



DGA-15

DAMNED GOOD AIRPLANES

BY DON PRATT, DIRECTOR

THE AVIATION ARCHIVE

After the clean sweep made by Howard Airplanes at the 1935 National Air Races, Ben began to think even more seriously about the possible commercial applications of the phenomenal, and since the races, famous "Mister Mulligan" design. After the finish of the Bendix Transcontinental Speed Dash several Army Officers, (members of an Air Corps evaluation team), had shown considerable interest in the big white cabin plane. One of them had been heard to suggest to his fellow officers that "Mister Mulligan" would make a fine fast personnel transport for the Air Corps.

Maybe this fellow was right, thought Ben, and if he took "Mulligan" down to Wright Field to show it off, maybe he could interest the big brass in ordering a few copies at a handsome profit for Howard and Company.

The Army Air Corps had just com-

pleted comparative tests between several fighter plane prototypes submitted as replacements for their aging P-12 biplanes. The winning design, the Boeing XP-26, had shown a top speed of 226 miles per hour. Since "Mr. Mulligan" had a top level flight speed nearly sixty miles per hour faster, Ben felt sure he would have little trouble selling the Army on buying a few copies of "Mr. Mulligan."

The weekend following the Thompson Trophy Race Ben packed Maxine, Gordon Israel, and mechanic Pete Lewis into "Mister Mulligan" and took off for Wright Field, Dayton, Ohio. They flew leisurely down from Cleveland and when they arrived over the field Ben decided to have a little fun and also see that their arrival did not go unnoticed.

"When we got there," Ben wrote in a recent letter, "I put the prop in very

low pitch and flew across the field at about 100 mph with the engine going put-put-put-put like it was only putting out about eighty horse power. Then I went out a few miles and climbed a little. Coming back and letting down to about a hundred feet or so, I came out of the haze over the edge of the field with the air speed on the peg at 350 mph and the prop in very high pitch, using all the manifold pressure I dared. By the time we taxied up to the parking line nearly everyone on the field was out to see what kind of contraption could go like that. It was all sort of silly but seemed like fun at the time."

The next day Ben got the chance to show off next to the new XP-26. A Wright Field test pilot had the stubby little fighter out to run measured speed checks. As the Boeing fighter raced along at over two hundred miles per



BEN HOWARD

hour Ben pulled alongside to let his passengers wave and smile at the startled Army Pilot. He then firewalled the Wasp engine and quickly pulled ahead of the shiny new fighter. Ben then swung around, re-passed the XP-26 and then while the test pilot threw in full throttle in a desperate attempt to catch up with the fleeing Mr. Mulligan, Ben pulled the powerful white monoplane nearly straight up into a five thousand foot per minute climb.

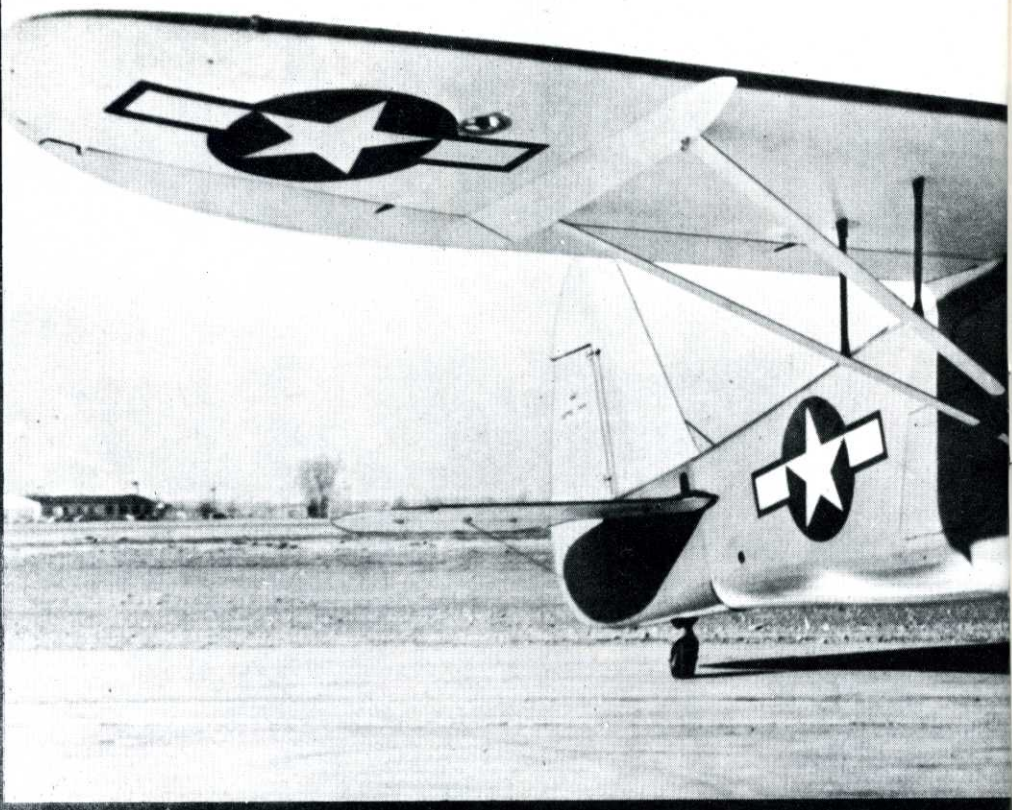
Rather than arousing the interest of the military authorities at Wright Field, Ben instead aroused their ire. He received a curt formal note asking him to leave. "The hangar space is needed for official airplanes." was the excuse given, but everyone knew that "Mister Mulligan" was proving to be an embarrassment to the Army and the XP-26 manufacturers alike. They wanted it to just go away.

