NAVAL AVIATION NEWS

37th Year of Publication

JANUARY 1956

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★ GAS, ELECTRICITY AND WATER ★

They are every day utilities for Navy. The 'N' type blimp, left, holds about 900,000 cu. ft. of helium when inflated.

This searchlight on the wingtip of a P2V Neptune uses a lot of current, but it produces 75 million candlepower.

Water comes cheap, especially sea water, and the Ticonderoga, empty, displaces 29,600 tons of it.

★

1955

NAVAL AVIATION

IN THE FORTY-FIFTH year since the first naval officer was ordered to flight training, naval aircraft operations literally covered the globe. Carrier and patrol aviation was deployed in in coastal areas of the United States, in European waters, and in the far reaches of the Pacific. En-route to distant stations, carriers rounded both the Capes of Good Hope and the Horn at the southern extremities of both hemispheres. Yes, wings of naval aviation covered the seven seas.

SIGNIFICANT operations were carried out by ships and aircraft of the Seventh Fleet in support of our national objectives in the southwestern Pacific under a delicately balanced international situation. A patrol squadron completed the first Navy round-the-world flight while others conducted routine missions over the North Atlantic from bases in Argentia and Iceland, over the North Pacific from Alaska and the Aleutians, over the Mediterranean from North Africa and over the troubled waters of the China Seas from Japan and Okinawa. Yet another was among the first United States forces to operate in Spain.

Helicopters and patrol planes flew ice reconnaissance in the Arctic for MSTS ships carrying construction equipment and materials for Dewline, and at the opposite end of the earth helicopters surveyed the Antarctic ice pack and the coastal shelf as a preliminary to Operation *Deepfreeze* that transported a large body of scientists and technicians to the continent of Antarctica late in the year.

There was activity too in the development of weapons, material, and tactics. The shipbuilding program witnessed the commissioning, launching, and keel-laying of three *Forrestal*-class carriers. Conversions provided the operating forces with three angled deck and steam catapult carriers. The development of assault helicopters and the conversion of a carrier to operate them potentially broadened fleet versatility and increased fleet strength. The installation of tactical air navigation systems at all-weather stations, the successful functioning of the mirror landing system during operational evaluations both ashore and afloat, tests of radically new instrument panels designed to simplify the job of flying complex aircraft, improvements in flight gear and ejection mechanisms, and the replacement of hydraulic fluid with a water-base compound in all hydraulic catapults, were only a few of the improvements, both real and prospective, realized during the year.

Advances in the development of rocket thrust motors that will augment turbo-jets, promised increasing performance of aircraft at high altitudes. Tactical development in the use of TACAN proved effective in fighter intercept control exercises and continued improvement in airborne equipment in general, improved the kill probability in the important function of fleet air defense.

Particular emphasis was placed on achieving greater offensive power through increased atomic weapons delivery potential. Newly converted attack aircraft carriers increased our atomic weapons capability by a significant factor. Substantial numbers of presently operating aircraft have the delivery capability and new types being introduced will extend it. Improved delivery techniques developed through constant study and evaluation and a steady increase in the number of pilots qualified for this highly specialized technique also contributed to the overall increase in offensive potential.

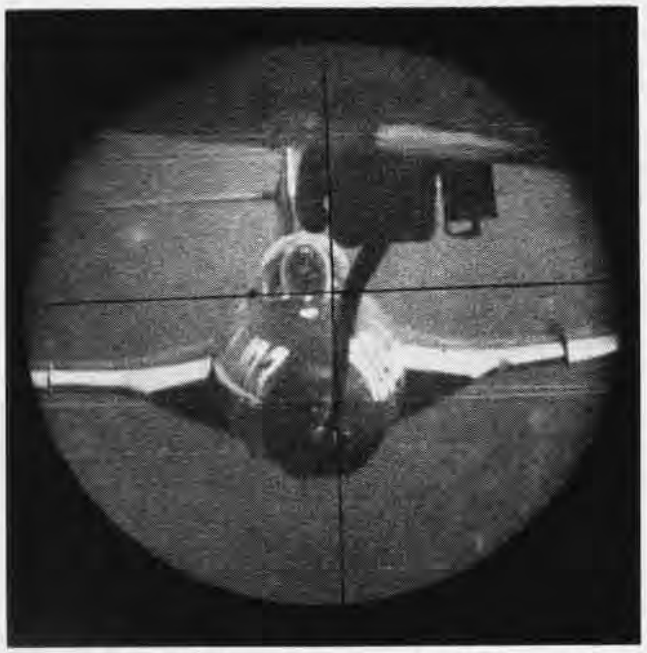
The assignment of new aircraft to fleet units increased both the offensive and defensive capabilities of the operating forces, while the successful preliminary tests of others indicated possibilities for still greater advance. In the field of new aircraft development, none promised more than the new jet-powered *Seamaster*. Its performance in preliminary trials opened prospective horizons of operational use hitherto untouched by seaplanes. The addition of three major guided missiles systems to the fleet arsenal raised the level of air defense to a degree commensurate with advances in offensive weapons, and at the same time added high destructive power and increased versatility to an already potent force.

VICTORY SMILE *of Lt. Gray in the A4D Skyhawk after making 500-kilometer speed record.*

HARMON WINNER *"Skeets" Coleman explains XFY-1 to John Knebel, Convair test pilot.*

F4D SKYRAY, *new carrier fighter, soars to fourth unofficial climb record within month.*

During the first quarter when Communist aggression drew world attention to southeast Asia, ships and aircraft of the Seventh Fleet gave aid to the oppressed and demonstrated United States' determination to uphold the rights of free peoples everywhere. At home, a series of successful assaults was made on the unofficial climb record put on the books at Cleveland in 1946 by a Grumman F8F Bearcat. Fleet forces were strengthened by the assignment of new aircraft including the F7U-3M Cutlass, equipped for guided



'FILL 'ER UP' *—Inflight refueling of an F9F-8 Cougar fighter as seen through the Bomb Director Periscope of the AJ Savage tanker.*

missile launching, the S2F-2 antisubmarine plane, and the P2V-7, a Neptune equipped with augmenting jet engines. Several aircraft under development made first flights including the TF-1 utility plane, the airship ZPG-2W, the HTL-6 helicopter, and the speedy Chance Vought carrier fighter, the XF8U-1 Crusader.

January 2—The USS *Monterey* (CVL-26) collided with the British freighter *Hartismore* at 0341 in the Mississippi River about three and a half miles north of Pilottown, La., without injury to personnel.

January 17—Development Squadron Six was commissioned at NAS PATUXENT RIVER for cold weather operations, particularly with Task Force 43 on Operation *Deepfreeze*. This squadron will provide services for parties based ashore on Antarctica and also make courier flights between that continent and New Zealand.

January 19—The Grumman utility plane, TF-1, made its first flight. A modification of the S2F-1 to permit its use for light transport and cargo purposes and as a trainer, this plane was designed as a replacement for the TBM-3R that served so well for Carrier Onboard Delivery.

January 21—The Flying Platform, a one-man helicopter of radical design, made its first flight at the Hiller plant in Palo Alto, California. Although the flight occurred during ground tests and was therefore accidental, it was successful in all respects.

January 28—A North American FJ-3 *Fury*, piloted by LCdr. W. J. Manby of VF-33, reached 10,000 feet in 73.2 seconds from a standing start at NAS OCEANA. This time bettered an 83-second mark set two days earlier by an FJ-3 at San Diego.

February 1—Task Force 43 was activated, Capt. G. J. Dufek commanding, to plan Antarctic operations scheduled to begin in the fall under the code name Operation *Deepfreeze*. Mission of the Force on its first expedition is to build the facilities and airstrips and deliver the supplies to support United States participation in the International Geophysical Year, 1957-58.

February 1—VP-23 left Tarragona, Spain, for NAS PORT LYAUTEY, after six days of intensive training at the Spanish Military Air Base at Reus. This was the first operation of U.S. forces in Spain.

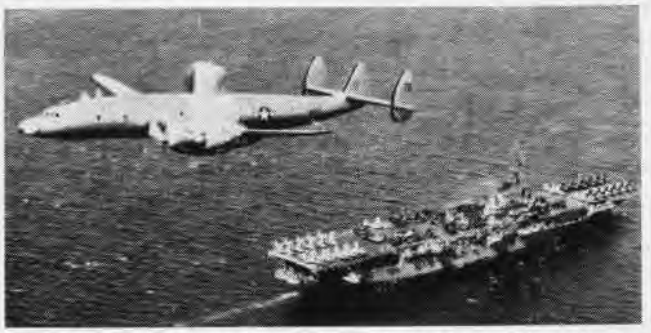
February 6—After steaming from the Atlantic to the Pacific around the Cape of Good Hope, the USS *Midway* reported to Commander Task Force 77 for operations in the China Seas. This marked the first operations of ships of her class in the Western Pacific.

February 12—The evacuation of 24,000 military and civilian personnel of the Nationalist Government, Republic of China, from the Tachen Islands off the China Coast, was completed without incident under cover of surface ships and carrier air of the Seventh Fleet.

February 13—An F3H-1N, piloted by C. V. Braun, a McDonnell test pilot, set the unofficial climb record to 10,000 feet at 71 seconds.

February 16—The Bureau of Aeronautics issued instructions implementing new exterior color schemes for operational aircraft, changing from the familiar sea blue to a light dull gray on top and glossy white below. The instruction set 1 July for the initiation of the new color scheme for all new models and 1 July 1957 at the date on which the changeover would be completed on all aircraft.

