the fall of 1922, Ben had saved enough to purchase a World War One Lincoln Standard biplane. He had enough money in the kitty to buy the airplane and feed it gas and oil, but there was nothing left for flying lessons. Ben had to beg a few hours instruction from local pilots, and from there he had to teach himself. It was this lack of flight instruction



Ben Howard and the man he narrowly beat out for the 1935 Bendix, Col. Roscoe Turner.



BEN HOWARD & CO. DESIGNED, BUILT, AND FLEW SOME OF THE FASTEST AIRCRAFT OF THE 1930'S.

Part I

TEXT BY DON PRATT

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which led indirectly to the creation of the DGA-1, Ben's first "Damned Good Airplane."

"The DGA-1 was the first Damned Good Airplane I built," Ben Howard told me recently. "While I was trying to teach myself to fly, I spun my OX-5 Standard in and spent a long hot Texas summer in a plaster cast. While I was laid up I designed the DGA-1. It had one single wide-back seat because in those days it was always the fellow in the front seat that got killed in a crash. I decided I wouldn't have a front seat. Just to be different, I put the long wing with the ailerons on it on the bottom and the short wing on top. I brought the fuselage to an end at the back with a horizontal rather than a vertical tailpost. It was a real good flyer. I built the whole thing myself using borrowed tools and hanger space. The only thing I bought was a five dollar vise, and I didn't get that until the ship was half done."

The DGA-1 lived up to its name. It was truly a 'Damned Good Airplane.' It could outperform its contemporaries, the "Jenny" and the "Standard" by a wide margin. Benny Howard was envied by all the local pilots in the Houston area. Many times he was approached with the idea of building another DGA for this person or that; but it wasn't until 1926 that a firm offer with a cash deposit led Ben to design and build the DGA-2.

DGA-2 was essentially a 180 hp. Hissop powered Lincoln Standard biplane with a deepened cargo-type fuselage and an all-new set of high-lift wings. "It could haul a lot of whiskey too," explained Ben, "and that is exactly what it was designed for. There was this bootlegger down in Houston who flew his stuff in from New Orleans. He'd been using any airplane he could find and the payload hadn't been much. I built up this special modified Standard

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Ben Howard and the first plane he ever built, the DGA-1, at Houston, Texas in the early 1920's.

BEN HOWARD

for him and he was happy as a lark with it. It could really lift a load. You simply couldn't overload it. It would carry anything you could close the door on."

That same year Ben sold the DGA-1 to a fellow from El Paso for \$800.00. "At the time I thought it was wonderful price," he told me during a recent interview, "But later I wished I had kept it a while longer."

Along with building the DGA-1 and 2 Ben Howard made his living in much the same way most airmen of the nineteen twenties. He barnstormed from town to town, performed at county fairs, flew supplies to wildcat oil well drillers out in the "boondocks," and occasionally flew an uneventful charter.

In October of 1928, Ben Howard went to work for Robertson Airlines in St. Louis, flying Ford Tri-motors on the St. Louis to Chicago run. For the first time in many years he found himself back on a weekly check. He had survived the early lean and dangerous years, and he was still flying and getting paid for it. Ben was a holder of the newly issued *Transport Pilot's Certificate* and his employer's solvency was guaranteed by a Civilian Air Mail Contract with the Post Office Dept. But Ben was bored. It was all too routine for his basically adventurous nature. He began to think about building a DGA number three.

At about this time Benny noticed

a sixteen year-old kid hanging around Lambert Field in St. Louis, doing odd jobs in exchange for flying time in any airplane. The boy's name was Gordon Israel.

Ben felt much in common with the diminutive teenager. Gordon had wanted to fly as long as he could remember. He had wanted to build airplanes from the time his first successful rubber driven model lifted into the breeze. Like Benny, Gordon had to quit school at the end of the eight grade due to family financial problems, and he too, was very small for his age. Ben Howard had always been a little fellow too, all throughout his life he had to be scrappy enough to prove size didn't make the man. It had cost Ben his lumps, but down in the oil fields of Texas, there was never a man who walked away from a fight with Ben Howard who didn't know he'd been hit.

There had been times, out behind the hangar, when Gordon Israel also had been forced to fight for the honor of the small people. Most of the time, however altercations ended quietly. There was something in his steady wide stance, or the deep, deliberate tone of his voice that made many a would-be bully think again about taking him on.

As Ben Howard began drawing up plans for his new airplane, he showed them to Gordon Israel. To Ben's surprise, Gordon offered some very helpful suggestions on methods of solving

some of the engineering problems. Gordon had read everything he could find on aircraft structure design and stress analysis, and he offered text-book solutions to add to Ben Howard's "Rule-of-thumb-and-double-it" engineering. Gordon begged Ben to let him help with the building of the DGA-3, and Ben agreed.

As 1929 drew to a close, the DGA-3 began to take shape on Ben Howard's makeshift drawing board. The DGA-3 was laid out as a racing type craft with a fuselage envelope designed to be the smallest structure which could enclose pilot, fuel tanks, and an 88 hp. Wright-built de Havilland Gipsy 4-cylinder engine. It had short, thin, wire-braced wings, and a fixed rigid, wire-braced undercarriage. Why a racing plane? "Excluding personal things," explained Ben Howard, "the design and development of new type aircraft has been my favorite subject of endeavor for as long as I can remember. At the time I decided to build *Pete* (DGA-3), I was flying for the airlines and bored to death with the routine. The job provided time and enough money for materials, so I decided to build a new airplane. But the real problem was how to get enough money out of the first design so I could go ahead and build others."

"Because of the fantastic cost of getting C.A.A., (now F.A.A.), approval of an airplane for a commercial li-

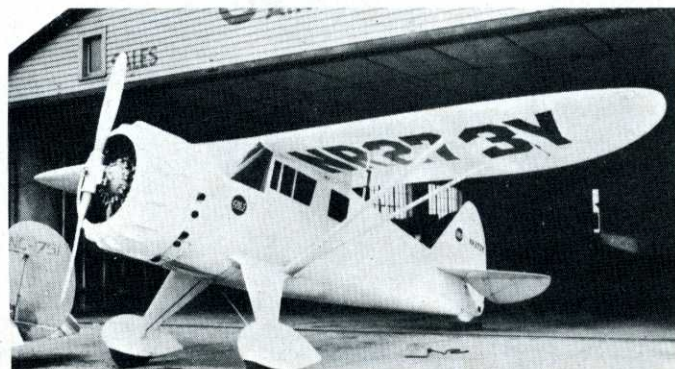


Ben Howard shows his elation after the Mr. Mulligan test flight by clowning at the camera.

