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FAA WORLD

Service to Man in Flight



1903-1973

**The Miracle of Kitty Hawk
Revisited**

FAA WORLD

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The cover: A soaring shaft of granite on Kill Devil Hill, Kitty Hawk, N.C., marks the site of man's first flight in a powered aircraft.



A Lesson From History

This month, we commemorate the seventieth anniversary of man's first powered flight.

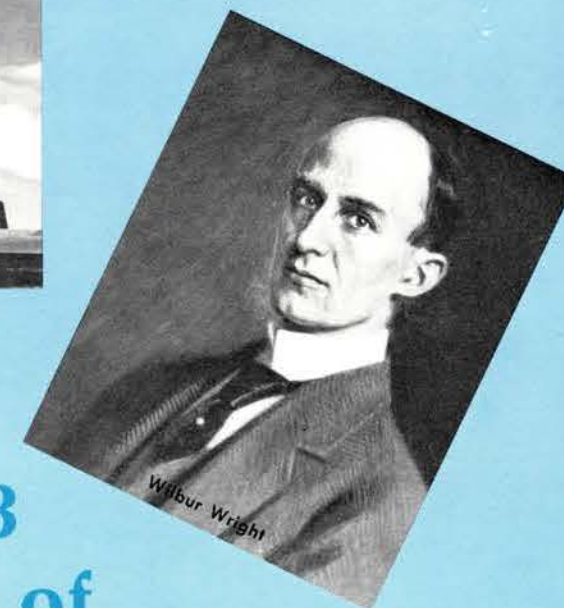
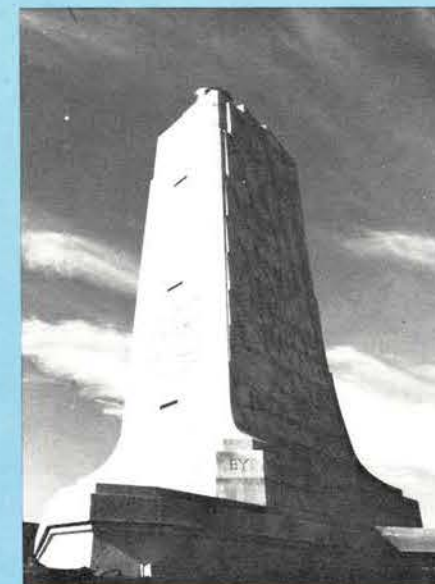
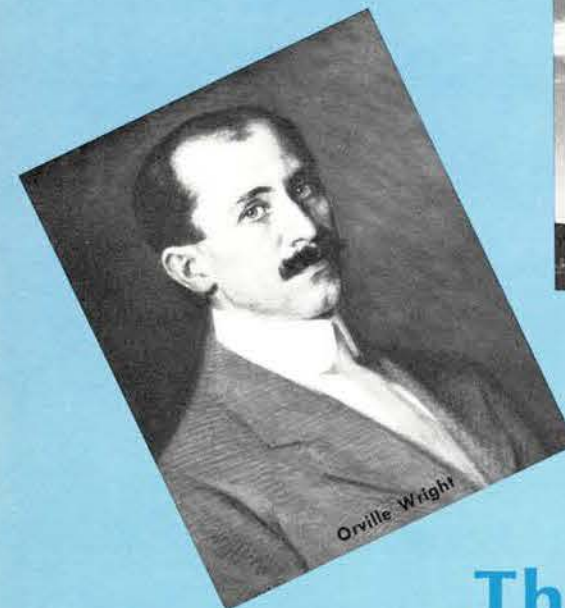
Though it has been only one lifetime—and there are people now living who experienced the birth of the air age—all of us, I think, are aware that those 70 years have produced almost unbelievable changes in aviation. Airplanes have become larger, heavier, faster, increasingly complex and more numerous. And a necessary concomitant of this growth has been the need for the unique services the FAA provides. Certainly, our jobs, too, have become complex. Still, the greater these changes, the more relevant our basic mission of safety—the more pertinent, meaningful and really important becomes our responsibility to provide for the American public a safe and efficient national aviation system second to none.

I believe, however, that both the FAA and the users of the airways can take a lesson from the Wright Brothers. In all of their experiments, control of the craft was the primary objective. It was only after they had achieved control and equilibrium in gliders that they set out to design and build an engine for a powered airplane. They were courageous men, but never foolhardy. They were cool and calculating and set for us on that very first flight an example in proper pilot discipline. In fact, Wilbur Wright had said earlier, "Carelessness and overconfidence are usually more dangerous than deliberately accepted risks."

The skies are more crowded today, but the real hazards to safe flight are precisely what Wilbur Wright warned against—carelessness and overconfidence on the part of some pilots, such as in inadequate preflighting, risky weather decisions and lack of visual alertness for other aircraft. All of us must do more than we have in the past to impress upon pilots the way and the wisdom of minimizing risk.

The lessons of Kitty Hawk are ever valid.

Alexander P. Butterfield
ALEXANDER P. BUTTERFIELD
Administrator



1903-1973 The Miracle of Kitty Hawk Revisited

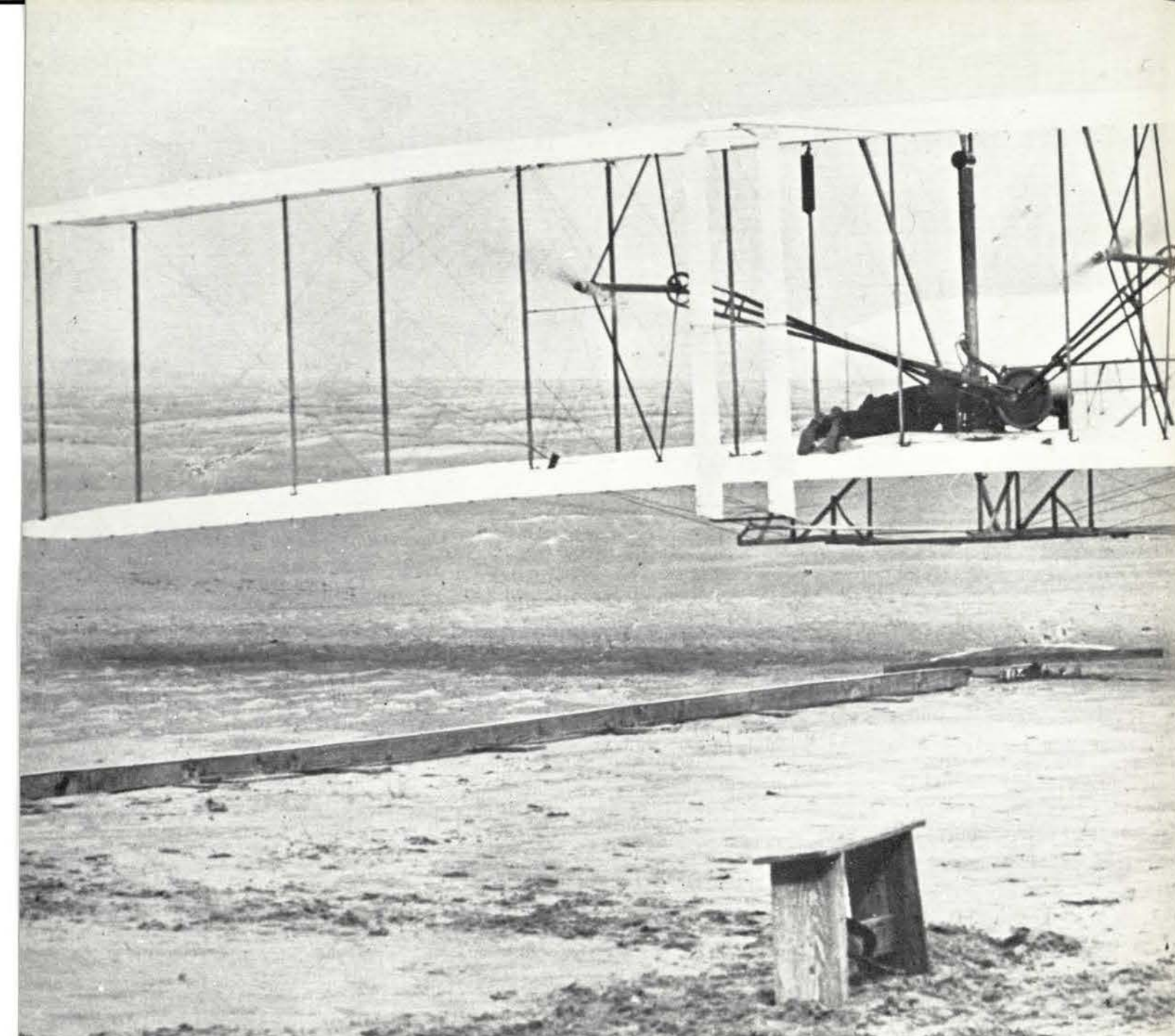
It was at 10:35 on a cold, windy morning 70 years ago this December 17th that man first broke "the surly bonds of earth" in powered flight.