February 23—An F4D *Skyray*, piloted by R. W. Rahn, a Douglas test pilot, reached 10,000 feet in 56 seconds.



WV-2 EARLY WARNING *plane flies over the Oriskany. This radar flying eye is the mainstay of a mission receiving new emphasis in 1955.*

REGULUS, *one of three guided missile types now operational, was launched from Hornet in 1954 to demonstrate carrier feasibility.*

NEPTUNE, *P2V-7, equipped with supplementary jet engines, joined the operating forces.*

ADM. A. A. BURKE *looks over P6M model with VAdm. K. Nagasawa of Japanese Defense Force.*

F11F-1 TIGER *is first aircraft to incorporate area rule or "coke-bottle" fuselage.*

THE BIG R3Y-1 *Tradewind transport can fly at speeds above 350 mph and carry 24 tons.*

NAVY'S HR2S-1 *built for Marines can carry 26 men, their assault equipment, three jeeps.*

ZPG-2W, *sporting radome on top of envelop will be assigned to early warning units.*

February 24—The first R3Y-1 *Tradewind*, high speed seaplane transport equipped with Allison turbo-prop engines, was delivered to NATC PATUXENT RIVER for service suitability evaluation and trials. Intended for the long range overwater transportation of military cargo, this plane can also serve as a personnel or troop transport and for the air evacuation of wounded.

March 1—USS *Boxer* (CVA-21) reported for duty to the Pacific Fleet after overhaul at San Francisco.

March 4—RAdm. James S. Russell relieved RAdm. Apollo Soucek as Chief of the Bureau of Aeronautics.

March 8—The Secretary of the Navy announced that CVA-62, the fourth carrier of the *Forrestal* class, would be named USS *Independence*.

March 19—USS *Shangri-La* (CVA-38) was recommissioned after conversion and installation of an angled deck and steam catapults.

March 21—USS *Yorktown* (CVA-10) was placed in commission in reserve to undergo conversion at Puget Sound Naval Shipyard.

March 22—A Navy R6D of VR-3 assigned to MATS, crashed and exploded at 0203 on Pali Kea Peak, 15 miles northwest of Honolulu, killing all on board. The 57 passengers and 9 crew members lost in this tragedy made it the fifth worst in aviation history, and the second in naval aviation.

March 25—The Chance Vought XF8U, a jet carrier fighter, made its first flight at Edwards AF Base, and lived up to its designers expectations by exceeding the speed of sound. The overall design is a substantial departure from earlier Chance Vought fighters.

March 31—The operational use of the KDU-1, a target drone version of the *Regulus*, marked the first high speed target drone for guided missile defense training.

International tension had eased to some extent by the second quarter. Carriers which had participated in the internationally significant operations in the southwest Pacific returned from their normal tours of duty and were relieved on station by others assigned to the area. There was no special area of emphasis in the activity of air elements in other geographic areas. A photographic version of the Cutlass, the F7U-3P, went into service during May, and the ZS2G-1, a specially equipped antisubmarine airship, made its first flight.

April 4—The Jet Transitional Training Unit was commissioned at NAS OLATHE to provide student training for aviators transferring from shore to sea duty in the rank of commander and below. In addition to providing refresher training for these "desk pilots," the Unit will serve pilots making the transition from prop to jet type aircraft.

April 11—The USS *Wasp* (CVA-18) with Air Task Group One, arrived in San Diego from an eight month tour in the Far East, including participation in the Tachen Islands evacuation.

April 11—VAdm. T. S. Combs assumed duty as Deputy Chief of Naval Operations (Air), relieving VAdm. R. A. Ofstie who had assumed command of Sixth Fleet in the previous month.

April 15—The USS *Lake Champlain* (CVA-39) returned to Norfolk after a tour of duty with Sixth Fleet.

April 30—Adm. John H. Towers, Naval Aviator No. 3,

A3D-1 SKYWARRIOR *heavy attack aircraft groomed to operate from steam cat carriers, will increase striking radius of the fleet.*

A4D-1 SKYHAWK, *small but mighty attack plane, completed carrier trials and is about ready for delivery to fleet operating units.*

died. His long and distinguished career as an aviator began on 26 June 1911, when he reported for flight instruction at the Curtiss Flying School, Hammondsport, New York. As a pioneer in aviation, he conducted experiments and made several record flights. He held many important aviation and fleet commands including the NC trans-Atlantic flight in 1919, Chief of the Bureau of Aeronautics 1939-1942, Commander Air Force Pacific 1942-1944; Commander Second Carrier Task Force, 1945, and Commander-in-Chief, Pacific Fleet 1946-1947. Upon his retirement from active duty 1 December 1947, he was serving as Chairman of the General Board.

May 2—The Navy announced a new program for prospective aviation officers, designated the Aviation Officer Candidate Program, which opens the way for qualified college graduates to earn a commission in aviation after four months of pre-flight training.

May 5—VP-1 arrived at NAS WHIDBEY ISLAND, returning from duty in the Far East by way of the Indian Ocean, the Mediterranean and the Atlantic, with neither accident nor incident. Although a tour of duty separated the Pacific Ocean leg from the rest of the flight, this was the first round-the-world flight by a Navy squadron.

May 12—The attack carrier USS *Kearsarge*, with Carrier Air Group Eleven aboard, arrived at San Diego after an eight-month tour in the Far East which included participation in the protection of the Tachen Islands evacuation in February.

May 14—The first Douglas A3D-1, a twin-jet heavy attack plane and the intended successor to the AJ *Savage*, was delivered for inspection trials at NATC PATUXENT RIVER.

May 18—A P4M on night patrol out of Naha, Okinawa, was attacked by two or three aircraft. The P4M returned fire, but there was no apparent damage on either side.

May 31—The USS *Princeton* (CVS-37) returned to San Diego from her fourth tour of duty in the Far East. For one week in February she launched the aircraft of Air Anti-submarine Squadrons 23 and 37 and of Helicopter Squadron Four around the clock with the Hunter-Killer team supporting the evacuation of the Tachens.

June 1—Electronic Countermeasures Squadron (VQ-1), first squadron of its type in the U.S. Navy, was commissioned at NAS IWAKUNI, Japan.

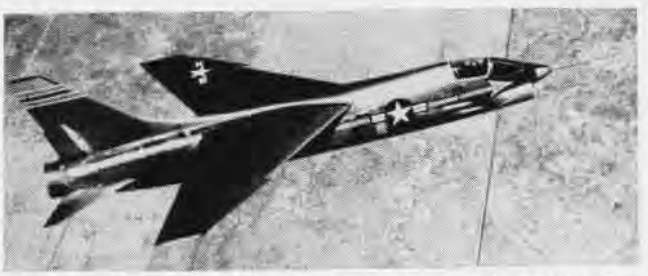
June 10—The USS *Leyte* (CVS-32) arrived at Newport after an antisubmarine training cruise in European waters.

June 12—Two new aircraft carrier classifications were established for escort carriers—CVU for Utility Aircraft Carriers, and CVHE for Escort Helicopter Aircraft Carriers.

June 22—A P2V-5 of VP-9, while on patrol in the Aleutian area, was attacked by two MIG-15's which set fire to the starboard engine and forced the *Neptune* to crash land on St. Lawrence Island near Gambell. There were no fatalities to the crew.

June 24—The USS *Essex* (CVA-9) with Air Group Two on board, arrived at San Diego after her fourth tour of duty in the Far East since recommissioning in January 1951. The *Essex* was one of the carriers covering the evacuation of the Tachens in February.

At the end of Fiscal Year 1955, the strength of naval aviation in ships, aircraft, bases, and men, was at a slightly lower numerical level than at the end of the previous year. There was, however, no similar decline in the power potential of the overall force nor in its readiness for combat. Noteworthy among the accomplishments during the year was the saving in both lives and equipment realized through a special emphasis on safety that reduced major damage aircraft accidents by 24 percent and resulting fatalities



NEWEST OF THE *carrier fighters under development, the XF8U-1 Crusader, has long slender fuselage, swept wings, low horizontal tail.*

NEW COLOR *scheme for naval aircraft is modelled by the F9F-8 Cougar. Dull gray top and shiny white bottom is style for the future.*

by 32 percent. Antisubmarine forces were augmented during August when the helicopter HSS-1 and the airship ZS2G-1, both designed especially for the AS mission, joined fleet squadrons. The utility helicopter HUP-4 made its first flight in July as did the jet powered seaplane, the XP6M Seamaster.

July 1—NAAS MAYPORT was commissioned. In the dedicating address, VAdm. T. S. Combs, Deputy Chief of Naval Operations (Air) said, "This station is the final link of our presently planned major fleet aviation centers . . . In two locations on the West Coast and now in three locations on this coast, we have facilities that provide for the swift and easy transfer of carrier air units from ship to shore and back again. With seaport facilities such as this one at Mayport, we have securely joined together training operations afloat and ashore."

July 1—At 1100, the keel of the USS *Independence* (CVA-62), fourth of the *Forrestal*-class carriers, was laid at the New York Naval Shipyard.

July 1—The USS *Thetis Bay* (CVE-90), already under conversion to the new mission, was reclassified as an Assault Helicopter Aircraft Carrier (CVHA-1).

July 5—Harmon International Trophies for 1955 were awarded to Capt. M. H. Eppes for his achievement as commander of the airship ZPG-2 on its record breaking endurance flight in May 1954, and to LCol. J. F. Coleman, USMCR and Convair test pilot, for his contribution to the art of flying in testing the XFY-1, the first VTO plane.

