

The THUNDERBIRD



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Paul G. Sturges, Director
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THE COVER

The list of war heroes among Thunderbird Field's graduates mounts daily. Over all war theaters youths who first tried their wings at Thunderbird are writing glory in the skies and to commemorate their achievements an Honor Roll board listing award winners has been erected. The inscription scroll reads, "Dedicated to our graduates whose distinguished service is the fulfillment of the aim and purpose of every man and woman here at Thunderbird Field".

BACK COVER

A tribute to America's fighting men, presented with the hope that it may hold a measure of inspiration for those who must carry on the battle here at home.

ANOTHER STEP TO VICTORY

Aircraft of the Air Transport Command area airline operated by our Cargo Division again flew the third largest number of miles in the history of the operation and also carried more than 100,000 pounds of high priority military freight and mail, which was a 12.42% gain over the same month last year. Last month's mileage total, 69.8% more than was flown in March, 1943, was sufficient to maintain Cargo's present average of nearly 75,000 miles flown per month. March was the fifth time that a single month's cargo total climbed above the 100,000-pound mark. Number of shipments also was second highest in the operation's history—only ten less than July's all-time high.

Other Southwest operations likewise recorded substantial gains in number of cadets trained, hours flown, planes operated and people employed, over the same month a year ago.

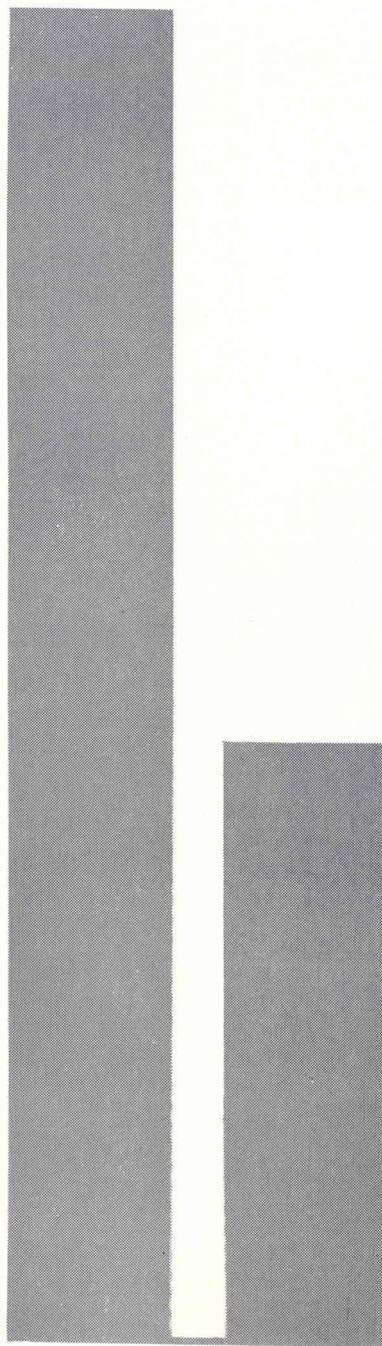
At Thunderbird, currently training its 28th class of American cadets, it's eighth class of Chinese, enrollment was up 29.12%. Thunderbird II figures showed an increase of 26.93%; Falcon 16.25%.

Number of hours flown at Thunderbird II increased 57.49% over March a year ago, 47.94% at Falcon, 46.17% at Thunderbird.

Cargo Division showed the greatest gain in number of people employed, an increase of 118.52% over March last year. (See graph.) Total for all operations increased 110.75%.

At the Overhaul Depot, engine production soared 84.62% above last year's total for the same month, and aircraft production was up 52.85%.

In March, when Southwest officials looked over the gains made over the preceding year and compared figures with 1942 totals, they discovered an increase of 127.59% in the number of cadets trained, 373.41% in the number of hours flown, and 394.85% in the number of people employed.



Cargo Division Employees

March, 1944 March, 1943

This Month In Brief

COMPANY

Pre-hearing conference on applications for area airline routes on Pacific Coast scheduled by Civil Aeronautics Board for April 29 . . . Vice-President Jim Ray back from test flying helicopters for Army Air Forces . . . Public Relations head elected chairman of Western Information Council, Aeronautical Training Society.

CARGO DIVISION

CONTRACTORS TO AIR TRANSPORT COMMAND

Aircraft again fly third largest number of miles in history of the operation . . . Also carry more than 100,000 pounds of high priority Army Air Forces' freight and mail.

FALCON FIELD

CONTRACTORS TO ROYAL AIR FORCE

Maintenance superintendent perfects device to permit lubrication of propeller thrust bearings without disassembly of prop.

OVERHAUL DEPOT

Ingenious employees contribute many time and labor saving devices to speed production . . . Engine output for March soars 84.62% above last year's total for the same month . . . Aircraft production also increases 52.85%.

SKY HARBOR

CAA-APPROVED PRIMARY AND ADVANCED FLIGHT SCHOOL

Flight facilities temporarily given to CAA for completion of college indoctrination courses . . . private instruction continues with equipment not needed for brief CAA program.

THUNDERBIRD FIELD

CONTRACTORS TO AAF FLYING TRAINING COMMAND

Honor Roll board dedicated to ex-Thunderbirds who have received War Department decorations . . . Squadron Five wins safety contest with fewest accidents per number of cadets graduated . . . Seventeen more employees receive tenure of service pins.

THUNDERBIRD II

CONTRACTORS TO AAF FLYING TRAINING COMMAND

Ground school instructors design complex shadow-graph for aircraft recognition classes . . . Give war bond to cadet winning plane identification contest.

Air Safety For Victory

The offensive power of our Air Forces today depends upon our ability to furnish skilled pilots in overwhelming numbers.

In July, 1939, it was such visionary Army Air Forces officers as Generals H. H. Arnold and B. K. Yount who foresaw the need for building quickly an American aerial striking force second to none. They called in the heads of civilian flying schools, who immediately prepared to help handle the pilots in the emergency which existed.

Southwest Airways, among other carefully-selected civilian schools, was asked to assist.

Combining our experience with that of the Army Air Forces, here at Southwest, we two—soldier and civilian—have succeeded in training unprecedented numbers of fliers, and in training them quickly, economically, efficiently, and safely.

The past two years have seen tens of thousands of cadets earn their wings; only 4,600 were trained in the twenty years preceding. In World War I, there was a training fatality for every 1,146 hours flown; today, it is less than one per 176,000 hours.

Latest figures from the Aeronautical Training Society indicate one fatal accident for every 43,789 hours flown in the nation's 63 primary flight training schools.

At our primary fields, Thunderbird and Thunderbird II, the mortality rate stands at one fatality for every 70,747 hours flown, less than one-tenth of one per cent as compared to the normal civilian mortality rate among young men of the same age group—18 to 26—of eight-tenths of one per cent.

On an average day, training planes fly more than 800 hours—enough flying time to send a bomber on a mission from London to Berlin 267 times; to fly from Chicago to Singapore, a distance of 9,365 airline miles, 17 times.

Instructors' messages, prominently-displayed "reminder signs," the policy of taking airplanes off the flight line the instant some part is not functioning perfectly—all these and many other safety measures aid in the preservation of the priceless lives of cadets.

Sky and ground forces together have spared no effort to keep our Air Force the safest in the world. They know that a man injured in training is as much a casualty as a soldier wounded on the battle front. With true American ingenuity, capacity for learning, and willingness to work, they have tackled and accomplished a tremendous job.

To these unsung heroes, the men on the ground and the men in the sky, Southwest points with pride. They are the power behind the planes that are sky-writing American air successes today.

THEY FLY THE FREIGHT THAT WON'T WAIT

It is approximately 6:00 o'clock at Tri-City Airport, San Bernardino—home of Southwest's Cargo birds. The sun, sinking lower in the West, announces the completion of another day, as overhead a fast-circling Waco informs waiting ground crews of another successful flight. Swiftly, now, the ship approaches the runway, lands, and is taxied to the line. Three minutes later, when the engine has cooled, the pilot emerges.

He is Steve Martino, senior pilot of the Cargo Division, home from— where he unloaded 200 pounds of high priority freight.

Typical of Southwest pilots, Steve has a lot of flying experience behind him. He started flying in 1928 when time was worth \$40 an hour; made his solo hop in 1930. That he has been flying constantly since that date can be proven from his log book which registers some 4,500 hours.

An old timer with Southwest, Steve started out as a flight instructor at Thunderbird Field in February, 1941. He moved with the British program to Falcon Field, and from there to the Cargo Division where he was the first pilot to fly the cargo run.

Past experiences in all types of planes, weather, and traffic make Steve a valuable pilot, just as all Southwest pilots are highly skilled fliers. It is no mere accident that of the thousands of pounds of high priority military freight and mail carried for the Army Air Forces, not one shipment has been lost or damaged in any way.

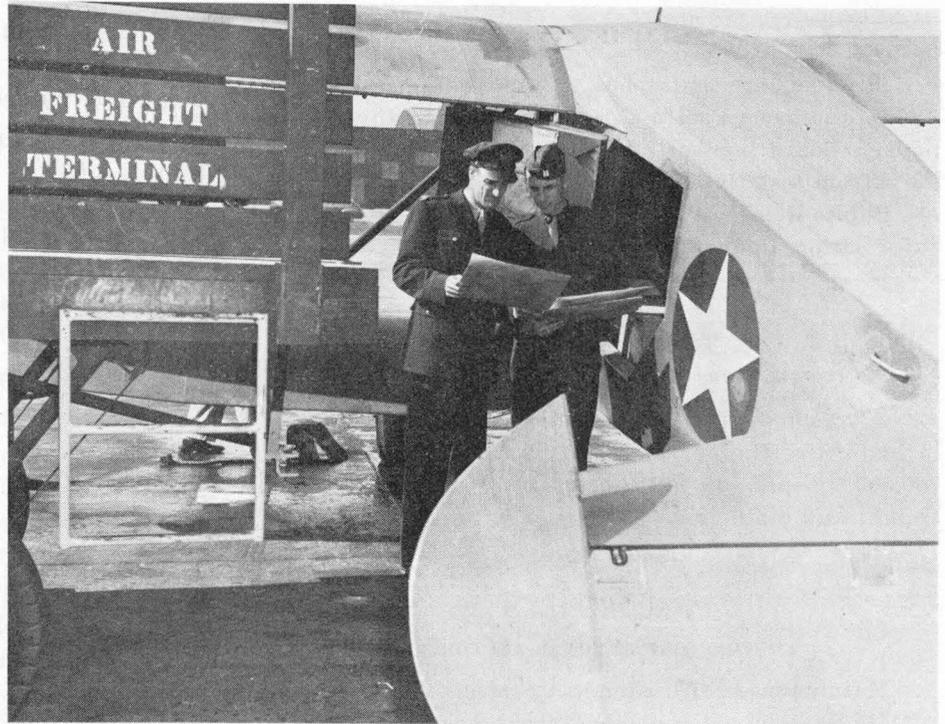
One by one the Wacos land until presently all are accounted for. Nor do their pilots leave the flight line until the last ship's engine is cool. Reason: Pilot etiquette.

"How about a cup of coffee?" somebody says, and they all move at once toward the lounge.

The pilots' room, which the fliers decorated themselves, is comfortably styled in Monterey type of furniture. On the pine paneled walls are maps of the cargo run, flight line pictures, and a huge roster logging the trips pilots will fly during the week.

"Wonder what those forest rangers did for news before I started flying this run?" Jack Gladney muses. "You know, I'm going to lay that paper right on their front porch one of these days. Only missed it about 10 feet today."

Jack, whose 23 years label him the baby of the Cargo Line, has been with the company for over two years. He began as a primary flight instructor at



CHECKING MANIFESTS of a loaded cargo ship are Ted Mitchell (left), operations manager of Cargo Division, and Captain Walker, operations officer of the 36th Air Freight Wing, San Bernardino Army Air Base.

Sky Harbor, progressed to cross-country, and later to chief pilot. He has 2,250 air hours to his credit.

"What's this about your delivering papers?" Chief Pilot Bill Brown wants to know. "There's nothing in the constitution providing for that kind of service."

"I know," defends Gladney, "but I'm kinda friendly with those guys up there on that 5,000-foot pinnacle. When I spot their lookout I know I'm on course. One of them came out on the porch the other day waving a newspaper and pointing at it, so I've been playing newsboy ever since."

Brown, whose birth certificate reads "Jess Willard Brown," was born in 1917. Besides his commercial license and instructor and instrument ratings, he holds a ground instructor's rating from the C.A.A. in navigation and meteorology. He, too, started as a Thunderbird instructor back in 1941.