On the sand flats of Kitty Hawk, N.C., Orville Wright released the restraining wire, and the biplane started along a 60-foot track, traveling slowly into a northerly 21-mile-per-hour headwind at about seven or eight miles per hour. It moved so slowly that Wilbur Wright was able to run alongside holding the right wing to balance the machine on its track.

After a run of 40 feet, the plane took off. When it had risen about two feet above the ground, the photo on the following page was snapped. The plane climbed 10 feet and flew erratically up and down for 120 feet at a ground speed of 6.8 miles per hour and an airspeed of 30 miles per hour.

"This flight lasted only 12 seconds," Orville wrote later, "but it was nevertheless the first in the history of the world in which a machine carrying a man had raised itself by its own power into the air in full flight, had sailed forward without reduction of speed and had finally landed at a point as high as that from which it started." (continued on page 6)

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"Do you young men know that you have come nearer to the art of flying than any other men who have ever lived?" —Octave Chanute, noted engineer and aeronautics expert, observing the Wright Brothers in their glider trials

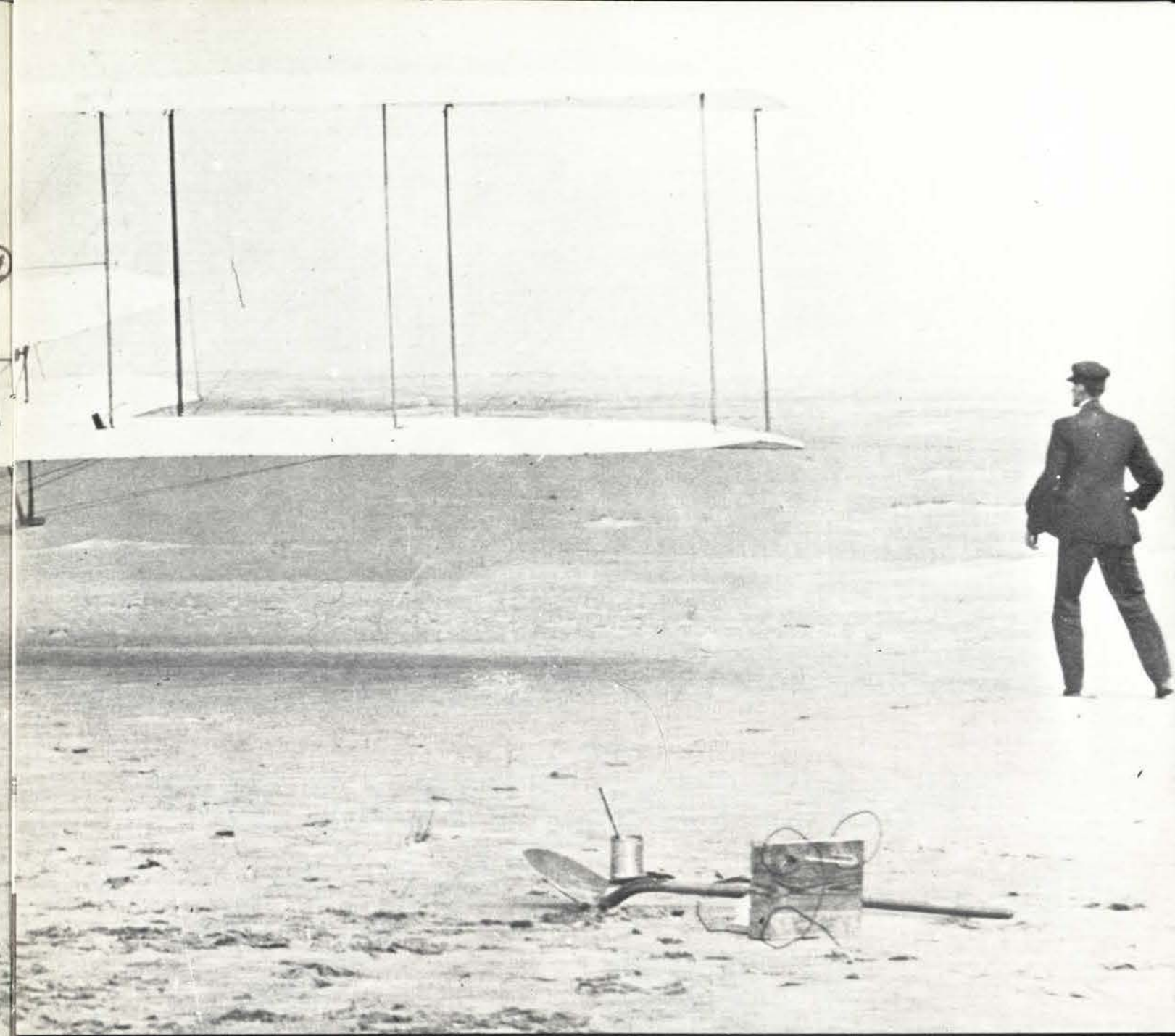
"When once a machine is under proper control under all conditions, the motor problem will be quickly solved. A failure of motor will then mean simply a slow descent and safe landing instead of a disastrous fall." —Wilbur Wright during glider trials

"There is now no question of final success." —Wilbur Wright on Dec. 16, 1903

"Success four flights Thursday morning all against 21-mile wind started from level with engine power alone average speed through air 31 miles longest 57 seconds inform press home Christmas. Orville Wright" (Telegram to his father, Dec. 17, 1903)