July 11—USS *Randolph* (CVA-15) scheduled for conversion at Norfolk, was placed in commission in reserve.

July 14—The Martin P6M *Seamaster*, a swept-wing seaplane powered with four J-71 jet engines and incorporating a new hull design, made its first flight. Designed for minelaying and reconnaissance tasks and adaptable to other missions, this plane on subsequent trials demonstrated great promise for the offensive potential of the operating forces.

July 22—RAdm. Apollo Soucek died. Former Chief of the Bureau of Aeronautics and twice holder of the world's record for altitude, his national record for class C-2 seaplanes made on 4 June 1929, is still on the books.

August 1—USS *Essex* (CVA-9) was placed in commission in reserve at Bremerton.

August 14—VP-881 from Olathe and VR-811 from Minneapolis, selected as tops in the Air Reserve in the western half of the U.S., returned from Barber's Point after two weeks of operations under Fleet command. One week later, the two top Reserve squadrons in the eastern United States, VP-801 and VR-801, both from Miami, completed a similar tour out of Port Lyautey.

August 15—USS *Lexington* (CVA-16) was recommissioned at Bremerton after conversion including the installation of angled deck and steam catapults.

August 22—Cdr. R. G. Dose, Commanding Officer of VX-3, assigned to operational evaluation of the mirror landing system installed on the USS *Bennington*, made the first carrier landing with the device in an FJ-3 *Fury*.

August 24—The first night landing aided by the experimental landing mirror system was made aboard the USS *Bennington* by LCdr. H. C. MacKnight in an F9F-8 *Cougar*.

FJ-4, LATEST *of the Fury series in production at North American has a high rate of climb and may also deliver externally stored weapons.*

F7U-3M CUTLASS, *a twin turbojet carrier fighter equipped to launch air-to-air guided missiles, lands on the angled deck of Shangri-La.*

August 24—The Secretary of the Navy announced the shipyard assignments for the construction of 11 new ships and the conversion of 26 existing ships under the Navy's 1956 program. This list included assignments for the conversion of six attack aircraft carriers.

August 29—Operations of Marine and Navy helicopters in the relief of New England flood victims ended.

September 6—USS *Bon Homme Richard* (CVA-31) was recommissioned after a 30-month conversion which included the installation of an angled deck and steam catapults at the Naval Ship Yard, San Francisco; Capt. L. P. Carver assumed command. This was the fourth angled deck and steam catapult carrier to join the fleet.

September 9—The USS *Bennington* (CVA-20) departed Mayport to join the Pacific Fleet via Cape Horn.

September 12—The landing of the A4D-1 *Skyhawk*, piloted by Marine Corps Maj. J. A. Feliton, aboard the USS *Ticonderoga*, initiated the fleet test of this attack plane.

September 12—The Navy announced that all fighters presently in production will be fitted with automatic gear for in-flight refueling, thus establishing the technique as a routine operational procedure.

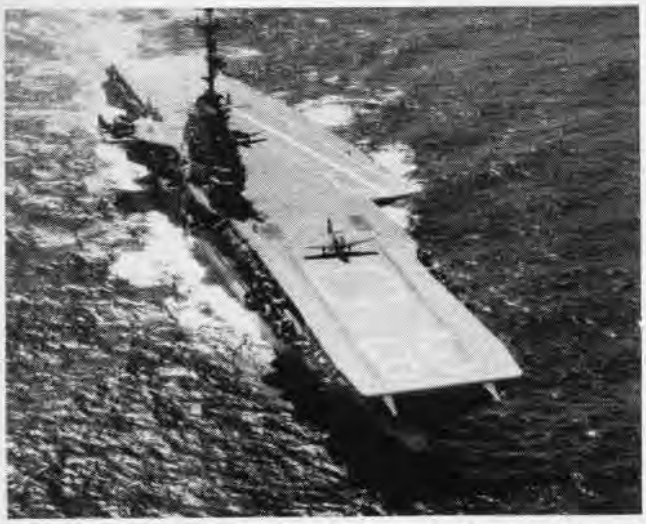
September 21—The USS *Oriskany* (CVA-34) arrived at Alameda from a tour of duty in the Far East.

September 27—A Navy hurricane hunter, a P2V-5J of VW-4 with nine crew members and two civilians on board, failed to return from a flight out of Guantanamo while tracking Hurricane *Janet* over the Caribbean.

September 29—The USS *Coral Sea* (CVA-43) returned to Norfolk after a tour of duty in the Mediterranean.

T2V-1 JET *trainer, an improved version of the TV-2 which it leads, has the equipment required for training operations aboard carriers.*

Events of the last quarter were dominated by ships, particularly the Forrestal class carriers, which hit the headlines on three separate occasions, and by the commissioning of the world's first cruiser designed for the specific purpose of operating guided missiles. Of no less significance, however, was a new world speed record set by carrier aircraft. No new model aircraft were assigned to fleet units but the carrier



USS SHANGRI-LA, *second angled deck carrier in the U. S. Navy and the first of three to join the U.S. Fleet operating forces in 1955.*

attack plane A3D-2, the utility helicopter HUL-1, and the one-man helicopter XRON-1, made first flights in October and another one-man type was expected to fly in December.

October 1—The USS *Forrestal* (CVA-59), Capt. R. L. Johnson, commanding, was placed in commission at the Norfolk Naval Shipyard, Portsmouth, Va.

October 8—The USS *Saratoga* (CVA-60), second carrier of the *Forrestal* class and seventh ship of the United States Navy to bear the name, was launched at the New York Naval Shipyard.

October 10—The carrier *Saipan* (CVL-28) with Helicopter Training Unit One aboard, left Tampico after a week of disaster relief operations for the inhabitants of the area. During these operations, the helicopters rescued 5,439 persons marooned on roof tops, trees and other retreats and delivered 183,017 pounds of food and medical supplies, thus earning the commendation of the Task Group Commander and the best wishes of a thankful people.

October 14—After a tour of duty with Seventh Fleet, the USS *Midway* (CVA-41) was decommissioned for conversion at the Puget Sound Naval Shipyard.

October 15—A Douglas attack plane, an AAD *Skyhawk* piloted by Lt. Gordon Gray of NATC PATUXENT RIVER, set a new world speed record for the 500-kilometer (310.685 miles) closed circuit course at Muroc, Calif.,

PERFORMANCE *of the P6M Seamaster on test flights captured the imagination and opened new horizons of operational use of seaplanes.*

averaging 695.163 mph around the 62-mile circular track.

October 26—The New York Shipbuilding Corporation of Camden, New Jersey, was awarded the contract to build the fifth *Forrestal*-class carrier, CVA-63, at the quoted fixed price of $119,841,034.

October 30—The landing field at NAS MIRAMAR was named Mitscher Field in honor of Adm. Marc A. Mitscher, famed carrier task force commander of World War II.

November 1—The USS *Boston* (CAG-1), the world's first guided missiles cruiser, was placed in commission at the Philadelphia Naval Shipyard, Capt. C. B. Martell, commanding.

November 14—The flagship of RAdm. George Dufek, commander of Task Force 43, sailed from Norfolk for New Zealand, where all ships of the force will assemble for the southward voyage to Antarctica. RAdm. R. E. Byrd, in charge of all U. S. Antarctic operations, will also join the force at New Zealand.

November 22—The National Aeronautics Association announced the selection of Mr. R. T. Whitcomb of NACA for the Collier Trophy Award for his experiments which led to the increased speed and performance of aircraft through the so-called coke bottle design of the fuselage. Presentation of the award was made at the Wright Memorial Dinner, December 17. The principle involved was first applied in the Grumman carrier fighter F11F-1.

November 23—USS *Philippine Sea* (CVA-47) with Air Task Group Two on board, returned to San Diego from her fifth tour in the Far East.

By Adrian O. Van Wyen

GRAMPAW PETTIBONE

Cornered in the Roundhouse

On a cross country flight recently, a P2V-5 arrived at its destination and the pilot called the tower for landing clearance. Clearance was granted and just prior to entering the traffic circle the co-pilot read the check-off list to the pilot over the intercom system. The pilot checked each item as he received it and prepared for landing. The aircraft was turned on final and landed on the first one third of the runway. Upon reaching the end of the runway, the pilot turned off and taxied to the line. The crew disembarked, and the aircraft was secured.

Grampaw Pettibone Says:

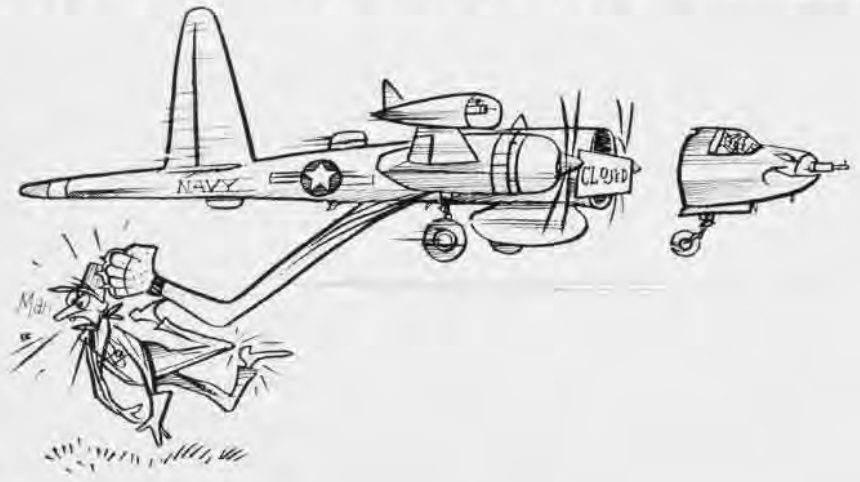
Well, that's a switch! It's just too gol-durned bad we can't print more tales like this. But like the man said, you ain't heard nothin' yet.