Whether the Army was interested in "Mister Mulligan" or not Ben was determined to use the airplane and the fame it had achieved as the basis for setting up a factory to build airplanes for the commercial market. "I felt the design principles used in "Mr. Mulligan" were too good not to be used," Ben told me recently, "and by the time we returned home to Chicago I had decided it would be fun to put together a little factory to build copies of the design. I was flying for United Airlines out of Chicago. The building we rented for our factory was only a few blocks from the airport, and a couple of miles from where we lived."

Ben rented a vacant grocery store building at the corner of 63rd and Kedzie streets and he and his associates started detail design of the prototype of the new DGA-7. Gordon Israel moved up to Chicago to become a full-time employee of the new Howard Aircraft Company and set to work on the stress analysis of the new plane.

Ben envisioned the DGA-7 as a deluxe version of Mr. Mulligan mounting the big Pratt and Whitney Hornet radial engine. Israel had barely started work when it was decided that the design showed little commercial practicality and it was abandoned in favor of DGA-8.

The DGA-8 was again a close copy of the "Mister Mulligan" design, but was lightened and simplified so it could be powered by the 320 hp Wright Whirlwind 9 cylinder radial engine, and assembled quickly and economically on a production line. As the DGA-8 took shape on the drafting boards, Ben and Gordon were convinced they



DAMNED GOOD AIRPLANES

Above: Navy NH-1, one of 500 that the Navy ordered in WW-II. The AAF purchased 20 as UC-70's. The Howard was a stable instrument training airplane. (WAMA)

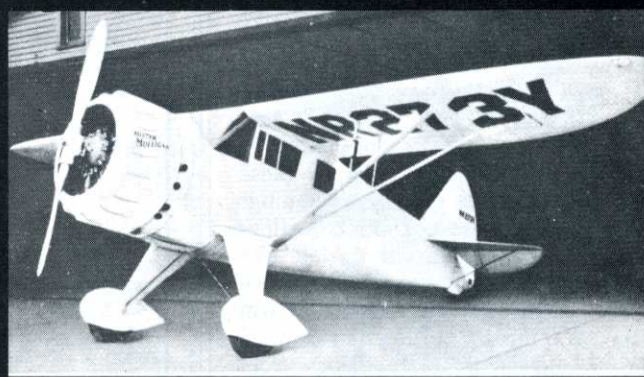
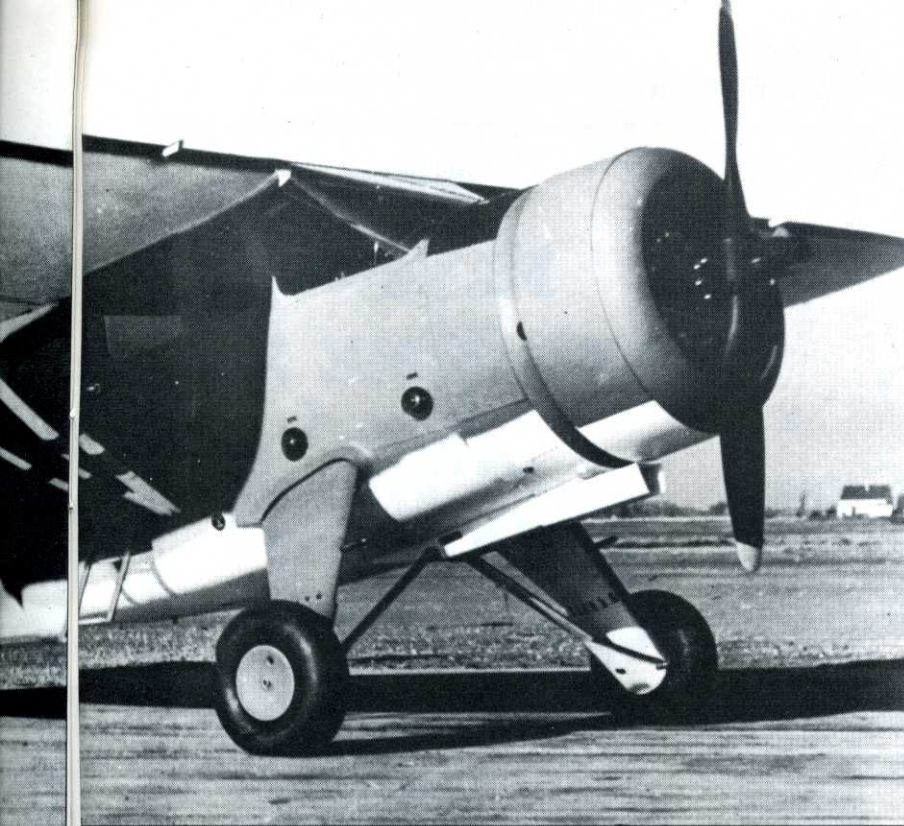
Top Right: Howard DGA-15P proudly displays her famous profile for the Sport Flying lens. The DGA-15 is a fast climber, fast cruiser and a maverick to land. It is a pilot's airplane all the way, to look at, to fly and to be damned proud of to own.