"Fifty-seven seconds, hey? If it had been 57 minutes, then it might have been a news item." —Associated Press representative, Dec. 17, 1903

"Those who understand the real significance of the conditions under which we worked will be surprised rather at the length than the shortness of the flights made with an unfamiliar machine after less than one minute's practice." —Wilbur Wright



"We have never aimed at merely flying—for what use would a flying machine be which no one could manage? Equilibrium and control were the first things we began to study. . . ." —Orville Wright

"And the last things we learned." —Wilbur Wright

"It was one of the grandest sights of my life. I stood in front of the machine as it came around a curve. Imagine, if you can, an aluminum locomotive, without wheels, but with 20-foot wings and big, flapping propellers, climbing up in the air right towards you! Such a tremendous flapping and snapping! Everyone was excited except the two Wrights. Even the attendant who helped launch the machine was shaking from head to foot." —A. I. Root, businessman, at a later flight

"I wish I could control my automobile as well as Orville Wright managed that big flying machine. His machine was as steady as a street-car. It was beyond my comprehension. I took off my hat and sat down. It was a miracle." —Charles Webbert, Dayton, Ohio, plumber, owner of building in which the Wright Brothers had their shop

"They are born mechanics and very quick and deft with their hands. Their skill in controlling their machine is most surprising." —Octave Chanute

"Some day, Congress will erect a monument here to these Wrights." —Reporter Byron Newton at Kitty Hawk, 1908

(continued from page 3)

The second flight that day was at 11:20 and carried Wilbur 175 feet in 12 seconds, because of diminishing headwinds. The third flight fell to Orville at 11:40 and was more level, covering 200 feet in 15 seconds. The fourth and last flight for this day and for this plane was the longest—at noon, Wilbur flew 852 feet in 59 seconds (erroneously recorded in a telegram as 57 seconds).

The sweet smell of success came to the Wright Brothers primarily from their brilliant insights and diligent homework.

During their glider experiments, they devised a wing-warping technique for lateral control, which they later linked to a movable rudder to keep the wings at the same speed during a warping—or banking—operation. The combination is still the key to successful control of all aircraft since, although warping was supplanted by the aileron in 1909.

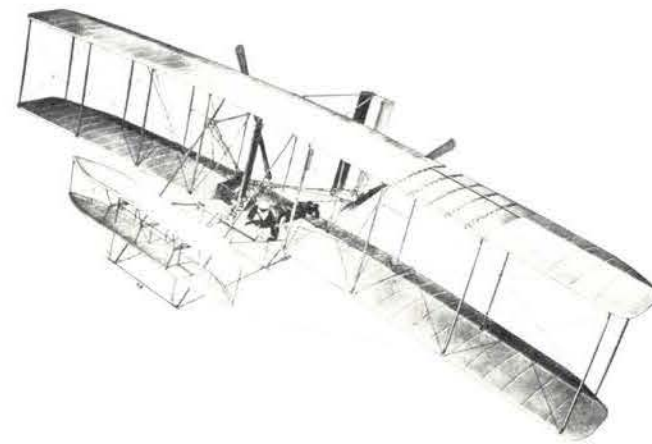
If nothing else, their achievements can be said to rest on their attention to detail. Unsatisfied with the results of following existing concepts and data on air pressures and travel of pressure on curved wing surfaces, the brothers designed a wind tun-

nel for testing airfoils. In only two months, they had tested about 200 surfaces and compiled new data on air pressures and the aerodynamic properties of wings, control surfaces and structural parts, exceeding in extent and reliability anything that had previously been available or would be for another decade.

With no manufacturers willing to bid on constructing an engine to their specifications, they designed and built their own, ending up with one that exceeded those specifications.

When it came to propellers, the brothers discovered that the existing marine-screw technology was inadequate for ploughing through the ocean of air. Though the factors involved were complex and, at first, they hardly knew where to start their study, they did develop an airfoil propeller in a few months. It was the first propeller ever built for which performance could be predicted, and it proved to be 66 percent more efficient than any other of that day.

The Wright Brothers' inquisitiveness, devotion to accuracy and persistence combined with the successful interplay of two brilliant minds achieved for the world what others could not.



The historic 1903 Wright Flyer, now displayed in the Smithsonian National Air and Space Museum, has a wingspan of 40 feet, 4 inches; a wing area of 510 square feet; a length of 21 feet, 1 inch; and weighs 605 pounds. The engine is on the lower wing to the right of center. The right wings are four inches longer than the left, which, together with the pilot's prone position at the left of center, helps balance the engine's weight of slightly more than 200 pounds. Fore-and-aft control was by means of the front elevator operated by a hand lever. Turning and wing-leveling were achieved by a wing-warping system coupled to twin movable rudders in the rear, linked by wires to a hip cradle, which the pilot could slide a few inches either way. The efficient pusher propellers the Wrights designed themselves were sprocket-chain driven from the 12-HP engine and counter-rotating.

Great Lakes accident-prevention coordinator Lee Ruebush, who also speaks on the radio and makes speeches at gatherings, here (at right) discusses aviation safety on a television talk show with Chet Davidson of the Central Region (center) and the show's moderator.



THE SAFETY MERCHANT

Safety is his business, and for Lee L. Ruebush, Jr., accident prevention coordinator in the Great Lakes Region, safety is a full-time job—seven days a week.

At night and on weekends, he is likely to be seen in accident prevention clinics; at other times, in talking safety and thinking safety in school auditoriums, at airports or in the Regional Office. He also might be involved in a National Safety Council discussion or FAA aviation-education classes. Wherever he is, he is busy and making sure that pilots get "the word" on safety.

Ruebush has been in the safety business for some time. He was one of FAA's first accident-prevention specialists and in 1968 was the first specialist to conduct an accident-prevention clinic. Since that time, he and his accident-prevention specialists have set an FAA record by holding more than 1,000 seminars attended by over 100,000 people, most of them pilots.

Although some seminars are relatively small, the specialists have had to hunt around for new and larger halls for others. By using high school and college auditoriums and large shopping-center con-

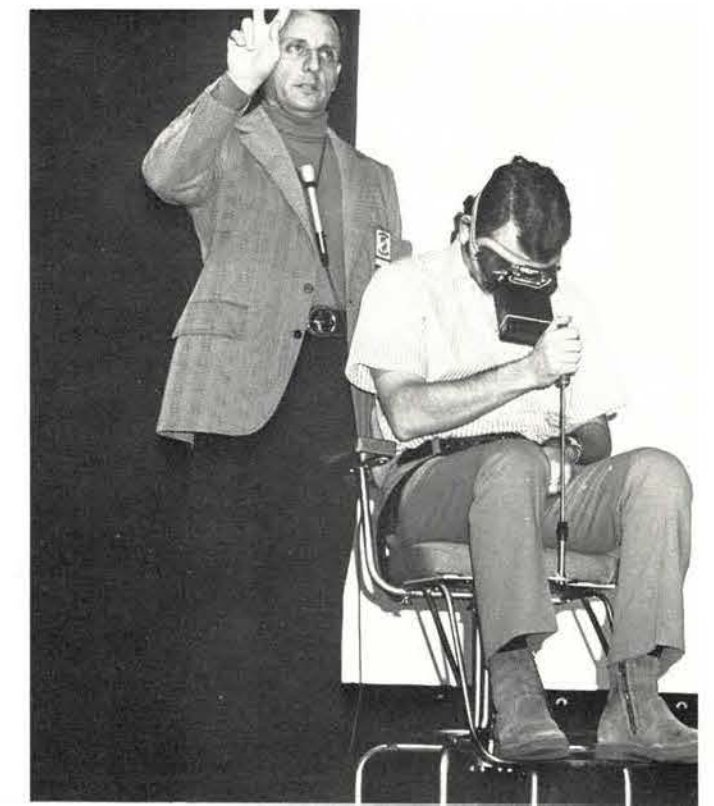
ference rooms, the Great Lakes Region has set two safety-seminar attendance records. A total of 1,250 attended a meeting held in the Glenbrook South High School in Glenview, Ill., while 1,400 showed up for the meeting held at Elmhurst College in Elmhurst, Ill.