Something had hit the fan for sure, but it wasn't until an hour or so later that the word had reached the base. A local engineer on a Diesel engine was laid out in a hospital with a permanent phlebitis of the lower leg (scarring and injury of the muscles and blood vessels). It seems the pilot of the P2V had inadvertently cornered him in the roundhouse while landing and the engineer was smartly clipped with, of all things, the trailing wire antenna and weights.

The culprit in this case was the radio operator who allowed as how he didn't know he had to ask permission to use the trailing antenna. He just figured if you gotta use it you gotta use it. Like he said, "From the time I first reeled it out until the time we landed I was using the antenna. I had only reeled out about 100 feet of it."

I would say off hand that this lad was a little green at his job. Besides dragging a deadly missile below the airplane, he snafued the situation further by turning off the ICS in order to keep interference out. When the co-pilot came to "trailing wire antenna in" on the check-off list, the pilot called the radio operator to check it. He received a couple of clicks in the ICS system, which he took for acknowledgment, and went ahead with the landing. By George! You gotta get up mighty early to outguess some people!

While there is no excuse for a pilot not having his crew completely under control, I am sure this one has learned his lesson. Anyway, he has my sympathy.



Unbreakable Pilot

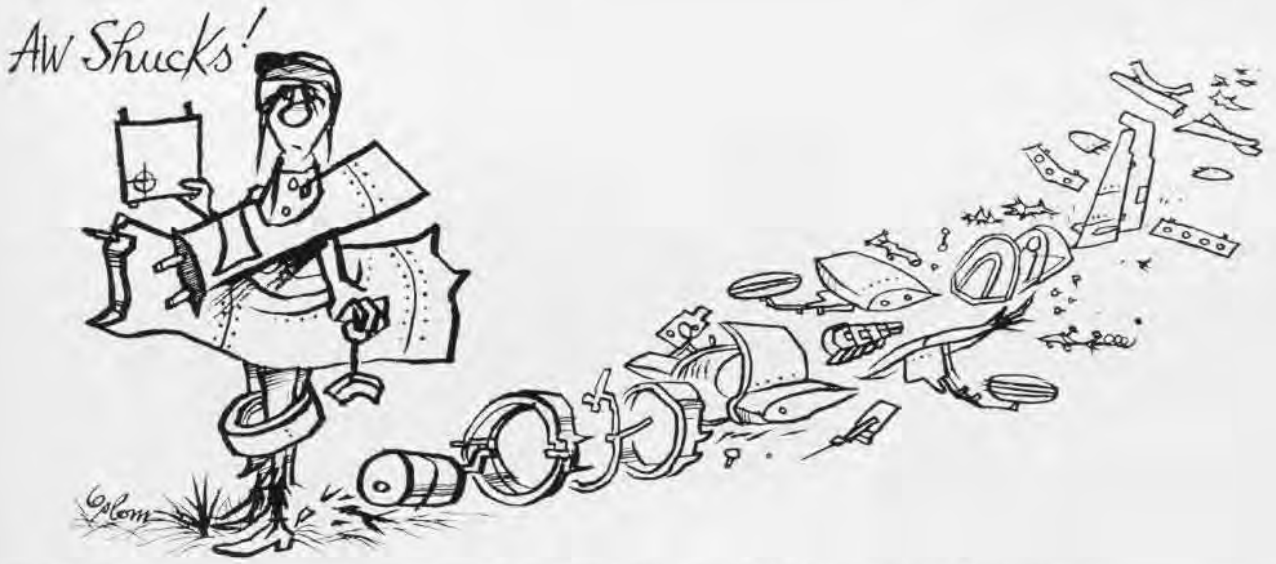
Some folks die every year just from falling out of their beds. Others seem to be practically indestructible. The T-28 pilot involved in this accident is definitely in the latter category.

His instructor had told him that the practice glide angle calibration runs were to be made with an entry speed of 140 knots, 45 degree dive, and pull-out of three "G's" or less to be completed above 1200 feet.

The flight proceeded to the target area without incident, and the instructor orbited the target to observe the runs. He had just cautioned one of the student pilots of a low pull-out and steep dive, when the Indestructible Cadet commenced his eighth run. Here is how the pilot described it:

"I had a slightly long interval on the plane ahead and tried to catch it up by using more bank in the turn into the target. I used about 40 degrees all the way around and ended up close to the target with a steep run—probably about 55 degrees dive angle. My airspeed was 170 knots when entering the run.

"When I checked the instruments in the run, I saw I was at 290 knots at 2300 feet and realized I was low and commenced a normal recovery using 4 to 4½ "G's". I trimmed the aircraft as I entered the dive and then kept my hand on the throttle to keep it at 20" MP in the dive. The dive felt normal in all respects except for being slightly steep. The plane felt like it stalled violently as my nose came through the horizon, and I then realized something was wrong. I took my left hand off the throttle to help recovery on the stick, and then found I had no control of the plane.



"I looked out and saw I was too low to bail out, but already I had put the canopy handle to the emergency position then I saw that I was losing parts of the plane. My nose was level with the horizon, and then I felt a sharp downward movement of the nose. Then I saw a shadow fly over the plane, the nose dropped through more, and I started a fast spiral to the right. I had both hands on the stick with no pressures at all. I then retarded the throttle to the closed position and tried to reach the mag switch but couldn't reach it because of the locked shoulder straps. I didn't have time to fool with any other switches.

"After the initial impact, I lost my eyesight and had to open my eye with my hand to see anything. After coming to a final halt, I unloosened my seat belt and finally got free from the parachute. I then saw something burning near me, and saw it was the engine about 25 feet away. My plan was to get away from the plane before it burned or exploded, and I managed with much effort to get about 10 feet away from the plane. I was lying in line with the fuselage and the burning engine and saw that I was clear of any fire so I tried to get back near the fuselage to shade my face from the sun. Finally I put a map over my face to escape the sun.

"Two men came up sometime after this and offered their assistance. I had them put the parachute under my head and take off my shoe. Then one man went after some water which I had requested. After a while the helicopter arrived, and the doctor took over. He gave me a shot of something, put some splints on my legs, and patched me up in general. Then they put me in the stretcher and we returned to Kingsville and then over to Corpus Christi. I have no idea of the time involved until the helicopter got there, but after they arrived I received excellent service."

Grampaw Pettibone Says:

I wish that every one who is tempted to exceed "G" limits could see the trail of parts that this plane shed before impact with the ground. They were spread along a 3800 foot area in this order: The horizontal stabilizer and elevators were the first parts to fail; then came the port and starboard outer wing panels, the port and starboard flaps, the rudder, the canopy, and the port and starboard inboard wing panels with landing gear attached to each.

After losing all of these parts, the fuselage and engine hit the ground in a slight nose down attitude. The engine and fuselage forward of station 73 broke off on impact. The pilot and what was left of the fuselage sailed another 100 feet along the ground to the spot where he crawled free.

The investigators noted that the instructor shaved off some of the safety factors in the training syllabus when he briefed the flight to dive at 45 degrees instead of 40 and specified a 1200-foot altitude for completion of pull out despite the 500 foot level of the terrain. The pilot then added an extra 30 knots to his entry speed, steepened the dive to 55° and set the stage for disintegration.

Dear Gramp:

Surely you'll have something to say about the vertical stabilizer on the F9F-2 on page 28 of the October issue!

Please, what happened?

LT USN

Grampaw Pettibone Says:

My first guess was a low bridge, but a check of the records shows that the damage occurred as a result of a mid air collision. The student pilot flying BuNo. 123651, lost sight of his instructor while performing a cross under. At this point, he made the mistake of pulling back on the stick and lost his tail feathers.

NACA SCIENTISTS WIN HONORS

On 17 December, Dr. Hugh L. Dryden, Director of the National Advisory Committee for Aeronautics, and Mr. Richard T. Whitcomb, an NACA scientist, received high aeronautical honors at the Wright Day Dinner in Washington, D. C. Dr. Dryden was given the Wright Brothers Memorial Award and Mr. Whitcomb, the Collier Trophy. The National Aeronautics Association administers the prizes.

The Wright trophy bestowed annually since 1948 is awarded for "significant public service of enduring value to aviation in the United States;" while the Collier award is made for "the greatest achievement in aviation in the year," in this case, 1954.

WHITCOMB AWARDED THE COLLIER TROPHY

WRIGHT AWARD GOES TO NACA DIRECTOR

Dr. Dryden was one of the first American scientists to investigate supersonic flows in aeronautics. He was associated with the Bureau of Standards until 1947. His studies of turbulence in wind tunnels and of the mechanics of air flow within the boundary layer were significant contributions to the design of low turbulence wind tunnels and wings. His research in this field contributed greatly to the performance and control of modern supersonic aircraft.

During WW II, Dr. Dryden served as section chief in the division of new missiles for the National Defense Research Committee and led the development of the radar-homing missile *Bat* used by the Navy against the Japanese.

In 1947, Dr. Dryden left the Bureau of Standards to become director of aeronautical research for NACA. Two years later he became director of that organization.

Mr. Whitcomb, another NACA scientist, received the Collier Trophy for his discovery and experimental verification of the "Area Rule," which has led to the development of the so called "coke bottle" fuselage (NANews, October 1955). This design increases the performance capabilities of supersonic aircraft.