Middle Right: A true antiquer in every sense of the word . . . Bob Reichardt, owner of N-9271H, poses by his 1939 Chevy at San Fernando, Airport.

Below Top Right: Mister Mulligan, the design that caused one of the biggest waves and changed the thinking of the airmen the World over.

Two of the ladies in the life of Ben Howard. Below right, the A-26 invader and below left, the DC-4E. Both of these Douglas creations were first flown by Howard and were among the many aircraft tested by him. (manufacturer)





BEN HOWARD

had found the right combination and the new plane would be a sales success. Howard and Company would hang their commercial fortunes on the DGA-8.

Construction of the prototype was begun right there at the grocery store and an approved type certificate for commercial manufacture from the C. A.A., (now F.A.A.), was applied for. By the time the 1936 National Air Races rolled around the DGA-8 prototype was nearly ready for flight testing.

I asked Ben Howard who his original financial backers were. "At first there was no one" he answered, "it didn't cost much to do things in those days and between my race winnings and my salary as a United Airlines pilot I had enough to get started. We were just getting going good and all we needed was the money I hoped to win in the 1936 races." But for Ben Howard there would be no prize money from the 1936 National Air Races.

In the spring of 1935 Maxine (Mike) Howard learned to fly. She had borrowed Harold Neumann's Lambert Monocoupe for her solo and her private pilot's check ride. When the time for 1936 Bendix Trophy race arrived Ben chose Maxine as his co-pilot. Ben was out to win again and this time he planned a husband and wife victory.

The close course races for 1936 were held at Mines Field (now L. A. International) in Los Angeles. This necessitated running the Bendix Transcontinental Speed Dash in reverse to the usual and the take-off was made at Cleveland, the finish line lay at Los Angeles.

With the drop of the starter's flag, Ben and Maxine roared away into the western sky and began milking every ounce of performance out of "Mr. Mulligan." The big white cabin plane was well prepared, and as the miles slid by beneath them they soared farther and farther into the lead. When Ben dropped onto the runway at Kansas City for refueling he held a comfortable margin over second place Joe Jacobson flying Captain Frank Hawk's old Northrop "Gamma," the famous "Texaco Sky Chief."

As Ben pulled the heavily laden "Mulligan" off after taking on enough fuel to finish at L. A., Joe Jacobson touched down on the other end of the runway, ready to refuel his Northrop. He was determined to catch the Howards and he piled out of the cockpit shouting orders to his refueling crew. By nearly superhuman effort the Jacobson crew knocked minutes off re-

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HOWARD DGA — 15P Specifications

Engine: Pratt & Whitney 450 hp R-985-AN-1 engine.

Prop: Hamilton Standard constant speed.

Fuel: 150 U.S. Gallons 80/87 Octane.

Span: 38 ft.; Length: 25 ft., 8 in.; Height: 8 ft., 5 in.

Wing Area: 210 sq. ft.

Empty Wt.: 2,700 lbs.

Loaded Wt.: 4,350 lbs.

Wing Loading: 20.7 lbs. per sq. ft.

Maximum Speed: 201 mph at 6,000 ft.

Cruising Speed: 191 mph at 12,000 ft.

Landing Speed: 61 mph.

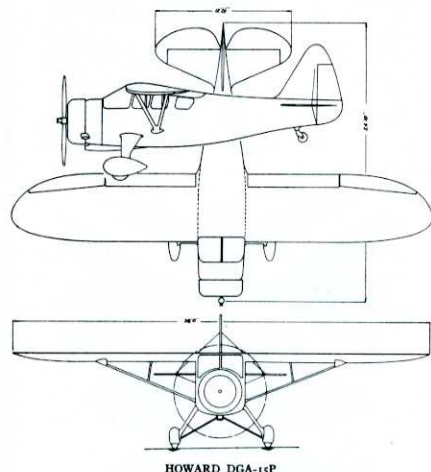
Service Ceiling: 21,500 ft.

Range: 1,263 Stat. mi. at cruise power.

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DAMNED GOOD AIRPLANES

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fueling time and Joe pushed the Northrop off in hot pursuit.

Less than twenty minutes later the telephone rang in the Jacobson hangar at Kansas City Municipal Airport. The line mechanic recognized the voice of his boss: "Goddammit! Send somebody down here after me. The S.O.B. blew up!", shouted the voice on the other end of the line.