But attendance records are only one indication of success. The important question is: Does it work? Have Ruebush and company set up a safety program that works out there in the field (and in the sky)? The answer seems to be a resounding "yes." In the Great Lakes Region last year, there was a 17 percent decrease in fatalities, while the national figures were up one percent; there was a seven percent drop in fatal accidents—up four percent nationally; and a nine percent decrease in total general-aviation accidents, which was the same as the national average.

With this kind of record, they must be doing something right.

Ruebush's crew of safety salesmen includes Carl Borchers, Detroit; Don Muzeroll, West Chicago; Bill Strauss, Cincinnati; Tony DeSilvio, Cleveland; Tom Tector, Columbus; Paul Derr, Grand Rapids; Leo Nunes, Milwaukee; Andrew Detroi, Minneapolis; Jay Stair, Springfield, Ill.; and Lowell Grossman, Indianapolis.

At a "sellout" accident-prevention clinic in Glenview, Ill., Chuck Valdez, a psychologist at the Aeronautical Center's Civil Aeromedical Institute, demonstrates the effects of vertigo on a pilot in the Barany chair.



DIRECT LINE



Q. Is it possible for an FSS specialist over the age of 35 to qualify for a terminal option if he was previously in a center option? I have heard that the key word in the regulation is not "terminal" or "center" but "controller."

A. Under Public Law 92-297, a maximum entry age of 30 was established for an original appointment to an air traffic controller position covered by the law. A person who had previously been employed in such a position—in a center or tower—could be reappointed, in either option, without regard to the age limitation.

Q. Eastern Region Order EA AF 3400.1A, dated 3/30/73, states in part that Airway Facilities unit chiefs are required to obtain certification credentials on all complex systems within their jurisdiction because their responsibility is usually associated within one specialty area. I am a unit chief who has complex systems under my jurisdiction consisting of radar plus communications plus nav aids plus data processing (FDEP). This order makes no provision for exceptions, which means that I must obtain approximately eight more certifications in addition to the nine I already possess. This not only appears impractical from the point of view of obtaining so many certifications but also from that of keeping current in this many certifications. Can this order be modified or must it be followed as stated?

A. The Eastern Region recognizes the impracticality of unit chiefs holding certification credentials for more than two specialty areas where a large number of different facilities are assigned. A revision to Order EA AF 3400.1A is in the process of being issued, modifying the existing policy and clarifying such situations as you have described. In the meantime, arrangements can be made with your sector manager to accommodate your particular situation.

Q. I am assigned to a split Level III facility; that is, we work in a RATCF and a VFR tower that are located about 12 miles apart. The facility chief recently be-

gan assigning GS-14 assistant chiefs to the tower for supervision and as the third controller on a day watch. We controllers believe that the assistant chiefs are not qualified or able to work in the tower and that they would be better qualified in the RATCF supervising the radar room. We also feel that the only reason they were assigned to the tower was to qualify them for the new ATC retirement law. What is agency policy on this? Are we the only facility with this problem?

A. From the situation you describe, it appears not only to be a typical situation for other like facilities but also reflects approved agency practice. As outlined in Order 1100.126B, Standard Organization of Air Traffic Control Terminal Facilities, certain facilities may be authorized team supervisors in addition to the assistant chiefs where there are at least two areas of operation physically separated, such as a tower cab and an IFR room. This authorization assures that the team concept is followed and that each area of operation receives adequate supervision. At sites where there are more teams than two or three team supervisors can handle, the assistant chiefs share with them the task of supervising a team of controllers. In this situation, the assistant chief occupies a position of first-line supervisor, and, as such, needs to be fully informed and current on both the IFR room operation and the tower operation. Under the Second-Career Program, the assistant chief and the team supervisor are eligible at facilities where both positions function as the immediate supervisor. They must also be officially assigned to an ATC facility, be actively engaged in the separation and control of live air traffic and occupy positions that require them to maintain the Civil Service Commission's medical qualifications for an ATCS.

Q. FSSs have been recording contacts as specified in Paragraph 2193 of Facility Management Handbook 7210.-3A for nearly two years, but no apparent use has been made of this activity. Somewhere I heard that this count would not be used as grade determining but would be counted for staffing purposes. Yet, it was not used in Flight Service Station Staffing Standard AAL-2500 FY 74/75. Some time and effort is required to record and compile this activity, but is it used?

A. In 1971, a workshop made up of FSS specialists recommended that facility staffing be determined by radio contacts, not by aircraft contacts as presently stated in the Flight Service Station staffing standards. The recommendation adopted by the workshop was to collect the data necessary to evaluate the proposal to determine its feasibility. The data necessary for this evaluation will take approximately three years to collect, and the study should be completed late in 1974.

Q. I would very much like to transfer to another crew so I can share rides with another person that comes from

the same town as I. This would cut my car and gas expenses. My systems engineer says, no. Does he have the last say, or is there another level of appeal?

A. We can well appreciate your desire to reduce commuting expenses; however, management makes up crews by balancing the skills necessary to accomplish the mission assigned during each shift. If you occupy a journeyman-level position, it's possible that your supervisor cannot accommodate you without jeopardizing the safety of the operation or changing someone else from one crew to another. If you wish to pursue the matter further, you could ask your supervisor to speak to the sector manager on your behalf. If the answer you receive is not satisfactory, you may then put your request in writing and send it to the sector manager through your immediate supervisor.

Q. It would appear that the engineers who laid out the DC-3 cockpit and flight-inspection console now have their hands into the jet project, and they know very little about flight inspection and perhaps even flying. It has always been apparent that no flight-inspection people with current experience had an input to the DC-3 configuration. At the same time the Type II DC-3 was being turned out, FAA was also putting consoles into USAF Convairs, which had very efficient consoles thanks to their having been laid out from the recommendations of experienced USAF flight-inspection pilots and technicians who would be using them. As far as we can determine at this level, no one with current field experience has had any input for the new jet cockpit and console layout and placement. From the looks of the Sabreliner interior simulation, the console is located to the far rear of the fuselage, and the technicians will have to ride facing rearward. This, I presume, was the easy way to accommodate the center of the gravity at the expense of the technician's hearing and equilibrium. Face-to-face contact among pilot, crew and technicians is essential even with the interphone. Also another pair of eyeballs facing toward the windshield adds to collision-avoidance capability. Can you possibly get the ear of the powers-that-be and persuade them to circulate equipment type, instrumentation, layout, etc., to the field and at least listen to any suggestions we underlings may have?

