



FEBRUARY 1944
Vol. 1 - No. 12



The THUNDERBIRD



PUBLISHED MONTHLY BY
The Industrial and Public Relations Department
Paul G. Sturges, Director
SOUTHWEST AIRWAYS • PHOENIX, ARIZONA
VOLUME 1 — NUMBER 12 — FEBRUARY, 1944

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THE BACK COVER

A new feature, introduced in this issue of THE THUNDERBIRD, will be found on the back cover. Hereafter, the outside page may be devoted to important reports, speeches, other company advertisements, or our own ad of the month.

In this issue, the report by General Arnold was chosen because of the particular interest it holds for all employees. Many of the records he praises were made possible because Southwest personnel also were doing their part.



SURE, that envelope's bulging. But let me tell you something, brother, before you spend a dime . . . *That money's mine too!*

I can take it. The mess out here. And missing my wife and kid.

What I *can't* take is you making it tougher for me. Or my widow, if that's how it goes. And, brother, you *will* make it tougher, if you splurge one dime tonight. There isn't as much as everybody'd like to buy—and you have more green stuff than I. But remember this, brother—everything you buy helps to send prices kiting. Up. UP. AND UP. Till that fat pay envelope can't buy you a square meal.

Stop spending. For yourself. *Your* kids. And mine. That, brother, is sense. Not sacrifice.

Know what I'd do with that dough . . . if I'd the luck to have it?

I'd buy War Bonds—and, God, would I hang on to them! (Bonds buy guns—and give you four bucks for your three!) . . . I'd pay back that insurance loan from when Mollie had the baby . . . I'd pony up for taxes cheerfully (knowing they're the cheapest way to pay for this war) . . . I'd sock some in the savings bank, while I could . . .

I'd lift a load off my mind with more life insurance.

And I wouldn't buy a shoelace till I'd looked myself square in the eye and knew I couldn't do without. (You get to knowin'—out here—what you can do without.)

I wouldn't try to profit from this war—and I wouldn't ask more for anything I had to sell.

I've got your future in my rifle hand, brother. But you've got both of ours, in the inside of that stuffed-up envelope. You and all the other guys that are lookin' at the Main Street shops tonight.

Squeeze that money, brother. It's got blood on it!

Use it up . . . wear it out,
make it do . . . or do without



A UNITED STATES WAR MESSAGE PREPARED BY THE WAR ADVERTISING COUNCIL; APPROVED BY THE OFFICE OF WAR INFORMATION; AND CONTRIBUTED BY THE MAGAZINE PUBLISHERS OF AMERICA

This Month In Brief

SKY HARBOR

School reopens to civilian flying . . . Ground classes begin in all courses prerequisite to private and commercial licenses, and instrument and instructor ratings.

THUNDERBIRD

Traditional review marks graduation of American cadets . . . Bomber pilot relates experience over North Africa and Sardinia . . . Eighth class of Chinese arrive for training . . . "M" flight wins safety contest with fewest accidents per number of cadets graduated . . . Ground school is host to high school aviation class. . . . Forty-five more employees receive tenure of service pins.

FALCON

British and American cadets receive wings from Major General Alvin C. Kincaid, Commanding, 37th Flying Training Wing . . . Flight instructors enroll in ground school classes; schedule Link and "under-the-hood" flying time. . . . Thirty-three new employees are added to the payroll.

THUNDERBIRD II

Gas crew employees over-subscribe quota on first day of Fourth War Loan drive; Field contributions already 77 per cent of \$37,000 goal . . . Post employees attend cadet graduation review . . . Squadron I wins safety contest, graduating highest number of cadets with lowest number of accidents . . . Squadrons 1 and 2 take cross-country navigation trip to Douglas and return.

OVERHAUL

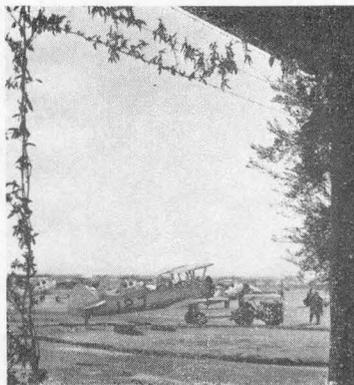
New paint and dope building allows 177 per cent step-up in "under-cover" production . . . Employees contribute over \$10,000 in first days of Fourth War Loan Drive.

CARGO DIVISION

Increase in number of personnel employed 181.82 per cent over January a year ago; Cargo miles flown, up 117.21 per cent over same time last year . . . Latest improvements include new maintenance equipment, pilots lounge, and soundproof radio room . . . Vice-President Jim Ray speaks before San Bernardino Chamber of Commerce on post-war area airlines.

THE COVER . . .

Looking out from under the spacious Administration building eaves at Thunderbird, every view is scenic. Framed here between pillar and climbing vines is one of the sturdy PT planes rolling into place on the ever-busy flight line. Shunted by a fleet of chugging little "tugs", ground traffic to and from hangars and wash racks flows in a constant stream.



Paper Packs A War Punch

The wheels of an Army truck slush through the muddy, rain-soaked streets of an Italian village. In those trucks are ammunition and guns and gun parts, yes, and food for a bunch of boys, our boys, up in the front lines. Will those supplies get there in good condition? You bet they will. The Quartermaster Corps sees to that by wrapping each parcel of food, each piece of equipment not in one but in many layers of protective paper.

Yes, paper is going to war. That's why Uncle Sam asks us to help save every scrap for the Army and the Navy.

Did you ever stop to think . . .

It takes 25 tons of blueprint paper to make a battleship.

Seven hundred thousand different kinds of items are shipped to the Army—and they're paper-wrapped or boxed.

Each propelling charge for 155-millimeter shell takes 3/5 pound of paper.

Each 500-pound bomb takes 12 pounds of paper for rings, tops and bottoms.

All kinds of paper are used by the Army, from vegetable parchment, .0015 inches thick, to heavy paper board and wallboard.

Paper is used in camouflage strips and netting and parachutes.

Paper-vests have proved excellent for aviators and ground crews as cold protection.

Many essential airplane parts are fabricated of plastic with a paper base.

An ambulance requires 52 pounds of paper for shipment abroad.

Huge amounts of paper board are used by the Red Cross for blood-plasma containers.

How shall we save it?

One easy way is to join with our stores in doing away with unnecessary wrapping of store purchases. Unless you actually need to have a purchase wrapped to protect it, don't ask to have it packaged.

Make each piece stretch. In some business offices, when a letter is answered, the carbon of the answer is the reverse side of the original letter.

Share the printed word. Trade magazines, books and newspapers with your neighbor.

And finally, get behind the giant waste paper salvage campaign that is now being launched throughout the country. Many paper mills are slowing up; some are now operating only one shift where a few weeks ago they were operating twenty-four hours. In doing all we can to help push the waste paper salvage campaign, every Southwest employee will be contributing in telling fashion to Victory.

It's an easy job, but a mighty important one. For Uncle Sam says, with your help, he can save 1,000,000 tons of paper for war needs. Remember, paper packs a war punch. Fight Waste!

AVENGER'S WASPS FLY THE ARMY-WAY

This story has been made possible by the cooperation of the WASP Public Relations Office and the AAF Flying Training Command.

Twin specks appeared out of the blue, grew larger, and were identified as PT-17s. Entering the pattern, they winged their way to a three-point landing and rolled to a stop directly in front of the control tower.

Out stepped two khaki-covered figures topped with leather helmets. The helmets came off, long red hair and a mass of gleaming yellow curls appeared, and girls, of all things, said "Hi!"

In his office nearby, Mike DesMarais, director of training at Thunderbird II, straightened his tie, and prepared to receive his guests.

They were WASPs (Women's Airforce Service Pilots), graduates of Avenger Field, Texas, who had ferried in two planes badly needed for flight training at the primary school. Two days later a dozen more primary trainers, earmarked for Thunderbird II, were delivered by women pilots to Luke Field.

Since graduation of its first class in April, 1943, the Army Air Forces have made increasingly heavy demands on Avenger pilots, giving them more and more responsible assignments. First allowed to ferry only light liaison and training craft from factories to airfields, they now ferry 17 different types of aircraft in the United States and Canada, including some of the heavier types.

In a day-and-night course as stern in nature as the rugged West Texas cattle country in which it is conducted, the Army Air Forces Training Command grooms its lady warbirds. Flying the same type training ships as our own Southwest cadets, Sweetwater girls receive their silver wings, with diamond-shaped center, after 210 hours in the air.

For 27 weeks, they learn to fly the Army-way in standard Air Forces primary, basic and single-engine advanced planes.

For the first nine weeks, ground school classes offer lengthy courses in engines and propellers, and flying is confined to PT-17s. Training is much like that given cadets at our own schools. The girls march to and from the classes and the flight line. Flight leaders, chosen for their alertness at drill and order giving, count cadence and give the necessary verbal directions.

Having spent 70 hours mastering the Stearman, the trainees start their second nine-weeks' period—the "intermediate" stage. This begins with 35 hours of transition instruction on the AT-6, reverting to the BT-15 for instrument work.

In the last nine week's lap — "Advanced" — the entire 70 hours of flight instruction is in cross country flying, except for routine proficiency checks. Lessons in the air teach students not only how to fly straight and level when conditions are ideal, but also how to put their winged charges through acrobatics and emergency flight and landing routines.

Flying their ship entirely on their own over the western mountain country and over the southeastern states, through the smoky haze characteristic of that territory, the girls prepare to relieve combat-ready men of any one of the dozens of service pilot jobs available.

Successful completion of a minimum of two 1000-miles-plus cross country solo flights is a graduation requirement.

Ground school classes include training in navigation and instruments, weather, code, aircraft mechanics, theory of flight, physics and military customs and courtesies. Like their aviation cadet brothers, each day the suntanned sky-scholars don shorts for an hour of calisthenics. Their muscles are worked out also on the drill field where an Army Officer introduces them to the technique of "forward march," "by the right flank" and other maneuvers familiar to the foot-soldier.

Women, too, live in trim barracks, six to a room. Although not exactly

what one might imagine milady's boudoir to be, quarters are efficient, and efficiency is a religion at Sweetwater. Their complete wardrobe, including cosmetics and other feminine odds-and-ends, must be kept neatly arranged in two not-very-big wooden lockers. Other furnishings consist of regulation iron Army cots, a built-in study desk in the middle of the room, and straight chairs. Each morning everything must be cleaned and tidied, and beds made up with "white collars" and military folds at the corners. WASPs are subject to the same strict military discipline as aviation cadets. Rooms are subject to inspection at any time by white-gloved officers who "gig" students who may have forgotten to dust on top of the window sill.

It's not all work, though. Sometimes on weekends, parties and dances are planned in town and there are frequent supervised trips into the park for swimming and tennis. Students have a downtown clubroom and at the field there's a big recreation room with ping pong tables, piano, plenty of easy chairs and magazines — mostly flying.

Off-duty, the girls wear their dress uniforms — jacket and skirt of Santiago blue wool gabardine; a beret of the same material; and a white cotton shirt with black tie. Trench coats are made of putty-colored, weatherproof wool gabar-



FUTURE WASPS LEARN how to operate an intercom. Lessons in the air will teach them not only how to fly straight and level, but also how to put their winged charges through acrobatics and emergency flight and landing routines. (AAF Training Command photo.)

dine, and have removable dark blue lining. In lieu of "U.S." insignia worn by Army officers, WASPs' collars bear gold-lettered "W. A. S. P." insignia. Uniforms are complete with Air Corps lapel wings, the AAF sleeve patch, and shoulder insignia identifying the unit to which they are assigned. The current WASP setup is a far cry from the humble beginning of the Women's Pilot Training Program about a year ago.