"When are you going to make us one of your famous gasoline model airplanes, Danny?" Larry Anderson needles Pilot Darnell.

Although Danny has built more than 75 model planes, the boys at Cargo never have seen one of them. They're even beginning to doubt he won the Arizona state contest in 1942 for gasoline driven models.

Larry and Danny, however, have something in common they often talk about. Larry used to work for Douglas Aircraft Company and was "there" when the first DC-2 and DC-3 experimental models made their initial hops. Danny, who worked in final sub-assembly and pickup at Lockheed, helped put together the first P-38.

Both men have been with Southwest since 1941.

Another Cargo pilot with an enviable record is quiet, unassuming Bill Walters.

Walters, who says he came to Southwest because of a company advertisement he saw in an aviation magazine, began his career at Thunderbird Field. His record: in nine months of instructing at Thunderbird, neither he nor any of his Army Air Forces or Chinese Air Force cadets ever so much as scratched a training plane.

By way of contrast, listen to Bill Walker's story of what happened to him on a recent vacation trip. Acting as guest pilot on a trip between Fairbanks, Alaska, and Edmonton, Canada, Walker made his first crash landing. It was after night, and in less than three hours of flying the ice load on the plane was too heavy to maintain altitude. Having received emergency landing instructions, Walker hit a false cone and was forced to walk 31 miles across

swampy, treeless tundra to the airport. It took him 36 hours to reach the field.

"Hi, ya, fellows, what's cookin'?"

It's Wyoming's six-foot-three-and-a-half inch athlete speaking.

Roy Rasmussen, who made all-state as a basketball center in high school and once threw the javelin 164 feet in a district meet, started flying when he was 16. Now, at 24, he has over 2,000 hours to his credit and nearly two years with Southwest.

Another veteran Cargo pilot is Bill Thompson. At 35 Bill has been flying for 14 years. He's owned five planes and logged 4,000 hours. Incidentally, he's proud of his two sons in the Army and Navy. Kenneth, who enlisted in the Army when he was only 17, now flies P-40's.

One of Cargo division's oldest pilots is Hank Potter. Still under 40, Hank recalls when he used to take his wife and five year old son with him on weekend flying trips. A graduate of Yale University, he soloed in 1934. Later, when he applied for his commercial license, it was C.A.A. Inspector John H. Connelly who flew with him on his check ride.

Coffee on, the pilots gather 'round for their weekly session of Kangaroo Court. Treated in a serious vein, the court is presided over by Operations Chief Ted Mitchell and his assistant, Rudy Couk.

Executive fliers, Mitchell and Couk likewise started their Southwest careers at one of the other company operations.

Ted began at Falcon in September, 1941, as a basic instructor, quickly going up the ladder. In rapid succession he was assistant flight commander, flight commander and assistant chief pilot, remaining at the British school until called to head up the new military cargo line in November, 1942.

Rudy, who left the managership of a CPT school in eastern Arizona to join Southwest Airways, began as a flight instructor at Sky Harbor in 1941. Shortly thereafter he was put in charge of the instrument program, and from there it was an easy step to the Cargo Line.

"Attention in the court; the judge wishes to speak."

Manager Mitchell has the floor and, incidentally, the undivided attention of his pilots.

"Well, boys," he begins, "you've made me proud of you again. Last month you flew the third largest number of miles in the 17 month's history of our operation. You carried more than 100,000 pounds of high priority military freight and mail—a 12.42 per cent gain over the same month last year."

The Cargo Division, as every company employee knows, serves the Army



PROSECUTING ATTORNEY Hank Potter, whose rapid-fire questions are meant to confuse the defendant.

Air Forces by connecting their establishments in the areas served with central supply depots, with each other, and with key air, rail and sea shipping points. Radiating in all directions from the San Bernardino and Sacramento Army Air Depots, eight daily flights speed urgently needed airplane parts, instruments, blood plasma and other materiel critical to the carrying on of the war effort.

"Anybody have any questions?" Mitchell asks.



JURY MEMBERS Steve Martino, Bill Walters and Bill Walker, of Cargo's Kangaroo Court, are not agreed as to whether the victim is guilty or not guilty.

The meeting is open to general discussion, after which the "offense" box will be opened and the court will try the offenders.

The "offense" box contains complaints signed by fellow pilots against anyone known to have committed a misdemeanor. The complaints, ranging all the way from failure to sign one's name to the more serious offense of being late for takeoff, are heard by the judge and jury; the alleged violator, privileged to testify in his own behalf, and to answer questions asked by any or all members of the court, then is adjudged guilty or not guilty and fined accordingly.

Captain Walters, for instance, has been called to the stand.

"Do you swear to tell the truth, the whole truth, and nothing but the truth, so help you God?"

"I do."

"Captain Walters, you are accused of being one minute late for takeoff from Tri-City Airport on the morning of Friday, March 24. How do you plead?"

"Not guilty, your Honor."

"In that case, do you wish to represent yourself or do you wish counsel?"

"I wish to represent myself."

The trial proceeds. Finally, after all testimony has been presented for and against the defendant, the court ponders the evidence, arrives at a verdict, and determines the punishment.

Although the court is held in the spirit of fun and the fines are small, pilots recognize in it an effective method for prevention of corner-cutting habits. To them it is just one more way of keeping superior the already high standards of Cargo pilots.

AREA AIRLINE HEARING SET

Early extension of air transportation to the Pacific Coast's smaller cities and towns through area, or feeder, airlines was strongly indicated recently when Southwest officials announced that a pre-hearing conference on its application for Pacific Coast routes had been scheduled by the Civil Aeronautics Board for April 29, in Washington, D. C.

Purpose of the pre-hearing conference is to define the issues and procedural matters to be followed in the formal hearing which will be held from 30 to 60 days later, it was learned.

"The Board's decision to consider our proposed routes at this time is indicative of the importance which it attaches to the need for expanding the Pacific Coast's air transportation system," according to Vice-President Jim Ray.

"The Board recognizes that existing transportation facilities, already greatly strained, will find it still more difficult to handle the added loads certain to come when the Japanese phase of the war is receiving full military attention. Bolstering air transport facilities will have an immediate value to the war effort, and is justification for establishing service at the earliest possible moment."

By Board action in setting a date for the routine preliminary conference, the Pacific Coast thus becomes the first area in the entire nation to be considered for feeder routes, a relatively new type of air transport which will link smaller communities with their natural trading centers and also "feed" passenger, mail and express traffic to trunk airlines.

Southwest's original application, filed two years ago, proposed that 11 routes be established, serving some 300 points en route from Los Angeles to San Diego, Los Angeles to Calexico, Los Angeles to Fresno, San Francisco to Santa Maria, San Francisco to Fresno, San Francisco to Medford, San Francisco to Eureka, Portland to Medford, Portland to Astoria, Seattle to Astoria, and Seattle to Port Angeles.

It now is being amended to include service to nearly 100 additional cities and towns on routes in central and eastern Washington, central and eastern Oregon, southwestern Idaho, and a route running up the coast from Los Angeles to Santa Maria.

During the last war 94 pounds of metal was enough for each man in the armed forces; today the average is 4,900 pounds.

SHADOWGRAPH AIDS CADETS



THE SHADOWGRAPH, designed by Thunderbird II ground school instructors, facilitates aircraft recognition by cadets. Classroom lights can actually be left on without dimming the image so students can take notes.

Program Change

Southwest is temporarily making available its flight facilities at Sky Harbor to the Civil Aeronautics Administration, completing the last 90 days of a contract for ten-hour college indoctrination courses.

Southwest will conduct the course only until June 30. Company officials emphasized the temporary nature of the contract and the fact that it is not likely that the C.A.A. contract will be renewed after mid-year.

"Meanwhile, we shall continue to give private instruction at Sky Harbor with facilities and equipment not required for this temporary program," President Jack Connelly asserted, "and after June 30, we will devote all of our time to commercial courses."

Connelly's reference to commercial work does not, of course, affect other Southwest training activities but only the Sky Harbor operation. Army Air Forces primary training is continuing unabated at Thunderbird and Thunderbird II, and primary and advanced instruction of Royal Air Force cadets at Falcon Field also is in full swing.

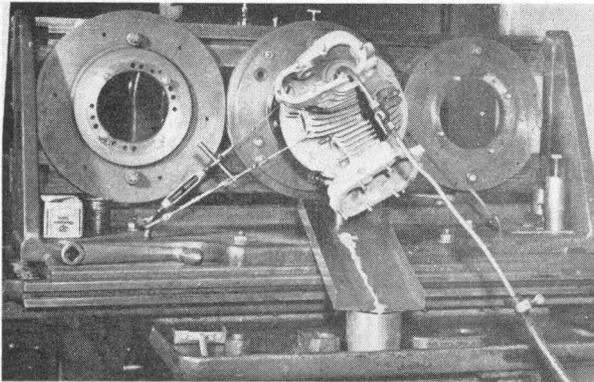
The complex, confusing problem of distinguishing between friendly and enemy aircraft has been tempered for Thunderbird II ground school students since installation of a shadowgraph machine designed and built by Thunderbird II instructors.

Developed from the Harrisburg plan of straight projection, the Thunderbird II shadowgraph boasts several innovations. Chief of these is use of a reflecting mirror which allows the projector to be kept at the base of the screen, leaving instructors free to face students, handle models for comparison or point out various features of the illustrated silhouette.

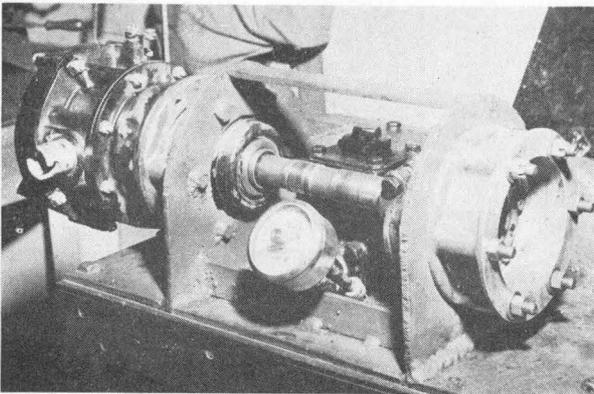
Basic units of the shadowgraph are an acetate screen, a slide projector and a reflecting mirror. The projector throws the image onto the mirror which, in turn, reflects the picture onto the screen in three dimensional form. While the image is on the screen instructors can hold up for comparison small models, turning them so that the silhouette varies and students can see how the type looks from all angles. The acetate screen gives clear translusion and permits a sharp image and clear-cut vision from all angles.

The design was scaled to size by Instructor Charles A. Wright and has proved highly successful.

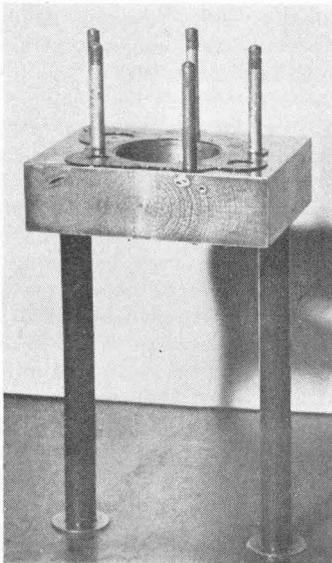
SALVAGED SCRAP SERVES AGAIN



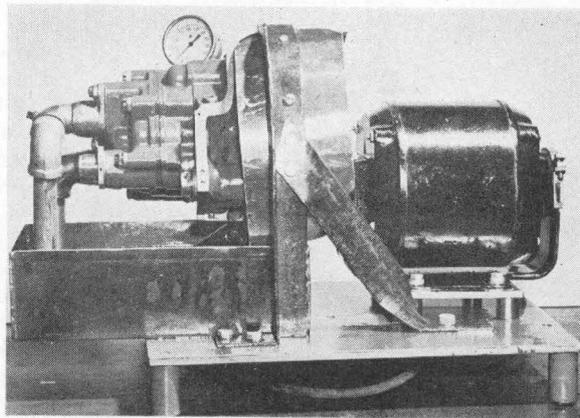
Mounting plates fashioned from old automobile fly-wheels permit handling of different sized cylinders on the grinding machine.