A. All possible console locations were explored. The forward-facing configuration was out of the question because of the size of the console and limited span-wise area of the cabin. There have been some complaints against the side-facing position in the five light jets with which we have had five years of experience, stemming from the uncomfortable position, which resulted in mild airsickness and vertigo. The aft-facing location provides the best space for an adequate-size console and a good work area. Other countries are using light jets similarly equipped with favorable results. The distance between the cockpit and the console should present no operational problems. (Other FAA inspection consoles are separated

by greater distances than in the new aircraft.) Having the console removed from the cockpit has some safety advantages, including not distracting the pilots by what is going on at the console. Every effort has been made to provide high-quality equipment, comfort and ease of operation for the crew members in the new aircraft, and field personnel did participate in the planning, equipment selection and interior arrangement.

Q. The last two openings for a GS-12 chief of a Level I VFR tower were filled by a GS-13 and GS-14 by way of internal placement. It is obvious that such first-level supervisory jobs are being taken by second-level-and-above management people to take advantage of the second-career program. I am a GS-11 assistant chief in a manual-approach tower and have aspirations to become a chief in a VFR tower. It appears now that these jobs will be all but closed for career progression and will be given to supervisors from the high-density towers. What is FAA's policy in regard to MPP for filling these jobs?

A. According to the Merit Promotion Program, the selecting official may either select a candidate on the promotion list or fill the position through internal placement procedures in attempting to obtain the best-qualified candidate.

Is there something bugging you? Something you don't understand? Tell it to "Direct Line." We don't want your name unless you want to give it, but we do need to know your region. We want your query, your comment, your idea—with specifics, so that a specific answer can be provided. All will be answered in this column, in the bulletin-board supplement and/or by mail if you provide a mailing address.

Better two-way communication in FAA WORLD's "Direct Line" is what it's all about.

Getting a Line on WHAT'S WHERE

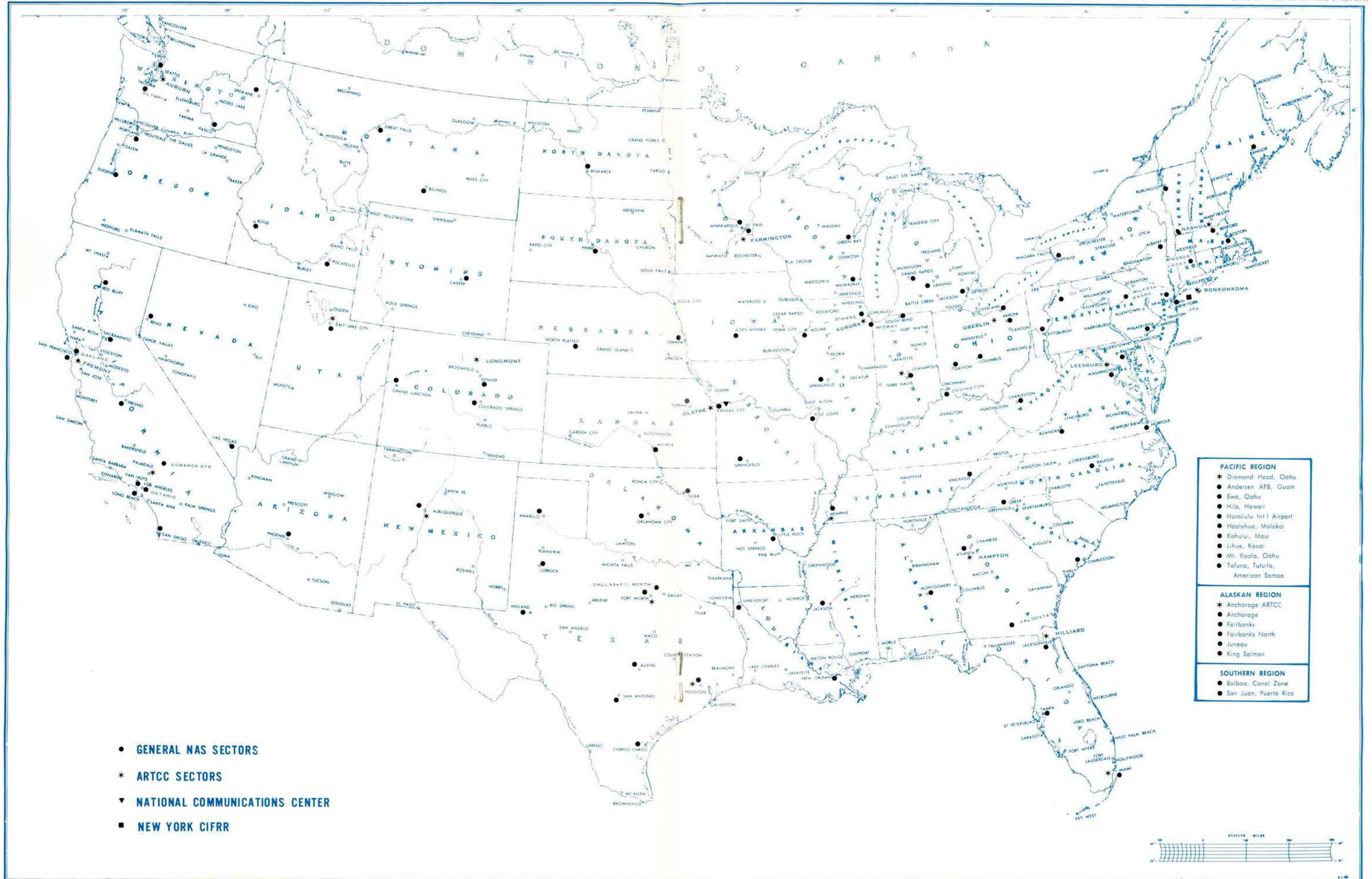
The map of Airway Facilities Sector Field Offices on the following pages is the fifth and last in FAA WORLD's series on FAA facilities and offices. It forms the center spread of the magazine to permit easy removal for those wishing to display it.

Other maps published were:
Flight Standards District Offices July
Air Route Traffic Control Centers August
Air Traffic Control Towers September
Flight Service Stations October

AIRWAY FACILITIES SECTOR OFFICES

FEDERAL AVIATION ADMINISTRATION

Scale: 1:500,000 Lambert Conformal Conic Projection



Federal Notebook

WHAT THEY SAY ABOUT PAY

The chairman of the House Civil Service Committee, Rep. Thaddeus Dulski (NY), is sponsoring new legislation to assure full pay comparability for Federal employees, in light of pay-raise delays and reductions for budgetary reasons. ■ In hearings of the House Subcommittee on Retirement and Employee Benefits, 4 unions have urged changes. The NFFE president recommended amendment of the Federal Pay Comparability Act of 1970 to allow the House or Senate to overrule the President by resolution on amount and date of the raise. The NAGE head asked for repeal of the section giving the president discretionary authority, saying the President has sufficient power in appointing members of the Advisory Committee on Federal Pay. NTEU's chief proposed a 13-member Federal Pay Board drawn from Congress, the Administration, unions and the private sector and having binding decisions. ■ The Senate Finance Committee has approved an amendment to an already passed House bill that would permit Federal employees' salaries and annuities to be garnished by court order in accordance with state law. The provision faces a House-Senate conference.