Functioning under the Army Air Forces Training Command, that staggering organization charged with the job of producing enough pilots, gunners, bombardiers, navigators, and technicians to smother the enemy in his own back yard, the "only daughter" is "mothered" by Jacqueline Cochran. Much of the stick-to-itiveness, grit, determination, and courage found in WASPs undoubtedly has been due to Jacqueline herself. As a little child she learned that making dreams come true had a lot to do with courage, determination and brain-work. Jackie wanted to fly. So she earned her license and went on to become an expert instrument pilot. But she wasn't content to "just fly" — she wanted to do something really outstanding. So she began racing, and eventually won the Bendix Trophy and numerous other honors in competition with men.

When the war started, the lady air-champion immediately began planning work in the skies for the thousands of women pilots who had secured their licenses at private flying fields or schools throughout the country. She went to England, ferrying a bimotored bomber across the Atlantic; she studied British women at work ferrying planes from factory to field; she proved to the Army Air Forces that "girls should get a chance" to help out in the air, as well as in factories, the Army ground forces, the Navy and the Marine Corps.

Original entrance requirements called for applicants to have 200 or more hours in the air. Since that time, however, a 35-hour minimum has been established. Applicants also must pass a rigid Army "64" physical examination — the same given aviation cadets; be between the ages of 18 years-six months and 34, inclusive; possess high school education, and — most important of all — be approved by Miss Cochran or by one of her representatives in a personal interview. Jackie has no patience with girls who intend to find in the training school a romantic interlude of adventure.

About 600 WASPs are in operation now; 500 more are in training. Recruiting, however, has been curtailed until the training and operations show promise of absorbing a greater number than those already on file. Although the AAF cannot have too many men



READY FOR FLIGHT are two lady-warbirds at the Army Air Forces' first and only training school for the fair sex — Avenger Field, Texas. (AAF Training Command photo.)

pilots, it can have too many women pilots when training and utilization of women must be afforded at the expense of training and experience needed for pilots in the theatres of war.

As students, the women at Sweetwater receive \$150 per month base pay. On graduation and the beginning of duty as ferry pilots, their pay is raised to \$250 per month.

It's hard for visitors to accustom themselves to the sight of so many attractive young women on the flight line, attired

in their coveralls, swinging cumbersome parachutes, squinting at the heavens through sun-goggles, and tucking their hair into trim flight caps. There's something not quite real about the sight of a powerful ship roaring off the ground, headed for the blue by a girl whose hair peeps out from under her pilot's helmet and who probably is propped up to the controls by a stack of yellow Air Corps pillows.

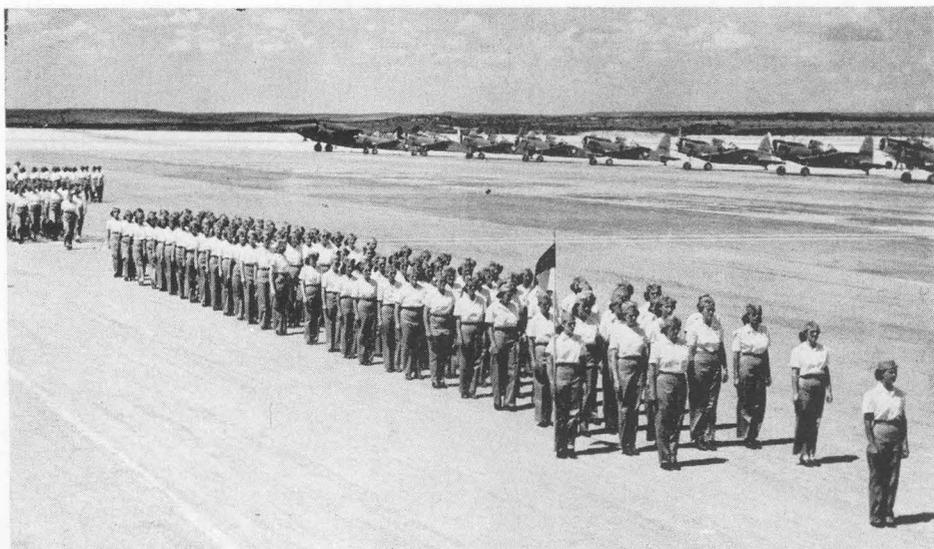
At Camp Davis, in the sand-dune country of North Carolina, graduate WASPs, with silver wings, are training to replace men of the First Tactical Air Force and to release them for combat. The women do target towing and mission flying, two of the most difficult and tedious jobs assigned to fliers.

With parachutes over their shoulders, these girls leave daily for the coveted missions that take them up in the air while anti-aircraft batteries fire on the targets floating behind their planes.

They're civilians, but they hope to be accepted into the Army Air Corps within a few months. Recruited from the thousands of applicants from all parts of the country — teachers, writers, bookkeepers, stenographers, parachute riggers — they are one in a common passion for aviation.

As skilled as their brothers, they are supplemental pilots — an integral part of domestic non-combat operations, freeing more and more men for combat roles.

Lt. General Barton K. Yount, Commanding General of the Army Air Forces entire training program for air and ground crew members, after a recent visit to Avenger Field, stated that he was highly pleased with the manner in which the girls were operating, and predicted "better things to come" for the "little sisters" of the A. A. F.



ON GRADUATION DAY, when students receive their silver wings from Jacqueline Cochran, they have been flying 27 weeks in primary, basic and single-engine advanced planes. (AAF Training Command photo.)

Civilians Fly At Sky Harbor

Once again Sky Harbor is open for civilian flight instruction. This important announcement came from Southwest officials shortly after it had been released publically that all Army War Training Service schools in the United States had been eliminated from the flying training program.

Army Air Forces casualties have been so far below expectations that the United States now has an abundance of combat-trained instructors.

When Southwest Airways was originated in the summer of 1940, six instructors were hired for the Civilian Pilot Training program at Sky Harbor. Effective in January, 1943, what previously had been known as the CPT program was officially decreed by Washington to be the "Civil Aeronautics Administration War Training Service." The new program eliminated from the Southwest operation the U. S. Navy fliers who were enrolled in the primary course, and confined instruction to Army Air Force Reserve personnel only.

The present setup, the original intention of the company, makes it possible for civilians as well as Army personnel to obtain or renew their private or commercial licenses, and also affords them an opportunity to earn their instrument and instructor ratings.

Ground school classes now are being held Monday through Friday in order that everyone who wishes may take advantage of the training. Courses include Civil Air Regulations, aircraft, general service of aircraft, navigation, engines, radio orientation procedures, meteorology and instructor technique.

Before the civilian pilot can be awarded his private or commercial license there are the very comprehensive CAA examinations that first must be passed to the board's satisfaction. Those who "wash out" the first time are given an opportunity to take them again after waiting a month—or after five hours private tutoring. The present program at Sky Harbor includes this special tutoring for those who, for some reason or other, failed the first time.

Sky Harbor operates as an approved primary and advanced flying school through its own facilities at the Harbor, and also through its affiliations with the Phoenix Junior College and the State Teachers College at Tempe.

Since the company first decided to revert the operation back to civilian use, plans have been under way for an elaborate program. Before many weeks have passed, Southwest's first post-war operation will be well under way.

WAR LOAN PURCHASES HIGH



Southwest's answer to the Fourth War Loan call has been a gratifying, whole-hearted display of patriotic generosity. With a week to go in the campaign to back the war effort, incomplete returns show a grand total of \$56,887.50 contributed from Thunderbird, Thunderbird II and Falcon fields.

Of this total \$28,550 was from Thunderbird II which had purchased 77% of its \$37,000 quota. Thunderbird bought \$22,650 with additional purchases in sight while Falcon turned in \$6,187.50 of its promised \$10,000 purchase pledge.

Claiming honors as highest individual buyer is Helen Lear, Overhaul secretary, who bought five \$1,000 bonds. Another high-buyer is Steve Hathaway, Falcon flight instructor who bought two \$1,000 bonds.

Proud of its achievement as first department to oversubscribe its quota is the gasoline crew at Thunderbird II. With a pledge of \$900, the gasmen laid cold, hard cash on the line to the tune of \$1,675 going over the top 180% the morning the drive opened.

Of eight departments at Thunderbird II, six oversubscribed their quota in the drive's early days. In addition to gas they are: shop with \$10,700 for a 107% record; administration with \$1,750 for 117%; mess with \$2,875, for 115%; maintenance and janitors with \$1,075 for 107%; and guards with \$1,000 for 111%.

With a full week remaining in the drive Overhaul led Thunderbird returns with \$10,000, while administrative had purchased \$6,175.



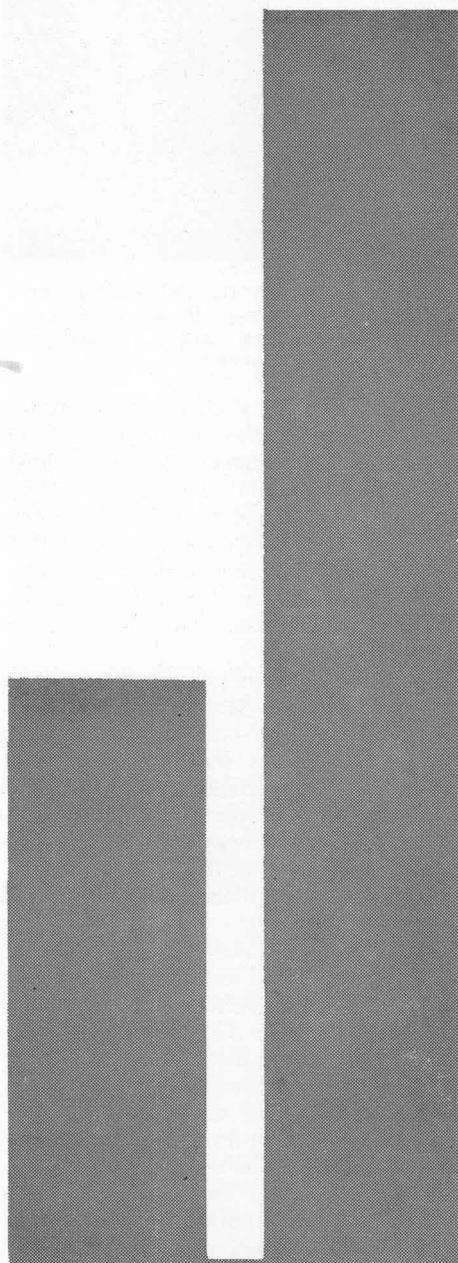
GAS CREW employees at Thunderbird II (above), were quick to answer the Fourth War Loan call and over-subscribed 100% on the drive's first day. Overhaul (below) contributed two \$1000 bond buyers: Lydia Lane of fabric and G. L. Christenson, foreman of aircraft assembly.

At Falcon field bond buyers have a special incentive in boosting their total. For Field Manager Bill Sims has made a wager with the personnel, promising if they meet or oversubscribe their quota, he will make a personal purchase of half the final figure.

SOUTHWEST AIRWAYS FORGES AHEAD

CARGO DIVISION

% OF MILES FLOWN



JAN., 1943

JAN., 1944

Ever since October 1, 1940, when operations began at Sky Harbor, Southwest Airways has been steadily growing. Its rapid expansion in operations, equipment, and personnel identifies it as one of the fastest growing companies in the aviation industry, and predicts for it a leading role in the post-war future.

The company's Cargo Division, essentially an area airline of the same type expected to be widely established after the war for the benefit of civilian population, has forged to the front in little more than a year's time. Its personnel, as of January 31, shows an increase of 181.82 per cent over January a year ago. (See graph at right.) Eight daily flights, totalling approximately 75,000 miles per month, have increased the number of miles flown 117.21 per cent over the same month last year. (See graph at left.) Number of pounds of freight carried likewise has increased substantially. Only recently, it will be remembered, a converted pre-war Waco carried Cargo's millionth pound, part of a three-pound shipment of vital engine parts for a B-17 bomber.