Joe had been pushing the Gamma hard trying to catch Ben and Maxine. He had the throttle to the firewall and every instrument up to the red line. Near Lyle, Kansas the tortured Wasp engine gave up and disintegrated. Pieces of the engine traveled backward, rupturing the main fuel tank and the Northrop literally blew up into hundreds of flying fragments. Miraculously Joe suffered only flash burns and a few minor cuts and bruises in the explosion. One moment he was flying along in a close but comfortable cockpit, peering ahead trying to catch a glimpse of the Howard racer, and the next there was a blinding flash, a roar, and then he was flying along, still strapped in a seat but minus an airplane.

At first Joe did nothing. The explosion had momentarily dazed and deafened him and the full impact of his situation had not yet imposed itself in his half-conscious mind. Then slowly he reached down and meticulously unbuckled the seat belt, kicked the seat away from his falling body, and pulled the ripcord on his backpack parachute. By the time he reached the ground in a soggy wheat field, Joe was again fully conscious and mad as a lassoed Billy Goat.

Up ahead Ben and Maxine droned along averaging nearly two hundred and fifty miles per hour. They were now far in the lead, but they could not know this and so kept pushing on as fast as they dared.

Maxine carefully checked their progress on an air chart clipped to a board on her lap. At about 2:45 in the afternoon the line on her chart led just a fraction of an inch to the north of Roswell, New Mexico. She had just reached down to pick up a pencil that had rolled off the board and onto the cabin floor when suddenly she and Ben were thrown violently upward and forward against their seat belts. The sudden pitching movement came so quickly and unexpectedly neither had time to brace themselves. Ben's forehead struck a fuselage bracing tube and blood began to spurt from a nasty gash above the left eye. Dazed, half unconscious Ben grabbed at the controls as "Mulligan" rolled onto its back. The big Wasp engine, bucked and shook on its mount, then ground noisily to a halt.

The controllable pitch propeller hub had broken releasing one of the blades to hurl off into space behind the plane. The remaining blade stayed fixed in the hub and the unbalanced shaft caused the engine to literally "follow" the propeller around in a tight violent turn. In most airplanes the engine would have been torn right out of its mount by the centrifugal force exerted by the unbalanced prop, but "Mulligan" had been built tough enough to take the punishment of high speed and low altitude turbulence. Instead of disintegrating in flight, the whole airplane, prop, engine and airframe whipped through several high speed oscillations.

With the engine stopped and the airplane brought back to level flight, Ben and Maxine began to collect themselves and size up their predicament. "Mr. Mulligan" was still airworthy and seemed to be under reasonable control. They had altitude enough to glide to any field they could pick in an area covering several hundred square miles. Yet below in all directions were mountains, steep cliffs and winding boulder strewn ravines.

Blood streamed down Ben's forehead into his eyes, blurring his vision. Maxine helped wipe the blood away with her hankie. They were still high enough and they weighed the advantages of taking to their parachutes instead of riding the heavy, short winged racer down to what seemed would certainly be a crash landing. They elected to stay with "Mulligan" and try to save it.

Ben brought the plane around in a

long shallow turn and both scanned the terrain below while wiping away the blood collecting about Ben's eyes. If that damned beeding woud just stop, and he could see better! He swore that surely there must be a ravine, a dry creek bed, something. It must be there, if he could only see it. The ground was coming up fast and Ben had just about decided to land up the side of one of the mountains when up ahead and to the left there appeared to be a small shallow valley about half a mile long. There were boulders, but perhaps he could get between them.

Ben pointed the nose down toward the near end of the valley and pulled down the wing flaps. The visibility straight ahead was now nearly nil. He was having considerable difficulty keeping away the blood that seemed to flow more heavily every moment. Added to the blood, oil was pouring from the broken prop hub back to coat the windshield with a opaque film of greenish gray. He forward slipped over the rise of the last cliff bordering the intended landing field, flared out to touch down in the first level feet of rock and sand.

"Mister Mulligan" settled heavily, struck, bounced, settled again, and began to buck and shake along over the hard valley floor. Suddenly the airplane jerked and twisted sideways as an unseen boulder tore away the left landing gear leg. Ben and Maxine were again thrown forward against their seat belts as the cockpit filled with flying sand and debris. Pieces of the plastic windscreen sailed back into the cabin area as rocks flying up over the nose went through it like so many bullets fired from a machine gun. The big Pratt and Whitney Wasp engine, all one thousand pounds of steel and aluminum came backward through the firewall, twisting and tearing until it stopped, crushing unmercifully against the two figures strapped in the front seats. Ben and Maxine lost consciousness.

The weathered old Indian Brave and his pinto pony had been refreshing themselves at a cool water spring up in the high country when he head the white man's mechanical bird above in the cloud strewn sky. He lifted his head and shielding his eyes against the glare of the midday light, saw the tiny speck above traveling toward the setting sun. As he followed the course of the speck across the heavens, he became aware that the sound had stopped. Then the speck was turning around in all directions, and it was getting larger. The white man's bird was coming down.