The DGA-6 "Mister Mulligan" shortly before the 1935 National Air Races. Note that race number 40 is not yet painted on side of fuselage.



The DGA-4 "Mike." This airplane was named after Ben Howard's wife whose nickname was "Mike."



cense, it would be impossible to get a reasonable part of it's cost back if only one was built and sold. The answer was to build a *winning* racer which wouldn't be saddled with a licensing expenses — one that could win back it's *total* cost — so that a newer one could be designed and built. This was the idea behind all the racers we built until we arrived at one that made good sense as a commercial design and could be put into production."

For eight months starting in November of 1929, Ben, Gordon, and whoever else might be hanging around worked on the DGA-3. The tiny racer was built at the Von Hoffman hangar at Lambert Field, St. Louis, and there was no shortage of kibitzers and well-wishers who stopped in to view the progress and found themselves temporarily part of Howard and Company — airplane builders.

"We called the little airplane *Pete*, because as a racer it had to have a name, and that just seemed like the right name for the plane.

Ben rolled the DGA-3 out of the hangar in July, 1930 for it's first test hop. *Pete* was painted silver all over with its license number NR601V painted on the wings and tail. The trim little racer flew well but experienced some overheating. This was overcome by cutting an opening in the right side of the engine compartment.

This cut-out was retained throughout the life of the airplane, and became one of the characteristic marks of the aircraft.

After testing was finished, Ben applied to the Dept of Commerce for a new license number. He thought the original one too long. He tried to get the number three, but it was already taken so Howard accepted number NR2Y. Before being taken to its first competition, *Pete* was repainted white all over with the license number and name in gold, outlined in black.

Pete stood groomed and ready for the 1930 National Air Races. Ben made arrangements for an experienced racing pilot to fly the plane in all events in which it could compete. When it came time to race, however, Ben's jockey failed to show. Since no other competent pilot could be found on short notice, Ben was forced to fly the races himself. As Ben tells it; "The course was a five mile triangle. I was an old settled-down Tri-motor pilot for T.A.T. I had no intention of flying in the races myself and it scared the pants off me."

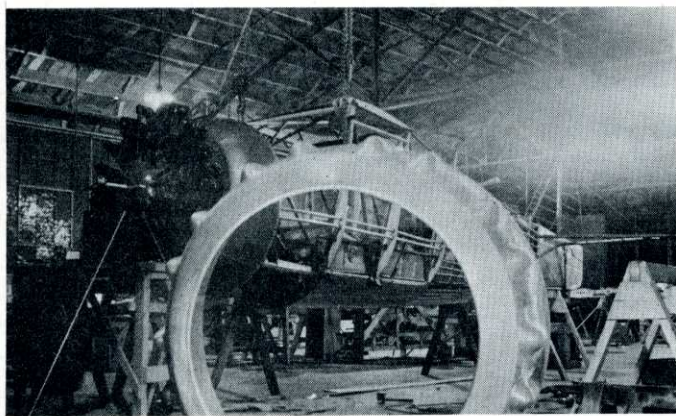
Scared or not, Ben Howard flew in the 1930 races and astounded the spectators and competitors alike with the performance of his diminutive racer. The first race for *Pete* was to be Event No. 14, The Men's Free-For-All for 350 cubic inch and under engines. When the flag dropped Ben

bounced *Pete* into the air, wallowed around among the pack for two laps, then poured on the throttle and romped into first place. At the end of the twenty-five mile race, Ben was across the finish line first with a speed of 163.01 mph. The \$500 prize money was his. Far behind came the second place winner, E. A. Newsom, in a Cirrus powered Command-Aire special. Third place went to Jimmy Wedell in the little Wedell-Williams Cirrus Derby racer.

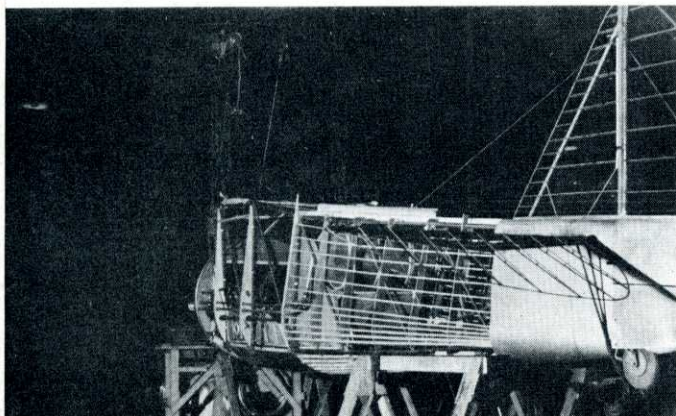
Next Ben entered in Event No. 17, The Men's Free-For-All 450 cubic inch race. Now *Pete* would be running against airplanes whose engines could run to almost twice the size and power of *Pete's* 88 hp. Gipsy. The odds were against him, but almost immediately Ben took the lead, and was never passed. His winning speed was 154.83 mph., ten miles per hour faster than Bill Ong in his 145 hp. Cessna which came in second. Another \$500.00 could go into the kitty.

The next event Ben decided to run in was a race for airplanes of 650 cubic inches and under. Now the competition would have engines three times the size of *Pete's*. It seemed too much to ask even for a place. But win they did — \$600.00 more in the kitty. In two days of racing, *Pete* was paid for. From here on it was gravy. They had enough money to build that next

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The DGA-6 "Mister Mulligan" under construction in the vacant American Eagle Plant in 1934.



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design, and maybe the next one after that.

On the fifth day of the races, Ben entered the 800 cubic inch class heat. And again won! This time Erett Williams followed Ben across the finish line to take second with the big Wedell-Williams monoplane powered by a souped up Wright J-6 radial. Ben's speed was 162.43 mph. William's second place speed was 161.73 mph.

Ben entered the 1000 cubic inch Free-For-All with new plugs and a minor tune-up and won again! He and *Pete* were now running against competitors whose power plants displaced nearly four times that of the Wright Gipsy, and yet still they won at 162.65 mph., and \$1000.00 more in the kitty.