Other operations also show large gains over a year ago. The combined total of hours flown at the three training fields is up 103.41 per cent over January of 1943. Individually, Thunderbird II increased 136.69 per cent; Thunderbird, 129.07 per cent; and Falcon, 23.48 per cent.

There are 33.28 per cent more cadets in training at Southwest now than in January a year ago.

By the same token, number of planes operated increased materially.

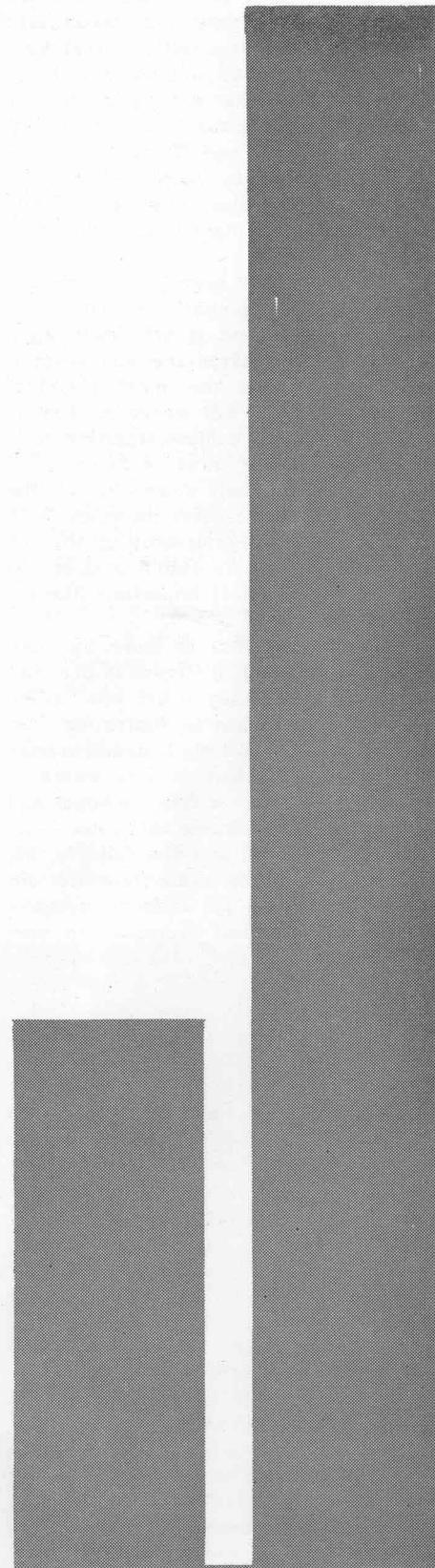
In the Overhaul Depot, only one of its kind between Texas and the Pacific Coast, aircraft are completely torn down and reassembled after fifteen hundred hours of flying. In January this year 78.57 per cent more planes were overhauled than during the same month last year.

In the engine department of the Overhaul Division, percentage of engines turned out likewise has increased. From a very modest beginning — original planned production was five engines a week—the depot has stepped up production tremendously. Just how much is a military secret. Suffice it to say that already it has turned out its 1,000th engine.

Substantiating the statement that Southwest's growth has been steadily rapid, total number of hours flown in January, 1944, is 332.97 per cent greater than in January, 1942. Cadets trained is up 113.58 per cent; planes operated, 118.04 per cent; and employees, 91.83 per cent.

CARGO DIVISION

% OF PERSONNEL



JAN., 1943

JAN., 1944

AFTER PRIMARY THEY GO TO BASIC

By Public Relations Dept.
AAF Western Flying Training Command
Santa Ana, California

In less than a month another class will finish Thunderbird and Thunderbird II. Don't let anyone tell you that isn't something. After all, in nine weeks these boys have done what it took the Wright Brothers eleven years to accomplish. They have flown and flown competently, learned to do turns, chandelles, eights, stalls, glides—most all of the fundamental air maneuvers. So what now?

Your graduates head from Primary straight toward combat! Starting with Basic Training next month, they begin the process of sharpening and shaping their flying into the most slashing, devastating of all war weapons. Everything they do has combat significance.

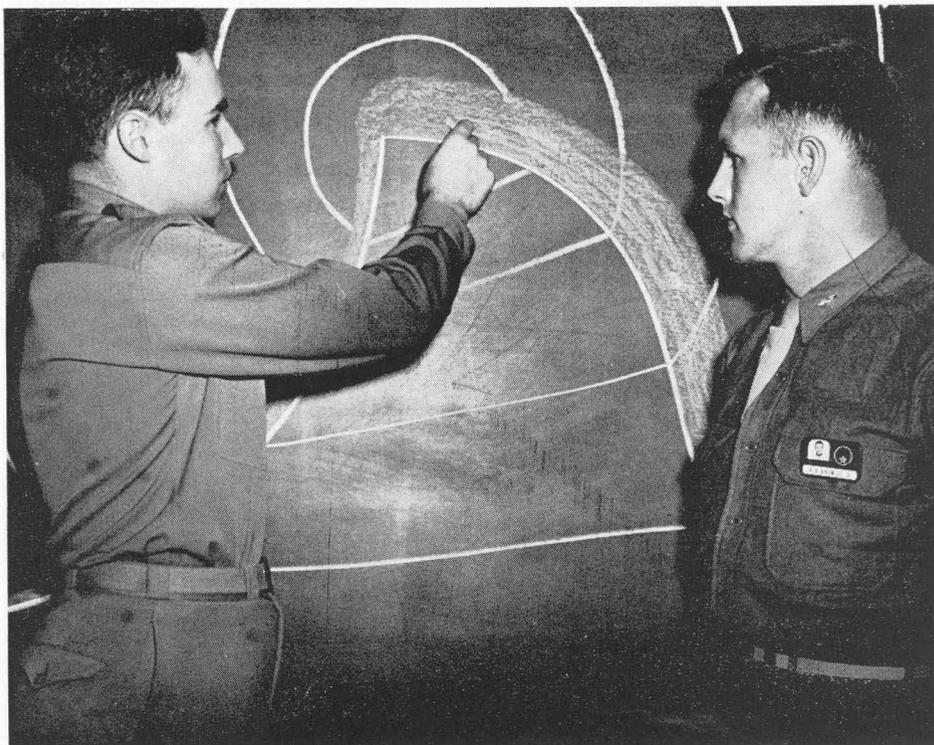
One of the first things a future pilot will do is let his hair down—but all the way—in a heart-to-heart interview with his instructor. Supplementing this he will write a complete autobiography. It can well be the most important literary effort of his life.

The instructor has to know his man inside out. Each is different in one way or another from any other student he has taught. He has to figure out just the right way to get his instruction over to every new student. So he wants to be told everything—a fellow's hopes and ambitions, what scares him, the successes he has had and the failures, his philosophy, what he wants from life. An Army instructor's job is to fit a man's mental and physical processes so perfectly to the business of flying that he and his plane will "weld" together into one flying entity capable of outfighting the enemy and outliving him.

Before he can solo, a new cadet must get used to his new military aircraft—heavier and twice as powerful as his Primary trainer. While some pre-solo maneuvers may have familiar names, don't let that fool you. They are different when you do them in a 450 horsepower B. T.

Take climbing and gliding turns, for instance. Your ex-Thunderbirds have done them before, but the wings of the biplanes they were flying gave them two reference points with the horizon. They simply kept it balanced between their upper and lower wing lines. Now one of these lines is gone; there is only a single wing. They're turning faster than they have before. And, unlike P.T.'s which fly with noses on the horizon, B. T.'s pull their noses below.

Then there are now things your graduates probably haven't seen before. Their



COMBAT PILOTS use every known science to help them fly today—far cry from navigating simply by contact with known landmarks. R. R. Knowles, Jr., ex-Thunderbird II cadet, Class 44-E (right), learns how rain is plotted on a weather map, from Instructor Lt. Allan Morehead.

planes have flaps and your fliers have to learn when and how much to "crank 'em down." They'll be changing gas tanks for the first time, working with new instruments and a two-way radio.

Before each man takes his ship up alone he'll pull his flight cap down over his eyes and go through a blindfold cockpit test, touching every control and instrument as the instructor calls it off. This officer will try all the tricks he knows to cross up his student. But he's pouring on the coal to make absolutely sure the boy about to solo can find everything he needs even in the dark.

And wait until they get into advanced landings in Basic. True, instruc-

When cadets at Thunderbird and Thunderbird II complete their schooling at Southwest, they go on for additional training from Army personnel. Believing that all of us are interested in knowing how the training we started is continued and expanded, THE THUNDERBIRD has asked the Western Flying Training Command for a series of articles covering the work given at Basic, Advanced, Transitional and Tactical schools. This month's article is on "Basic" Training.

tors here have cut their throttles without warning—made them decide instantly on which one of a number of fields to land. But now in less time than it takes to say it, they have to figure out plans for getting into the fields they choose and then get in—right on the button. The margin of allowable error is cut way down. And precision even goes on into the evenings.

At Basic, student pilots get an inkling of what a night fighter thinks about. Probably the first thing that will impress them about night flying is how small and different the field looks in the dark. Take it easy, "Misters"—that runway is exactly where it always has been! Landings will be shot on it using floodlights, wing lights, a combination of flood and wing, runway lights only, and no light at all. Students quickly get the feel of night flying—lose any fear of the dark in night locals. (After dark cross-counties are saved for Advanced Training.)

The next thing Basic pilots hit is formation flying in three-ship Vees. Sounds simple, but it can make the palms of anybody's hands perspire, the first few times at least. The reason is, this formation work is an **exhibition type maneuver**. It is flown tight—position is held **rigidly** to teach air discipline.

Students take off, fly and land in formation; hold **steady position** in flight;

practice medium turns, climbs, dives; fly every position in the Vee. They'll get to like it, and later on when they look out and see their pals sticking tight on their wings as they head for Berlin or Tokyo, they'll LOVE IT!

Perhaps the most important single thing they'll learn is how to fly with instruments. The rate instruments they've met already—air speed indicator, altimeter, bank and turn indicator, climb indicator and clock. In addition they now have the attitude instruments—flight indicator and gyro compass.

As you know, the face of the flight indicator show a miniature plane superimposed on a horizon line. The position of this miniature in relation to the horizon line, which is stabilized by gyro action to correspond with the real horizon, indicates the position of your ship. You actually fly by the tiny plane on your indicator.

The gyro compass also is stabilized and is always correct in space. When you go into a 90 degree turn, for instance, and your compass indicates you have made it—you have—regardless of the angle or bank your plane may be in.

With these devices students are ready to graduate from contact or seat-of-the-pants flying and learn to fly entirely on instruments without checking plane attitude first. They take off, land, make turns, recover from stalls and spins—fly precisely and accurately on instruments alone. Once they start it, they'll get at least 45 minutes of instrument work every flyable day. And after passing their checks they'll fly a minimum of an hour of instrument a week.

Two-thirds of all the instrument time given in the Western Flying Training Command comes in Basic—and the "Misters" had better get good! Knowledge of instruments probably has brought more fliers back from over Europe and the Pacific than any other one thing.

To make future pilots sharper still, they are given ten hours of Link trainer time. And it will pay them to get "Link happy"—spend all the time they can "flying" these little hooded cockpits. They just can't know instruments too well!

Next, and closely allied, comes navigation. After dual time to give practice in identifying landmarks, students go out on navigation solos. No use trying to follow the leader—takeoffs are staggered too well and there is no radio beam in Basic. It's up to each man to hit his navigation points on the nose. Strange and wonderful things can happen, and one did to a southwestern cadet, maybe an ex-Thunderbird at that.

He was told to fly due north until he sighted a small gully, then make a 180 degree turn. He flew on and on. Finally



FIVE MINUTES more and Aviation Cadet Elton D. Wastoy, Thunderbird II graduate, Class 44-E, will solo his first basic plane, a BT-13A.

his instructor, worried about the gas supply, inquired sarcastically, "Bud, haven't you found that gully yet?" To which the student replied sharp as a tack, "You bet I have, Sir, it's right below you." Craning his neck the instructor found himself gazing down into the awesome majesty of the Grand Canyon!