RETIREMENT FILE

Now on the books is a law that permits Federal employees to retire after the effective date of a cost-of-living annuity boost and still benefit from it. In addition to permitting employees to choose their retirement times without penalty, the law benefits the government by eliminating the logjam that occurred each time a cost-of-living raise became effective, such as last June when nearly

90,000 opted for the annuity increase. ■ Awaiting action in the Senate is a bill to restore the reduction in annuity elected to provide survivor benefits when the spouse dies before the annuitant.

■ The House has passed a bill to lower Federal employees' pension contributions from 7% to 6.5% of salary because of lower costs. The bill would also authorize CSC to adjust contributions upward or downward in .25% increments when costs justify, but unions oppose the bill because eventually it would likely mean higher employee costs. Some expect the Senate Civil Service Committee to hold up action until next year. ■ The Senate Finance Committee has okayed a 7% boost in Social Security benefits contained in a House bill, which comes on top of a 5.9% increase that becomes effective next July. This moves up the effect of an automatic system for SS cost-of-living boosts planned to begin in January 1975. Boosts will be triggered whenever the CPI rises 3%. The maximum salary allowed under SS full benefits would be raised from \$2,100 to \$2,400.

■ Rep. Larry Hogan (Md) has introduced a bill to permit Federal employees to get full credit toward Civil Service retirement benefits for years worked under Social Security.

HEALTH HIKES HIT

Rep. Jerome Waldie (Calif) has appealed the announced health insurance premium increases to the Cost of Living Council, charging that they exceed economic stabilization guidelines, that the data base for the rate increases has not been audited nor checked for accuracy and that the increases would result in excessive reserves.



THE GOONEY BIRD RETIRES



As FINFO—the Flight Inspection National Field Office—readies for its jet fleet in 1974, one of the workhorses of the flight-inspection fleet—old Nan-23—has been put out to pasture. The ancient, but still performing, DC-3 is the first of the “gooney bird” fleet to be phased out.

After 22 years, N-23 returned to the Aeronautical Center whence she began her career, having flown over almost every navaid in the United States and many overseas with 19,000 hours to her credit.

Nan-23's story began in 1949, when a C-47 fuselage was selected from several surplus aircraft stored on the ramp at Will Rogers Field in Oklahoma City. CAA stripped off the camouflage paint, soundproofed and refurbished the interior and installed wings, control surfaces and new engines. H. J. Barnett, now aviation safety officer at the Aircraft Services Base, Aeronautical Center, who supplied the photo of the C-47, did the sheet metal work on it.

The C-47 was then registered as N-70 and was used in flight-inspection training of pilots.

In 1951, N-70 was chosen as the prototype aircraft in the standardization of equipment and procedures to perform evaluation of navigation facilities. Radio console and radio racks were manufactured and installed. In this configuration, it became the first national standard aircraft for use in what is now known as flight inspection. It was renamed N-23 and delivered to the old CAA Southern Region—Region 2. The log books during the next several years show many familiar names—Chet Shimp, Wilford Moore, Loring Craymer, Jack Webb and Norm Hodgkinson.

In September 1969, N-23 was assigned to the Pacific Region. All of the cabin equipment was pulled out and shipped to Honolulu by boat to make room for ferry tanks to provide fuel for the overseas flight. The trip from Oakland took 13 hours.

This year the trip was reversed for the last time, as the DC-3 outlived its usefulness.



Inspector Baker and pilot Ward get their ups and downs.

The Ups and Downs Of Flight Inspection

Robert P. Baker's FAA position description doesn't actually say, "... will ride in hot air, free flight balloons ..." but he does; that's the charm of being a general aviation operations inspector, which he is.

Part of Baker's job at the Salt Lake City GADO is pilot certification; since a balloonist must be licensed to fly and comply with FAA aircraft rules of operation, Baker becomes involved. He certifies helicopter, crop duster, glider, air-taxi operator, balloonist and even ordinary light-plane private pilots, and responds to all types of aviation activity, including air shows and parachute jumps. It's not a dull life.

I got into the act for the Rocky Mountain Public Affairs Office when a balloon pilot named Stephen Ward from Ogden, Utah, called Baker, saying he wanted his commercial hot-air balloon check ride. We had to record the novel event.

Baker was ready after reviewing the appropriate regulations and flight-check procedures with Earl D. Baird, principal operations inspector at the Broomfield, Colo., GADO, who had extensive experience with this sort of thing.

Ward is an insurance salesman, who read an article on ballooning and decided to buy. He paid \$5,000 for the basic balloon, took eight hours of training from the manufacturer, including one tethered solo flight, and then practiced tethered flights on his father's farm. In addition to the ability to fly skillfully, the balloon pilot must have knowledge of the equipment, instruments and their use and pass oral and written exams on the FARs.

It was 6:00 a.m. on a Saturday morning when Baker and I met Ward and his two-man crew at a service station about 25 miles north of Salt Lake City. Early morning, when the wind is calm, is the best time for free flights. Baker commented that if ballooning becomes popular, his regular duty hours will have to change.

Ward had his balloon in the back of his quarter-

ton pickup and two helpers in the cab. We followed them to a nearby field, where hungry mosquitos were waiting for breakfast. A wisp of a breeze was blowing northward—not the direction Ward had hoped for.

The crew unloaded the basket, balloon and two 10-gallon liquid-butane tanks, started a portable generator and began hooking the basket to the burner frame. Power from the generator operated a fan, which blew cold air into the balloon. When enough air to billow it out had been supplied, Ward lit the burners and hot air surged into the big bag.

Preparing the balloon for flight took about 45 minutes, and streaks of color began to paint the sky above the Wasatch Mountains to the east. On the west was the Great Salt Lake. The unfavorable northwest wind continued. Ward commented that the forecast the night before had indicated southeasterly winds, which would have moved them over farmland.

Wind direction and velocity are the most important forces affecting free balloons. The pilot can control vertical motion with a 15-second delay, but he's at the mercy of the wind for direction and safe landing. Hazards include power lines, bodies of water, trees, buildings and kooks with rifles and shotguns.

When all was ready, Baker and Ward climbed into the basket where the pilot was quizzed on the instruments and operation. At Ward's command, his ground crew slacked off the rope that held the balloon, which was secured to the bumper of the pickup truck. At 50 feet, the tether was taut. Baker asked Ward to make several ascents and descents while tethered, including one emergency blast to 50 feet before cutting the gas jets to descend. This was designed to test the pilot's coordination and control.