According to the Collier Trophy citation, "Whitcomb's Area Rule is a powerful, simple and useful method of reducing greatly the sharp increase in wing drag heretofore associated with transonic flight.

"The use of Whitcomb's Area rule . . . makes possible the rapid acceleration of aircraft through the transonic speed range; the attainment of supersonic speed with less power than herefore required and consequent increase in range; and the attainment of supersonic speed by aircraft which otherwise would be limited to subsonic speed."

VAdm. T. S. Combs, DCNO(Air) was a member of the selection board which made the award to Whitcomb.

10,000 Chute Jumps Made

Milestone Logged by CWO Russell

CWO E. B. Russell recently chalked up a milestone for NATTU, Parachute Rigger School at NAS Lakehurst. He stepped to the hatch of an R4D, adjusted his gear, then leaped into space to established the school's 10,000th voluntary free-fall parachute jump since it was founded in 1924. He is the school's Training Officer in the Class C Oxygen Equipment Course.

BuAer's parachute experts report that these jumps were being recorded on film for evaluation. In order to keep the camera on the 'chute being tested and to evaluate the tests properly, the jumpers are asked to add color to their suits for better identification. These self-styled creations are referred to as "nightmares." To distinguish the jumper further, the individual is permitted to add his last name to the "nightmare," thus giving it a Dior touch. In the photograph, Russell wears his multi-colored suit.

RUSSELL'S SUIT WAS A REAL NIGHTMARE

Two instructors at the school logged the two "almost but not quite a record" jumps. W. M. Marshall, PR1, logged the 9,999th jump and B. J. Massay, PR1, tallied the 10,001st leap.

Canadians in War Games

RCAF Lancasters Support Defenses

NAS Miramar hosted 80 officers and 60 enlisted men from the Royal Canadian Air Force recently. The men arrived at the air station in nine huge Lancaster bombers to take part in war games held in November.

The bombers' role during the exercise was to provide long range escort for the Fleet in the maneuvers.

The Canadian squadron, 407MR, is based at Air Station, Comox, British Columbia. The Canadian Navy, USAF, Navy and Marines also participated.

VP-4 Tours SW Pacific

Squadron On Good Will Mission

Early in November ten P2V *Neptune* planes of VP-4 left NAS *Iwakuni* for NAS *Whidbey Island*, Washington via the Philippines, Singapore, Australia

CDR. DAVIS BRIEFS PILOTS AT IWAKUNI

and New Zealand. They were led on the extended good will tour by Cdr. L. D. Davis (second from left in picture).

Before they set off on the trip home, members of the squadron were bid "sayonara" by Capt. E. A. Junghans, Commander Fleet Air Wing Six, who praised the squadron for its perfect three-year safety record.

Thirty-four officers and 86 enlisted men of the squadron made the Australia flight. They arrived home at Whidbey after stops at Kwajalein Atoll, Hawaii, and Alameda, Calif.

Army, Navy Sponsor Study

'Copter Instrumentation Research

The Office of Naval Research, Bureau of Aeronautics and the Army's Transportation Corps, are jointly sponsoring an engineering project to develop an ideal set of all-weather helicopter flight instruments. The contract for the development of the system was awarded the Bell Aircraft Corporation.

The research program is designed to give prime consideration to the pilot—his reactions, limitations and requirements. Current cockpit styles are designed around existing instruments with an apparent lack of consideration to the man.

This Bell program closely parallels the Navy's fixed-wing instrument development study which Douglas Aircraft has conducted for two years.

RECORD-BREAKER'S HEADACHE

GRAY IS NOW BACK AT THE DESK ROUTINE

Lt. Gordon Gray, holder of the world's 500-km, closed circuit course speed record, had to battle Mother Nature and Fate for the title. When he tackled the job of pushing an A4D *Skyhawk* around a 62-mile circular track at 695.163 mph average, he never figured he would have to battle anything more than the elements.

The day the flight was scheduled his troubles started. The *Skyhawk* that Douglas engineers and maintenance men had pampered in preparation for the record hop had to be replaced with a slower standby aircraft. Then the standby *Skyhawk's* fuel gauge stopped working, but the engineers figured out how long Gray could fly before he ran out of jet fuel. He made it with fuel to spare.

Then Mother Nature decided to go against Gray by conjuring up windy and turbulent weather. The flight had to be rescheduled and the *Skyhawk* lost even more speed, owing to a drop in temperature. Gray got the little plane airborne and commenced his run. He later declared that the flight was routine, but "it was like riding on a cobblestone street."

When news of the new world's record was finally released on Monday, just as Gray was preparing to return to Patuxent River, the press pounced on him. He was called to Los Angeles where he appeared on two TV shows on Tuesday. Then followed a noontime telecast and a variety show in the evening. On Wednesday, newsreel people, magazine and newspaper men jammed the Hollywood Roosevelt Hotel to hear and see Lt. Gray. He was offered time on other national TV shows.

He finally got home to his family in Maryland. He thought that the time had come for a little relaxation, but such was not the case—far from it.

On Thursday he reported to his desk at NATC but was unable to accomplish much work. A steady procession of his shipmates came by, slapping him on the back and offering congratulations.

Gray is now convinced that the aftermath of setting such a record can be more nerve-racking than the flight. He's now content to sit back and let someone else do it next time.

OWENS (R) PREPARES BROWN FOR SEA DUTY

Old Sailors With VC-62

Two Have 63 Years between Them

The position of leading chief with a squadron or aboard ship is a very jealously guarded privilege among those who hold this place of esteem. A situation arose in VC-62 recently where a chief with 29-years service was almost forced to take a back seat to another Navy chief.

Carl Owens, AOC, was the man involved when salty L. R. Brown, ADC, reported aboard for duty with VC-62. Brown has a mere 34 years in the Navy. He elected to take the job of training chief with the squadron to keep from "kicking anyone out of a job." He became responsible for the scheduling, and the flight and ground training records of the more than 50 pilots in the jet photographic reconnaissance squadron.

Brown finally got restless and volunteered to go to sea with a VC-62 detachment aboard the carrier USS *Ticonderoga*. As he was preparing his gear for the shipboard duty, Chief Owens handed him a bottle of seasick pills saying, "Here, you had better take these."

Brown's retort was what one would expect from an old chief. "Why, you rubber-neck, I was seasick before you ever knew there was a U. S. Navy."

TURBINE LAB IS DEDICATED

'FOR TEST AND EVALUATION OF TURBOJET, TURBOPROP, RAM AND PULSEJET ENGINES'

With a recent traditional ribbon-cutting ceremony, the Aeronautical Turbine Laboratory, a part of the Naval Air Turbine Test Station, Trenton, N. J., was formally dedicated. It was the most recent milestone in a series of events pertaining to Naval aircraft engine development, the first of which took place in 1915. It was then that the first Navy Engine Test Facility was established at the Navy Yard, Washington, D. C.

Distinguished military and civilian guests prefaced an inspection tour of the new facility by observing while RAdm. E. H. von Heimburg, ComFour (above) wielded the scissors. With him are (left to right) Mrs. Mary G. Roebling, Chairman, Trenton Trust Co.; Capt. J. E. Dodson, CO, NATTS; Rep. Frank Thompson; VAdm. Thomas S. Combs, DCNO (Air); Mr. J. P. Stewart, Pres., DeLaval Steam Turbine Co.; and RAdm. S. B. Spangler, Commander, NADMC.

The history behind this epoch-marking ceremony covers a generation of steady advances in engine design and development. Millions of miles of ocean and land have passed under the wings of Naval aircraft, dependably propelled by engines which, owing to Navy-fostered research, have been progressively improved each year. It has been the changes from gasoline to kerosene and other propellant fuels, and from wooden and steel propellers to jet and rocket thrust.

In 1924, the Aeronautical Engine Laboratory was established in Philadelphia, and in 1942, the need for an advanced aeronautical turbine lab was felt. The Power Plant Division of BuAer under Capt. S. B. Spangler began studies along those lines. Three years later, after development of design criteria by the Navy, preliminary design studies were made by a New York engineering firm with a view to starting work as soon as possible.

Funds were made available in 1948 and construction of facilities for NATTS began one year later at the Trenton site. The station was commissioned in 1951 with Capt. W. T. Hines assigned as CO. In 1952, ten years after the first studies began on the project, NATTS received its first test engineering development project.

Funds for additional expansion of the already huge NATTS installation have been made available, and a more complete report on the plant will appear in a future issue of NANews.

Kearsarge Aids in Search

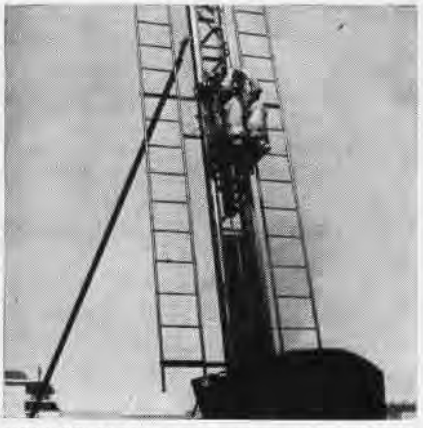
C-119 Plane Crew Lost Near Hawaii

The USS *Kearsarge* steamed to a point 600 miles northeast of Pearl Harbor recently to assist in the search for an AF plane crew which had bailed out of a crippled C-119 Packet.

The big plane sent out a distress signal in the early evening, then five men hit the silk. Four were rescued by ships which participated in the rescue. After a 36-hour search by over 11 Navy and two merchant ships, plus planes from CAG-5, the fifth man could not be found, and the hunt was called off.