The biggest single chunk of ground school (38 hours), and probably the most important, is weather. And why not? When a fortress pilot runs into weather which he does constantly, as many as a dozen lives to say nothing of a \$400,000 plane will depend on his ability to handle

the situation. Even if he's alone in a fighter, it's nice to come back.

So before he gets out there he studies weather—hurricanes, thunderstorms, fog, wind, etc. In Basic he learns to get more information out of a cloudbank than a fortune teller can out of tea leaves. He reads weather maps, decodes teletype reports, recognizes air masses and fronts. Most important, he begins to piece his knowledge together and figure out what is likely to happen.

While becoming his own weatherman, your ex-Thunderbird also works on code (visual and audio) among other things, and puts in more hours identifying planes. If he can't already, he'll soon be recognizing war plane images flashed on the screen for a 50th of a second and less. And right here a warning must be sounded.

If he takes time out for so much as a yawn, he may suffer the ignominy of one of the hottest identifiers ever seen in these parts. This lad was so good he never missed—well, almost never. No matter how fast images flashed on the screen he nonchalantly checked them off. Suddenly some dastardly instructor flashed a picture of a Colonel's silver eagle for a 75th of a second. The red hot identified it as a belly view of a Jap Zero!

It's up to every one of your ex-Thunderbirds to get all there is to get in Basic Training. He'll need all he possibly can absorb when he salutes the "Old Man" for the last time and heads for Advanced School to win the finest decoration the Air Forces can confer—his pilot's wings.



STUDENT PILOTS and instructors fly a three ship Vee formation near A.A.F. Basic pilot school at Gardner Field. This formation looks easy, but isn't. It's an exhibition type maneuver flown in rigid position to instill the discipline.

Full Panel Flying Taught

A row of neatly parked instrument ships, their fire-wagon red noses brilliant in the sun, await their pilots on the flight line at Falcon field.

Since January 1, instrument flying has become a definite part of the instructor program, two hours "under the hood" flying and one hour of Link each month being required of all Falcon pilots.

In a further step to standardize cadet training in this country, British Flying Training Schools sent representatives to take the army instrument course at Bryan Field, Texas. From Falcon, No. 4 B. F. T. S., went Daniel Aherin, advanced flight instructor.

For a month he lived in Army barracks and lead the life of an Army cadet. A portion of each day he spent in ground school, Link, and on the flight line. He studied the full panel, including the gyro horizon and directional gyro.

Now returned to Falcon, Aherin teaches fellow instructors full panel flying.

A two and one-half year man with Southwest, Aherin knows his fellow instructors pretty well, but he'll soon know them better . . . he must fly at least two hours with every Falcon pilot.

His total of 2,400 logged hours has been built up since 1940, when he left the University of Idaho, bought a Taylorcraft, and learned to fly.

Ray Speaks

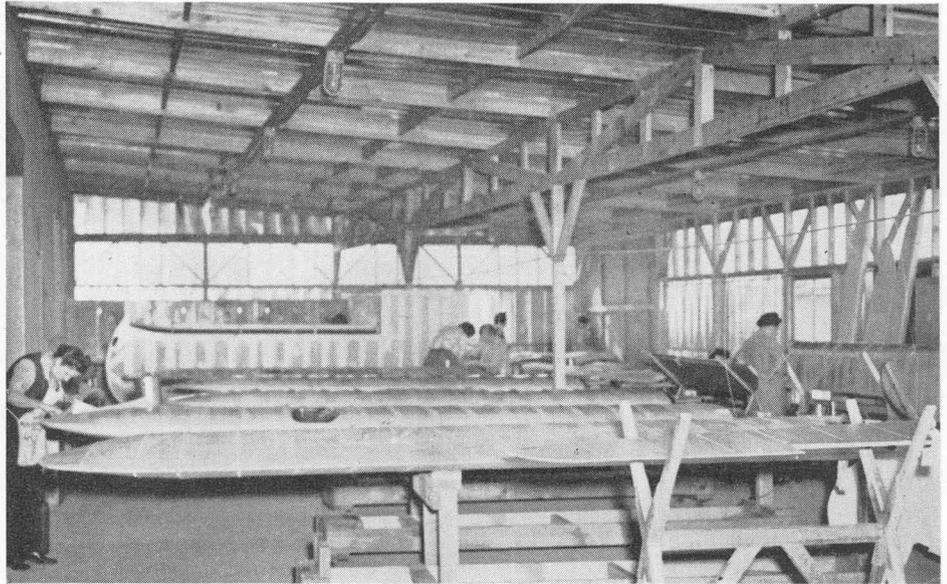
Vice President Jim Ray and Ted Mitchell, operations manager of Southwest's Cargo Division, were guests of honor recently at a dinner given by the San Bernardino Chamber of Commerce.

Mr. Ray, principal speaker for the evening, pointed out to members of the chamber that San Bernardino might possibly become a backup transcontinental air terminal for Los Angeles.

"San Bernardino already has been placed on one of the area airline routes contemplated by Southwest Airways in the postwar period," he said. "This line will provide day and night transportation for both passengers, mail and freight, with planes operating on schedules of either 30 minutes or one hour."

Ray also presented figures relating to the United States in general and Southern California in particular, which proved highly interesting to his listeners.

Take care of your parachute, it may have to take care of you some day.



Finish Course

Impressive ceremonies and reviews marked graduations at Thunderbird, Thunderbird II, and Falcon fields recently.

Especially outstanding was the review at Falcon where British and American cadets were presented wings by Maj. Gen. Alvin C. Kincaid of the U. S. Army Air Forces.

In his address General Kincaid complimented cadets on their high conduct record, stressed the need of leadership and teamwork and paid special tribute to the civilian instructors.

He said:

"A great amount of credit for this marvelous training is due to the instructors. At this school, an American civilian contract school, the flight training is given by civilian flight instructors. They have done a marvelous job in this training and they deserve a great amount of credit."

Speaking of teamwork, General Kincaid declared:

"Up to this time you have been in that group of men who receive instructions. You will be placed over other men now and you will direct them. It is most essential that we have teamwork in the air. You have a right to expect full co-operation and full performance of duty from your teammates, whether they be a member of a bomber crew or a fighter squadron, just as they will demand of you the highest performance of duty.

"In the American Air Forces we place great stress on discipline. The object is to develop a high state of air discipline for we know that a unit which goes into combat weak in discipline will suffer high casualties".

New Expansion

Overhaul has stepped up production in the paint and dope department through construction of a new building which doubles the size of previous quarters.

The new paint and dope wing, erected in less than ten days by George Frock's efficient maintenance crew, is a 30 by 96 foot structure, of frame construction sided with shiny sheets of galvanized metal.

Static lines run throughout the shop and all work units as well as all electrical fixtures are grounded to metal rods thus thwarting any chance of static combustion since the dope-room fumes are highly volatile.

Both heat and air conditioning ducts run through the shop which is maintained at a constant temperature of 85 degrees to facilitate a near-perfect working atmosphere.

According to Ted Watters, foreman of paint and dope, addition of the new building makes it possible to put 16 additional wings under cover.

CHINESE ARRIVE

Thunderbird recently welcomed its eighth class of Chinese cadets. The youths, who arrived safely over various routes, will spend nine weeks at the primary training base, only field in this country giving primary training to Chinese nationals.

YOUTHS VISIT FIELD

The ground school department at Thunderbird recently had as its guests 20 air-minded youths from the Glendale High School's aviation class. As the tour ended, the group was privileged to see a training film used in regular army classes.

NORTHERN CONTROL TERMINUS OF CARGO LINE

Phoenix and San Bernardino are familiar names to all Southwest employees—operating headquarters for the various company activities. Far less well known is the fact that Sacramento also is an important operating terminal for planes which fly the Thunderbird insignia.

Sacramento is the northern control terminus of the Cargo Division, but it always has been far more than just a “turn-around” point.

More than 40 per cent of the one million pounds of high priority Army freight and mail carried on Cargo Division planes in the first year of operation, originated at McClellan Field, home of the Sacramento Air Service Command.

To properly handle this vital military cargo and serve the large Sacramento A. S. C. area, Cargo Line chiefs long ago permanently assigned maintenance and communications employees to the McClellan Field base. At the present time, maintenance is under the supervision of Alton Preston, while communications has been handled by Virgil Anderson and, more recently, by Jim Guisto.

Undoubtedly these men come the closest to being the “forgotten men” of Southwest, if any are truly in that category. Seldom do they have an opportunity to gain first-hand knowledge of the constant progress being made in the company’s six war-time activities. News must be relayed to them by the two Cargo Division pilots who daily make Sacramento their overnight stop and by visiting company officials. It may be anywhere from a day to weeks old when they hear it.

Yet, with the constant co-operation of such military officers as Major W. A. Radford, Jr., base commander, and Captain Donald A. Cook, commanding the 39th Air Freight Wing detachment, they are performing roles equally as important to the war effort as those of Southwest employees in other, better known headquarters.

Of particular interest because it is our company’s northernmost operating base, is McClellan Field’s history.

Sacramento Air Depot, one of the four first Air Forces service depots in the country, was moved from Rockwell Field, San Diego, in 1939 and was designated as a command base in February of 1943, after the Air Service Command was set up as a separate branch of the Army Air Forces on October 17, 1941.

Symbolic of the huge, lumbering bombers and the flashing pursuit craft which are daily reconditioned for combat by the civilian and military personnel of the Sacramento Air Depot was the visit, sometime ago, of the valiant,



MCCLELLAN FIELD base commander, Major W. A. Radford, Jr. (right), inspects a piece of the high priority Army freight which Southwest Airways’ area airline planes rush daily from the local Air Service Command depot to individual Air Forces installations in this area. Others are Ted Mitchell (center) Cargo operations manager, and Captain Donald A. Cook, commanding officer of the 39th Air Freight Wing Detachment at McClellan.

battle-scarred Suzy-Q, the world’s most famous Flying Fortress, fresh from more than 100 air battles over the world.

Maintenance shops workmen—“garage mechanics of the Army Air Forces”—made many repairs: Mended oil leaks, tightened screws and wing bolts, repaired a wing tip that had been shot away. They even gave her a brand new over-all paint job to obliterate the names of admirers who had inscribed their autographs on all available surfaces as she set down in many foreign and United States ports. The Suzy-Q was treated with near reverence and greeted as an old friend by civilian workmen in the depot shops. For just a little more than a year before, she had said “Good bye” as she stopped at McClellan to have her fighting gear added as she set out on her initial combat flight.

It is activities such as these that are carried on daily at Sacramento Air Depot—servicing air forces airplanes when they are new, keeping supplies and equipment flowing to them while they are in combat and attending to their wounds when they return victorious from battle—in other words, carrying out the Air Service Command function, “Keep ‘em Flying” at all times and under any conditions regardless of the difficulties encountered.

Flight Made

A new idea for keeping flight instructors at their best in navigation problems has been initiated by Squadrons 1 and 2 at Thunderbird II.

A cross-country flight from the field to Douglas via Tucson was made by the two squadrons. Two instructors rode in each ship, one acting as pilot, the other as observer. On the return trip they changed duties.

The ships took off from Thunderbird II at five minute intervals. The men held their schedules in time and distance very closely, and arrived in Douglas in the same order in which they took off at approximately the same time intervals. The trip originally had been planned as a competitive flight, however the planes landed in such close sequence that it was impossible to determine a winner. Average time for the trip down was two hours and 23 minutes; for the trip back, two hours and six minutes.

Convinced that such flights are of great training value, Army and civilian officials are planning that they become a regular part of the instructor program.

Wally Pankratz is group commander of the two squadrons.