The next race for Ben and *Pete* was the big one. Event No. 32 "The Thompson Trophy Race." This race was for unlimited engine displacement and design. In this race there would be engines souped up to over 600 horse power. The best airplanes, engine designers, and the largest factories would be represented. *Pete* didn't have a chance, but Ben thought that a few more dollars might be picked up for a place. "Maybe" he thought, "if enough of the big boys go too fast and burn up their engines, and if I just get in there and go along steady, well . . . ?"

When the flag dropped, Charles "Speed" Holman jumped into first place with Matty Laird's Speedwing Solution biplane and the race was on. Ben set his throttle at a high cruise and never touched it again. One hundred miles, and sixty pylons later, he crossed the finish line with an average of 162.80 mph., third place, and \$200.00 prize money. First place money went to "Speed" Holman in the Laird at 201.91 mph. Second went to Jimmp Haizlip in a Travel Air Mystery Ship almost identical to Doug Daris' 1929 Winner at 199.80 mph.

Ben was second highest money winner at the 1930 races, winning \$5750. Top money winner was Wiley Post who got \$7500.00 for winning the Men's Transcontinental Derby. Now Ben had a winning racer, and money with which to build another.

Back home in St. Louis, Ben Howard and Gordon Israel began to think about ways of improving *Pete's* performance. The Gipsy engine was tuned. Tiny cuff fairings were added to the juncture of the wheel-hub and flying support wires, and the (small) wing to fuselage fillet fairings were enlarged. This added several miles per hour to the speed, but nothing spectacular. More impressive performance, they decided, would have to await the availability of a more powerful engine. And what of a totally new design? This too depended upon the selection of an engine.

Ben heard the de Havilland Com-

Continued

pany in England was developing a six cylinder version of the Gipsy which promised over 130 hp. Little was known about it yet on this side of the ocean. He also learned the Menasco Company of Los Angeles, (a former manufacturer of pumps and engine accessories), was developing inverted 4 and 6 cylinder in-line engines for both aircraft and boat use.

1930 came to a close, and 1931 swept in on a cold blustery January morning. Ben and Gordon had done a lot of sketching, but without an engine, nothing concrete could be decided.

In the spring of 1930 Ben left Universal Air Lines, (he had moved from Robertson in the fall of 1929), and transferred to Transcontinental Air Transport. Transcontinental based its crews in Kansas City, Missouri, and this necessitated a move to that city. He had no sooner settled down with the new job, mostly flying Ford Trimotors up to Chicago, when he received word that the Menasco engines were finished and running even better than expected. Ben ordered two of the six cylindr, inverted, in-line 160 hp. engines, one for running and the other for a spare. Now that he had the engines, he could build his airplane.

Ben took sketches that he and Gordon Israel had worked up and began revising them for the Menasco engine. Gordon had stayed in St. Louis so Ben had to finish designing the new DGA-4. Using what they had learned from building *Pete* he set to work on the drawings.

As the design began to shape up, Ben met Bob Donovan. Bob was a mechanic for T.A.T. who had aspirations of being an aircraft engineer. He had studied by himself until he had become a pretty fair draftsman. Ben enlisted his help. Later, Don not only drew up the construction drawings, but made many of the parts and did all the covering work as well.

In the summer of 1931 the American Eagle plant at Fairfax Airport in Kansas City, Kansas was open but producing at a very reduced rate. They had space to spare and could use some rental money. Benny made arrangements with Victor H. Roos, American Eagle's new president, and moved in the tools and materials.

After delivery of the first engine, Menasco informed Ben Howard that a new supercharged version of the same power plant was being developed. The new engine would, they claimed, turn out more than 200 hp. with an 8.75 to 1 blower mounted at the back and gear driven off the crankshaft. Was Ben interested? You bet he was! Now that there were two different engines available, he'd build two different airplanes.

By mid-June both of the new racers were taking shape at American Eagle, but it was clear they could not be finished in time for the National Air

Races starting August 29th at Cleveland, Ohio. *Pete* would have to carry on for Howard and Company another year.

Benny flew *Pete* again for the 1931 races, but this time because he wanted to. Ben's first Event for the 1931 series was No. 3, the 400 cubic inch Free-For-All 25 mile race. Benny pushed *Pete* to the limit, but managed only second spot behind Ray Moore in the new 4-cylinder Menasco powered Keith-Rider special. Beaten by a Menasco! The choice of engines for the new racers was a good one after all!

The next Event entered was the 510 cubic inch Free-For-All, and again Ben took second place, but this time behind John Livingston in a Model 90 Monocoupe! Beaten by a factory built cabin job! This was too much. True, the speed was down. Only 136.847 mph. Perhaps it was fouled plugs again, or maybe the carburetor. Benny and his crew pulled off the cowl and went to work.

Event No. 7 and again a second place behind the Monocoupe of Livingston's. Ben was stymied. Event No. 9 and the same story. Ben couldn't get around the 'Coupe. And away up front Ray Moore turned in 185.097 mph. to win in that little 4-cylinder Menasco powered Keith-Rider.

The next Event entered was the 1,875 cubic inch Free-For-All. Ben got in front of the Monocoupe and was never passed after that, but out front Lowel Bayles in the first little Gee Bee Sportster racer followed by Jimmy Haizlip in the Laird Speedwing biplane. Ben had to be satisfied with 3rd place money again.

Though not a winner, Ben and *Pete* went home with enough prize money to have made the trip to the races well worth the effort.

Two occurrences at the 1931 National Air Races made lasting impressions on Ben Howard. The first was the experience of being beaten by Johnny Livingston flying, what appeared to be, a stock factory built cabin monoplane. The second was the performance of Ray Moore's Menasco powered Keith-Rider. He would grow accustomed to the performance of the Menasco power plants, as would everyone at the Nationals in the years to come. But the idea of being led around the pylons by that Monocoupe pried at his subconscious long after he consciously set it aside.