When the old Indian saw the white bird drop into the ravine where he had

often hunted, he decided to mount his pony and ride down to the valley to see for himself at first hand this wonderful machine of the white man. When the old warrior came to the valley he saw the bird lying among the boulders. It was hurt, he reasoned, and it seemed to have broken its leg and wing. Maybe it was hurt very badly for it lay silent even as he approached. Perhaps it was even dead.

The two lying pinned in the wreckage of the broken airplane had periods of semi-consciousness followed by merciful sleep. Both were badly crushed below the waist and had lost considerable blood. Ben had no idea of how long he had been unconscious when he first lifted his head and became aware of where he was and what had transpired. He did know that he could not move and that each time he tried the pain would almost send him into unconsciousness again. When he first saw the old Indian standing near the crushed wing he thought that his injuries must be causing him to have hallucinations. But when he spoke to the vision, it stepped back, stared, and disappeared behind the wreckage of the left wing.

The bird was dead. The old Indian was sure of it, but there were people inside of it, and one had spoken to him in the white man's tongue which he did not understand. This was something indeed. A wonder to behold and he must show this to the other braves of his reservation. He would go and

get them.

When Ben Howard saw the old Indian disappear behind the wing he called several times, then lapsed back into unconsciousness. When he awoke again there were many Indians around the wreckage and one of them, a man who spoke to him several times, was busy cutting and chopping through tubing and pulling it away from around the cockpit.

Ben and Maxine were carried down from the mountains and were placed in a hospital in New Mexico. A few days later they were flown back home to Chicago, where both were to spend months of pain and anguish. Ben would lose one leg and barely save the other. Maxine would keep both of her legs but would be in and out of hospitals for years thereafter in order to do it.

Meanwhile, things at Howard Aircraft Company slowed up, and after a few months, came to a halt. The prize money from the 1936 races had not materialized. "Mr. Mulligan" was completely washed out and the expenses had gone on. Doctor and hospital bills piled up. In a short time, not only was all the money gone, but Ben found himself thirty-five thousand dollars in the red!

"I owed everybody I knew," Ben recalled after thirty one years, "and I was still a pretty unhealthy guy and not easy to get along with either. The nurses kept writing IRRATIONAL on my chart every day. I finally managed

to get a phone at my bed and over it I sold half interest in my thirty-five thousand dollars worth of debts for \$60,000.00 in cash. I paid off my debts and came out with \$25,000.00 left over, and the day I made the deal they had IRRATIONAL written on my chart!"

"Anyhow," Ben continued, "the people I made the deal with, a brokerage outfit in Chicago named Paul H. Davis Co. went ahead and made a public offering of stock and sold enough to furnish us with everything we needed. But in the end I wound up with a lot less than controlling interest in my own company."

Once back in operation the Howard Company, now the Howard Aircraft Corporation, went full speed ahead with the licensing and production of the new DGA-8. The licensing went comparatively easy with only some differences with the inspectors over the size of the vertical fin and rudder. The "X" model (NX14835) was modified after most of the flight testing had been completed to incorporate a 25% greater vertical fin area. This satisfied the misgivings of the C.A.A. inspectors and a provisional (later regular) Approved Type Certificate was awarded to the DGA-8 in the early spring of 1937.

"The first customers I had," Ben wrote in a recent letter, "were very understanding of the difficulties we were going through, what with the crash and all. They apparently had a lot of faith in me too, because they paid for their airplanes in total, in advance, so I could have money to work with. Some of these fellows were: Doctor Harry V. Spaulding of New York City, Mr. Daniel Peterkins, President of Morton Salt Co., Mr. Walden Shaw, Pasadena, California Financier, Mr. David Ingalls, former Secretary of the Navy, and Mr. Dwight Joyce, Vice President of the Glidden Company. There were many others who made partial advance payments too, and without the help of those wonderful people we might not have made it."

The DGA-8 proved to be an excellent performer. Its level flight top speed was 202 mph. Its 65% power cruise was 191 mph. (rated at 12,000 feet). Nothing in its class could run with it. Its nearest performance competitor, the Beech 17 Staggerwing Biplane required 150 more horse power and a retractable landing gear to reach a comparable speed.