Planes from CAG-5, based aboard the *Kearsarge*, interrupted their training schedule to assist in the search. Destroyer Squadron Seven assisted and the big carrier had to refuel the tin cans when their fuel supply began to run low. The carrier conducted ship-to-ship refueling operations all through the night and into the next day.

The *Kearsarge* returned to Pearl Harbor on the third day and resumed training operations in that area.



HOW TO BLOW *your top is taught with this ejection seat trainer. It is also used for demonstration purposes for families of pilots and crew members at NAS Corpus Christi, Tex.*

T-28C in Carrier Tests

New Trainer Lands Aboard Tarawa

NATC's Carrier Suitability Branch has completed highly successful carrier evaluations for the North American T-28C trainer. The sleek plane was landed aboard the USS *Tarawa* in November. At the controls for the 50 landings were LCdr. W. F. Tobin and Lt. Robert R. King.

Both pilots are members of NATC's Flight Test Division at Patuxent River.

Mid-air Birth in 'Copter

Tampico Event Surprises Gregory

Many claims have been recorded as "firsts", "records" or what have you, but the claim that really tears the rag off the bush was a recent experience by Lt. J. E. Gregory of HTU-1. Gregory was serving as a helicopter pilot with an HTU-1 detachment during the Tampico disaster and was transporting evacuees to higher ground.

During one flight he took off with the prescribed number of persons his HUP-2 could carry. When he landed, he had an extra passenger! One of the expectant mothers had given birth to a healthy baby boy.

The Piasecki people, who built the helicopter, gave Gregory a model of the HUP-2 with his name and an appropriate insignia of a stork painted on it to commemorate the rare event.

GREGORY COLLIDED IN MID-AIR WITH STORK

Wake Marines are Honored

F4F Parts Used for a Memorial

The Marine defenders of Wake Island have had a simple, plain, but dramatic monument erected in their honor by a U. S. Coast Guard officer. Ltjg. Marshall K. Phillips, O-in-C of the island's Loran station, noticed that two monuments had been dedicated to the Japanese conquerors of Wake Island, but none to the gallant Marines who defended that tiny three-by-four mile coral atoll.

Taking matters into his own hands, Phillips decided to build and dedicate a fitting tribute to the defenders. While searching for shells one day, he

MEMORIAL IS GIVEN FINISHING TOUCHES

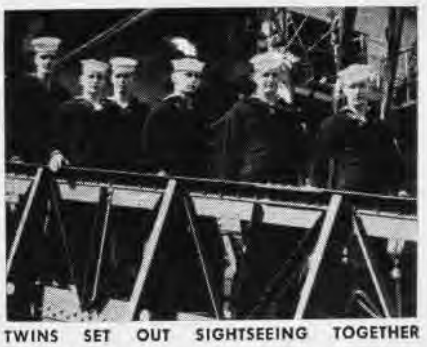
came across the wreckage of an old F4F *Wildcat* fighter which had been partially buried by the clean-up crews and bulldozers. He investigated and discovered that the plane had been flown by Marine Capt. Henry T. Elrod who was later elevated to the rank of major and awarded the Medal of Honor posthumously.

Lt. Phillips erected his monument, using the F4F wreckage. The plaque on the memorial reads: "Dedicated humbly to Capt. Henry T. Elrod and the gallant defenders of Wake."

Twins Serve on Board CVA

Confusion Reigns in Forecastle

Three sets of identical twins on board the USS *Hancock*, now in the Far East, create quite a bit of confusion aboard ship and in foreign ports. *Hancock* crew members often think they are seeing double and the local citizenry of foreign ports gaze in astonishment.



TWINS SET OUT SIGHTSEEING TOGETHER

The twins are all assigned to the ship's combat information center. One set, Alton and Alvin Ruark, are radarmen second class and the other two sets, Doug and Don Bisbee, Joe and John Tolson, are radarman strikers.

Hiller Delivers HOE-1's

Ramjet Powered 'Copters at NATC

The first CAA-approved ramjet powered helicopter, the Hiller HOE-1, has been accepted by the Navy and is being readied for shipment to NATC Patuxent River. Lt. Paul S. Olmsted, service test pilot and Lt. Robert O. Barnes, flight test pilot from NATC, soloed in the HOE-1 and flew a number of hours during preliminary tests at Palo Alto, Calif.

One of the three helicopters to be delivered is being instrumented for the contractor's demonstration, scheduled to take place at Patuxent River. Power plants for the 'copter are mounted by using only a screwdriver.

DURING VISITS *to Far Eastern ports, the men of the USS Hornet were treated to these contrasting views when the big carrier put into the British Crown Colony of Hong Kong. Modern apartment projects adorn the hilly terrain (1) while a view from Castle Peak gives a sweeping panorama of the harbor and the Victoria business center. Beyond this is the beginning of the "bamboo curtain" of Red China.*

NAVY WIVES CRUISE ON CVA'S

THE WIVES of crew members of the USS *Shangri-La* and the USS *Kearsarge* now have a better understanding of the complexities of a modern aircraft carrier, husbands' jobs and air operations.

Recently 300 wives of the officers and sailors of the USS *Shangri-La*, commanded by Capt. R. L. Newman, reported aboard for a one-day cruise off the coast of southern California. They travelled up and down ladders, following their husbands and observing the routine of life at sea. Jet air operations found the ladies topside in glamorless foul weather jackets. Puffs of stack gas and windblown hair did not bother them in the least. When it came time for chow, the girls were right in line with their husbands, getting a taste of Navy food.

A RARE SIGHT IN A SEA-GOING CHOWLINE

The *Shangri-La* cruise was so successful, that two weeks later, 365 wives reported aboard the USS *Kearsarge* for a similar outing. Capt. E. O. Wagner, *Kearsarge* CO, was "temporarily relieved" of his command as the ladies took turns giving orders to the helm. The photographers' wives shot pictures of carrier operations, and pilots in aircraft waiting to take off or land heard female voices giving them instructions by radio. One pilot said: "This is real back-seat driving."

SCARVES HELPED STEM LAUNCHING NOISE

When the "White Flag—Launch Aircraft" word was passed over the ship's bullhorn, heads turned and eyes stared for the high-pitched voice was that of a female.

Wives returned exhausted from the cruises, but with a better understanding of life at sea and with knowledge of the part the husband plays in keeping the gigantic ships operating.

MEMBERS OF VA-34 *look on as Cdr. A. L. Detweiler, CO, thanks Ltjg. Bob Donaldson of VX-3 for the fast delivery of the squadron's first F7U-3 at NAS Jacksonville. The squadron's pilots and maintenance personnel have been preparing for their new aircraft with an intensive training program.*

P2V Gives Guiding Light

Pilot Leads Four Planes To Safety

Ltjg. W. S. Thompson of VP-4 is a guy who uses his head, and four single-engine pilots are certainly glad that he does. While warming up his P2V-5 *Neptune* at NAS IWAKUNI in preparation for a patrol mission recently, he heard a four-plane flight declare an emergency.

Inbound from Korea, the leader of the formation became disoriented, was low on gas and, from the conversation, very unhappy. His gyro compass was out, and his radio compass wasn't working. The other three planes were having similar difficulties.

Thompson interrupted the conversation and offered to climb to 8,000 feet and use his *Neptune's* powerful searchlight as a beacon for the pilots to home on. Before he had completed his first 360 degree orbit, the flight leader spotted the light and was homing in from about 50 miles south of the air station. Thompson orbited overhead, occasionally turning on his searchlight to give the planes a new fix.

After landing, one of the planes engines died of fuel exhaustion just as it taxied onto the flight line.

Cadet Finishes Jet Course

ATU-206 Graduates First Student

ATU-206, based at Sherman Field, NAS PENSACOLA, recorded a milestone recently when the "Wings of Gold" were pinned on Ens. R. J. Pekkanen. The new aviator became the first man to graduate from the newly inaugurated jet course at Pensacola. Cdr. R. A. Beveridge skippers ATU-206.

Jet flight training which once came after commissioning is now part of the course. Pekkanen received, before commissioning, 100 hours of jet flight training, some 40 hours in the TV-2 at Memphis, and 60 hours in a *Panther* jet during 40 hops at ATU-206.

Pekkanen's wings were pinned on by his mother as his father and brother watched. In the brief ceremony witnessed by instructors, students and enlisted personnel, Capt. J. P. Monroe, CNABT, presented the 24-year old jet pilot with his designation as a Naval Aviator. Capt. M. H. Tuttle, Chief of Staff to Capt. Monroe, gave the oath of office to the new ensign.

Pekkanen completed the two-phase, eight-week course—ground and flight training—in the F9F-2 *Panther* jet.

Lightning Strikes Doctor
Riding in Nose of FAW-3 Neptune

The senior medical officer at NAS QUONSET POINT, Capt. R. K. Smith, considers himself a very lucky individual. He should, for he lived to tell the tale after being struck by a bolt of lightning.

The captain was riding the nose section of a FAW-3 *Neptune* on 25 October when he felt static electricity building up in his headset. Without hesitation he pulled it from his head. That act probably saved his life. Just minutes after he removed the earphones a loud report, like the firing of a .45 caliber pistol, filled the nose section.

Capt. Smith said, "Simultaneously I felt something hit my right foot a terrible blow. I was so scared I was afraid to look at my foot. My shoe had been blown off. I was afraid to look at my leg for fear that I would find the foot missing. At any rate, the foot was where it should be, but the sock was shredded and the top of the foot was already beginning to blister. As soon as I could quit shaking, I started to crawl out of the nose section."