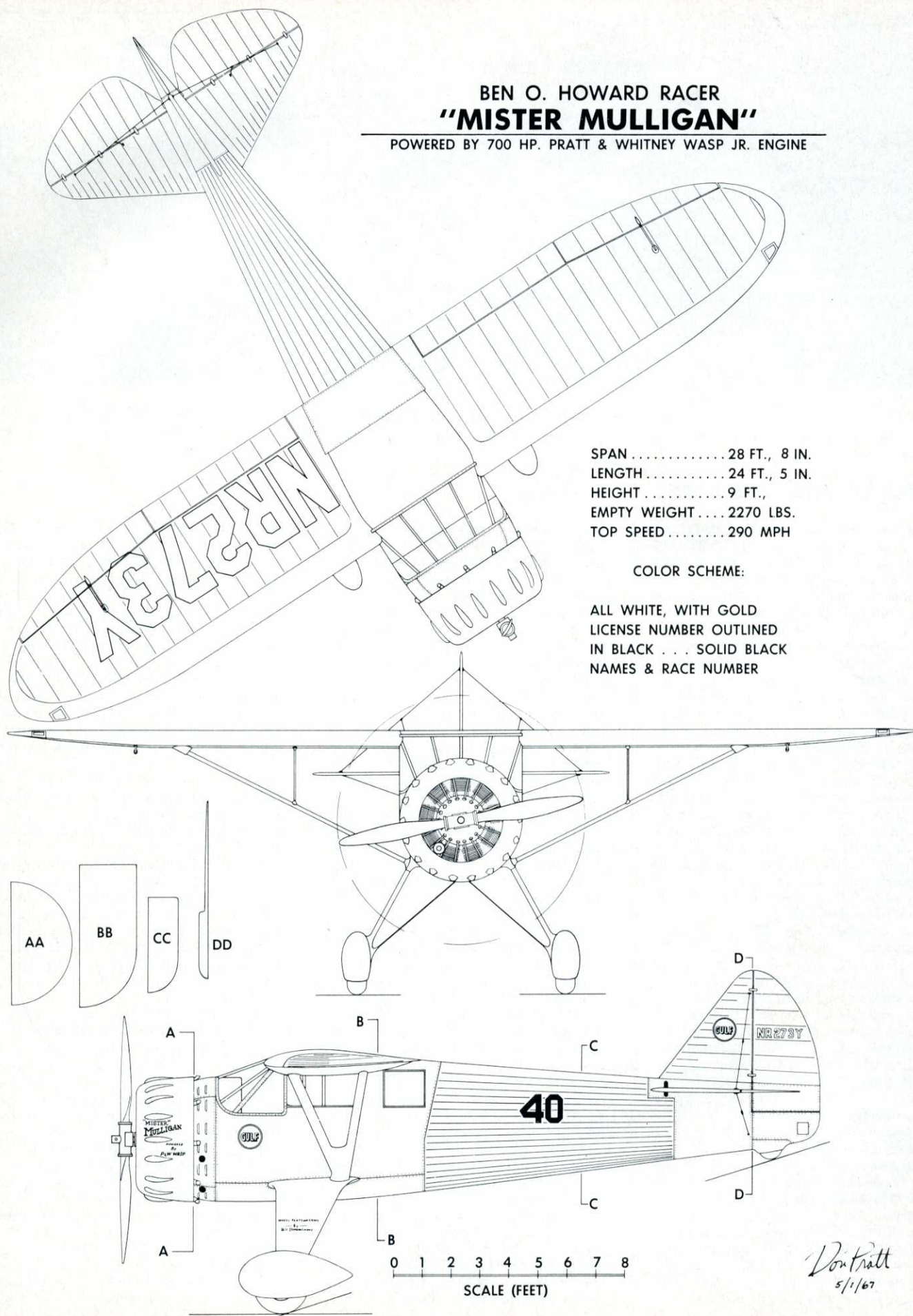
Another entry at the 1931 races was a youngster whom he had seen hanging around the air mail field at Moline, Illinois when he stopped there during his runs up to Chicago. The young man had won the dead stick landing contest. His name was HAROLD NEUMANN.

Back in Kansas City, the '31 Nationals over, Ben continued to work on the two new racers. Bob Donovan

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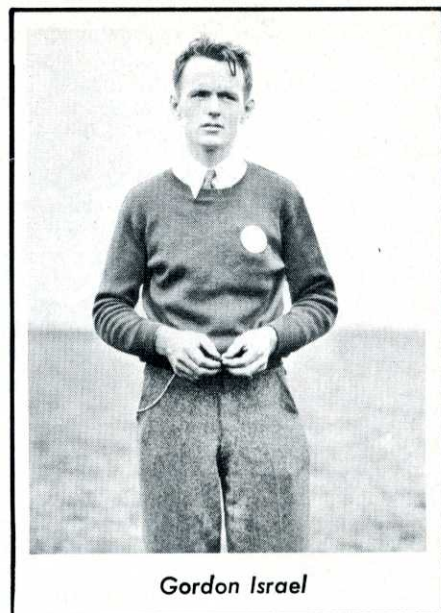
BEN O. HOWARD RACER "MISTER MULLIGAN"

POWERED BY 700 HP. PRATT & WHITNEY WASP JR. ENGINE





The DGA-3 "Pete." Pete won third place in the 1930 Thompson, then went on to compete for many years. It still won a major regional race when it was nine years old!



Gordon Israel

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Continued

acted as chief engineer, shop foreman, treasurer and purchasing agent. Occasionally Gordon Israel would drop progress and offer suggestions.

Between being a full time airline pilot and building racing planes, Ben Howard had found time for affairs of the heart. He had gotten married. There were those who said that Maxine Howard resembled a particular movie star who was popular at the time. Maxine was pretty, intelligent and good natured. And more, she believed in Ben and his airplanes.

By midsummer of 1932 the first of the two racers was completed and test flown. On one full throttle run the new plane indicated over 230 mph. and Ben was satisfied that his new ship would be a winner. They decided to name it *Mike*, which was Maxine Howard's nickname, and to rhyme with *Mike*, they named the second, yet to be completed, *Ike*.

Ben decided since *Mike* was completed and ready to go, he would by way of a test, enter it at the Omaha races in June before the Nationals. This early experience would show up any faults before taking a chance with the big money. *Mike* exceeded all expectations and won every event entered, setting records all the way.

The only fault in the aircraft was nearly fatal. Exhaust gases creeping back through the firewall entered the cockpit and nearly affixed Ben during the first event. The problem was quickly solved by drilling "eight 1/4 inch holes in the plastic windshield to allow fresh air in to blow the gases away.

At Cleveland for the National Air Races, Ben decided to fly *Ike* and turn the thoroughly tested *Mike* over to veteran barnstormer BILL ONG who also made his home in Kansas City.

Ben won the 510 cubic inch Free-For-All and the 685 cubic inch Free-For-All. In the second race Ong followed his boss across the line at 172.680 mph in *Mike*.

By the start of the Thompson Trophy Race, *Ike's* engine acted up and Ben did not enter. Bill Ong flew the supercharged *Mike* to seventh place at 191.073 mph.