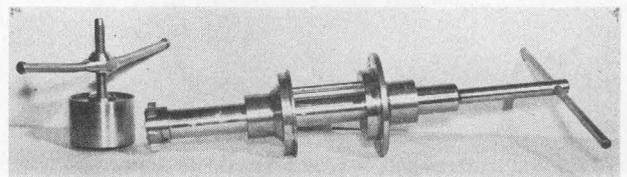
Odds and ends of scrap material went into construction of this starter tester, used to determine proper clutch adjustments.



Serving a three-fold purpose, this oil pump jig allows speedy assembly, proper alignment and a check for faulty parts.



Out of the junk pile rose this oil pump tester which allows checking of overhauled pumps under actual running conditions.



Pulling and boring of master rod bearings is a simple task with these jigs—a pulling unit at left and a boring bit at right.

PRODUCTION BUGS

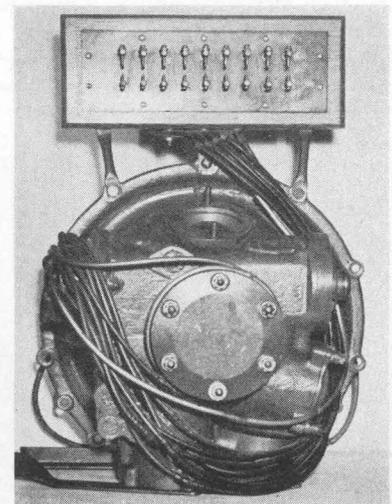
Production bugs, the desire to do a better job in less time, and the sometimes inability to obtain a specific tool or machine has resulted in a host of inventions and "home-made" devices at Southwest Airways' Overhaul Depot at Thunderbird Field.

On this page are pictured a number of the time and labor saving machines and jigs, all of them contributing to the successful expansion and efficient role the Overhaul Depot plays in the pilot training effort.

Impressive feature about every device pictured here is that all are products of the scrap heap. Each machine or jig was fabricated from some castoff. Mended or, salvaged bits of aircraft or auto parts, chunks of angle iron and boiler plate reclaimed by resourceful inventors and fashioned with American ingenuity have resulted in useful tools—tools that will help speed the victory.



Testing carburetors is simple with this unit which builds proper pressure by means of a variable level fuel tank.



Fashioned from discarded material, this magneto tester facilitates checking of Lycoming ignition systems.

I TRAINED AT THUNDERBIRD II

By A/C MARVIN D. RILEY
Class 44-G

An eager bunch of cadets bound for Thunderbird II sleepily step off a train in Phoenix in the early morning.

I am among the first to spot another group of cadets at the station who are just leaving the Southwest school for basic training. We stand around and listen to them as they tell us of their experiences at the training field where we will soon start our flying.

We already are sold on Thunderbird before we ever climb into the big, long buses that take us to our new home in the midst of the sagebrush and cacti in Paradise Valley. After what seems an interminable ride through rugged hills, endless cacti, and sagebrush, we come over the crest of a rise and there below us in the middle of the valley lies Thunderbird II. It appears very restful, except for continuous streams of airplanes that wing their way in every direction as far as our eyes can see. At last, we think exultantly, we are going to start our actual flying training.

After we have enjoyed a delicious meal of pork chops with all the trimmings, we are called into the recreation hall to listen to welcoming speeches by our Commanding Officer, and the Commandant of Cadets.

Our Flight Surgeon makes us realize the importance of keeping fit while flying. He also assures us that air-sickness is only a state of mind. "If you believe you will be sick, you probably

will be, so don't give it a thought," he says. Some of the fellows don't believe him though, and go and get sick anyway.

We are assigned to separate flights now. We are marched to the supply warehouse and draw our sheets and blankets. The same day we also are issued our flying equipment. We really are getting started now, I think. We go back to the barracks and everyone exclaims how good we look in our new working clothes. But when are we going to start flying? That is the question on every man's lips.

Our first day on the flight line is more or less a matter of becoming acquainted with the airplanes we will be flying and the civilian instructor who is to teach us the not too gentle art thereof. We are given instruction sheets on local flying regulations, along with "poop" sheets for the plane itself, and are told to come back the next day prepared to start our flight training.

The next day is a great day for everyone. We are going to be taken up in the air for our first "Dollar Ride." This is an awful lot of airplane, I think. I begin to wonder which one of us is going to come out on top in the battle that lies ahead in the next two months. But right then I make up my mind that I am going to master this flying mass of ribs, spars, and engine—or die in the attempt. Here is the opportunity to begin the fulfillment of my lifelong

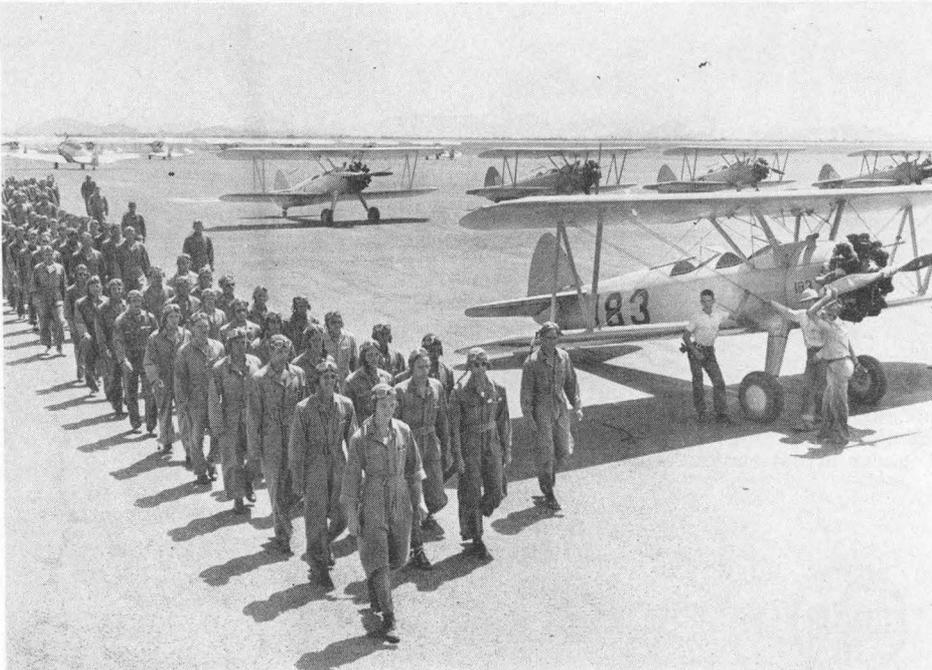
ambition; to fly, and fly better than anyone else in the world.

As we progress day by day, other interests come to us. They are not as interesting or as thrilling as the actual flying, but nevertheless, are very important to our training. We begin learning things in the ground school. They tell us how and why an airplane flies, why we must learn to know when an airplane is not being flown correctly, how to operate the various cockpit controls and why they are necessary in the proper piloting of a plane. We learn how airplanes are constructed, that a large bomber will not stand the strain of fast maneuvering such as a fighter will. We learn about the multitude of mechanisms that are hidden beneath the sleek exterior of the fuselage and how every one of them is vital to the safe operation of our aircraft.

All the time we are gaining knowledge from our books, we are also becoming more proficient as pilots. Through our own grim determination to fly, and our instructor's constant corrections and instructions, we are gradually working ourselves towards that greatest moment in a pilot's life. The solo flight! Finally, after the usual check ride by one of the squadron commanders, the time comes and my instructor climbs out of his cockpit and says it is all up to me now. I force a weak smile and he waves reassuringly to me as I advance the throttle and taxi to the take-off area. Now under full throttle I am racing over the ground, the airplane is in the air! To think I did it all by myself. There I am coming in for my first solo landing, and it is a fairly good one, too. I never have felt better in my life.

After the first thrill of soloing has diminished, the days following are filled with steady instruction and practice, trying to perfect all the maneuvers that are demonstrated by my able instructor. Ground school occupies a part of our time and we rapidly are beginning to understand how very important the things we learn there will be. We are taught to know where and what to look for when an engine is not running smoothly. We learn about critical altitude, service ceiling, absolute ceiling, the different horsepower ratings, brake horsepower, rated horsepower, and developed horsepower. We have to know the correct operating procedures for engines in order to receive full power from them and make them last longer through smooth operation.

Weather is one of our major subjects. It is one of the things that must be understood and studied by any pilot, so



CADETS SING as they march to and from the flight line at Thunderbird II, Southwest's primary school in the Valley of the Sun.



FLYING MANEUVERS seem less complicated to Cadet Riley when explained by his instructor, Les King.

that he may safely reach his chosen destination with the least amount of danger to himself and his crew. We are taught how to read and decode teletype sequence reports, weather maps, and the reports on winds aloft. Although it takes years of training to make a good meteorologist, we are becoming firmly founded in the basic fundamentals of weather in our short two-month stay.

Then we are introduced to that maze of instruments and gadgets that flies without leaving the ground, the Link trainer. It is a queer looking, earth-bound, airplane where we will begin to learn the rudiments of "under-the-hood" piloting. The Link trainer instructor says we will soon be able to fly long distances over the overcasts, never seeing the ground, and come down and land our airplane entirely on instruments. It is pretty baffling at first, trying to maintain a constant airspeed, keep the plane level, and watch all the instruments at once.

Each day on the flight line now is more and more interesting. My instructor, Mr. Lester King, is teaching me new maneuvers as fast as I can learn them. Acrobatics are next on the curriculum. That is where the real thrill of flying begins to come in. How well I remember my first solo loop! I have pulled up the nose too slowly and consequently stall out completely at the top of the loop. It is a queer feeling to have nothing but clear blue sky all around until the airplane falls off on a wing and I recover. We all learn things by making mistakes, and I learn to do

a loop by doing just that. Then comes the time when all the prescribed maneuvers have been demonstrated to me and it is only a matter of persistent endeavor to perfect them as nearly as possible before I leave for basic training. Hours and hours of practice on slow rolls, snap rolls, loops, altitude-gaining, chandelles, lazy eights, and those hard-to-come-out-right Immelmans occupy a great deal of my time in the days following. A certain feeling of confidence in the airplane and myself is being bred into me, although I never will be altogether satisfied with the execution of any of my maneuvers. An airplane is something that should be treated with great respect at all times, and it will rarely, if ever, let you down in a tight spot if it is being flown correctly.

The end of primary flight training is in sight. Final flight checks are being given every day and the ground school is preparing us for the final written examinations. Some of us are casting anxious eyes on our time sheets, wishing we had taken advantage of those little five and ten minute periods that we have wasted in the preceding weeks.

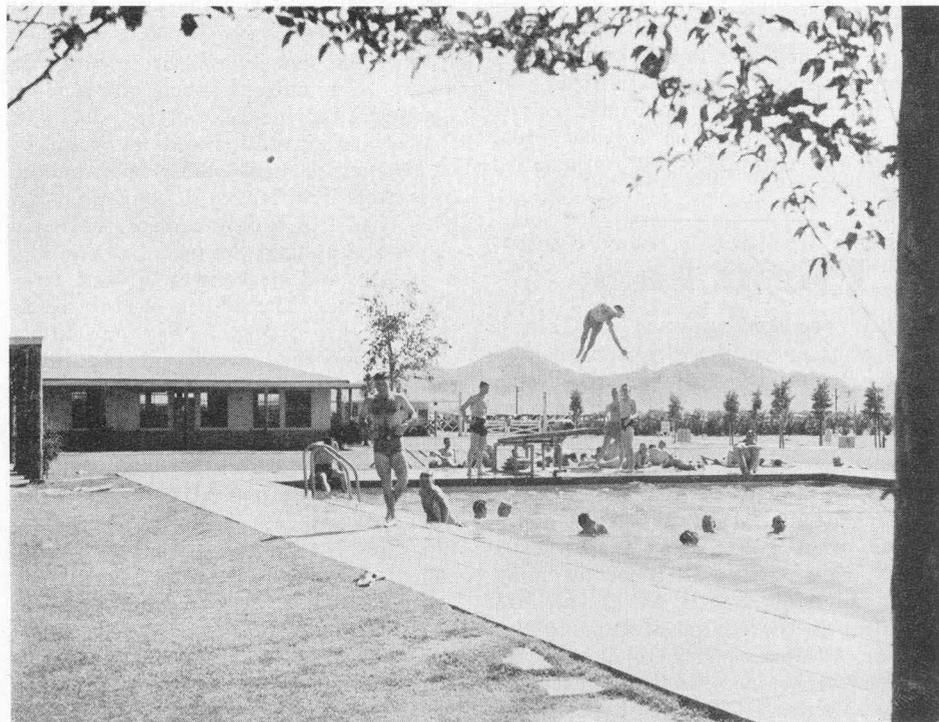
I now have made up my mind that a medium bomber is the plane that I will like most to fly. My instructor says he too thinks I will be at my best in a medium bomber and forthwith recommends me for my choice.