Mary Bradshaw's job in aircraft Overhaul entails tacking fabric to the plane fuselage with the aid of a pair of ice picks and PK screws. A painstaking job, the operation calls for insertion of scores of screws in order to securely anchor refabrication.



Anything needed for work or maintenance at Falcon field is dispensed by Howard Hunter, stock room chief. Hunter's tidy store-room is crammed with supplies and tools which are checked out to workers. From his neat racks he can issue any tool or part in a matter of seconds.



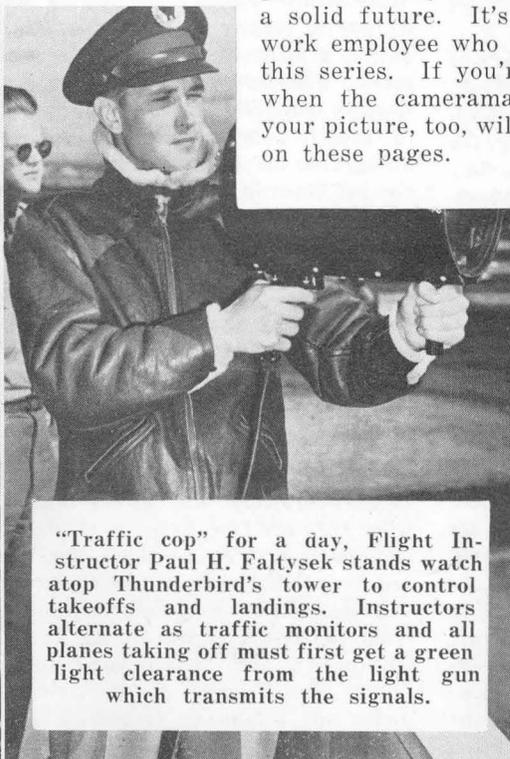
Grounds of Southwest Airways' fields get constant attention from such capable gardeners as Trinidad Valencia, who keeps Falcon field blooming. When this picture was taken, Trinidad was busy weeding one of the two ponds whose "dinner-sized" fish are landscape attractions at Falcon.

WAR WORKERS

The staccato click and blinding flash of the roving photographer's camera this month has caught another dozen Southwest employees busy at work building for victory. It's such operations as pictured on these two pages that spell the success of Southwest's steady growth and lay the foundation for a solid future. It's the hard-at-work employee who is sought for this series. If you're on the job when the cameraman passes by, your picture, too, will soon appear on these pages.



Checking flight records of Falcon students is a full-time job for Mary Lou Turner, one of a corps of accountants who tabs the flying history of the British and American cadets. A Falcon veteran, Mary Lou has been with the field since it started operations.



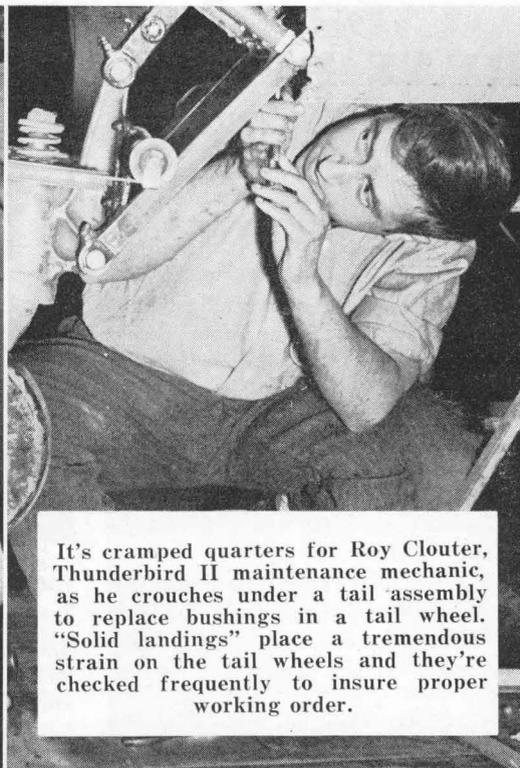
"Traffic cop" for a day, Flight Instructor Paul H. Faltysek stands watch atop Thunderbird's tower to control takeoffs and landings. Instructors alternate as traffic monitors and all planes taking off must first get a green light clearance from the light gun which transmits the signals.



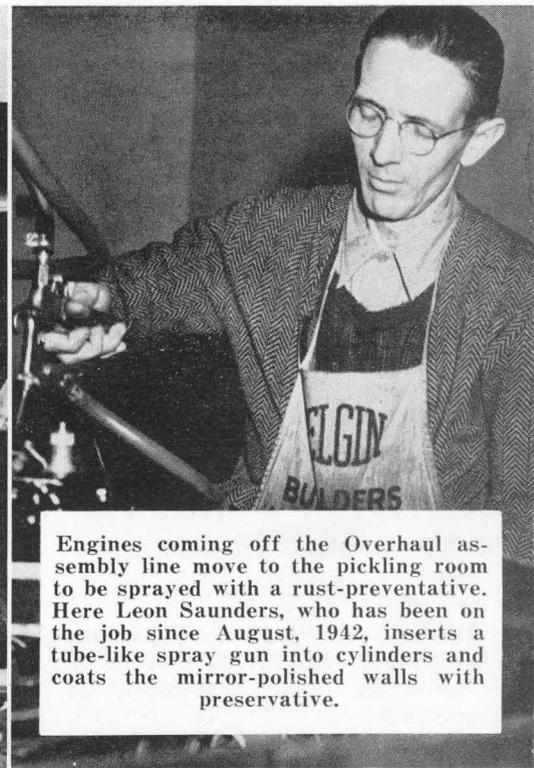
Airplanes must be kept clean and tidy in order to maintain peak performance. Spraying cleaning solvent on the ships of Thunderbird II is the duty of Lawrence Scott, one of the many competent Indian workers who keeps flying equipment groomed.



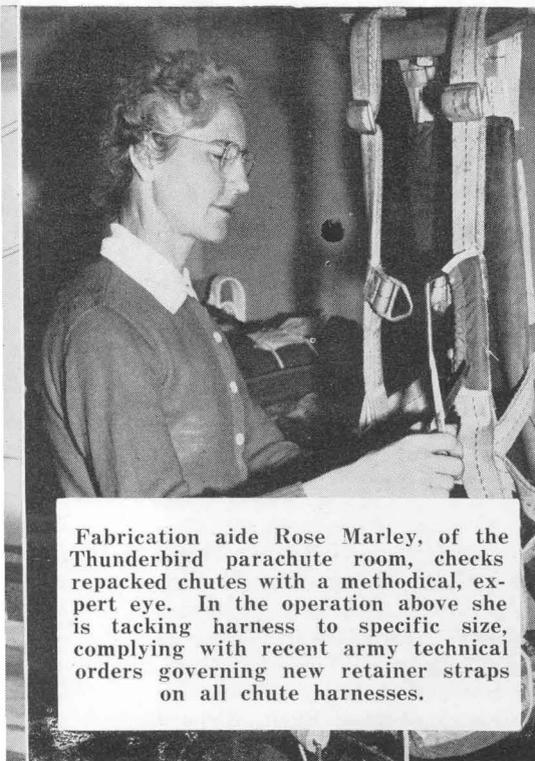
Air Transport Command ships of the Cargo Division never are without top-notch flight maintenance, even when they're at the northern terminus of our military feeder routes. As pilots' days end at the Sacramento Air Service Command depot, cheerful Alton Preston (right) is just beginning his work.



It's cramped quarters for Roy Clouter, Thunderbird II maintenance mechanic, as he crouches under a tail assembly to replace bushings in a tail wheel. "Solid landings" place a tremendous strain on the tail wheels and they're checked frequently to insure proper working order.



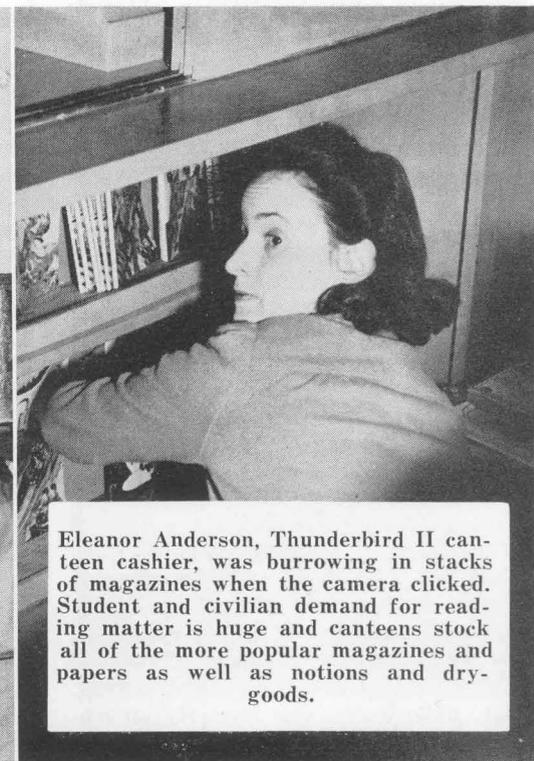
Engines coming off the Overhaul assembly line move to the pickling room to be sprayed with a rust-preventative. Here Leon Saunders, who has been on the job since August, 1942, inserts a tube-like spray gun into cylinders and coats the mirror-polished walls with preservative.



Fabrication aide Rose Marley, of the Thunderbird parachute room, checks repacked chutes with a methodical, expert eye. In the operation above she is tacking harness to specific size, complying with recent army technical orders governing new retainer straps on all chute harnesses.



Ted Watters, foreman of Overhaul's paint and dope department, looks on with approving eye as Lead-lady Opal Dosh works in dope on a newly-fabricated wing. This is almost the final step in wing-work, tightening the fabric and preparing a smooth surface for the spray-painting.



Eleanor Anderson, Thunderbird II canteen cashier, was burrowing in stacks of magazines when the camera clicked. Student and civilian demand for reading matter is huge and canteens stock all of the more popular magazines and papers as well as notions and dry-goods.



JEWELL WOLFE

Little-publicized, but very important, is the job performed by Jewell Wolfe of the stock expediting department at Thunderbird field.

It is her duty to issue parts for maintenance and repair of planes. Simple—well, 16 huge volumns of nomenclature for every part of an airplane line her desk. And when a mechanic comes in for a bolt for the tail wheel, he needs that particular bolt and not one to fit the engine. It is Jewell's job to see that he gets the correct-sized bolt as quickly as possible, for delay keeps a plane out of the air that much longer.

The civilian supply depot operates in close conjunction with the Army Air Depot Detachment, the Army issuing parts to the civilian depot which in turn issues them to the maintenance employees. This service has done much to speed up production in the maintenance department at Thunderbird, as it operates during the same hours as the maintenance crews. At any time of day or night parts may be obtained and planes made ready for flight. This makes the supply department doubly valuable as the Army supply depot is not open for night maintenance crews to draw upon.

Jewell can locate any part of a plane from the smallest to the largest in a matter of moments, as each part has a class and a number to simplify the operation. Shelves are lined with labels for safety wire, altimeters, airspeed indicators, carburetor heads, gosport tubing, and every other airplane part with the exception of wings. The 13'x21' room in Hangar 4 automatically excludes such large items.

Jewell was born in Tulsa, Oklahoma, in 1924. To date she has 12 hours of flying time to her credit. Her brother, Sgt. Dale Wolfe, was formerly an employee in the Aileron Department.

EX-CADETS CHEAT DEATH

"In every theatre of war, gunners, radio men, bombardiers and other members of the crew are working in their planes as a unit and are distinguishing themselves by quick thinking and ability to cope with emergencies."

Such was the enthusiastic statement of Lieutenant Robert L. Anderson, Thunderbird, Class 42-H, home after eleven months and 50 missions over enemy territory.

Wearing the air medal with nine oak leaf clusters — he also has a service ribbon with stars for three major engagements — Lieutenant Anderson modestly recalled his forty-ninth mission as the most exciting.