Ben loaned *Mike* to famed woman racing pilot GLADY O'DONNELL to fly in in the Aerol Trophy Race for women. Gladys won easily at 185.475 mph., leading MAY HAZLIP flying her husband's big *Wedell-Williams* into second place at 183.126 mph.

Next, Ben took *Ike* to eighth place and out of the money in the Shell Speed Dash. Ben's speed over the 3 kilometer course was 213.855 mph. Jimmy Doolittle won this event in the Gee Bee R-1 at 296.287 mph. Thus ended the 1932 races for Howard and Company. HAROLD NEUMANN won third over-all in the dead stick landing contest with his new 90 hp. *Lambert Monocoupe*, and managed to take first, a second, and a fifth place in the stock airplane races.

"I was just a farm kid from Illinois," HAROLD NEUMANN told me, "and I used to come into the air mail field and just hang around waiting until Benny would come in with the evening flight to Chicago." I'd set there and hope he'd see me, and maybe ask me to have a cup of coffee and talk awhile. I never dreamed that after the 1932 races he would ask me to fly one of his racers."

But that's just what happened. After the 1932 races Ben's employer had given him strict orders — no more closed course racing. He therefore, chose three relatively unknown airmen to pilot his flying Irishmen in the

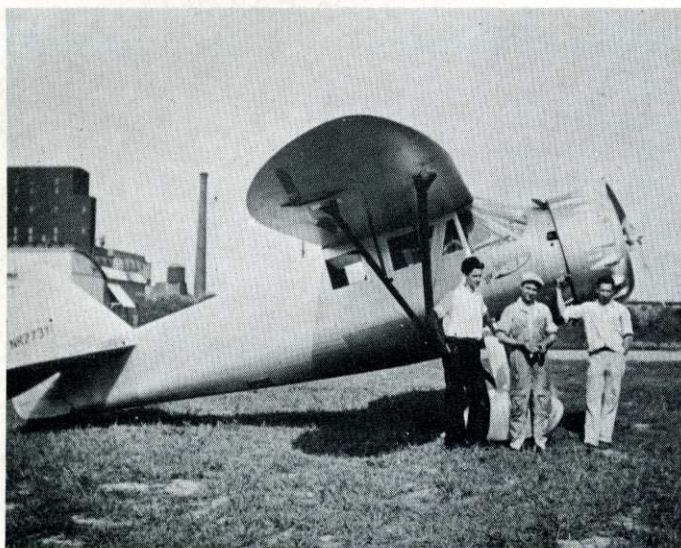
1933 National Air Races. They were: ROY MINOR of Los Angeles, California, HAROLD NEUMANN of Moline, Illinois and JOE JACOBSON of Kansas City.

Two factions were fighting for control of air racing that year and there would be two National Air Races for 1933. One would be at Los Angeles in July, the other would be at Chicago on the first of September. Benny decided to send ROY MINOR and *Mike* alone to Los Angeles and then the whole stable to Chicago in September. Roy and *Mike* took five "firsts," two "seconds," two "thirds," and one "fourth" place to bring home \$6925. prize money, including 3rd place money in the coveted Thompson Trophy Race.

Back to Chicago in September, Minor took five firsts, and one third place, winning all but one race he entered with *Mike*. HAROLD NEUMANN took third place in *Ike* in the Baby Ruth Trophy for \$750.00 prize money and then dropped *Ike's* gear into a chuck hole and that was all for *Ike* in 1933.

Ben loaned *Pete* to HAZEL LANTZ to fly in the Women's International Free-For-All. She came in fourth at a speed of 123.11 mph. to take a \$250.00 prize. Next Gordon Israel, whose own racer, "Readhead" was shelved with engine trouble, flew *Pete* in the 375 cubic inch the money. Then JOE JACOBSON took over *Pete* and ran it to second place race. Gordon came in sixth, just out of in the 350 cubic inch Free-For-All, second in the Edelweiss Trophy Race, and fifth in the Aero Digest Trophy Race. Total winnings for Howard Airplanes in the 1933 Chicago races were \$5915.00.

Ike, *Mike*, and *Pete* had paid for themselves several times over and true



"Mister Mulligan" on day of first test flight in summer of 1934. Ship was all-silver with black name and license number at the time.

to his nature Ben began to think about designing a new racer which would be faster still. He began thinking about a totally new kind of competition airplane, one that could not only compete, but would also be a commercially marketable craft, a cabin plane with the performance of a racer.

Ben began to sketch a high-wing strut-braced, cabin monoplane, similar in layout to a Monocoupe, but large enough to carry four persons and baggage. The DGA-6 was underway.

Gordon Israel was coaxed to come down from St. Louis to do the stress analysis and detail design work. Bob Donovan was again enlisted to do the drafting. The now completely vacant American Eagle Factory Building was again rented as space for the construction of the new plane.

With many hands applied to the work, the new craft took shape rapidly. By New Years Day of 1934 a welded up fuselage frame set erect on the landing gear legs. The DGA-6 would be ready to race in the 1934 air races.

Although he believed radial engines to be inefficient, and abhorred the idea of being forced to build an airplane around one, Ben Howard conceded the amount of horsepower needed to make his new cabin plane perform competitively was not available from contemporary in-line engines. He would have to settle for a radial. Ron selected the largest one he could find, a 550 hp. Pratt & Whitney, nine cylinder, Wasp Junior.

By mid-July 1934, the big monoplane was ready to roll out for that all-important first test flight. Ben, Gordon, and Bob Donovan pushed the heavy bird across the road from the

factory to the edge of the airfield.

Sitting on the grass that July morning in 1934, the DGA-6 looked far different than it would later. The plane was silver all over with the name *Mister Mulligan* on the side of the forward fuselage in black, and the license number on the wing and tail in solid black also. There were no fairings on the landing gear or wing struts.

"We named the airplane *Mr. Mulligan*," explained Ben Howard, "simply because the airplane had to have a name, and that one seemed to possess the amount of dignity befitting an airplane of that size and power."

Shortly after the first test flight, Pratt & Whitney informed Ben they had developed a supercharged version of their Wasp Jr. which could turn out some 700 hp. at full throttle for a short period of time. They could, they explained, install one of the new engines in *Mr. Mulligan* immediately. Ben flew the big racer to Cleveland and pulled a quick swap of engines with Pratt & Whitney factory mechanics working around the clock. The start of the Bendix Race from Los Angeles was drawing dangerously near. *Mr. Mulligan* would have to be ready.