Everything is coming along fine. My final check rides have been completed,

and I actually receive an "Excellent" rating in my physical fitness test. The ground school quizzes are passed with fairly good grades, even in the aircraft recognition test, where I thought I never would be able to tell a Focke-Wulf 190 from a P-47, or Japanese Betty from an American B-26. Also, the navigation test, with a cross-country course to plot, along with questions on all the various instruments we have studied in the weeks before.

The graduation dance is held at the Hotel Westward Ho in Phoenix and is a great success for our class of 44-G, as is the graduation parade held in our honor. There are not a few heavy hearts among us as we march snappily past the reviewing officers. We remember what a pleasant home Thunderbird II has been to us the last two months, but we are going on to more advanced training.

As we pack our belongings into our barracks bag that last day we can't help feeling a touch of remorse at leaving. Perhaps it is because we have become so well acquainted with our tactical officers, instructors, and other members of the post. It seems as though each one of the departing cadets is leaving a part of himself behind at Thunderbird Field. For myself, I shall always remember this field in Paradise Valley as the beginning of a life-long career started by proper instruction and discipline, and it will always remain in my memories as a part of the happiest days in my life.



PHYSICAL FITNESS is an important requisite to flying. At Thunderbird II, daily periods are devoted to swimming and more routine calisthenics.

RAY TESTS HELICOPTERS

Permission has been obtained from the War Department to publish the fact that Company Vice-President Jim Ray recently has been flying several of the latest model helicopters.

Officials revealed that an urgent request has been received, asking that Ray be granted a leave of absence to personally conduct a series of primary test flights on the twin-rotor helicopter developed by the Platt-LePage Aircraft Company.

In the course of his leave from company duties, Ray flew the Sikorsky R4, as well as the new Platt-LePage XR-1. Both models now are being tested by the Army Air Forces and other branches of the military for possible war use.

Prior to joining Southwest, Ray had earned international fame as an authority on rotary wing craft. During his nine years as an official of the Autogyro Company of America, he flew more hours in more types of autogyros than any other man and still is undoubtedly one of the nation's most experienced pilots, with several thousand hours to his credit in various rotary wing models.

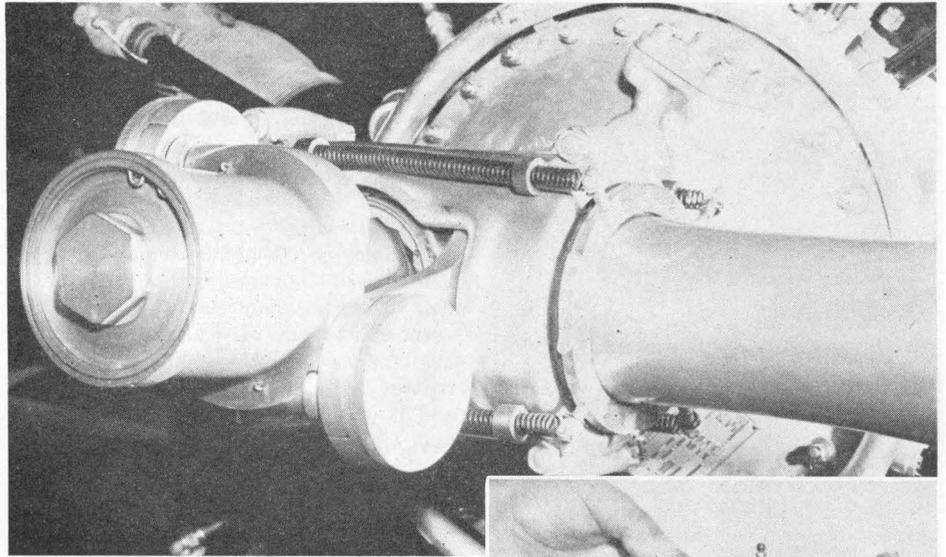
In addition to the aforementioned test work, Ray has been consulted many times in recent months by aircraft companies concerning problems in the design and operation of helicopters. It will be recalled that it was he who prepared Southwest's application for air mail and air express helicopter routes in the metropolitan Los Angeles area, now on file with the Civil Aeronautics Board.

Flight Facts

When you look upward and see a plane way up in the sky, the chances are ten to one it's a fledgling cadet in a training plane and not an airliner.

Aeronautical Training Society, liaison agency for 64 Army contract flying schools, of which Southwest is a member, made public a study this month showing that cadets from such schools are flying roundly ten times as many plane miles a month as all airlines operating in the United States. In November, 1943, according to C.A.B. records, the eighteen domestic airlines flew 9,436,663 miles. Compared to this, cadets in ATS schools flew 94,500,000 miles.

PROP LUBRICATOR DESIGNED



Aviation mechanics and repair men everywhere—especially in regions where dust and grime conditions prevail—will have a warm welcome for the latest invention of Falcon Field Maintenance Superintendent Joe Wischler, who recently perfected a device that permits lubrication of propeller thrust bearings without disassembly of the prop itself.

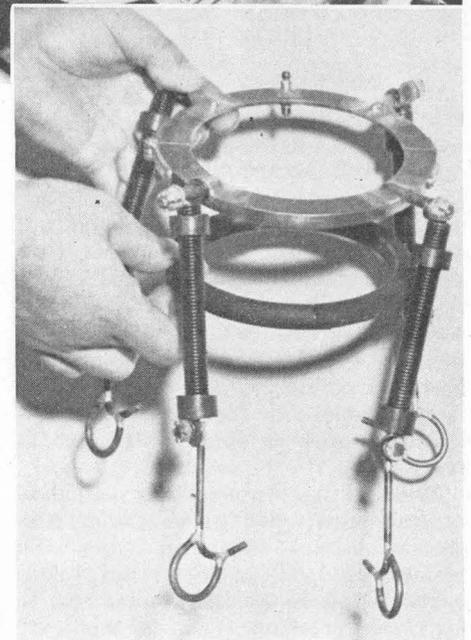
Noting that it was an all day's job for two men to remove the prop, take it apart, clean and grease the bearings and put it back on the plane, Wischler sought some method of saving time and money for the company and the army training program.

With the new lubricator, it's only a matter of minutes to shoot grease into the thrust bearings.

Wischler's invention consists of a piece of ordinary ¼-inch rubber hose, spliced to a circle by a length of copper tubing. This hose fits snugly around the blade shank and against the prop hub forming a gasket and preventing grease from blowing out. The hose is perforated to take a grease fitting and has four outlets on its under-side through which the lubricant is distributed into the propeller.

The hose-gasket is held firmly in place by a split backing plate, hinged on one end, spring locked on the other and machined to fit the curvature of the hose. This backing plate is held in position by four springs which hook over the opposite end of the propeller hub. Each spring has two rubber buffers which prevent chaffing of the hub.

A grease fitting on the backing plate fits into an opening in the rubber hose. Grease is applied under pressure and seeps through the holes on the underside of the hose, through and around the



A DEVICE to lubricate propeller thrust bearings without disassembly of the prop itself has been invented by Falcon Field's superintendent of maintenance.

thrust bearings thus insuring smooth, constant operation at all speeds.

Wischler, who has devised countless mechanical and safety aids for Falcon's ships, pointed out that under normal conditions grease should remain in bearings for a long period of time. Because of this, no provision is made to provide lubrication between required inspections. Desert dust and heat conditions, however, dry out bearings in short order and greatly affect the smooth change of pitch operation.

Join the Payroll Savings Army and top that 10 per cent.

THUNDERBIRDS RECEIVE CITATIONS

Civilian flight instructors at Southwest Airways are proud of their cadets, of the awards they are receiving for extraordinary achievement and meritorious action "over there." They know that every German or Japanese plane brought down is a tribute to the quality of their teaching.

Typical of the daring exploits of Thunderbird cadets who bear out their early training is the action of First Lieutenant David W. Emch, Class 42-G, winner of the coveted Silver Star award for gallantry in action over Wewak, New Guinea last August. Lieutenant Emch's citation reads as follows:

"For meritorious achievement while participating in twenty-five operational flight missions in the Southwest Pacific Area, during which hostile contact was probable and expected. These operations included escorting bombers and transport aircraft, interception and attack missions and patrol and reconnaissance flights. In the course of these operations, strafing and bombing attacks were made from dangerously low altitudes destroying and damaging enemy installations and equipment. Throughout these flights, outstanding courage, ability and devotion to duty were demonstrated."

Lieutenant Emch also holds the Distinguished Flying Cross award for participation in two hundred hours of operational flight missions.

The courage and determination of Lt. Francis A. Evans, Class 42-D, a pilot with the 11th Air Force, is clearly set forth in his citation for the award of the Distinguished Flying Cross:

"For heroism displayed on February 13, 1943, while piloting a pursuit plane which encountered five Japanese Zeros. Regardless of the fact that he and one other pursuit plane were by themselves and outnumbered, they immediately attacked the enemy and pressed home their attacks time after time until only two Zeros remained. These escaped by seeking refuge over anti-aircraft around Kiska Harbor. The unhesitating courage which Lieutenant Evans displayed when they attacked against heavy odds, and the skill and determination with which the attack was executed, is worthy of the highest praise and bestows great credit on the Army Air Force."

Of Lt. Willis E. Brady, Class 42-B, the army records state his D. F. C. was in recognition of:

"Extraordinary achievement while participating in an aerial flight over Lakanai airdrome, Rabaul, New Britain, on January 31, 1943. This combat crew took off from an advanced base with a heavy load of bombs to attack enemy airdromes and shipping in the Rabaul area. Successful runs were made over

THE BOX SCORE

The Roll of Honor at Thunderbird Field this month reached a total of 599 decorations won by former cadets. The complete list now shows:

- 1 Distinguished Service Medal
- 23 Silver Stars
- 93 Distinguished Flying Crosses
- 15 Oak Leaf Clusters to D. F. C.'s
- 196 Air Medals
- 254 Oak Leaf Clusters to A. M.'s
- 13 Purple Hearts
- 4 Soldiers Medals

Official confirmation from the Historical Division of the War Department is the basis upon which additions to the list are made.

searchlight batteries near the airfields and fires were started by incendiary clusters, while approximately 5,000 rounds of ammunition were expended during the numerous strafing attacks on other searchlight and anti-aircraft batteries . . . As a result of this mission, twenty large fires were started on Lakanai airdrome and considerable damage was done to enemy installations. The courage, persistence and devotion to duty displayed by these combat crew members who volunteered to perform this hazardous mission, involving exposure to hostile fire for a period of five hours, are worthy of the highest commendation."

Lt. Brady later received the Air Medal for meritorious achievement while participating in an aerial flight over Kavieng Harbor, New Ireland.

" . . . After proceeding through adverse weather conditions and severe electrical storms, which caused three of the accompanying airplanes to turn back, this aircraft reached the target area. A 7,000 ton enemy cargo vessel was sighted and a bombing run was made from an altitude of 200 feet. Bombs were dropped along each side of the vessel which was last seen sinking bow first . . ."

Two members of Thunderbird's Class 42-H were decorated recently for outstanding feats in carrying out missions in badly-damaged heavy bombardment aircraft. One was Lieutenant William J. Dooley, holder of the Air Medal with three Oak Leaf Clusters, and the D. F. C., described by the official War Department citation as follows:

"For extraordinary achievement, while serving as pilot of a B-17 airplane on a bombing mission over Germany, July 28, 1943. Lieutenant Dooley's plane was subjected to repeated and determined attacks by enemy fighters, being heavily damaged by 20 mm. shells. He nevertheless, succeeded in staying with

the formation and continuing on to the objective, which was successfully bombed. On the return trip, with only one engine of his plane working properly, Lieutenant Dooley managed to reach the English coast and effect a crash landing without injury to his crew. The courage and skill displayed by Lieutenant Dooley on this occasion reflect the highest credit upon himself and the Armed Forces of the United States."

The other, Lt. Robert M. Chilcott, won the D. F. C. for distinguished and meritorious achievement while participating in aerial flights in the Middle East Theater of Operations.