"Our ship, 'The Thunderbird,' was hit by enemy flak and members of the crew were injured. Also the control wires for the bomb bay were cut and the bombs stuck. I administered first aid to crew members who were wounded and we managed to get back to our home base."

The above and other death-cheating reports repeatedly have been called to the attention of THE THUNDERBIRD.

John R. Arant, Thunderbird, 42-E, buzzed Lae 'drome when it was the Japanese hot spot in New Guinea and strafed it. He caught the enemy completely off guard and roared up and down the strip, stinging men and trucks and planes with streams of .50 caliber.

In the heavy air assault on the Japanese stronghold of Rabaul, Captain John R. Wilson, watching the waves of bombers as they left the runway, said he was enjoying "the happiest day of my life." He received his primary training at Thunderbird II, Class 43-D.

More recently, Captain Frank Chapman, also a Thunderbird II graduate, Class 43-A, said of a recent raid on German-occupied Europe, "The sky was jammed full of planes — but few of them were Germans."

Group Comander Chapman flew in the lead ship, "Chap's Flying Circus," in one of the American bomber groups over Bremen. They were escorted by American long-range P-47 fighters the entire 380 miles to Bremen and back. One Thunderbolt fighter group alone accounted for 26 German planes against a loss of only one of its own.

A high-ranking officer who participated in the raid said the majority of the bombs smacked the target squarely.

Among bombing raid veterans is Lt. John M. Robinson, Thunderbird, 42-J, who recently helped other members of the crew of the "Knock-Out-Dropper" celebrate its 50th bombing mission over Europe.



JESSIE AND JOSEPH

Overhaul elected a "king and queen" and the Infantile Paralysis Fund was richer by nearly \$200 recently as a result of a spirited "popularity" contest between hangars 2 and 3.

Royal rulers of the hangar domain are Queen Jessie Ceplina of the sheet metal department in hangar 2, and King Joseph Cohen, final assembly inspector from hangar 3.

Votes cost money in the week-long balloting to determine winners, but there were no "crooked politics" in this election. For every vote—at a penny each—swelled the fund which goes to combat infantile paralysis, dread scourge of our nation's youth, the killer which knows no race or creed.

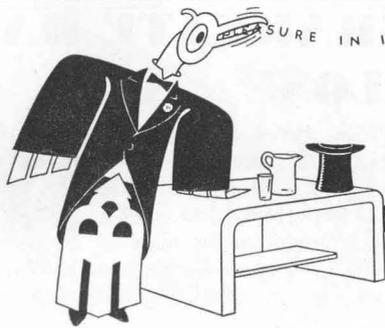
Runners up in the contest were Marjorie Jones of hangar 3 and John Davis of hangar 2.

"M" Flight Wins

Winner of this month's Thunderbird safety contest (highest number of cadets graduated with lowest number of accidents) was Charlie Jenkin's "M" flight, with a score of 2.57. In close second place was Wayne Forter's "K" flight, with a total of 3.04.

Jenkin's men, in addition to retaining the handsome leather plaque in their hangar for the next nine weeks, will be banqueted by Southwest officials.

Winning instructors are: Flight Commanders Tom and Francis Smith, Jerome Buckman, Robert Elliott, Ralph Hunnicutt, Harry Finley, Tom Jenkins, Robert Kersting, Phillip McManamy, Walter Morris, Lloyd Adams, Raymond Dinsen, Paul Foltyssek, Vernon Latham, Caldwell Mothershed, Loren Pilling, Edmond Pillsbury, Arthur Ryan, Richard Swingler and Phillip Camerano.



SURE IN INTRODUCING ONE WHO NEEDS NO INTRODUCTION

Biographically Speaking

Al (short for Alfred D.) Davis bears a role of distinction in the vast Southwest organization. For at 22 he is the youngest foreman in the operations.

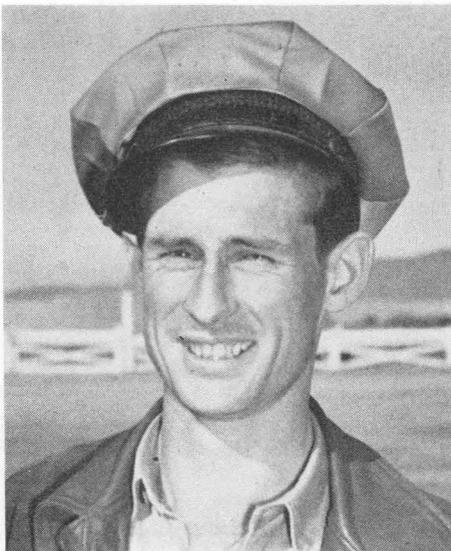
What's more, he's proving you don't have to be grizzled and grey in order to do a successful job of supervision, for his teardown and cleanup department at Overhaul is clicking like clockwork.

Davis, a Joplin, Missouri, boy has been with Southwest for two years and a foreman for half of that time. His job is to supervise the complete teardown of ships which go through the overhaul operation.

"It's a great job for anyone who wants to see what makes things tick," Davis declared, "for we rip planes down to the bare skeleton, removing all instruments, parts and fittings."

While his span of working years has been short, Davis has managed to crowd in a variety of activities. After schooling at Spring City, Mo., and Wichita, Kan., he worked on a dairy, later in an ice plant and somewhere along the line picked up a "jack-of-all-trades" knowledge of mechanics.

An Arizona resident for seven years, Davis married an Arizona girl and has a daughter three-and-a-half years old. His work leaves little time for hobbies, but he likes baseball, hunting and fishing.



AL DAVIS



MEL LYSTER

Astoria, Oregon, snug seaport nestled at the mouth of the Columbia river is the home of the mighty Chinook salmon, rip-roaring Finnish basketball teams and Mel Lyster, Falcon field's chief link instructor.

And Lyster claims he'd like to get back there just long enough to tie into one of those 50-pound Chinook beauties and perhaps watch a basketball game.

Lyster didn't tarry long in Astoria after completing his schooling. He decided aviation was a promising career and took aeronautical training at the Boeing School of Aeronautics, specializing in aircraft instruments. He graduated as an airline mechanic and later became interested in Link trainers.

He went back to Boeing, took a post-graduate course in Link and upon completion of the course went to work for United Airlines at the co-pilot training school at Tracy, Cal.

He left Tracy in September of '41 to come to Falcon field and has been there ever since as chief Link instructor.

Lyster holds several ground school instructor's ratings and spends his spare time repairing aircraft instruments and inventing gadgets that make instruction easier and trainers simpler to operate.

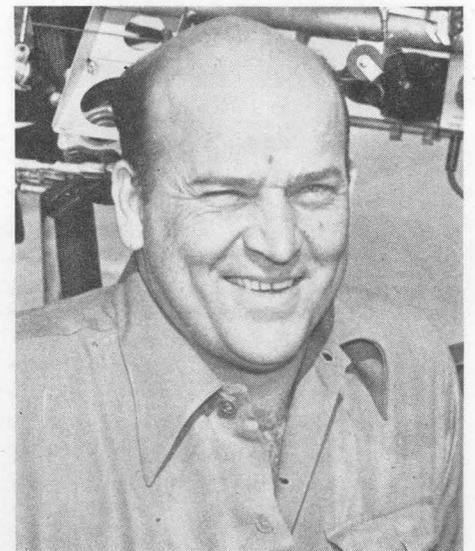
Take it from John Robinson, assistant superintendent of maintenance at Thunderbird II, it's the airplane maintenance men of this country who keep the aspirin people in business.

"It's one big headache," Robinson vows, "but I never want to be in anything else."

A Southwest employee for three years, Robinson started at Thunderbird "when they had but 35 planes and all the present bosses were 'just workers'." When operations started at Thunderbird II he came over as Guy Polston's assistant and has been bustling ever since keeping ships in tip-top shape.

Robinson has been in aviation for six years both as a pilot and mechanic. He learned to fly in 1939, taking instructions from Bill Marsh and Jack Marine at Sky Harbor. He still likes to "kick a plane about the sky," but ironically, though he's around them all day, seldom has the time.

Born in Tennessee, he came to Arizona in 1928 and has been here ever since. He boasts a bulky bomber-like build yet moves with all the lithe grace of a trim fighter. This he attributes to an active athletic career that included football, weight lifting and a whirl at professional wrestling—just enough to find out that "what you get isn't worth the beating you take."



JOHN ROBINSON

HOW MANY CAN YOU ANSWER?

Here they are again—those questions and answers—so sharpen up your wits and get to work. Score ten points for each correct answer—50, sad; 70, better, but not good enough; 80, pretty sharp; 100, on the ball.

The answers are on page 20.

- How many rivets does it take to make a P-40 pursuit plane? (a) 70,000; (b) 60,000; (c) 10,000.
- Who was the world's largest producer of aircraft in 1943? (a) Douglas; (b) Messerschmitt; (c) Consolidated-Vultee.
- By not camouflaging a Liberator bomber eight miles per hour is gained in speed. The weight saved is about (a) 80 lbs.; (b) 100 lbs.; (c) 180 lbs.
- The world's international speed record for aircraft, which was set in 1939 (none has been reported by any country since then) is (a) 399 mph; (b) 444 mph; (c) 469 mph.
- All the newest British Lancaster bombers have (a) air cooled engines; (b) six engines (c) liquid cooled engines.
- Which is farthest north of the equator? (a) San Diego; (b) Phoenix; (c) Dallas.
- The Army value set for a Boeing PT-17 is: (a) \$6,129; (b) \$7,000; (c) \$8,129.
- On a standard typewriter, not counting the shift key, what is the fourth key from the right? (a) m; (b) ? (c) .
- What issue of THE THUNDERBIRD magazine is this? (a) 7; (b) 11; (c) 12.
- Which is heavier? (a) quart of cream; (b) quart of milk; (c) quart of air.

Gives Concert

Hot licks, sweet riffs and a break or two of good old "dirty-neck" trumpet-tooting wafted across the commons at Thunderbird II recently to the delight of cadet and civilian personnel and the chagrin of Aviation Cadet Claude Dauster of Breckenridge, Tex.

As the story goes Cadet Dauster, who once made sweet music with Ted Fio Rita's band, couldn't stand the staid, stock notes of a certain bugle call after about 60 consecutive renditions, and on his last day at bugler swung out with a "hot version" of it.

As a result, Cadet Dauster was given an opportunity to give a half-hour solo concert at the flag-pole, to get the swing out of his system.

So during his 30 minutes of free time at noon toes tapped as Dauster blew everything from Bach to Boogie-Woogie.



NEVER LATE or absent since he started work on Jan. 13, 1942, Grover F. Black (right), hangar 4, maintenance crew chief, receives his two-year pin from Jim Roberts, Thunderbird paymaster.

Receive Pins

Forty-five Southwest employees have been awarded tenure of service pins.

Two-year workers follow:

THUNDERBIRD

Flight Instructors—Charles F. Moores, Arthur W. Robart.

Airplane Maintenance — C. L. Ballard, Grover F. Black, Alva J. Galland.

FALCON

Airplane Maintenance — Roy Jones, Oscar Martinez, Kenneth Holland.

Guards—L. H. Wilkerson.

Flight Operations — Fetta Mae Brown.

Airplane Maintenance — David L. Conner, Lloyd Rich.

Ground Maintenance — Alva Pardee.

THUNDERBIRD II

Flight Instructors — Roy E. Knupp, Carl R. Holmes.

Airplane Maintenance — C. E. Ramsey.

Those receiving one-year pins:

THUNDERBIRD

Flight Instructors — David P. Doak, Harold S. Hancock, Earl A. Lieske, Thomas C. Sanders, Edmond H. Snyder, Richard T. Swingler, Ray V. Wood, Robert E. Finley.

Airplane Maintenance — Joe T. Keeton.