Ben made arrangements for Harold Neumann and a co-pilot for United Airlines named George Cassidy to fly *Mr. Mulligan* to Los Angeles for the start of the Bendix Trophy Race. Ben would meet them there and fly the plane in the actual race cross country to Cleveland. Harold would be his co-pilot. "Fly it at 17,000 feet" Ben told Harold, "the Pratt & Whitney people say that supercharged engine performs best at that altitude."

I asked Harold Neumann about that flight westward. "We tried to get up

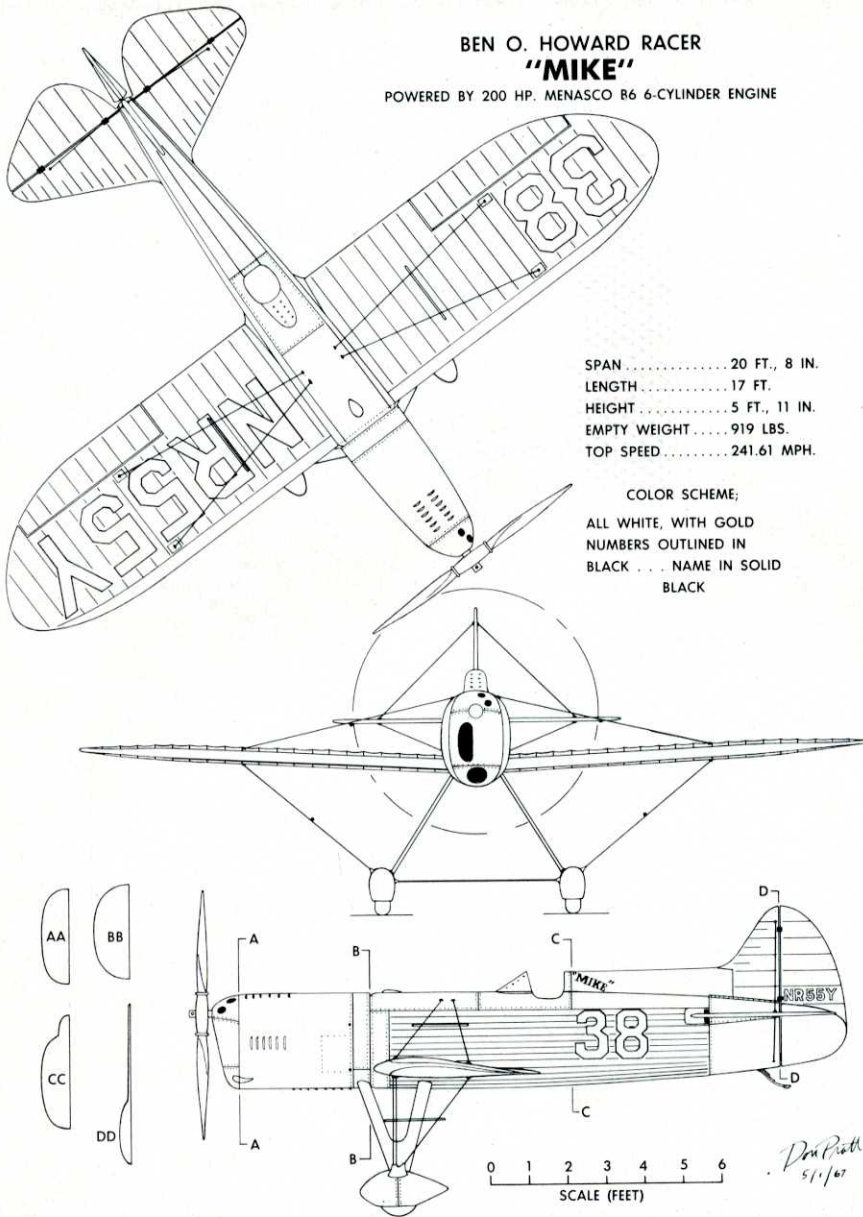
to 17,000 feet as Ben instructed, but weather kept us down until we were near Tucumcari, New Mexico. Then we went right on up seventeen thousand. None of us had any experience with oxygen and high altitude, so we didn't know what we were letting ourselves in for. After several hours I felt real sick and was going to have Cassidy take over, but I then noticed he was slumped over in the seat. I couldn't wake him so I decided to get down quickly. I didn't know exactly where I was, but I turned north to get away from the mountains that were below us. Presently I came over the little town of Hawthorne, Nevada out on the desert. Fortunately it had a little landing strip. I was sick and totally exhausted, and to top it off there was a cross wind blowing in at about thirty miles per hour. I skidded off the runway, hit a ditch and wiped the gear right off *Mulligan*. Neither Cassidy nor I were hurt, but that ended *Mr. Mulligan's* chances for 1934."

Back at Cleveland, Howard and Company went after prize money to make up for the absence of *Mr. Mulligan*. Harold flew *Mike*, and Roy Hunt of Oklahoma City flew *Ike*, Joe Jacobson flew *Pete* again — Joe having purchased *Pete* from Ben the previous spring.

Harold took first in the 550 cubic inch event at 211.55 mph. and then copped the 550 cubic inch Shell Speed Dash at 222.85 mph. He went on to take fourth in the Thompson Trophy Race and to place in others. Roy Hunt couldn't get *Ike* going and wound up just placing in all events entered. Joe Jacobson placed *Pete* in five contests, hitting 172.21 in the Shell Speed Dash. 1934 did not prove a profitable year

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BEN O. HOWARD RACER "MIKE" POWERED BY 200 HP. MENASCO R6 6-CYLINDER ENGINE



(Continued from page 13)

for Ben Howard's racing planes so Ben decided to send them to tour the country, entering any local event that paid money. They were also put under contract with the All-American Air Aces Air Show Troupe to fly mock races and perform high speed acrobatics. Ben let his pilots travel the country while he and Gordon Israel labored to get *Mr. Mulligan* rebuilt for the 1935 season.

During the 1935 races (held at Cleveland), Ben chose to field *Ike* and *Mike* for the closed course races and to run *Mr. Mulligan* in the Bendix. Ben would fly it himself, since his employer's ban on racing only forbade him to enter pylon races. Nothing had been said about cross country racing. As a co-pilot he decided to take his engineer, Gordon Israel. For the closed course races Harold Neumann could fly *Ike* and Joe Jacobson could fly *Mike*, using *Pete* as a spare in case one of the other planes blew its engine.