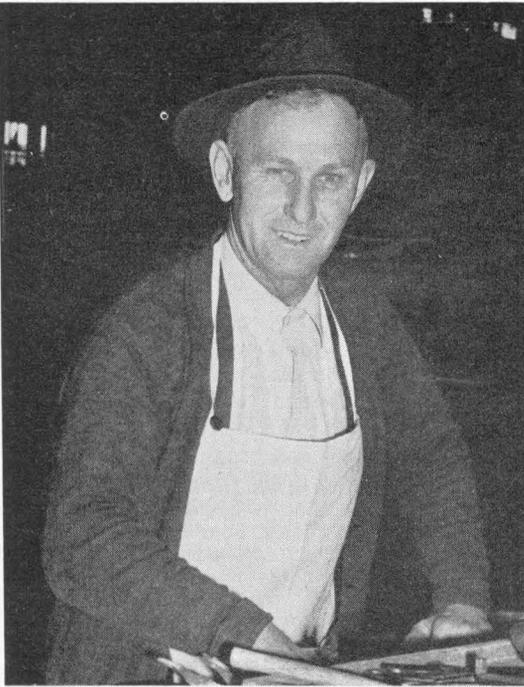
"On May 6, 1943, Lieutenant Chilcott commanded a heavy bombardment aircraft on a bombing mission against enemy installations in Italy. When nearing the objective engine failure forced him to head for a friendly airdrome. En route his plane was hit by enemy anti-aircraft fire wounding him and four of the crew members and rendering the rudder control cable and main hydraulic line inoperative. Flying on without the use of the rudder he experienced more engine trouble until only one engine remained at the time when he reached the approach to the friendly airdrome, forcing him to crash-land into the sea. Although painfully wounded, his superb airmanship and coolness under difficult conditions made possible the landing of his plane and the immediate rescue of all except one crew member."

For seventy-five operational flight missions in the Southwest Pacific Area, during which hostile contact was probable and expected, Lt. Thomas E. Carr, Class 43-B, won for himself the Distinguished Flying Cross and Air Medal.

" . . . These operations consisted of dropping supplies and transporting troops to advanced positions. The flights involved flying at low altitudes over mountainous terrain under adverse weather conditions in an unarmed transport airplane and often necessitated landing within a few miles of enemy bases . . ."

Other winners of the Air Medal for participation in aerial sorties against the enemy:

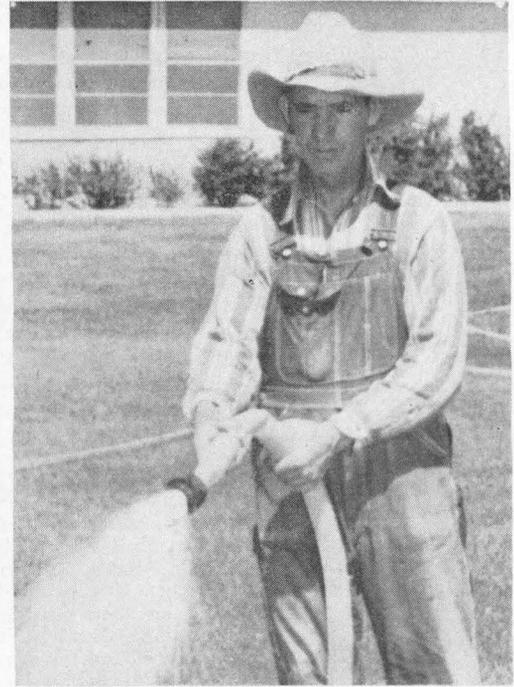
Burton J. Anderson, 43-D; Delmar W. Atchison, 42-B, (three clusters); William A. Bechter, 42-I; John K. Brush, 42-I; Richard T. Carrington, 42-H; Howard E. Clausen, 42-H, also Purple Heart; Carl F. Ewan, 42-J (seven clusters); Lester R. Gillan, 42-H (five clusters); John W. Harsh, 42-I, (two clusters); Homer D. Hodgson, 42-J, (seven clusters); Lawrence E. Horras, 42-E, (three clusters); Phill R. McMills, 42-G, (seven clusters); Richard S. Moore, 42-F; Meade L. Morris, 42-K; Orson T. Smith, 42-E, (four clusters).



Woodworking expert in the Overhaul Depot is Rice Pettus, with Southwest the past year. It's his job to repair wings, installing everything from a tiny brad to an entire new spar.



Every day is "Saturday night" for Southwest training ships which are given a daily bath. Wielding a wicked mop above is Atha W. Roberts, one of the wash crew at Thunderbird field.



"Rainmaker" for Thunderbird II is Andy Williams, one of the corps of gardeners who keep the field beautifully landscaped. Five hoses are used to flood the grounds and keep things growing.



Mae Scott (left) and Mattie McCullough, kitchen workers at Thunderbird, waded through mountains of potatoes—from 400 to 800 pounds each day—to stroke the appetites of cadets and workers.



Falcon planes burn thousands of gallons of gasoline each month training cadets for the American and British Air Forces. And it's Margaret Roberts' job to keep track of the consumption records.



Methodical maintenance checks are given all Southwest planes to insure a maximum of mechanical efficiency. Here Leroy Benson inspects the oil screen on one of Thunderbird II's ships.



Affable Ruth Wilcox knows what makes Falcon radio communications click. Her job is servicing the sets and making necessary repairs. Here she checks a primary trainer "intercom."



It was moving day at Cargo Division's San Bernardino office when Carrie Olson (foreground) and Virginia Loren were discovered on tip-toes neatly arranging a cabinet full of supplies.



Curtis Jones is the "commuting kid" of Thunderbird. Driver of the field's station wagon he carries supplies, mail and passengers and his traveling—like the legendary "Flying Dutchman's"—is never over.

WAR WORKERS

The old adage "a chain is no stronger than its weakest link" holds true in all enterprises. Strong links in Southwest Airways' success chain are its industrious employees—men and women who daily perform tasks such as are pictured on this page. Workers such as these are the foundation blocks without which no business can be successful. Dedicating their efforts to the training of fighting men they contribute in immeasurable manner to our nation's victory effort.



Parachutes—the pilot's life insurance—are checked in and out of pools at Thunderbird. In charge of hangar four's chute pool is Adolf Michaelis, behind the counter at the right.



Flowing a fine weld at Cargo Division's maintenance hangar, "Crump" Bates does fabrication work on a parts rack which will afford better facilities at the air-freight division.



Each engine part at the Overhaul Depot is carefully magnifluxed to guard against faulty, fatigued units. Julia Furnish magnitizes each part, sprays on rust filings and kerosene and then inspects for flaws.

CADETS USE WAR ROOMS

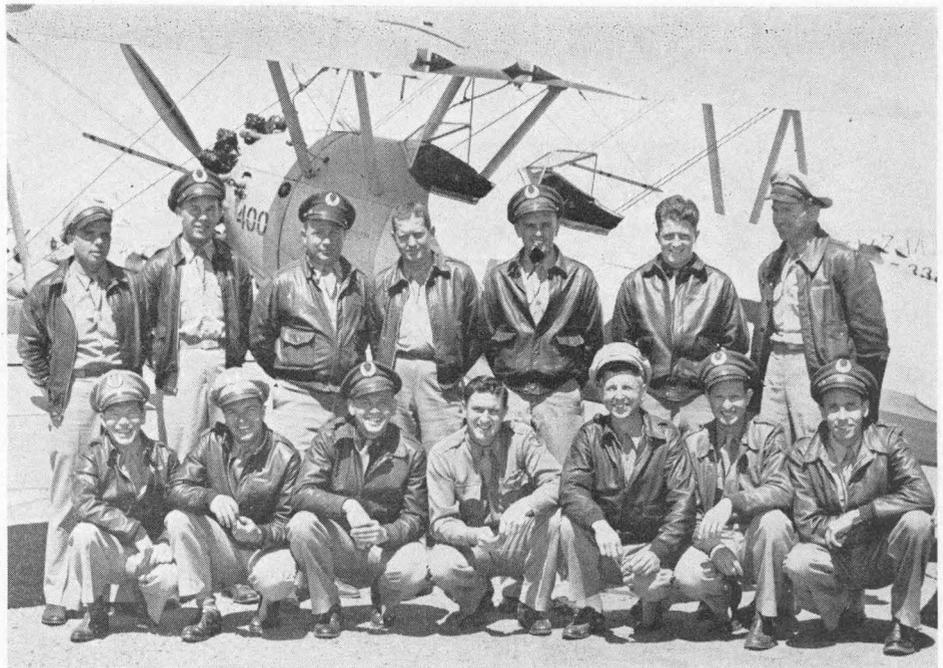
War Rooms at Thunderbird and Thunderbird II have been converted from leisure-hour reading rooms to spare time classrooms by ambitious cadets who now use them as aircraft recognition centers.

Cadets get plenty of opportunity in ground school to look at hundreds of silhouettes, models, charts and pictures of hostile and friendly aircraft. But for many who realized the vital importance of whetting recognition ability to split-second identification this was not enough.

And Southwest Airways, appreciating merits of the cadet enterprise, has encouraged their efforts at both fields.

At Thunderbird the ground school provided a projector and slides for the war room and knots of cadets now gather around the screen playing a game of identifying the planes—a game whose score someday may total the difference between “kill or be killed.”

At Thunderbird II cadets compete for a war-bond prize given by Southwest Airways. A different plane picture is posted daily captioned, “Would you shoot this plane?” The picture may be a German, Jap or Allied plane whose general appearance and outline are perplexingly similar. Cadets write their answers, sign their names and place the slips of paper in a locked ballot box. At the conclusion of the term answers are tabulated and the winning cadet presented the Southwest prize.



POSED AGAINST one of the sturdy Stearmans in which they instruct are members of Squadron 3, winner of the recent safety contest at Thunderbird II. Left to right, front row: Paul Wertheimer, Aaron Spotswood, Edgar Matson, John Bowers, Horace Hibbard, George Seese and Edward Salmon. Back row: Fred Logan, Robert Reitfors, Marion Snyder, James Baldwin, Lowell Armstrong, James Gannon and Ray LeFever.

Heads Council

Accredited representatives of Aeronautical Training Society members in the California-Arizona area met last month in Los Angeles to organize a Public Relations group to be known as A.T.S. Western Information Council.

Southwest's representative, Public Relations Director Paul G. Sturges, was elected chairman of the new group.

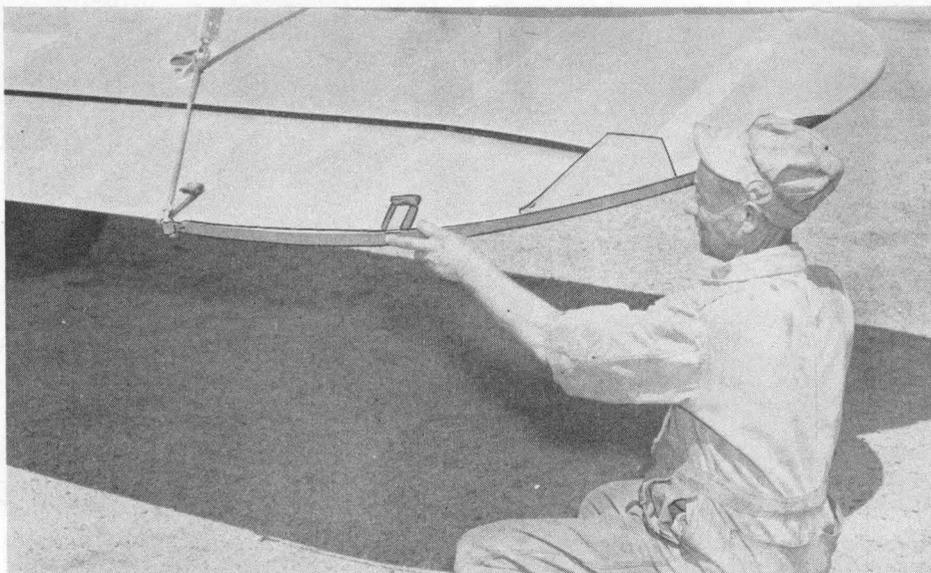
New Program

A revised training program announced recently from AAF Training Command headquarters at Fort Worth, Texas, is now in effect at Thunderbird and Thunderbird II, according to Southwest officials.

The new program, which adds one week to the primary training phase—nine weeks to the entire pilot training period—is a reversion to the “ten week per phase” system employed before Pearl Harbor. The reduction of the phases from ten to nine weeks was made shortly after the U. S. entered the war and maintained up to date in order to meet the critical and heavy demand for pilots for the Air Forces in all theaters.

Now that requirements of the combat Air Forces are being filled adequately, Training Command officers explained, it is possible to slow down the tempo of pilot training to provide more time for students to absorb the complex instruction and to reduce the mental and physical pressure under which they study and practice.