A crew member rushed a first aid kit to him and he dressed the wound. Although Capt. Smith suffered first and third degree burns, he was able to get his shoe back on his foot.

Hero's Sword Given Pilot
Tradition Carried on for General

BGen. Roswell Winans, a retired Marine Medal of Honor winner, recently requested that an outstanding young officer be selected to carry the General's sword throughout his career. The sword, symbolic of a proud tradition of the Marine Corps, has been carried by Gen. Winans through 29 of his 34 years of service in the Corps.

Lt. John Madden of VMR-152 was picked for the honor, because he met the qualifications set up by Gen. Winans.

As First Sergeant Winans, the donor won the Medal of Honor during the Haitian campaign of 1916. It was awarded for exceptional courage in the face of danger while he was fighting bandits at Guayacanes. Sgt. Winans was commissioned as a 2ndLt. in 1917, at which time he procured his sword.

Madden is aircraft maintenance officer and a pilot for the squadron.

THESE THIRTY *members of Fighter Squadron 870, a Royal Canadian Navy outfit, have returned to Nova Scotia after completing a course in maintenance and up keep of the F2H-3 Banshee with VF-41 at NAS Oceana. Eight other members were at NAS Jacksonville for Banshee flight training.*

Navy Pilot Wins AF Award
Plaque Presented to Lt. Somers

Lt. Robert W. Somers recently broke an AF precedent and became the first Naval Aviator to achieve the Outstanding Supervisor award of the AF Air Training Command.

Somers, an exchange pilot at Vance AFB, Oklahoma, received an engraved trophy at a Group dinner in October. He arrived at Vance AFB a little over a year ago, and was assigned duty as an element leader in the T-28 trainer.

Last January, he was assigned as a flight instructor and element leader in the B-25 aircraft. He now serves with the Training Analysis and Development Division as Chief, Instructor Training and Methods Branch.

Furies Flown by Brothers
Serve With Checkerboard Squadron

Two brothers are flying together at MCAS CHERRY POINT as jet fighter pilots with VMF-312, the Checkerboard Squadron of Korean War fame. The Flying Leathernecks, 2nd Lts. Joe D. and William G. Skinner, received their flight training at Pensacola and advanced training at Kingsville. Further jet training was given the brothers at Cherry Pt. by Marine Fighter Training Squadron 20.

William is checked out in seven different aircraft; Joe in five.

SQUADRON-MATES AND BROTHER PILOTS

No Room for Faint Hearted
Ex-Football Greats Get Together

Five famous stars of two great football teams reminisced gridiron escapades of the past recently at NAS COLUMBUS. Three of the famed "Four Horsemen" of Notre Dame Jim Crowley, Harry Stuhldreher and Don Miller (in center of photo) stopped over at the station enroute to Pensacola to visit with Academy greats, Capt. J. C. "Jumping Joe" Clifton (left), CO, NAS MEMPHIS and Capt. L. L. Koepke, CO, NAS COLUMBUS.

FIVE FOOTBALL GREATS OF YESTERYEAR MEET

Occasion was the departure of guests for an Orientation cruise at NAS PENSACOLA from NAS COLUMBUS, Ohio.

EARLY ENLISTED FAMILY UNITS WERE DRAB

EVEN THE 'NEW' OFFICERS' FAMILY QUARTERS IN 1948 LEFT MUCH TO BE DESIRED

PORT LYAUTEY HAS NEW LOOK

CONNIE BRINGS SUPPLIES FOR THE FLEET

COMFORTABLY spread out over 3500 acres of low-lying terrain at the bend of the Sebou River on the Atlantic Coast of North Africa lies the Navy's largest shore installation in the European and Mediterranean area, the U. S. Naval Activities, Port Lyautey, French Morocco.

To anyone acquainted with the station as recently as two years ago, the early 1956 appearance would be unrecognizable. As the importance of Port Lyautey in the Western European defense picture has increased, so has its physical character been changed.

In 1951 a vigorous construction program was inaugurated in order to provide adequate facilities for fleet forces supporting the increasingly important mission of the Navy in the Mediterranean. Progressing from the temporary advanced base of post-war times, it now is a solid looking, permanent type installation, with fine airstrips, modern buildings, and pleasant, palm-lined straight streets.

To appreciate the remarkable strides made by the four-year plan of construction, one needs a bird's eye view of the pre-1951 Port Lyautey.

Four years ago, personnel were quartered in either 20-man temporary

DESERT AIR GIVES CRYSTALLINE SPARKLE TO HANGAR LIGHTS AS ROUND-THE-CLOCK MAINTENANCE OF PLANES IS ACCOMPLISHED

NEW QUARTERS ARE SURROUNDED BY GROWING GRASS AND TREES

THE SENIOR BOQ ALSO HOUSES OFFICERS' WARDROOM AND CLUB

quonsets, or in tents, while a limited number of quonsets were available for the families of men attached to the activity. Flight operations were controlled from an elongated quonset at the end of the one serviceable airstrip. One lone hangar was in the process of being erected. The primary recreational facilities were represented by the Enlisted Men's and Chiefs' Clubs, inconveniently leased in the town of Port Lyautey.

Streets aboard the station were for the most part unpaved, deep in dust in the dry months, and correspondingly deep in mud during the rainy season, and sidewalks were unknown.

But today there is a different story.

A short tour of the station points out high spots in recent construction from the standpoint of living, service and recreational facilities.

The new family quarters located on the edge of the station complex are an appropriate starting point for the tour. They are a part of the planning that has been realized—planning in an effort to provide the maximum on-station housing for the families presently living in the towns of Port Lyautey, Mehdia Beach, and Rabat. The first non-quonset houses to appear on the station, they are two, three and four family units, edged with gardens and separated by spacious lawns.

For billeting single personnel there have been built nine new cubicle type barracks, and a new Junior BOQ, capable of accommodating 300 officers. Feeding Port Lyautey men is no problem now, since the 1954 opening of the 1000-man mess hall and galley.

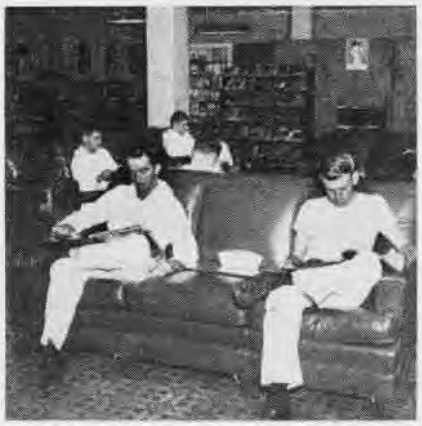
Since French Morocco is considered an isolated area, the station itself is made as nearly self-sufficient as possible. Contributing to this is the suburban-like new Shopping Center, only a stone's throw from the new family units. Housed in one long structural unit, the Shopping Center offers many services, which include a retail store, a uniform shop, ladies' shop, cobbler shop, magazine store, a beauty salon, and an almost Stateside supermarket, as well as the Navy Exchange laundry and dry cleaning plant.

Capable of serving a community of of 10,000, the shopping center of the Port Lyautey Naval Activities is used not only by the naval personnel stationed thereon, but also by the Air Force personnel in the area, and by the State Department families from Rabat and Sidi Slimane.

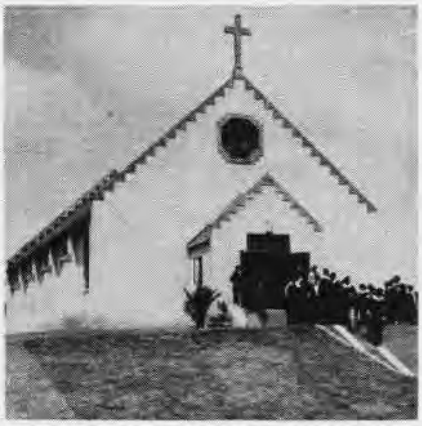
Adding immeasurably to the comfort and well being of the service personnel and their families at Port Lyautey are the new hospital, the new Elementary School, and the Chapel, all of which opened their doors for the first time in 1954, and all of which have already accomplished much in the effort to make this naval activity a 'home away from home.'

In addition to the installations necessary to house, feed and administer related services to a self-contained military community are those aimed at maintaining a high level of morale. The necessity of providing adequate on-station recreational facilities is a more

NAVY JRS. PLAY ON NEW SCHOOL GROUND



LIBRARY, READING ROOM GET STEADY USE



CHOIR AWAITS CUE FOR THE PROCESSIONAL

ONE FINE DAY THIS WILL BE A REAL GREEN

CLUB HOUSE TERRACE IS PLEASANT PLACE TO AWAIT TURN ON REAL GRASS FIRST TEE

important problem here than at many other naval stations, because of the restrictions on activity off the base. And in this, the progress made within the last year has been considerable.

Fulfilling a long-standing need, the Recreation Center is one of the most widely used buildings on the station. A recently renovated building in the heart of the station, it houses equipment and provisions for worthwhile use of leisure time.

With the completion about a year ago of the Enlisted Men's Club, a happy combination of masonry walls, large overhanging patio roof and plate glass frontage, the station's three clubs can now provide accommodations for the ever increasing military and civil service population of this activity.

But the balmy weather enjoyed for long periods at this naval station encourages more outdoor recreation than otherwise. Since its opening in Sept. '55, the 50-meter swimming pool has had almost constant use. The outdoor skating rink with lighting for night skating has already been a source of many hours of wholesome pleasure.