Steward's Dept. — Myrtie L. Evans, Nellie K. Schultz, Harry Warfel.

FALCON

Flight Instructors — Harry C. Shipley, James B. Holloman, Paul M. Wertheimer.

Airplane Maintenance — Gerald A. Nicholson, David Sampson.

Steward's Dept. — Lela E. Tucker.

Ground Maintenance — P. E. Sumpter.

OVERHAUL

Administrative — Velma Lyall.

Engine Clerical — James Hogle.

Aircraft Division — Albert Kuban, Claude McHone, Dale Patton.

Engine Division — Ollie M. Casey, Beryl Champion, Pearl Daly, Mary Ann Mullikin, Jack Nix.

GRADUATE HAS CLOSE CALL

"Most times the little hunks of flak do more damage than the big ones," Lt. Preston M. Hawk, Thunderbird, Class 43-A, reportedly has said.

In a recent press dispatch Lieutenant Preston recounted in his own words, his experience in raiding a target in Austria.

"I was riding copilot and the old Liberator had taken pretty much of a beating. Big, noisy gashes opened up all over her but we made our run and turned for home. About that time a little finger-tip dab of ack-ack pierced the ship and things really began to happen.

"It cut the release control for our life raft which inflated with air and shot out into the slipstream—a bulging, whipping rubber boat—bluffeting the tail blanketed the elevator.

"Up front we didn't know what was happening, of course, but we suspected the tail had been shot half away. When the raft jammed the elevator, the Liberator stuck her nose down and headed for the deck.

"And let me tell you, trying to fight a four-engine bomber out of a power dive is really something! We were going down so fast we couldn't get our hands out far enough at first to cut the throttles, and one of the crew was pinned to the top of the ship by the force of the drop!

"Finally we dragged her out of it by sheer strength, but she was in a bad way. One engine was gone, the others were out of 'sync' (synchronization) and half the instruments were shot away.

"About that time someone called out that the five boys in back had bailed out. So we decided to hit the silk ourselves.

"But when I started aft, my rip cord snagged on something and the damn chute spilled out all over the place!

"There was nothing left to do but stick with her, and the other boys elected to stick, too. Somehow we nursed her into an auxiliary field behind our lines."

IMPROVEMENTS MADE

Cargo Division at Tri City Airport is undergoing a face-lifting.

The girls who operate the radio are now in a soundproof room which adjoins the new office of Superintendent Ed Rein. The old radio room has been painted and furnished with modern furniture to serve as a pilots' lounge.

In the maintenance shop new benches and other equipment are being installed, under the supervision of Superintendent L. C. Ponte.



Gossip and Hearsay

The recent golf tournament at the Phoenix Country Club must have reminded Cecil Watkins, T'Bird head gardner, of the eight years he worked there before joining Southwest. Recalling big-name golfers, Watkins said it was his job to rope off the greens from the people the year Lawson Little competed . . . Janet Johnson, administrative secretary, had more than just an ordinary interest in the recent Falcon graduation. It was her childhood playmate, RAF cadet Frazier Noble, who won the award of outstanding man of the graduating class.

Gasoline Boss Charlie King probably never will hear the last of it from T-2's office manager, Art Brittain. It seems that Charlie offered to drive Art to Thunderbird, then ran out of gas, and Art had to walk the last two miles . . . "Tiny" Douthett, T'Bird flight instructor, believes he holds the record when it comes to "staying put." He's been in the same flight, the same hangar, and even had the same locker for two years and two months . . .

There was at least one cadet in class 44-F to whom Thunderbird was not new—A/C Ray Henson, former maintenance mechanic for Guy Polston . . . Ever listen to Bob Gravage, T-2 flight instructor talk when he's a bit excited? Sounds like GETTASTICKBACK - HOLDER - OFF-GETTABACKBACKBACK-OUCH-YAGODDAMDOPE. Translated it means: "Phew! Tomorrow's another day."

Dorothy Barnes, T'Bird airplane mechanic, has enlisted for mechanical work in the Women's Army Corps, through the Army Ninth Service Command's special drive . . . Before Eva Wagoner left the Cargo Division to join her husband in Tennessee, she was presented with a going-away gift from fellow employees . . . "Kaleidoscopic" is the only word we can think of that describes the new paint job in the Falcon maintenance office. Responsible for the color scheme were Vaudine Awtry, Alice Johnston, and Dorothy Rein. . . .

Next time you see T'Bird flight commander Charlie Culver, take a look at the ring he's wearing. It's a special mounted gold thunderbird (his two-year

pin) on an onyx base, and mighty pretty, too, if we may be allowed to comment. . . . Al Storrs, Falcon director of training, has a new baby girl, Alice Louise; and over at T'Bird, the flight department are congratulating Catorce Hight on the arrival of his daughter. Catorce's wife, Christine, used to work in the T'Bird mimeograph office.

Unable to locate her boss, Marie Wright, secretary to T-2's field manager, had him paged over the P. A. system. Imagine her surprise to hear, "A/C John Swope, call extension 20—A/C John Swope, call extension 20—On the double, Mister, this is important." . . . We like the one they tell about Bob Fry, T'Bird office manager, upon his arrival at the Cargo Line office. Greeted by personnel manager Jim Yerkes, Fry asked, "How do you find it here?" To which Jim replied, "Walk right down the hall, and it's two doors to your left." . . .

A new kind of production line assembly went into effect recently in the T'Bird flight department when Pilots Gordon Kunkle, Harold Frost, Charlie Culver and Stan Roper assorted and

stapled some two hundred copies of instruction for preparation of student logs . . . Wilbur Hofmann, T'Bird night maintenance clerk, has been notified that his Marine son, survivor of five major campaigns, was killed in action at Tarawa.

Cadets marching to the flight line at Thunderbird II frequently go "eyes left" when passing the flight record office, staffed by a "bevy of beauties." Allegedly shy and coy to the low whistles and murmured "ah's", the girls are now hollering "sabotage" since one flight lieutenant barked at his sight-seeing cadets "Awright you guys, keep those eyes front AND OFF THE WIMMIN!"

About the busiest man at dedication of the Falcon Field Officers' Club in Mesa was Chief Pilot Mike Foydl, torn between the jobs of dispensing refreshments and rendering drum solos . . . Which reminds us, why does Ted Hanna think a cracked rib is a legitimate tax reduction when he claims it as maintenance for a mustache? . . .

T'Bird ground schools' "I Don't Ever Remember" contest, which costs an instructor money every time he forgets something he should have remembered, is all tied up between Dick Lincoln and Louie Hoyle. To date Kenny Brown is the only instructor who hasn't had to forfeit cash. . . . They call him "Man-Mountain" Davis of the Cargo Line. Weighing only 143 pounds, Davis has had two chairs collapse under him while hard at work in the accounting department, much to the vicarious enjoyment of other employees . . .

Marie Wright, T-2 secretary, has smoked her first and last cigar. Nibbling the end in the traditional manner, she gingerly puffed away—until she inhaled. The occasion, Post Commandant of Cadets, Captain Earl Coolidge had been made a Major. Other promotions at T-2 included Wm. Ogilvie and Frank Reynolds from 2nd to 1st Lieutenants.

Marjorie Amend, ex-T'Bird employee, recently was on leave from the Coast Guard. She is a parachute rigger with a third class petty officer rating, one

(Continued on Page 18)



John R. Winn, Falcon instructor, left, with former student, Lt. Francis N. Satterlee, graduate of Course 16. Lt. Satterlee was en route to Long Beach to join the 6th Ferrying Group, of which he is a member.



SAFETY CONTEST WINNERS

Eight good reasons why the AAF is the most powerful air force in the world today. These instructors won top honors in the monthly contests at Thunderbird and Thunderbird II to see which flight could graduate the greatest number of cadets with the fewest number of accidents.



Thunderbird II Flight 8



Thunderbird Flight "B"



Thunderbird II Flight 3



Thunderbird Flight "L"



Thunderbird II Flight 4



Thunderbird Flight "D"



Thunderbird II Flight 7



Thunderbird Flight "N"

PILOT SERVES 40 MISSIONS

(Photo on Visitors' Page)

"When the sky begins to fill with flak and the Messerschmitts and FW's clutter your path you think of a lot of things—but you don't have time to remember them" says Captain John H. Barber, Thunderbird 42-F, back in the States after 40 successful bombing missions.

The fact he "came back" after those 40 sallies into enemy air over North Africa, Sicily, Sardinia and France is a source of satisfaction to Barber, of course. But he takes even greater pride in the fact no member of his B-26 crew was lost or even wounded in all the long, sometimes terrible hours of combat.

The action-crammed story of Barber's experiences since he graduated from Thunderbird field were unfolded recently when he and his pretty bride of a few weeks visited the scene of his early training days.

And, though he's modest and retiring, the collective questioning of Director of Training Ralph Jordan and Fred Merha, who was Barber's first instructor, drew out bit-by-bit the saga of the aerial antics which won for Barber the air medal, six oak leaf clusters and three silver stars.

As explained by Barber:

"I was among the great gang of pilots and ships that went over to participate in the North African campaign, and we lost little time getting into action."

Barber saw plenty of it on his 40 missions. Foremost in his mind is the time the boys went out for a nice little bombing run on Paola, Italy, for the curtain almost "rang down" that trip.

Paola, the flight was told, was a "sitting duck". There were practically no anti-aircraft guns, and no fighter opposition to speak of.

So the boys sailed out to lay their eggs on a bridge which vitally would cripple enemy transportation. Just as the flight neared its destination, however, clouds obscured the target and the ships roared over the bridge with bomb bays still loaded. Recalling their briefing information which assured little opposition, the flight wheeled around and committed the bomber's cardinal crime—a double run.

That time they caught it. Black, greasy smoke of flak suddenly surrounded the B-26's and up off a half dozen fields rushed flights of ME-109's until there were over 40 enemy fighters lashing at the bombers.

That battle lasted 40 minutes, the Americans lost two ships—but bombs were "on the target" and the bridge was



FORTRESS PILOT Capt. Wesley W. Dunlap, a graduate of Thunderbird, Class 42-I, and his ship, "Spirit of a Nation."

blasted into a mass of useless wreckage.

Though his ship—"Lady Laurette", named for Helen Laurette, the girl he came home to marry—was dimpled with shrapnel and machine gun bullets, Barber brought her home safely.

Came the day, however, when the good luck record ran out. Barber still brought his men home, but his beautiful bomber stayed behind, fit only for scrap salvage.

"That call was just a little too close for comfort," Barber tells. "We were lazying along over Sardinia minding our own business when suddenly a flock of German fighters appeared and started lobbing rocket shells at our formation. There wasn't much we could do but fight evasive action—for they'd lie out of range of our guns and lob rockets at us. Take it from me, they're nasty company. They're high explosive shells and they spit a lethal load.

"One of them hit our ship squarely, exploding directly behind the pilot's quarters, ripping out the hydraulic system and knocking our plane out of commission. I knew there was an airfield in the vicinity—but we had orders to land only in extreme emergency since it had been taken from the enemy only three hours earlier.

"So far as I could see, this was "the" extreme emergency and I nosed her down. We made something that resembled a landing—we couldn't get wheels down, remember—and scampered to safety from sniping bullets fired by the enemy who was still a little peeved about our taking over his nice airfield."

Pilot Praised

Captain Wesley W. Dunlap, Thunderbird Class 42-I, recently completed a tour of operations in England.

Piloting his Fortress, "Spirit of a Nation," he attacked such targets as Kiel, Hanover, Kassel, Bremen, Frankfurt, Gelsenkirchen, Huls, Nantes, Amiens, Munster, Paris and Wilhelmshaven.

While assaulting an important target at Nantes, his ship was subjected to heavy enemy fighter attacks. During the running battle the plane received 14 direct hits from the enemy's 20mm guns. Three members of his crew were wounded, but refused to leave their gun positions. Continuing to drive off enemy attacks, the "Spirit of a Nation" officially destroyed seven enemy aircraft. Although the fortress was badly damaged from enemy fire, Captain Dunlap succeeded in returning to home base.