Assuming no changes in the interim, combat units will benefit from the cumulative effect of the new time schedule gradually over a period between now and late 1945 as each successive shipment of pilots reports with more training than the preceding shipment.



SAFETY MEASURE for grounded ships which must be towed out of brush country is the aleron slot cover, designed and built by Ralph Barton (above), Thunderbird II maintenance worker.



NORMA HOLT



BETTY JUNE ELKINS



MAXINE MEEKER

THE NOTEBOOK BRIGADE

Like all secretaries, the girls at Southwest spend their days at typewriters—

There's Norma Holt, secretary to Bill Sims, Falcon's field manager . . . A WAVE awaiting her call to Hunter College for basic training, Norma has the distinction of scoring the highest grade on her aptitude test ever to be made by a Wave candidate enlisted through the Phoenix recruiting station.

There's Betty June Elkins, secretary to Ted Mitchell, Cargo operations manager . . . Born in Los Angeles, Betty finished high school in Needles, Calif.,

and in 1938 was chosen "Miss Needles" to represent that town at the San Bernardino Orange Show.

There's Maxine Meeker, secretary to Benny Moeur, Thunderbird's field manager . . . Born in Pueblo, Colorado, Maxine attended school in Omaha, Minneapolis and Chicago. A good swimmer, she is an accredited life guard.

There's Shirley Hendricksen, secretary to Felix Kallis, Overhaul's general manager . . . A former toll supervisor for Bell Telephone, Shirley started out as an operator; was the first girl to obtain a

supervisory position in six months.

There's Marie Wright, secretary to John Swope, Thunderbird II's field manager . . . An enthusiastic sports lover, Marie played forward on the basketball team the year Berkeley Academy won the East Bay championship and silver cup.

There's Florence Judd, secretary to Personnel Director Paul Marston . . . A native Arizonan, Flo graduated from Gregg business college in 1937; worked as a legal stenographer in a local law firm for six years; joined Southwest in March, 1943. Once won a cash award and first prize ribbon in a local dancing contest.



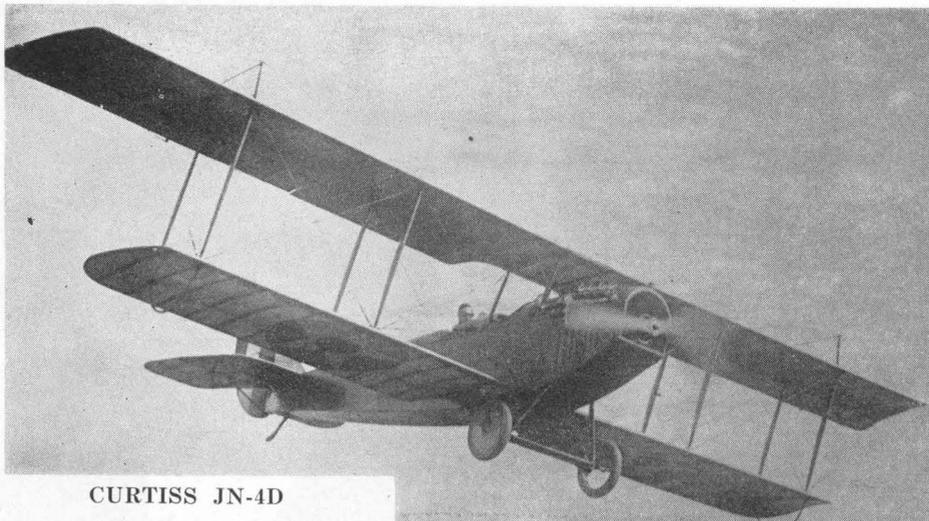
SHIRLEY HENDRICKSEN



MARIE WRIGHT



FLO JUDD



CURTISS JN-4D



CURTISS JN-4H



DE HAVILLAND DH-4



DE HAVILLAND DH-4B

YESTERDAY . . .

Any comparison of World War I and II training planes undoubtedly should begin with a description of the "Jenny", famed Curtiss JN-4D, and its later component, the JN-4H.

"Jenny" was powered by an OX5, 90-100 horsepower motor; weighed 1,525 pounds empty (useful load 491 pounds); had fuel capacity for 21 gallons; maximum speed 73 (mph), cruising 58 (mph); landing 45 (mph), service ceiling 6,500 feet; climb (ft. min.) 335; cruising range 225 miles.

In 1917 there was an almost entire absence of aviation interest in the United States. The total number of military airplanes possessed by the government amounted to about 60, and the entire personnel of the air services totaled about 100 officers and 1,300 men. Nine months after entrance into hostilities, the membership of the air services totaled nearly 200,000 of which 78,000 were in France, England and Italy.

Beginning fliers took their first rides in the JN-4. Fifty flying hours later they were in a pilot's pool in France, a "hot" service pilot awaiting assignment to a fighting squadron.

Today, higher horsepower, sturdy landing gears and tested parts all make for better performance and safer training.

On Thunderbird and Thunderbird II flight lines are sturdy PT-17's, for years known in aviation circles as the "Stearman." Used by both the U. S. Army and the U. S. Navy, and by the aviation training services of many of the United Nations as well, it is noted for its extreme rugged qualities. Its design and construction make of it one of the safest primary trainers in the history of American aviation, for it provides maximum vision for the pilot and, in the event of a nose-over in practice landings, renders maximum protection to the fledglings.

The PT-17 boasts a 220 horsepower Continental engine, weighs 2,680 pounds; has fuel capacity for 46 gallons; maximum speed 123.5 (mph), cruising 96 (mph), landing 54.7 (mph); service ceiling 13,200 feet; climb (ft./min.) 960; cruising range 380 miles.

Another well known and widely used primary trainer is the Fairchild PT-19.

Its statistics: Empowered by a 175 horsepower Ranger engine; weighs 1,749 pounds empty (useful load 716 pounds); has fuel capacity for 45 gallons; maximum speed 135 (mph), cruising 120 (mph), landing 48 (mph); service ceiling 16,000 feet; climb (ft./min.) 835; cruising range 480 miles.

One of the most outstanding military aircraft of the first world war was the

.... AND TODAY

DH-4, outcome of aircraft experiments started by the DeHavilland Company in 1911.

It was a two-seater fighter and long distance reconnaissance machine, fitted with a 250 horsepower Rolls Royce engine. Later it was fitted with a 200 horsepower B. H. P., R. A. F. 3A, Liberty 12, Lorraine and Hisso, and other types of engines. During the first war, the DH-4, and its later component, the DH-4B, did valuable work on the fighting fronts. For the last nine months of the conflict, a squadron of these machines were used continuously for carrying staff officers and cabinet ministers between London and Paris, and headquarters in France. The DH-4 attained a speed of 130 mph and climbed 10,000 feet in 10 minutes. Used by practically every country who had even the merest semblance of an air force, the Army Air Service of the United States used the DH-4's as standard observation-attack-bombers, and later in the early pioneering flights of the air-mail service. The DH-4 proved to be more than just a training plane. It was suitable for fighting, and practically every kind of military duty.

The primary phase alone in today's pilot training course calls for 65 hours of flying—more than many a World War I flier had when he went into combat. It is in basic school that World War II cadets begin sharpening and shaping their flying into combat maneuvers.

Their planes—military aircraft heavier and twice as powerful as their primary trainers—North American BT-14's and Vultee BT-15's.

The BT-14 is empowered by a Pratt and Whitney 450 horsepower engine, weighs 4,512 pounds; maximum speed 180 (mph), cruising speed 147 (mph), landing 56.6 (mph); service ceiling 21,650 feet; climb (ft./min.) 1,410; cruising range 765 miles.

Statistics on the BT-15: A 450 horsepower Wright engine, weighs 4,307 pounds; has a maximum speed of 167 (mph), cruising 130 (mph), landing 62 (mph), service ceiling 19,200 feet; climb (ft./min.) 1,360; cruising range 780 miles.

By comparing the planes of the two World Wars, it becomes easy to realize the far-reaching progress made by aviation in the past 25 years. In most cases the planes used to train today's aviation cadet are vastly superior to the front-line ships which bore the brunt of fighting 25 years ago.



BOEING PT-17



FAIRCHILD PT-19



VULTEE BT-15



NORTH AMERICAN BT-14

PERSONAL SKETCHES OF EMPLOYEES

It's a small world!

Irish Bill Kelly, born in Illinois, no doubt still would be in the Middle West, if he hadn't known somebody who knew somebody at Southwest. Which, incidentally, is the way a lot of flight instructors first heard about Thunderbird. They, in turn, wrote their friends, who told their friends and before long everybody knew about Southwest Airways.

They've all done well for themselves, too. Take Kelly, who started at Thunderbird as a flight instructor in February, 1942, was promoted to section commander a year later, and now is squadron commander.

Bill started flying in 1936, while attending the University of Illinois, and got his pilot's license in Peoria. Very much interested in airplanes, he bought half interest in Hawley Airport, and another half interest in the distributorship of Piper Cubs.

Asked if he owned his own airplane, Bill confessed he bought a whole carload to begin with, hired some mechanics to assemble the planes, and sold them all before he had a chance to fly one himself.

The twenty-seven year old flier holds a commercial license and instructor's rating, and his log book totals 2,500 hours. A great deal of his spare time is spent practicing "under the hood" flying to attain his instrument rating soon.

He's married, and equally proud of his two-months' old son and his Victory garden.



BILL KELLY

Any biography of Beverly Wood, figure-juggling worker in Thunderbird's payroll department, must be unique for one specific reason—she lists no town as "home".

Beverly, a beautiful brownette, explains it this way: "my father was advance man for a large construction concern and traveled extensively. I can't call any town "home" because I have lived in 24 states.

Such a hedge-hopping career probably would prove a serious handicap for the average school-going youngster. But not to Beverly. For in spite of the fact she never attended any one school for a complete year, she managed to skip a grade somewhere along the line.

She attended Oklahoma University, and

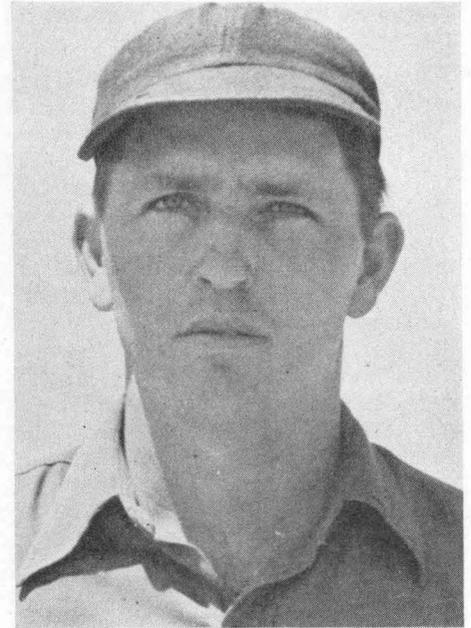


BEVERLY WOOD

studied art and fashion designing which she plans to make her career. She has done much commercial designing and modeling and creates most of the chic togs which crowd her own wardrobe. Proof of her ability as an artist is membership in Kappa Phi, national art honor organization.

Sketching and designing take most of Beverly's spare time, but she's the athletic type, too, with swimming ranking just about tops on her list of recreational favorites.

Beverly has worked for Southwest Airways for a year and a half. She came to Arizona to spend her vacation with her brother, became impressed with the need for civilians in war work and signed on with Thunderbird.



PAT PATRICK

Pitching ball is one of the things Pat (his real name is Harry) Patrick, Thunderbird II crew chief, likes to do the most. And the batsmen who have been trying to beat him for the last five years around here can understand why.

The first season he pitched he won what was perhaps the longest game in Arizona softball history—a 21-inning joust lasting three hours, 20 minutes. In 1940 he was a real workhorse, toiling for three different clubs, pitching 85 games and winning 52. He had stretches of as many as 28 consecutive scoreless innings. Once he pitched nine games in six nights, winning seven. On another occasion, two of the teams for which he hurled were matched, so he pitched both and "beat himself" 2-1 in eight innings.

For the past two years Pat has played for Phalanx Fraternity, the only minor league team ever to win the Arizona and Pacific Coast championship. Twice he has participated in the national softball tournaments at Detroit, Mich.