Then, my turn came to climb aboard for the free flight after Baker passed Ward on the licensing test. The balloon was noisy on ascent, with the burners

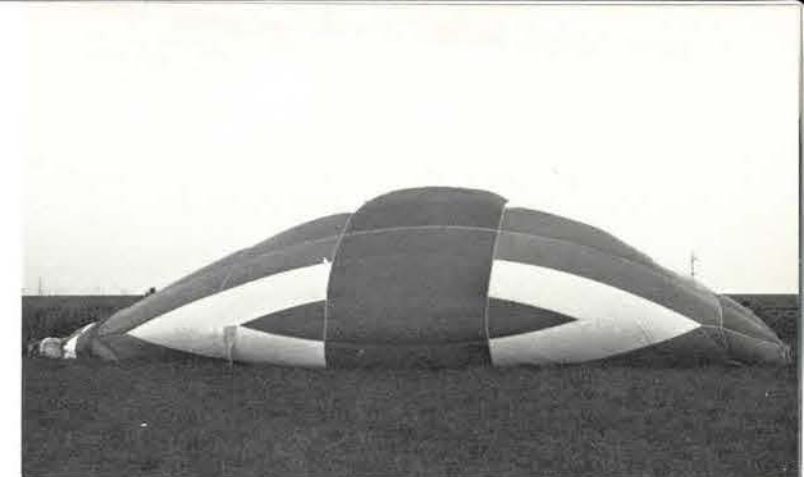


There's standing room only in the balloon gondola with the instruments for altitude, rate of climb, controls for regulating the hot air fuel and two 10-gallon tanks.

sounding like furnace blowers. Since the gas to the burners is cut for descent, it's much quieter.

While Ward operated the controls, Baker and I hung on the sides of the basket. There was only room to stand, so the other two kept me steady with their backsides while I took photos. Ward controlled the burners with handles that reminded me of draft beer dispensers. I found that the pilot has to be a fast-working plumber if one butane tank empties during flight, making a quick change to the other tank with wrenches.

The wind direction had made passage over the Great Salt Lake imminent, so Ward brought us down in an alfalfa field. We were heading for an irrigation ditch, and I thought that if we could stay



Looking like a beached striped whale, the balloon has been started with cold air, following which the burners will be lighted to raise the bag vertically with hot air.

buoyant for another three feet, we might clear it. Though Ward tried to give the balloon a shot of hot gas, the time delay for reaction insured our wet feet. The balloon's buoyancy bounced us up and twice more before we settled down with the mosquitos. The ground crew had followed us and were ready to hold down the balloon and deflate it.

After all was secure, we went to a coffee shop for breakfast, chitchat and Baker's log entries and completion of other paperwork. The flight was officially over.

In retrospect, I admire Stephen Ward for his daring and skill, but I sort of envy Bob Baker for his fascinating and unusual assignments. Oh well, I just had one, too.

—By Al Barnes



Ward sorts out the cables for hooking the burner and fan to the balloon. Assembly and inflation takes a total of 45 minutes.



Wending their way up the 18-inch-wide stairway to the new tower cab are Airway Facilities technicians David Galloway, Richard Dehn, John Chapman and Ron Ide.

Controller Marjorie Muir, who retired this summer, peeks through a hole in the nylon staircase covering at a departing aircraft. The other controllers are (left to right) Ronald Kerku and Kenneth Poorman.



Hardhats man the tower

Everyone's got troubles. If it isn't one thing, it's another. Unfortunately for the personnel of the Detroit Metropolitan Wayne County Airport Tower, they had to put up with one thing and another for a year to get a satisfactory facility.

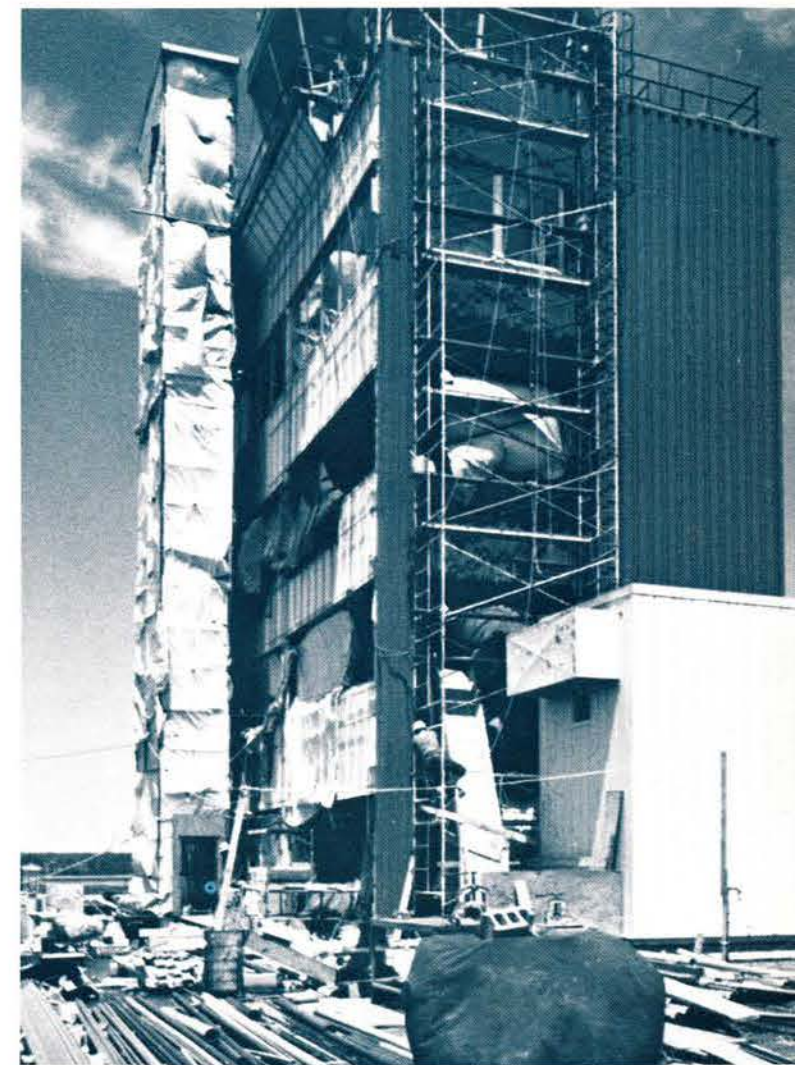
First, hotel construction nearby was not supposed to interfere with air-traffic control, but as soon as the inns were up, FAA was stuck with relocating or elevating the tower. The latter seemed more feasible. A piggy-back design was selected so the old cab could continue to operate while a new tower was built over and around it.

Then, during construction, a welder's torch set the tower afire and put it out of commission temporarily, forcing the controllers to set up shop aboard a loaner aircraft. Service continued with hardly a missed beat.

Finally, the new cab was ready, but the old cab below it blocked access. An outside, bolted-together staircase was built, which gave rise to some safety problems and the requirement for wearing hardhats by anyone heading for the cab. Tower chief Harry McIntyre, then assistant chief, explained that the staircase was open to the elements, and it was then March. It wouldn't do for any of the crew to become airborne in a high wind or slip on icy steps. Heavy-duty reinforced nylon was lashed around the stairway, non-skid treads used on each of the 80 steps and all projecting bolts taped. But then the nylon shroud blocked part of the view of the runways from the cab, and a hole had to be cut through it and restitched to provide a window.

Alongside the iron stairway were all the cables usually suspended inside the tower shaft. These were initially connected to the old cab as the tower construction got underway, then reconnected to the new cab, then reconnected inside the new tower. The switching around of the thousands of wires was accomplished without a break in equipment use.