While in the European theatre, Dunlap was awarded the Air Medal with three Oak Leaf Clusters, and the Distinguished Flying Cross with one Oak Leaf Cluster.

RATINGS GIVEN

Taking advantage of Southwest's instrument instruction course at Falcon, seven more men have passed their C.A.A. exams for instrument ratings: Dink Robart, Ray Corn, Al Donohoe, Charles Hanson, Robert James, Fred Merha, and Hart Anderson. Claude Downs, who has been instructing the course, will continue to teach fellow pilots in the order of their seniority.

GOSSIP (Cont'd)

of only nine Spars to have this rating. . . .

Rebecca Parra, O'haul purchasing, is now Mrs. D. P. Jimenez . . . T-2 instructor, **Bob Crocker**, was pleased to learn that his former cadet, Curtis Bickstaff, Class 44-B, had been given the high individual gunnery award at Luke Field, having scored 76 per cent to tie the field's record. . . . **Frank Medaros**, wing and aileron maintenance, and **Tom Finley**, in charge of tugs at T'bird, were personally escorted to their jobs the other morning. The reason: They had forgotten to wear their identification buttons. For Finley it was the first time in 21 months of service. . . .

At 11:00 A. M. Feb. 2, all work in Overhaul ceased for exactly one minute as employees paid silent tribute to the memory of **James W. Kelton**, former metal parts department worker, killed in action somewhere in the Pacific. . . .

Noticed at SH recently: Instructors **Art and Bruce Bethancourt** and **Wally Child** in mechanics' coveralls overhauling planes. . . . **Dave Verrill**, T'Bird ground school instructor, who has spent a lot of extra hours on visual training aids for navigation and weather, has just completed an enlarged-to-scale map drawing. . . .

Back on the job after recent illness are **Warren Gentry** and **Mamie Moore**, T'Bird maintenance, and **Rachel Furman**, Cargo Line . . . **Roy Rasmussen**, late of T-2, is fast becoming a seasoned Cargo pilot . . . No doubt you'll be hearing some new fish stories soon. **Frank Chestnut** and **Angel Haulde**, T'Bird maintenance foremen, are spending their vacation at the lake. . . .

T'Bird ground school's popular paycheck pool recently was won by instructors **Tom Hansen** and **Louie Hoyle**. Hoyle, who showed up for class the morning his vacation started, was accused of coming to the field merely to collect his winnings. . . . Tanned **Jeanette Williams** is the envy of most of the girls in Overhaul. She acquired that nut-brown look by doping airplane wings out in the sun. . . . Those fragrant bouquets of sweet peas seen on the desks of secretary's **Anna Odom** and **Maxine Meeker** were picked from the Post's own flowerbeds. T'Bird gardeners, take a bow.

With the extension of the luncheon period for maintenance employees to a full hour has come an interest in baseball. Most faithful players are **Gertrude McElroy**, **Nellie Liveley**, **Alma Wolfe**, **Florence Grogg**, **Bobbie Ellis**, **Maude Long**, **Juanita Montgomery**, **Amy Rickets**, **Flovilla Sanders** and **Jewell Wolfe**.



NOT THIS



BUT THIS

SPEAK DIRECTLY into the telephone . . . your natural voice is best. (Courtesy Southern New England Telephone Company.)

Take Flight

A recent cross-country flight to Ashfork and return not only had great training value for all flight instructors who participated, but also enriched one instructor—William Steddom—by \$24.

Before the group of 13 PT-17 airplanes left Thunderbird Field, instructors estimated the average time it would take for all planes to make the round trip.

Steddom's estimate, three hours and 58 minutes, came within six minutes of the actual time logged. Closest rival for the correct total (three hours, 52 minutes) was Clayton Vagneur, who guessed three hours, 59 minutes, one minute more than Steddom.

Other instructors who participated were, Terry Henry, Ronald Storrs, Thomas Hall, Wm. Hammett, Joe Taylor, Robert Freese, Howard Naas, Albert Caradies, Earl Lieske; John Nichols, John Jones, John Hetherington, Tesley King, Cecil Napier, Charles Crooks, Homer Falkner, Lester Bonnick, Henry Copes, John Auhl, Wm. Trainor, Harry White, Herman Elliott, Gordon Kunkel and Charlie Culver.

TIMING DEVICE PERFECTED

A mechanism to better illustrate engine timing has been perfected by Clyde Gilman, ground school instructor at Falcon Field. The synthetic training device consists of a wooden cut-away model of a radial engine, complete with florescent light bulb cylinders, which flash on at the same time the ignition spark would occur in a real engine. The spark can be advanced or retarded by the instructor to illustrate changes in ignition timing required with changes of engine speed.

Shrewd investors are putting both income and principal into War Bonds.

Wins Contest

Steak dinners will go to members of Squadron One at Thunderbird II for running up the best record in the number of cadets graduated with the fewest number of accidents in Class 44-F. Their score is one other squadrons will be shooting at for some time to come—five minor accidents with only one elimination.

Headed by Squadron Commander Dick Holmes and Flight Commander Orin Lund, the instructors of the winning group were: Francis Clark, Donald Donovan, Jack Ferdinand, Alec Hamilton, Jack Harbin, Floyd Longwell, Stephen Lowell, Herbert Manis, Jerry McWane, Jimmy Odo, Ralph Price, John Stephens and Eric West.

The names of the squadron commander, the senior cadet leader, and the number of the winning squadron will be engraved on the perpetual trophy.

Other squadrons, and their commanders, who participated in the contest were: Squadron Two, George Tayrien; Squadron Three, Ace Hibbard; and Squadron Four, Fred Logan.

Ideas Pay

Ever watch somebody else working and think, "If it were my job, I'd find an easier way to do it?" Ever see inefficiency or waste in your job or that of a fellow worker?

The chances are good that you've had such thoughts. But have you ever done anything about them?

The maintenance departments at Thunderbird and Thunderbird II are offering cash prizes for new ideas. Why not get your suggestions down on paper, submit them to your foreman, and pocket the extra cash? Give your ideas a chance!

★★ VISITORS OF THE MONTH ★★

ARMY MAINTENANCE OFFICERS were entertained at Thunderbird II recently. Left to right, Capt. J. R. Breeden, Capt. R. L. Thompson and Capt. H. T. Van De Car, hosts, Capt. Hardy and Capt. Smith, Luke; Lt. Col. T. S. Algent, Western Flying Training Command; Lt. Col. Joe Ashe, Luke; and Major B. Alexander, W.F.T.C.



They Also Stopped By

FALCON: Mr. R. C. Stowbridge, modification approving engineer, Army Air Forces, formerly stationed at Wright Field, Dayton, O., now with Consolidated Vultee modification center, Tucson, Ariz.; and Squadron Leader Bartley, holder of the DSC and bar, who visited with Wing Commander McKenna.

OVERHAUL: Major K. I. Dazey, San Bernardino Air Service Command, who performed an inspection of activities.

THUNDERBIRD II: Captain B. M. Holmes, Western Flying Training Command, who conducted a ground school inspection.



AIR TRANSPORT COMMAND officers examining applicants at Thunderbird II were, left to right, Capt. William P. Sloan; Lt. Ray Chandler; Capt. John Morgan and Capt. Harold Fox.



FORMER THUNDERBIRD CADET Captain John H. Barber and his bride of two weeks visited and talked over old times with Instructor Fred Merha (standing left) and Ralph Jordan



BRIGADIER GENERALS Martin F. Scanlon (left), commanding the 36th Flying Training Wing, and Alvin C. Kincaid, commanding the 37th Training Wing, spent an afternoon inspecting Thunderbird fields.

REPORT OF THE MONTH

By General H. H. Arnold to The Secretary of War

Two years after Pearl Harbor we have reached the moment when the basic change in our strategic position has become apparent to all. It is now plain that for us the beginning has ended; for our enemies, the end has begun . . .

As of January 1, 1944, it can be revealed that the Army Air Forces number 2,385,000 officers and men. In 1938 the Army Air Forces had about 1,300 officers and 18,000 men, with a reserve of 2,800 officers and 400 men. In 1938 we were building 100 military planes a month. We had 1,600 planes . . .

To provide airmen to fly the planes it was necessary to expand Army Air Force training facilities at once. The Army Air Forces did not have sufficient instructors to train 2,400 pilots a year. To build another Randolph Field to handle 500 pilots a year would take five years. The idea was criticized as being against precedent, but heads of our civilian flying schools were called in by the Army Air Force. They were to get ready to teach huge classes in primary flight. The Army Air Force could offer them no contracts at the time to justify complete changeovers of their programs, but the flying schools immediately prepared to help handle the pilots. The figure was raised to 12,000 pilots a year, and later to 30,000. We could not possibly have trained so many airmen so quickly without these schools. Today, our pilot training rate has left these earlier goals far behind . . .

Germany required ten years to create her Luftwaffe; we were required to build our air force in one, and to fight with it in four corners of the world at the same time . . .

When the Allied nations began sending their cadets to the United States for training, additional duties were put on the shoulders of the experienced men. At one time foreign cadet training required a substantial part of our training equipment and personnel. About one-third of all our facilities were used for this purpose. In the United States were trained thousands of young men from Great Britain, China, the Central and South American countries, and others . . .

Flying safety is vital both to our individual men and to our program; we need every soldier. If we stopped flying and put the airplanes in hangars we would have no accidents at all. But war is not fought that way . . .

There has been an increase in the numbers of airplane accidents, but not out of proportion to the tremendous increase in the numbers of men now flying . . .

Since the Ferrying Command was established in May, 1941, the transport and ferry systems of the Air Transport Command now extend over some 110,000 miles of routes. In recent months an average of

more than twelve million miles a month have been flown in ferrying operations and more than ten million in air transport . . .

The Air Service Command, formed in October, 1941, surpasses in size and is doing a wholesale round-the-globe business greater than any mercantile establishment in the world . . .

During January, 1942, the number of aircraft produced in this country totaled 2,972. During November, 1943, approximately 8,800 planes were produced . . .

It can now be announced that up to Oct. 1, 1943, a total of 26,900 planes have been exported to our allies by Lend-Lease or direct purchase . . .

One hundred and forty-five thousand planes are scheduled for completion by the War Production Board in the next fifteen months.

Not one of our Air Forces has the planes it should have. Every one could use double the number it now possesses . . .

The primary objective of Allied forces in the Southwest Pacific is to advance our own network of air bases deep into the Japanese perimeter . . .

To destroy the will to fight is one of the secondary objectives of our air offensive against Germany; we do not expect white crosses to appear tomorrow on the runways at Templehof. Our primary concern, simply stated, is to make the coming invasion of Germany as economical as possible by drastically reducing the war potential of the Third Reich and its satellites . . .

In military reports soldiers are spoken of as "personnel" or "the human factor." Let us not take exception to the usage. Let us not forget, either, that those soldiers are men . . .

Heroes or not, our men have done heroic things. Privates, sergeants, generals, have put their lives on the line—not without regard to consequences, as some like to think—but knowing full well what the odds were . . .

On the training fields of the United States other men are making another kind of sacrifice. Top fliers themselves, they have been wanting more than anything else to get into combat. Cadets whom they have taught to fly return home, loaded with honors and higher than they in rank, perhaps. But every German or Japanese plane brought down is a tribute to the quality of their work. They are the instructors.

H. H. Arnold

General, U. S. Army

Commanding General, Army Air Forces

General H. H. Arnold, on January 4, 1944, submitted to the Secretary of War a 26,000 word report accompanied by eloquent graphs and maps. Titled "Air War," it is a masterful, organized historical summary of the progress of the war in the air to date and a blueprint for the future. With the thought that not everyone may have a chance to read the complete message, these few highlights are presented here.