Born in Phoenix 26 years ago, Pat has spent most of his life working the range and tinkering on automobiles. Once he tried working inside (as shipping clerk for a leather goods store) but his love for the outdoors and his fondness for machinery soon got the better of him. In 1943 he joined the maintenance staff at Thunderbird II as a mechanic's helper. Today he holds a C.A.M. license, and the title of crew chief.

This summer when Thunderbird II's softball team meets its opponents, it will undoubtedly be Pat's "sling-shot" arm that does the pitching.



Gossip and Hearsay

Two Grumman "Wildcats", piloted by Navy lieutenants, flashed through the air and landed at Thunderbird recently, midst oh's and ah's of excited Southwest employees and Army personnel. Later they demonstrated precision wing-to-wing fuselage formation flying for the admiring crowd . . . Former SH flight instructress, Pat Thomas, now Mrs. Jack Gladney, has joined the WASP's and is in training at Sweetwater, Texas.

Some people just aren't lucky. Take Bob Hannah, T'Bird ground school instructor, for instance. Six blowouts in as many days is bad luck in anybody's language . . . Gone from T-2 maintenance are Harvey Rudolph who left for the Army, and Sam Billings who went to Pearl Harbor.

Practically everybody on the Cargo Division is looking forward to Mehitabel's blessed event, mostly because everybody has money bet on when it's going to take place, and also because the winner gets to keep one of the kittens . . . Speaking of kittens, practical joker Frank Chestnut caused a great deal of commotion among fellow employees at T'Bird maintenance recently when he passed the proverbial cigar box full of cigarettes, announcing the birth of quintuplets. Mother and kittens are doing nicely, thank you.

Among interesting Southwest instructors we'd list T'Bird's Robert Emil Frese, one time assistant test pilot for Timm Aircraft; T-2's Frank Haberl, ex-member of the Cornell ski team, and Hubert Manis, who once was assistant entomologist at the University of Idaho . . . Howard Williams, T'Bird preflight crew, is an ambulance driver on off-duty hours.

Wedding bells rang recently for T'Bird flight instructors Hayward Haught, and Ray Howes; also Pat Patrick of T-2 maintenance . . . Cargo pilot Bill Brown is an advocate of weight lifting. In the last year he's added 25 pounds to his weight; developed his chest measurement from 38 to 42 inches.

From what we hear the last T'Bird safety contest dinner must have been the best yet. For verification, ask any of the flight accounting girls who at-

tended . . . On vacation to Los Angeles is Ruth Lassiter, T-2 mechanic . . . Rudy Cook, Cargo flight supervisor, places his golfing average in the 90's; would like everyone to know that the course he plays is a very difficult one.

Recent visitor at Falcon was Lt. John K. Greene, former student of Stan Cox. Lieutenant Greene is with the fourth ferrying group . . . Five "maple-maulers," Harry Anderson, Malcolm Moss, Paul Stoll, Ted Watters and Orval Graham, bowled a total of 2,963 points for third place in the Valley Tournament recently. The Overhaul boys missed first place by only seven points.

Fellow employees were forced to render first aid to one Jim Yerkes, Cargo purchasing agent, upon his return to the office from the depot recently. It seems that Jim accidentally lighted a package of matches in his pocket. Not wishing to make a disturbance, he calmly and nonchalantly removed the matches and smothered the flames in his hands . . .

The call, sent over the T'Bird P. A. system, for slightly used cadet "blitz" cloths was really authentic. It came from the ground school, whose overly-enthusiastic staff had decided to polish the demonstration Ryan in one of the classrooms. The job done, the ship was christened "Thunderbolt, Jr."

Cargo Pilot Bill Thompson, with nearly 4,000 logged air hours, recalls his most exciting trip (early in his flying career) as the one on which his airplane caught fire. Without a parachute, Bill rode the ship to within approximately ten feet of the ground, then jumped. He was unhurt, but the plane was completely demolished.

The Army and Navy claimed two more O'haul workers this month. Audrey Harper, who joined the WACs', and Phil Eastin, who left for the Navy . . . "All work and no play make Anna and Colleen dull girls" according to the T'Bird flight accounting femmes. Thereby they accounted for cake and candles on Anna Odom's and Colleen Close's birthdays.

Some students are much sharper than others when it comes to aircraft recognition, say Charles Wright and Bev. Wild-

er, T-2 ground school instructors. All of them enjoy the now-classic comparison between B-24's and PT's. "PT's have more wings and less engines." . . .

Judging from the technical conversation of Bill Kelly and Jimmy Lauderdale, T'Bird flight instructors, their victory garden is on a large scale. But when Walt Palmer, fellow instructor, whose acre-and-a-half ranch is his pride and joy, pinned them down he found it measured about 10x12 feet.

Ed Genereux, T'Bird maintenance, is the proud father of a baby boy . . . Neil Leiter, Engine Overhaul, is a grandfather! . . . Coke machine profits on the Cargo Line go to the Red Cross. "In the summer, we often contribute from \$30-\$40," says Frank Breen, stockroom clerk.

Rumor has it that there is a firm in the East from whom you can order nylon stockings. See Billie Bryant and Ella McCarthy, T'Bird administrative office, for particulars . . . Best wishes to O'haul's Beryl Champion, now Mrs. Ernest Rossteter, and to Grace Morrison, who recently wed Corporal C. G. Plaetz.

The following employees have signed up for the T-2 softball team: Edward Mamajek, Jack Bauer, Malcolm White, Carroll Gunnet, Edgar Jenkin, Francis Malody, Fred Kukal, Richard Luna, Sid Kruger, Sam Millanez, Arnoldo Fernandez, Frank Rosenstock, Alton Clark, Pat Patrick, Harold Martin, Tommie Horton, and Loren Conrad. Manager Eddie Tucker plans to enter the team in the Class A tournament.

Tiny Douthett, T'Bird flight instructor, spends a great deal of his spare time building more equipment for his miniature railroad. At present he has 280 feet of H. O.-gauge track . . . Back from vacations are Ted Sutphen and Bob Chambers, Engine O'haul.

Dispensing cigars like a beserk tobacco merchant, was T-2 Instructor Joe Trujillo, as he celebrated the birth of a daughter, Mary Ellen . . . Aircraft division supervisors, guests at a recent dinner meeting, were meek and silent, not at all the usual rollicking "coffee hour" gang, until several "ice-breaking" sto-

(Continued on Page 20)

TEN MONTHS 200 MISSIONS

Ten months and 200 missions—that's the record of the "Bobcats," veteran medium bomber group with the 12th AAF in Italy, according to latest reports from one member of the group, Lt. William McCue, Thunderbird II, Class 43-D.

In a campaign which reads like the history of the Allied air offensive in the Mediterranean, the "Bobcats" hit land and sea targets in the Tunisian campaign, bombed Pantelleria and Lampedusa, softened Sicily for the invasion, and went on to Sardinia to knock out airdromes and shipping there.

Target on the "Bobcats" 200th mission, similar to many of the other 199, was a road bridge at Ceprano on one of the main highways leading from the Fifth Army front to Rome. It was one of the enemy's main supply routes and only a few miles behind their front lines.

"We really flew through Flak Alley that day; the air was so thick with bursts, it was like flying through fog," Lieutenant McCue wrote.

Commented one Mitchell pilot, holding a mean looking piece of steel fully two inches long—a shell fragment, "I pulled this out of my right engine. There was another in the other engine, too."

"That's nothing," challenged a fellow pilot, "take a look at this."

He pulled open the side of his jacket and there hanging to the fiber of his sweater was a wicked looking flak sliver. It had come through the top of his plane, pierced his jacket and lodged on the sweater at his chest.

"I didn't even know the thing was there until I saw the hole in the top and started looking for the fragment."

Observers said the bombs hit on either side of the road near the end of the bridge and blocked it.

Included in the "Bobcat's" 200 missions are an imposing list of "firsts." They were the first medium bombers to hit the mainland of Italy before the invasion, and the first to operate from bases in Southern Italy; the first Americans to attack Sofia, the Bulgarian capital; and the first to fly missions over Greece, Albania and Yugoslavia.

P-39 FILM

The new technicolor film on the P-39 Aircobra has proven a favorite with military and civilian personnel alike. At Thunderbird's "Little Theatre" approximately 1,150 people saw the show.



FLIGHT FIVE'S safety record topped Thunderbird field last month and won for its members the usual reward of a barbecued steak dinner. Members of the winning flight are, left to right, back row: Donald R. Churchill, John C. Glynn, Lawrence P. Sterns, James L. Lauderdale, William E. Doan, Ray Howes, Phillip D. Carpenter and Frank H. Carson. Front row: Walter G. Palmer, Edmund H. Snyder, Catorce A. Hight, E. Earl Warren, William Kelly and Ray V. Wood.

Our Poets' Contributions

From an Air Corps radio operator in British West Indies comes the following poem:

A LETTER FROM HOME

There is one main highlight in the life of a Yank;
Be he in the air, on the sea, or in a tank.
The one thing that will boost the morale of them all
Is a letter from home in the daily mail call.

One from the folks, and one from the sweetheart;
That's the way to satisfy that young upstart
Who not so long ago used to love to pull the curl
Of that extra special person; you know, his girl.

He's out there fighting now, and he's willing to die.
If you ask him the reason he'll say, "Heck, you know why;
It's for Mom and for Pop and for Betty Lou
And all of those little things we hold so true."

No, it's no fun out there—you can ask the Lord above—
To be so far from home and the ones we love.
So why not send a little cheer to that guy we all know?
Come on people, write a letter to that kid named Joe.
—Jay J. Peddy, PFC, USAAF.

FOOD FOR FLEDGLING THOUGHT

My Boy, I often wonder if
You ever give a thought
To all the work, the myriad parts
Of which your plane is wrought.

How often do you hop right in,
Assuming all is well,
And take her off and climb her up
To fly and stunt like ————?

You take for granted she's O. K.,
And rightly we can't blame you,
Because it's all the Ground Crew's job
She doesn't kill or maim you.

Those mechanics ply their trade
At night while you're asleep;
They toil and sweat 'til early morn
That your good health you'll keep.

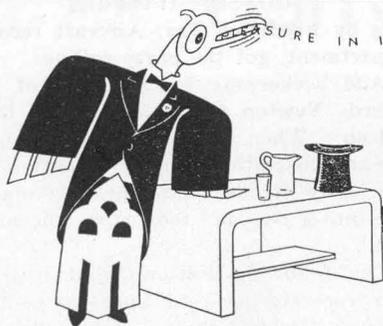
They'll seldom ask of you a thing;
It's just their lot to serve.
They're just duty-bound your life to save,
That your good looks preserve.

So think of them, my Boy, while you
Are winging safe on high;
It's only by the grace of God
AND THEM, that you still fly.

—Anonymous.

FIDDLE!

A young theologian named Fiddle
Refused to accept his degree.
"For," said he, "It's enough to be Fiddle,
"Without being Fiddle, D. D."



PLEASURE IN INTRODUCING ONE WHO NEEDS NO INTRODUCTION

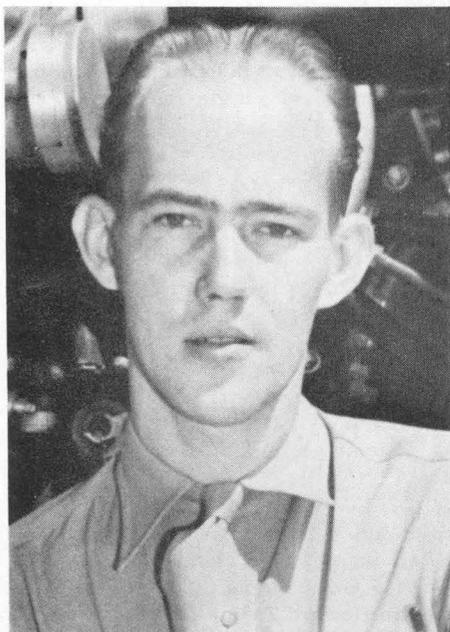
Biographically Speaking

Tall, lanky, Lester John Ward this month celebrates his third birthday with Southwest. The capable, young assistant superintendent of maintenance, who came up through the ranks at Falcon, began his life in Newark, New Jersey, on March 28, 1917. He went to school in Jersey City and graduated from Stewart Technical school in New York.

A licensed aircraft and engine mechanic, Les' first job was gas boy for American Airlines. In six months they made him an apprentice mechanic. Three years later, when he left American to join Southwest, he was their senior mechanic.

It was fate that brought Les to Arizona. He was on vacation enroute to Los Angeles when his plane was grounded on account of bad weather. Undaunted, he meant to continue his trip by car. But an automobile accident temporarily confined him to Arizona, and it was while recuperating in Phoenix that he met Ted Mitchell, then stationed at Falcon, and decided to go to work for Southwest.