A factory building was leased at 5601 West 65th Street, just two blocks south of the old Municipal Airport in Chicago and assembly lines were erected to produce the newly approved DGA-8. Throughout the latter part of 1937 and all through 1938 the model



DAMNED GOOD AIRPLANES PART II

Continued

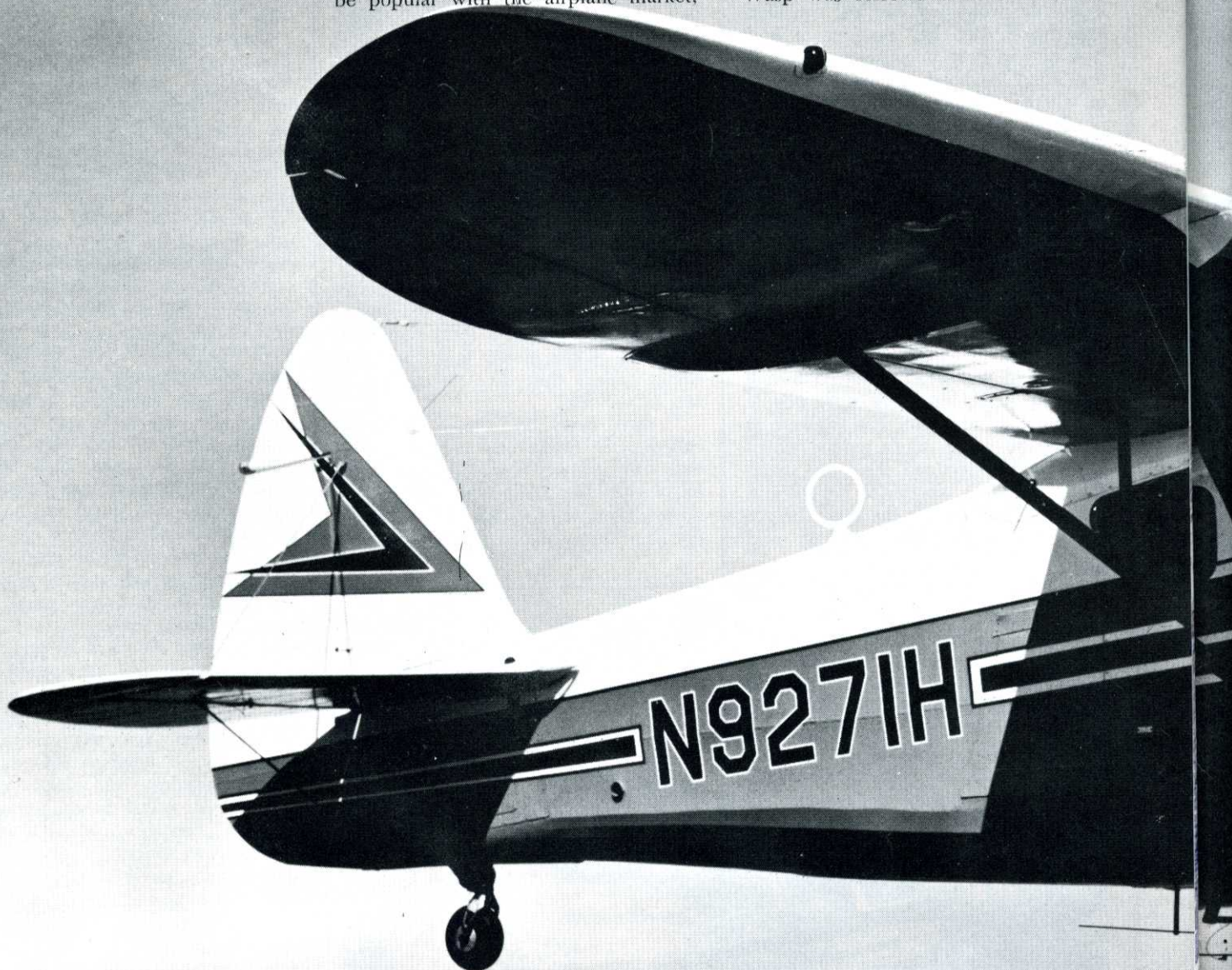
DGA-8's rolled off the assembly lines as Ben and Gordon Israel worked toward the creation of new improved designs that would outclass even the speedy "eight."

The first of these was the DGA-9. The "nine" was essentially the DGA-8 with the newly certificated 300 hp. Jacobs radial engine fitted instead of the 300 hp. Wright engine used on the "eight." Also, where wheel pants were fitted to the DGA-8 as standard equipment, the DGA-9 had them as optional equipment only. The Jacobs engine in the "nine" did not prove to be popular with the airplane market,

and very few of this model were built.

Next came the DGA-10. The tenth design from Howard never got off the drawing board. Ben simply could not convince his stockholders that the airplane should be built. The "ten" was a small four-place high-wing twin engine monoplane, very similar in layout to the later, highly successful Aero Commander. After arguing to no avail for a few months, Ben shelved the drawings forever.

The DGA-11 was again, basically the DGA-8 with a new engine. This time the 450 hp. Pratt and Whitney Wasp was selected and the DGA-11



was a great sales success. Many owners of DGA-8 and 9 airplanes later had their machines converted to DGA-11 specifications.

In the summer of 1939 Ben conceived the idea of a troop and cargo carrying craft built specifically with the requirements of the Air Corps in mind. The DGA-12 design was a twin-engine craft about the size of a DC-3 (C-47) that employed a swing-away tail and after fuselage so full-size jeeps, trucks, and guns could be quickly and safely loaded and unloaded on any airfield. It was an idea that would not come into use until the end of World

War Two. Ben was ahead of his time.