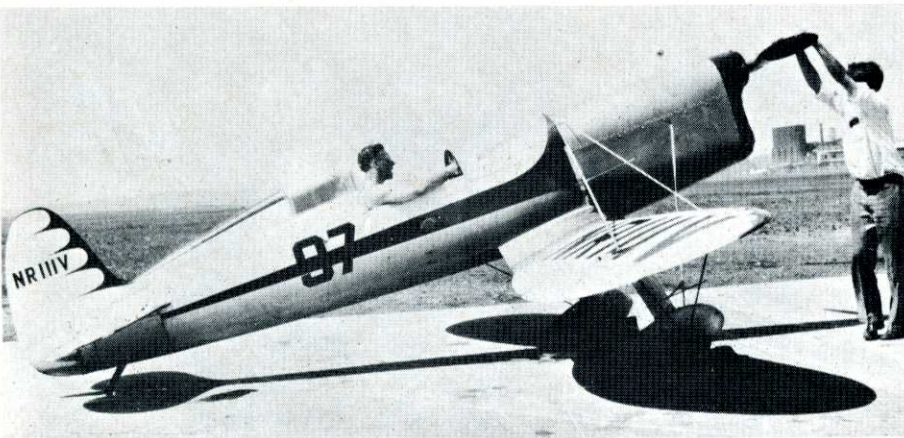
Ben and Gordon got off from Los Angeles and slipped into the lead. They made one stop for fuel at Kansas City and then went on to Cleveland and to win the Bendix race at an average speed of 238.704 mph. Just seconds behind in second place came ROSCOE TURNER in his gold No. 57 *Wedell-Williams* racer at 238.522 mph. It seemed impossible that the big cabin plane had nosed out the sleek nimble *Wedell-Williams*, yet *Mulligan* had won, and at a record speed.

Ben was beside himself with joy. He decided to give his big monoplane another chance at winning in 1935 and promptly entered it in the Thompson Trophy Race. Harold Neumann was listed as the pilot. "Ridiculous!" not a chance!" said the odds-makers. "No airplane like that could ever win a closed course race."

The following day Neumann took *Ike* up for its qualifying runs and timed in at over 220 mph. As he brought the plane in for a landing the right main gear wheel dropped into a hole and the entire landing gear folded back under the airplane. *Ike* was out of the races even before they were underway. An hour later he took *Mike* up and qualified at 224.061 mph.

The 1935 Louis W. Greve Trophy Race was run in three separate heats, one each day. There was no question of who was the over-all winner Harold won all three with *Mike*.

The Thompson Trophy test was set for 1:00 P.M. Monday, September 2. At 10 O'Clock Sunday morning Harold climbed into *Mr. Mulligan* and set off to qualify the big bird. After three laps at reduced power to warm up the engine, Harold opened the throttle full bore and went on time. Two circuits



Gordon Israel's "Readhead." Gordon built a racing design of his own in 1933. Note resemblance to Howard planes.

later, coming down the main stretch in front of the grandstands), the big Wasp engine suddenly lost power and belched a stream of oily black smoke from under the cowl. Harold pulled the throttle back and quickly landed the big white cabin plane. He had qualified at over 240 mph., but the Wasp had burned out two cylinders. The supercharged engine was built to fly at high altitude. Full throttle at low altitude had run the head temperatures well past the red line in seconds. *Mulligan* was towed into a hangar and the engine torn down. Howard and the Pratt & Whitney factory representatives made a desperate attempt to get *Mulligan* into the big race, now less than twenty-four hours away!

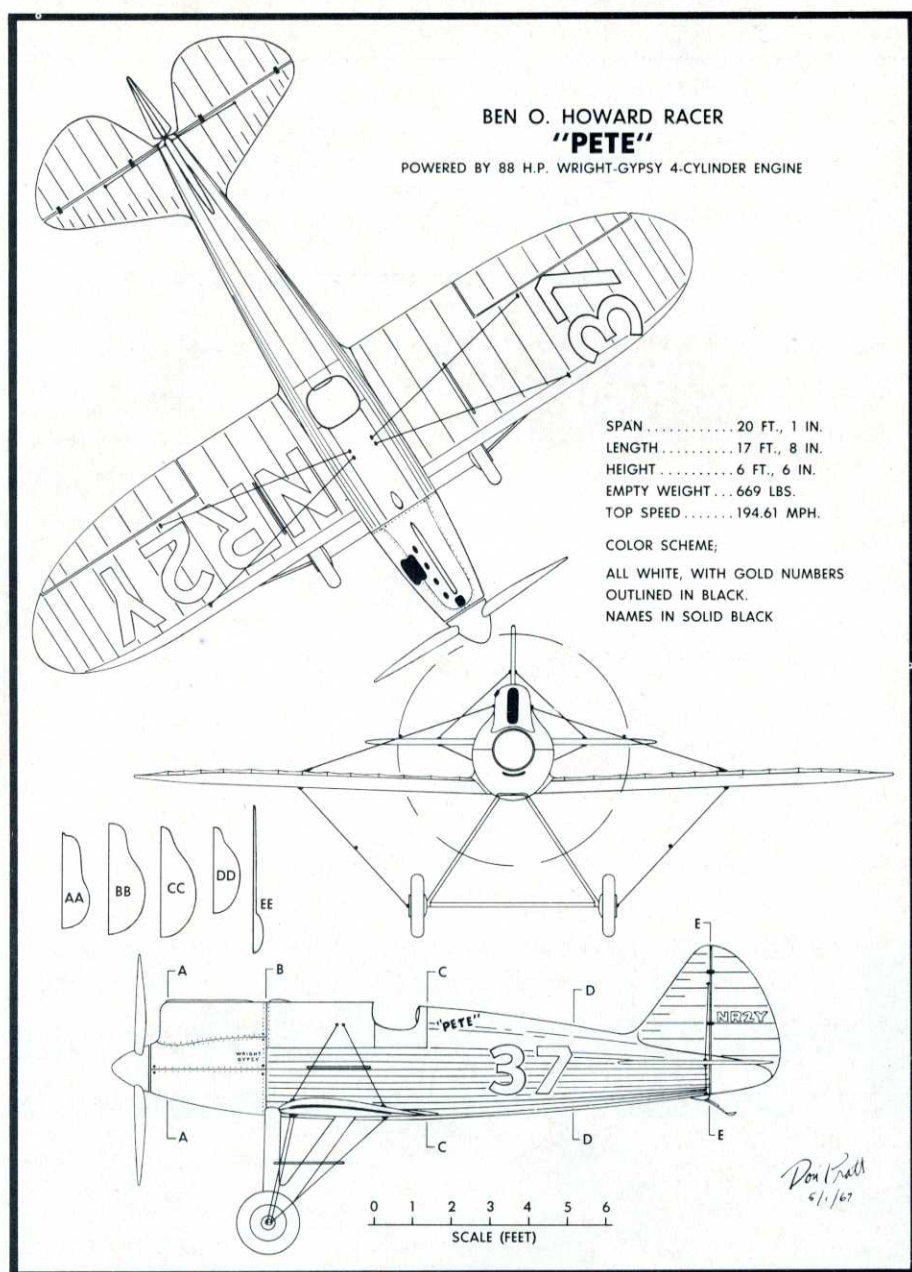
All during the rest of the day, and into the night they labored. The sun broke over the eastern horizon and dawn swept in a clean beautiful September day. At 12:20 P.M., *Mulligan* sat in front of the hangar, it's motor ticking over at a fast idle. Everything seemed alright, temperature, oil pressure, but there would be no time for a flight before the race. Neumann would have to make his first laps double as the test flight.