Besides his interest in aviation, Les lists woodworking as his hobby.



LES WARD



JACK WARD

The Belmont, New York; Biltmore and Town House, Los Angeles; Westward Ho, Phoenix; Drake and Blackstone, Chicago; the Island Club, Treasure Island . . . Jack (John C.) Ward, Thunderbird II's chief steward knows them all from experience.

For ever since he left Brown University, over 20 years ago, he's been in the food business.

Four years Jack spent at the famous old Phoenix Hotel in Lexington, Ky., parts of which were built in 1700. Vividly recalls the time Queen Marie of Rumania stayed at the Blackstone. It was his job as assistant purchasing agent to help buy the special gold service from which she was served. In 1934, at the Drake, handled his largest dinner party—3,000 guests at the Eucharistic Congress.

Ward came to Southwest in May, 1942, to oversee the installation of canteen equipment and set up his office, before Thunderbird II was activated. Biggest job now days is planning menus for hungry civilians and Army personnel.

Lists his hobby as fishing.

From mechanic to hangar chief to foreman to assistant superintendent of maintenance in three easy jumps—that's the Southwest history of Cargo Division's Jocko Kevari.

Specifically, Jocko started work at Sky Harbor in 1941 as a mechanic, was transferred to Thunderbird where he became a hangar chief, to Falcon as foreman on the AT-6's, and finally to Cargo as assistant superintendent of maintenance.

His aviation career dates back to 1938 when he was a barnstorming mechanic. His ship—a 1928 model Waco! Which may be one of the reasons for the extra care Cargo Waco's receive today.

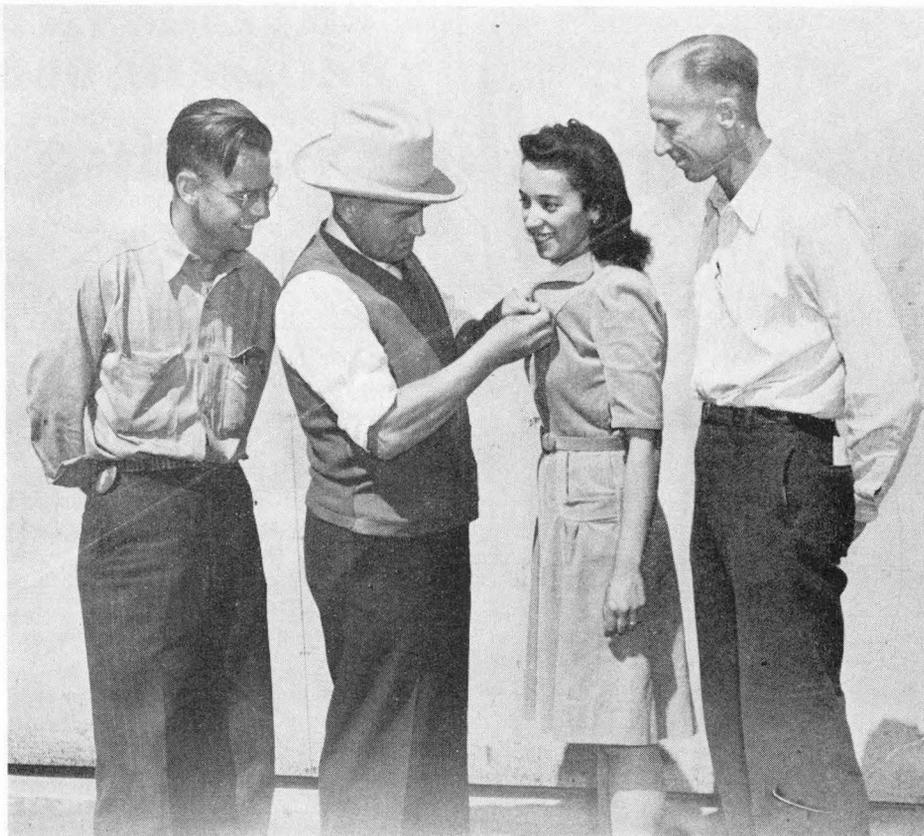
Mechanic at night, ticket taker during the day, Jocko sold rides at the rate of three minutes for \$1.00; \$1.50 for stunting. Recalls his biggest take—\$165.00 in one day.

A licensed A and E mechanic, Jocko received his first training in a garage. Still spends a great deal of his spare time working with electrical equipment.

Born in Michigan (1918) Kevari is fond of all outdoor sports, especially ski jumping, ice skating and hunting.



JOCKO KEVARI



AMONG MEMBERS of Southwest Aircraft Division who collected service pins last month were Ted Sutphen (left) and Orval Graham (right), who look on as General Manager Felix Kallis pins a tenure of service pin on Rebecca Jimeney. Graham received a two-year pin while Sutphen, Kallis and Miss Jimeney completed a year's service.

Forty-three more silver Thunderbirds were awarded Southwest employees this month, the management's acknowledgment of one year's faithful service. Gold Thunderbirds were awarded 11 workers who qualified for two-year pins.

Two-year employees follow:

THUNDERBIRD

Administrative—Marguerite Lebert.
Flight Instructors—Francis P. Fisk, William Orme.

Airplane Maintenance—Charles Hopwood, G. R. Kerns.

Guards—Herbert Green.

THUNDERBIRD II

Flight Instructors—Edgar Jenkin, George Tayrien.

FALCON

Flight Instructors—J. E. Netser, M. J. O'Connell.

Airplane Maintenance—Nova Beck.
Those receiving one-year pins:

SKY HARBOR

Airplane Maintenance—Benjamin Sisson, Clarence Davis, Frank Pennock.

THUNDERBIRD

Flight Instructors—Charles Barnes, Albert Bowen, James Pew, Matthew Reddy, Arthur Ryan, Maxim Shears.

Flight Miscellaneous—Signe Auhll.

Airplane Maintenance—Genevieve Buckles.

Janitors—Anna Osborn.

Guards—Roscoe H. Anderson.

THUNDERBIRD II

Flight Instructors—Forrest Lundy.

Flight Operations—Mary Hogue, Georgia Annon.

Ground School—Cliff Gill.

Airplane Maintenance—Frank Rosenstock.

Steward's Department—John Smith, Mattie Smith, Anna Stillion.

Guards—Robert Rogers.

FALCON

Administrative—Janet Johnson.

Flight Miscellaneous—James Wells.

Ground School—Eugene Walsler.

Link—John Winn.

Airplane Maintenance—Kenneth Achelpohl, Evelyn Brooks.

Ground Maintenance—F. Sullivan.

Guards—Louis B. Ellsworth, Joe Phelps.

OVERHAUL

Administrative—Felix Kallis, Shirley Hendricksen.

Engine Division—Leola Claxton, Robert Dobbs, Opal Hoover, Gerald McCordle.

Aircraft Division—John A. Bell, Margaret Brady, Orval Graham, Rebecca Jimeney, James Rhodes, Gladys Sheridan, Charles Stafford, Ted Sutphen, Eva Varney.

THE THUNDERBIRD STAFF

Editor . . . Bernadine Wurzbacher
Photographer . . . Frank Gianelli

STAFF ASSOCIATES

Genevieve Buckles
Jim Yerkes Elizabeth Olson

GOSSIP—(Cont'd)

ries by Frederick Toy, Aircraft records department, got the party rolling.

Add beekeeping to the skills of T-2 guards Newton Oliver and Elmer Donaldson. When a flight swarmed near the administration building recently they fearlessly strode in, popped the queen bee into a box and took home the hive-full.

The following Falcon flight instructors recently received their instrument ratings: Doice Schults, Ted Galbraith, Bud Rose and Norman Proteet . . . Glenn Ball, assistant superintendent of maintenance at T'Bird, whose spare-time hobby is working problems in higher mathematics, claims he didn't know he had so many friends until income tax time.

Marie Wright, T-2 administrative office, has a charm bracelet with six miniature charms—one for each month of matrimony . . . Instructors Jimmy Lauderdale and Jack Stillman, T'Bird, recently were promoted to the rank of flight commanders.

Falcon's maintenance assistant, Les Ward, may have helped make some of the labels you see today in drug stores and doctors' offices. As a youngster he learned the art of glass bending from his father who was a bottle label contractor.

Jose Trujillo, Richard Robbins and Marshall Pierson, T-2 flight instructors, have obtained horsepower ratings . . . Current unanswered question at T-2 is, "Who broke the window?" Fred Beardsley, ground school instructor, got the bill.

In Air Battle

"Ground troops witnessed and wildly cheered as 26 Japanese bombers and fighters one after another fell flaming into the Assam jungle recently in the greatest of a series of air battles that clinched Allied control of the air over Burma."

The above newspaper account, from General Stilwell's headquarters in India, April 1, credited Lt. Robert Bell, Thunderbird, Class 42-H, with one bomber and two fighters destroyed.

More than 30 Japanese planes were shot down, but the principal triumph was the destruction of 13 bombers and 13 fighters out of a total force of 38 that attempted to raid the Chabua-Ledo area.

Captain John R. Breeden, previously the air inspector at Thunderbird II, now is acting commanding officer in place of Captain Howard T. Van De Car, who was transferred the first of this month to a four-engine school.

★★ VISITORS OF THE MONTH ★★



TWO VISITING OFFICERS from Tulare were shown Thunderbird II by Commandant of Cadets, Major E. R. Coolidge (left). Visitors were Captain H. E. Tilden (center) and Lt. E. L. Langley.



THREE PRETTY WASPS, part of a flight that ferried ships to Thunderbird field, wishfully watched swimming pool activity while regretting lack of suits. Left to right: Betty Wall, Ruth Jones and Marie Mountain.

THEY ALSO STOPPED BY

FALCON—Wing Commander T. Prickett, D.S.O., D.F.C., and Squadron Leader J. P. Blackman, of the R.A.F. Delegation, Washington, D.C.

THUNDERBIRD—Lee Campbell, assistant superintendent, and Douglas Maw, field manager, Ryan School of Aeronautics, Tucson; William Maxfield, T.W.A. superintendent of maintenance; and Charles Potter, Texas Company, Los Angeles.

THUNDERBIRD II—Colonel Thomas J. Cunningham, Major Charles Shaw, Major J. H. Van Horn, and Captain Edwin Ingles, of the 36th Flying Training Wing.

OVERHAUL DIVISION—Majors Joe B. McDonald and J. H. Lewis; Captains Wm. M. Grady and Gladys Nelson, from the field Air Inspector's office, Indianapolis area.



FORMAL INSPECTION by Brigadier General Martin F. Scanlon, commanding the 36th Flying Training Wing, saw a white-gloved honor guard of cadets greet him as he stepped from his plane.



FALCON WAS HOST to Lady Dill of England and her party of Phoenix Red Cross leaders. Left to right, back row: Sqd. Leader Johnson, Flt. Lt. McClelland, Captain Brown, Bill Sims, Al Storrs and Flt. Lt. Carter. Front row: Mrs. H. M. Thompson, Lady Dill, Dorothy Hamilton and Mrs. William Baker.



AN AERIAL SHOW designed to give cadets a peek at what they'll fly later in their careers, was presented at Thunderbird II by Lt. Edwin H. Pinkerton of Luke field. Before the demonstration Lt. Pinkerton addressed cadets from the wing of the sleek P-40 in which he did aerobatics.

This message has been prepared as a tribute to America's fighting men and in the hope that it may hold a measure of inspiration for those who must carry on the battle here at home.



CAN YOU LOOK HIM IN THE EYE?

They found him slumped by his gun on the cartridge-strewn ground he had so fiercely defended, as still as the enemy dead huddled there around him. Though three times wounded, he had kept on firing until unconsciousness dragged his finger from the trigger.

He wouldn't quit then. And he won't quit now! In a few more weeks, when his wounds have healed, he'll go back to help finish that job in the jungle. Can you look him in the eye and truthfully tell him that you, too, are doing all that you can to finish the job?

In the days ahead, can he count on you to stick to your war post as faithfully as he sticks to his? Can he expect you to buy War Bonds in the willing spirit he shows when he steps to the front as a volunteer? Can he rely on you to give a little blood to the Red Cross as ungrudgingly as he gives up his on the battlefield? Can he really depend on you to fight inflation over here while he is fighting oppression over there?

When your conscience tells you that you're worthy of the sacrifices he's making for *you*—only then can you proudly look him in the eye!



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