"The idea of a specially built cargo and troop carrier plane got me nothing but laughs from the Air Corps and my own board of directors. They all told me there wasn't going to be any war anyway and that type of plane wouldn't be needed, even if it were practical, which they were sure it wasn't."

When I asked Ben Howard about the DGA-13 he answered, "We didn't use the number 13. I'm not superstitious, mind you but why stretch our luck?" I think I agree.

The DGA-14 was another Pratt and Whitney Wasp powered version of the

basic DGA-8 airplane, only the "fourteen" reverted to the wheel pants and deluxe interior appointments used on the original DGA-8's.

The DGA-15 became the final variation on the original DGA-8 of 1936. The model "fifteen" used the 450 hp. Pratt and Whitney Wasp engine for power. It had a deepened fuselage to make room for additional fuel tankage and a higher vertical fin to compensate for the additional fuselage side area. The "fifteen" was built in larger numbers than any other of the Howard monoplanes. The Air Corps alone purchased over 600 of these and the

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DGA-16 (multi-student instrument trainers version of the "fifteen") and the DGA-17 (Ambulance version of the "fifteen"). But this all took place after Ben Howard had severed all connections with the corporation which bore his name.

"I left Howard Aircraft Corporation in July of 1939," Ben explained in a recent letter, "because of great differences of opinion between myself and my board of directors. They were members of the brokerage firm that held controlling interest. They made their money by selling stock, and I insisted that we would make it by selling airplanes. I couldn't convince them that there was going to be a war and that we should aim at military designs. I resigned and two months later Hitler invaded Poland."

Ben Howard had resigned, but he was not out of a job. He had simply quit one of his four salaried positions! When Ben crashed "Mr. Mulligan" in 1936 he had been on the payroll of United Airlines as a captain. After he had sufficiently recovered from his injuries and had learned to use his artificial leg, United fitted out a special Boeing 247 transport for Ben and made him "Chief Research Pilot." With this 247 Ben engaged in such activities as "route proving," thunderstorm exploration, turbulence penetration, instrument landing systems, etc. During his off hours he was building up the Howard Aircraft Corporation.

At the same time Ben was drawing a regular salary as "Research Pilot" for an association of aircraft insurance underwriters out of Chicago. For the insurance companies Ben was investigating accidents and their probable causes and the effects of weather on the efficiency of pilots and planes.

During 1937, while still president of Howard Aircraft Corporation, a group of five airlines including United chose Ben to be their representative test pilot on the new Douglas DC-4E program being financed jointly by the airlines and Douglas. Ben went out to Douglas mostly to observe, but had no sooner arrived when Johnnie Cable, Douglas DC-4E test pilot was killed in the crash of the DR-7 experimental attack bomber. Donald Douglas hurriedly put Howard on the payroll and Ben tested the DC-4E for both Douglas and the airlines and remained on the payroll of both! But this was by no means as far

as it finally went!

By the time America entered the Second World War, Ben had left Howard Aircraft Corp. forever. He was however in the employ of all the following organizations simultaneously! United Airlines, the insurance association (USAIG), Douglas Aircraft Corp., Budd Aircraft, Fairchild Airplane Co., Lockheed, and Curtiss.

By 1942 Ben Howard had moved up to Chief of Flight testing for Douglas Aircraft Corp. with his headquarters in Santa Monica, California and by 1945 was Assistant to the President, Donald W. Douglas. During the war years Ben's test flying capabilities were so much in demand that Douglas loaned him out to other airplane manufacturers on numerous occasions.

He went to Budd Aircraft to test fly their "Conestoga" troop carrier design. Ben was loaned to Fairchild to make the first flights of their famous C-82 Packet troop and cargo transport. Curtiss borrowed him to test fly the all-plywood C-76 "Caravan" swing-nose assault-cargo plane. Ben hopped over to Lockheed to do high altitude research with the P-38 Lightning fighter, and load tests with the Hudson, Lodestar and Ventura. Back to Curtiss again Howard test flew the C-46 Commando on fuel-flow failure problems, and the XP-55 tail-first "Asender" fighter on control and stability problems. Ben dove the Curtiss "Helldiver" dive bomber to see if the wings would come off under various load conditions.

Back at Douglas, Ben took the C-54 Skymaster aloft on its first flight and followed that by lifting the famous A-26 (B-26) Invader off the runway for the first time. The giant C-74 flew for the first time with Ben Howard at the controls, and he flew numerous testing and research flights in the DB-7, the A-20, A-20B, the A-20A, and the P-70 night fighter. Later he made the initial test flight in the famous DC-6 Intercontinental airliner.

Between test flights at the Santa Monica factory, Ben Howard was busy hopping around the world. He traveled to wherever there was a problem, or there were crews to train, or routes to the different theaters of war that needed to be explored and proven.

Ben took the first DC-4's (C-54's) to England, Australia, New Zealand, and New Guinea. He traveled to every theater of war, demonstrating the C-54 to Army, Navy, and Civilian contract crews, showing them how to get the most loading and performance out of their airplanes. He landed and took off from short, rough jungle strips in overloaded C-54's to show it could be done,

then went back to Santa Monica to test fly more new designs.