The difficulties, major and minor, lasted for nearly a year. The outside stairway is gone now, and things are virtually back to normal. Now, if they could only do something about the length of the airport name. . . .



Find the hidden old tower cab in this photo. The new structure is flanked by a temporary staircase tower swathed in nylon to keep out the cold high winds.



Hi ho, hi ho, it's off to work they go. Threading their way through construction paraphernalia are hardhat ATCSs (left to right) Richard Butas, Robert Lang, Dave Sanders, John Goslin and John Ogden.

FACES and PLACES



TOAST OF THE REGION—Training certificates have been awarded to the first members to earn them in the Skyriders Toastmistress Club, organized among women working for FAA in the Southwest Region. Having completed Phase I training are (left to right) Jo Ann Choate, Betty Grimada, Thelma Gollihar, Louise Owens, Roberta Bowman, Vivian Aldrich, Jean Queppet, Carolyn Williams, Jean Hovenkamp and (not pictured) Marion Hailey and Beverly Puckett. The gentleman in their midst is George B. Woodbury, chief of the Southwest Region's training branch.

THINKING IT THROUGH—Earl Ginyard (at lectern), director of FAA's EEO Internal Program, moderates a recent EEO rap session with members of the EEO Advisory Committee, EEO counselors and New England personnel.

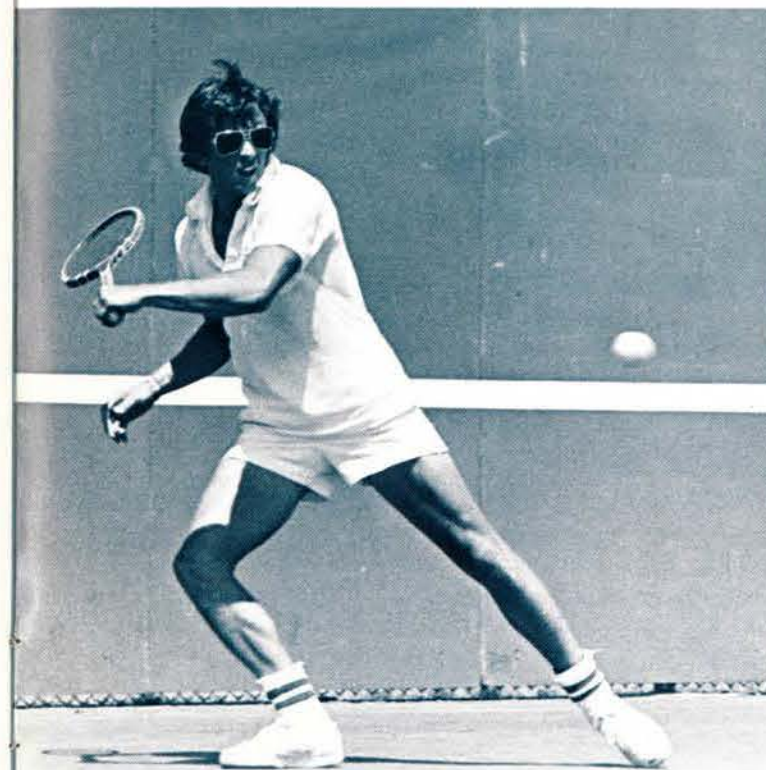


PAPERWORK PERFECTIONIST—The Great Lakes nominee and the agency's second candidate for the Federal Paperwork Management Award was Beverly Brask of the Labor Relations Branch. She developed a new LMR record system.

NEW CATS—Pilots Alfred Oliver and Robert Kelly, Utah International Corp., San Francisco, received the first Cessna Citation authorization for Category II operation from San Jose, Calif., principal operations inspector Ron Bernstein (left). Stan Grates (third from left) from the San Jose GADO congratulates chief pilot Oliver.



MTS SCHOLARSHIPS—A second group of four freshmen at Cameron College in Lawton, Okla., have been chosen as recipients for the FAA-MTS Scholarships, which were initiated by FAAers. Shown are (left to right) Johnie Withers, MTS Asst. Supt.; student Jan E. Swanagon; student David A. Lewis; Cameron Dean, Dr. Richard Murray; student Karen K. Kowena; and student Lawrence D. Brackett.



GOOD FORM—Denver Center controller John Gagnon won the first Longmont, Colo., tennis tournament in straight sets, justifying his selection as top seed in the event.

GOOD COMPANY—Administrator Butterfield, chairperson Nancy Walsh of the Headquarters Subcommittee on Women's Rights (center) and Kathy Vitek, Federal Women's Program coordinator took a joint tour of the special Women's Equality Day display on Women in Aviation at FAA headquarters.



INTERNATIONAL KLATSCH—Mrs. Charles O. Cary, wife of the Asst. Administrator for International Aviation Affairs serves coffee to wives of delegates from 25 countries attending ICAO's air navigation meeting in Honolulu. Waiting their turns are (left to right) Mrs. Sven Piculell of Sweden, Mrs. Jack Webb, wife of the Pacific Region Director, and Mrs. Khamdarankorn Baliene of Laos.



GOVERNOR PINNED—Gov. William A. Egan of Alaska, a former pilot, is presented a "Spirit of Safety" pin and an FAA certificate naming him an honorary air safety counselor by Juneau accident prevention specialist Orville Perley.



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WINGS FOR MIKE



News cameras grind away as Mike Berryman is presented a certificate of appreciation by Sacramento Executive Airport Tower chief Bruce Troyer. At left is pilot Gary Roberts, who was preparing to land head to head with the disabled plane. FAA local coordinator Norman Polk observes at right.

Sixteen-year-old Mike Berryman's enthusiasm for aviation lent FAA an extra pair of eyes when it was needed at the Sacramento Executive Airport Tower.

It really started when Mike contacted assistant tower chief Victor Katz two years ago concerning his interest in flying. He began to visit the tower, and the controllers were won over by his sincerity and consuming desire to fly. All this was fine with his father, as long as his grades didn't suffer and he earned his way. This past year, he selected the tower as his "outside work experience" assignment.

Under the tower's sponsorship, Mike enrolled in the Civil Air Patrol, a local ground school and finally in a flight school. Eldon Fowler, an instructor pilot and friend of the controllers, volunteered to teach Mike to fly for the cost of the plane only. As a result of his father's admonition, Mike plunged into aircraft waxing to pay his way, with Victor Katz helping him to get some business cards printed.

Early this summer, during one of his visits to

the tower, he spotted a recently departed light plane in trouble. Controllers Hank Hancock and Bob Surber were busy with routine traffic and didn't notice. Mike alerted them to the problem, and they cleared traffic from the path of the distressed aircraft.

Pilot instructor Bob Young later said that he had no time to call the tower while struggling to regain control of his falling plane. He had just climbed to 300 feet when the engine lost power. Unaware that traffic was landing behind him, he reversed course, hoping to regain the runway he just left. The controllers' clearing of the runway narrowly averted a head-on collision. The plane bounced down on the grass alongside the runway, over a ditch, and back onto the runway.

For sounding the alarm, Mike Berryman was presented with a certificate of appreciation by tower chief Bruce Troyer; but for Mike, the real climax came six weeks later when he realized his dream by soloing an airplane—and on his sixteenth birthday.