At eight minutes to one the steward called for the competitors to taxi to the starting line. One by one the colorful racing planes moved into position on the white chalk line indicated by a flagman. Harold sat hunched over the controls. It was hot in *Mulligan's* cockpit, and he began to perspire heavily as his eyes travelled first over the instruments in the cockpit, then back to the man standing at the end of the line holding the green starters flag. He glanced at his watch. One O'Clock straight up. Any second now! He tensed, his hand closed around the throttle . . .

What was this? There were several men gathered around the starter. Some sort of heated conversation was taking place. One of the racing crews was dissatisfied with the starting position given their racer, and was lodging a protest. Five minutes past One and they were still arguing. Ten past One . . . Still no movement from the flagman. Harold stared at the head and oil temperature gauges. They were rising alarmingly. Both were already near red line. A worried frown crossed his face. This was no good. The big Wasp wasn't meant to set running on the ground. This heat could ruin those new cylinders, foul the plugs. He advanced the throttle. Get more air over those cylinders, the thought, maybe that will help.

Mr. *Mulligan* coughed, backfired, and a shuddered. The plugs were already fouled! He'd blast them clean. Harold shoved the throttle in. The Wasp coughed again and again, then backfired. A shower of black carbon came back through the slip stream from the short stacks. Slowly the engine, gained r.p.m.

(Text continued on page 49)



The DGA-3 "Pete." Pete won third place in the 1930 Thompson, then went on to compete for many years. It still won a major regional race when it was nine years old!

DAMNED GOOD AIRPLANES

The noise and smoke from *Milligan* attracted the attention of the starter. He brusquely waved away the protesting crew, turned his back on them, and lifted the green flag high over his head. Engines screamed, propellers roared as the blade tips became transonic, and after seconds which seemed an eternity, down came the flag.

The Wasp hesitated, misfired, back-fired and then took the throttle. *Mr. Mulligan* gathered speed slowly at first, then faster and faster. Neumann held the nose down and kept the big bird straight ahead with the rudder pedals. Other planes that had initially raced ahead of *Mulligan* when the flag dropped fell back. Neumann hauled the plane tight around the scattering pylon with only Roscoe Turner's gold *Wedell-Williams* in front of him. Now into the straight stretch, Harold applied full throttle. The whole airplane shook and vibrated. He pulled the throttle back and the vibration subsided. Turner widened the gap between the Howard racer.

Again Harold tried full throttle, and again *Mulligan* shuddered, this time so violently he feared the engine would come right out of its mount! Quickly Harold stole a glance behind him. No one was near him. He advanced the throttle slowly until the vibration started, then retarded the throttle again until the vibration ceased. There he locked the throttle in place. For better or for worse, this was the speed he would run. He couldn't keep the *Mulligan* together if he tried to run it any faster. Up front he could see Turner leading by nearly a half a mile. Neumann would settle down and try to hold second.

Roscoe Turner was really pouring it on. The record would surely fall to the sleek golden *Wedell-Williams*. At the half-way mark he was nearly a lap

(Text continued on page 63)



Harold Neumann checks Mike's Menasco engine before the start of the 1935 Greve Trophy Race.

DAMNED GOOD AIRPLANES

(Continued from page 49)



Harold Neumann with "Ike" and Joe Jacobson with "Pete" while touring the country early in 1935.



Joe Jacobson flew "Pete" for Ben Howard. Later he bought the plane and continued to race it until just before World War Two.

ahead of Neumann and travelling at slightly over three hundred miles per hour down the stretches. Doolittle's 1932 record would surely be shattered.

As Turner pulled up behind Neumann to lap the cruising Mr. Mulligan his engine suddenly blew black smoke and oil over the cockpit. Turner pulled up and away from the course, skidded around in a wide turn, and dead stick landed across the field from the main grandstands.

Meanwhile, Harold was still cruising along thinking he was in second place. Turner's troubles had all taken place behind him and he had not seen it. When the checkered flag dropped Harold took another hot lap to make sure, then throttled back to land. As he flared out to touch down on the grass he caught sight of Turner's *Wedell-Williams* being towed behind a car from the other side of the field. The momentary distraction caused him to let *Mulligan* drop heavily on to the turf. This jarred his hand downward. His thumb struck the crashswitch Benny had mounted on top of the control stick and the engine died on the roll-out.

It was the custom for the winner of the Thompson to taxi into the winner's circle in front of the grandstands, but try as he might, Harold could not get the overheated *Wasp* to re-start. In the end, the plane was pulled to the trophy award ceremony by tow truck.

The 1935 races became known

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Harold Neumann accepts the coveted Thompson Trophy in 1935. Left to right are Neumann, Ruth Chatterton, Mr. Fred C. Crawford, Thompson Pres., and second placer Col. Roscoe Turner.

among the fraternity as the "*Benny Howard National Air Races*," and well they were. Ben's racers won three of the five major trophies awarded and a total of \$17,250.00 in prize money.

Once again his racer had paid for itself and had put enough extra money in the kitty for building a new design. Howard and Company would race again next year, and probably the year after that, but the next design, he told Gordon Israel and Harold Neumann, would be the one they would build by the hundreds. The next Damned Good Airplane would be the prototype of a commercial aircraft based upon the design of Mr. Mulligan.

END OF PART ONE