In 1944 Douglas loaned Ben to the Air Force and he took off on a special assignment to survey landing fields in Africa, Italy, and the middle east for supply operations to support the shuttle bombing program against Germany.

By the end of the war in 1945 Ben Howard was Assistant to Donald Douglas in charge of all experimental flight testing and was still employed by United Airlines and USAIG as a consultant.

In 1947 Ben Howard resigned from Douglas, United, and the insurance group to join his old friend Floyd Odum, who had just taken over control of Consolidated Vultee (Later Convair) Ben became a vice president and also a member of the board. Except for a short time when he took time off to do a study of peacetime non-combat air accidents for Secretary of Defense Forrestal, Ben remained full-time with Consolidated until the end of 1949.

Ben craved more action than the job at Consolidated offered so at the end of 1949 he resigned and took over as General Manager of the airplane division of Fairchild at Hagerstown, Maryland. "I just stayed there through 1950," Ben told me. "I didn't like it back there — the town and the weather, and the idea of being the boss rather than the critic, as I had always been. So I came back to L. A. and started test flying again." And, as he had done in the past, Ben Howard couldn't just work for one employer at a time. He went simultaneously on the payrolls of Douglas, Convair, Flying Tiger Airlines, Slick Airways, and Lear.

"After a year or so I decided to slow down a bit and give up everything except my Convair job. Then I got a little bored with all the extra time on my hands and got to tinkering with a DC-3 to see if I could speed it up a bit. I figured I would work it out, then turn it over to some shop and I could collect the royalties. As it turned out I set up the shop and made the kits myself."

Ben called his DC-3 kit the "Maximizer" and since 1957, when he gave up his job at Convair and opened Ben Howard and Associates, the little shop has built and sold over 200 of the "Maximizer" kits. And the sales of kits and spare parts goes on.

Today Ben and Maxine Howard live in a comfortable home in Los Angeles and Ben goes to the shop every day that he feels like he wants to. If you ask him, he will tell you that he has

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no plans for anything in the future and that he is in semi-retirement. But I really wonder. He made a DGA out of a DC-3. From such an indomitable spirit and a fertile mind, what might come next?

POSTSCRIPT —

Where are they today. Ben and Maxine Howard live in Los Angeles and Ben operates Ben Howard and Associates, a small shop making conversion kits and parts for Douglas DC-3 airplanes.

Gordon Israel is still one of the foremost aircraft engineers in the world. He is now an executive for Lear Jet in Wichita, Kansas. His latest engineering study has been the hydrostatic control surface imbalance that is the apparent cause of many of the jet airliner accidents in recent years.

Harold Neumann gave up air racing at the close of the 1936 season and joined TWA in Kansas City as an airline captain. He retired this past spring at the age of sixty but keeps his hand in by doing aerobatics in a 145 hp. Warner Powered Monocoupe.

Joe Jacobson operated a Flying School in Kansas City until 1962, when he went into semi-retirement. Now he divides his time between his ranch in Canada during the summer, and giving flight instruction in the Los Angeles area during the winter months.

Bill Ong operated a Flying School and Service at Ong Airport Raytown, Missouri until 1950 when he organized Ong Investment Corp., when he closed his field and converted it into a suburban housing development. In 1947 he again entered the National Air Races, flying a surplus F-51D Mustang. That year he won the SOHIO TROPHY RACE in record time. In recent years Bill has served as national president of the OX-5 Club and also as president of the NAA.

Roy Minor had started a meteoric rise to stardom as a racing and test

pilot in 1934 when his life came to a sudden tragic end. He had entered the hospital for a bit of minor surgery, developed an infection and passed away despite all the doctors could do to save him.

And what of the Howard Aircraft Corporation? Just before Ben resigned as president of the company a difference of opinion led Gordon Israel to leave the employ of his old friend, and Ben hired Dr. Robert Nebesat to replace him. Nebesat resigned soon after Ben left and later joined up with Howard at Douglas. Gordon Israel rejoined the company a few months later and was promptly assigned to design a two-place open cockpit trainer airplane to meet an Army Air Corps contract specification. Out of this assignment came the DGA-18 model. Though the Army eventually bought a production batch of this model for the C.P.T. program, the design was generally considered as a failure due to the fact that the 125 hp. and later 160 hp. Kinner engines used were simply not powerful enough to make the plane perform.

During the Second World War the Howard Aircraft Corp. built DGA-15P and DGA-18 aircraft at a new plant they had built at St. Charles, Missouri (suburb of St. Louis). After the Model 15 and 18 contracts were filled, they manufacturer components for other companies on sub-contract. When the war ended the company found that no new military contracts were forthcoming and they had no new civilian models to offer to the public. What with surplus airplanes being dumped on the market by the thousands the prospects for the development and sale of new airplanes looked fairly dim. The financial interests that controlled Howard Aircraft Corporation therefore voted to liquidate and convert the assets of the company, and it closed it's doors and ceased production forever.