One of the most gratifying improvements is in the golf course, which is open to all. Replacing the nine-hole "sand trap" rolled sand greens, common in this part of the world, have been planted bona fide grass greens.

Native Moroccan trees, shrubs and flowers, integrated into the landscaping, along with the new paved streets and wide sidewalks, make a sizable contribution to the present day picture.

The primary mission of U.S. Naval Activities, Port Lyautey, is to furnish logistic suport for CINCNELM's Naval Forces, and to serve as communications link between the United States and Naval Ships and stations operating in the Eastern Atlantic, European and Mediterranean area. Discharging this mission are Navy people among whom a high level of morale is maintained. This is reflected in the high reenlistment rate, and in the many requests for extension of tour of duty.

It is also reflected in the frequently echoed sentiment of departing personnel, the hope of being able to return to Port Lyautey in a few years. These few years, they believe, will make the Navy's "oasis" in North Africa one of its finest overseas bases.

NEW GYM IS THE SCENE OF WELL ATTENDED BOXING MATCHES

CONVENIENTLY LOCATED, NEW POOL IS RARELY 'NOT IN USE'

AIR ADVISORS POSE FOR PHOTOGRAPH AROUND STATUE OF J. V. FORRESTAL ABOARD THE HUGE CARRIER NAMED IN HIS HONOR

AIR ADVISORS AT PENTAGON

THE GREAT transition that the Navy is undergoing at the present time was the theme of the annual meeting of the Naval Air Advisory Council. The Council, composed of nationally known business and professional specialists, was brought up-to-date on recent advancements in Naval Aviation and problems to be encountered in the future during their annual meeting at the Pentagon November 17-18.

The opening remarks for the two-day conclave were made by VAdm. T. S. Combs, DCNO(Air), who stressed the transition to nuclear power for all classes of ships, the great advance from guns to missiles and from gunpowder to nuclear bombs, and the progress from subsonic to supersonic speeds in modern aircraft. Adm. Combs emphasized the fact that "these things are not in the remote future, they are with us now."

Capt. T. R. Focke, USNR, President of the National-U.S. Radiator Corp., heads the council and acts as its chairman.

Principal speaker for NAAC was Asst. SecNav(Air) J. H. Smith, who stressed the importance of continued ASW tactics keeping pace with submarine development, such as the USS *Nautilus*. He indicated that helicopters may replace the destroyer as a screening craft for surface task forces.

Secretary Smith closed his remarks by saying, "We shall use the sea as a base for strategic or tactical warfare. It isn't good sense to build large fixed bases near populated areas. A powerful reprisal force at sea is something an enemy cannot ignore and may have difficulty finding. The sea also provides an ever-present decontamination system for pumping up an umbrella over a task force. The enemy could put labels on ballistic missiles destined for land bases, but cannot so label a missile for a mobile base."

Cdr. F. E. Adams, Head of BUPERS Officer Candidate section, discussed the officer and NavCad input and the areas of responsibility of BUPERS and DCNO(Air). He revealed that about 35% of Naval Academy graduates and 32% of NROTC graduates are ordered to flight training.

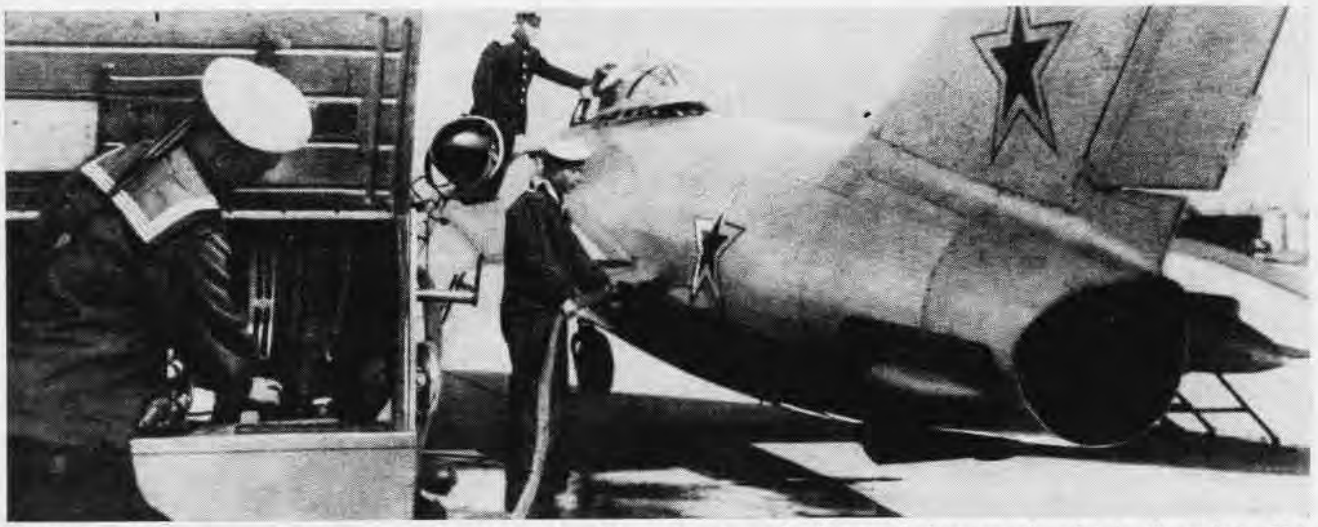
Other speakers during the meeting were Capt. J. D. Lamade, Deputy Chief of Information, who explained the organization and operation of his office; the Honorable Albert Pratt, Asst. SecNav(Personnel and Reserve Forces), who was impressed with Sixth Fleet personnel's "ambassador" role in Med ports; RAdm. J. S. Russell, Chief of BUAER, who stressed streamlining operations for efficiency; and RAdm. J. R. Lee, Director, Aviation Personnel Division of DCNO(Air), who showed the existing personnel problems of the 1300 category officers. Capt. J. L. Counihan, Executive Secretary of Ad Hoc Committee on Recruiting, presented BUPERS recruiting plans.

After the meeting adjourned, the Council took off for NAS NORFOLK where they were met by RAdm. I. N. Kiland, Com-5, and Capt. S. G. Mitchell, CO of the station. After a brief visit at the air station, the group was taken aboard the USS *Forrestal* where the big ship's captain, Capt. R. L. Johnson acted as host.

CAPT. FOCKE (CENTER BACKGROUND), CAPT. PRIEL (L) AND VADM. COMBS WERE PRESENT

1955 A GLIM

A FORMATION *flight of Soviet Navy* Fresco *jet fighters fitted with exterior flush-mounted wing tanks are seen here passing over a Russian* Skoryy-*class destroyer. The Air Force of the Soviet Army also operates the very versatile Fresco planes in its fighter squadrons.*



IT IS INTERESTING *to see enlisted men wearing formal dress blues as they service a fighter aircraft. While they fuel the* Fresco, *a Soviet naval officer is checking out the pilot in the cockpit. Note especially the dive brakes located on either side of the tail pipe.*

SOVIET SPECTATORS *observe air show at Tushino Airfield, Moscow. Airplanes spell out "Hail CPSU (Communist Party Soviet Union)."*

A FIVE-AIRCRAFT *flight of* Fresco *jet fighters flies over the capital city. The buildings below house the University of Moscow.*

IPSE OF SOVIET AVIATION

HERE SOVIET *Navy ordnance man makes adjustments to gun camera on jet fighter.*

AFTER A FLIGHT *in* Fresco *jets, naval pilots have a glass of tea served by Russian lass.*

JET PILOT *with parachute harness attached fastens on leather helmet,* not a crash helmet.

FLIGHT OF FAGOT *jet fighters prepares for take-off under direction of a field controller, equipped with flags and radio. Note interesting concrete block composition of the runway, and the wind on the flag.*

HELICOPTERS, *as elsewhere, are used for transport in Russia. A small* Pobeda *is unloaded from after-ramp of twin-engine twin rotor* Horse.

COFFIN-SHAPED *four-bladed, twin-rotor* Horse *is seen from another angle as it passes over head of the cameraman.*

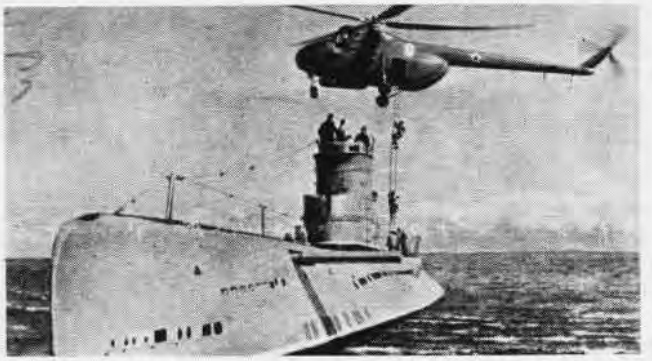
HORSE HELICOPTERS, *Soviets claim, are the largest in the world, forerunners of a new type of transport and more powerful "flying coaches."*

THREE HORSE *twin-engined helicopters fly by the crowds at Tushino Airfield. Soviets say* Horse *can fly on one engine if other fails.*

AIRBORNE *infantry and artillery units are practising the use of* Hound *single-rotor helicopters. This method of transport appears to be popular. Here helicopters have unloaded personnel and weapons and have just taken off to accomplish another mission.*

★

HOUND HELICOPTER *with engine in nose is undergoing repairs at an Arctic base. It has four-bladed rotor and clam shell rear doors.*



IN THE FIELD *of aircraft-submarine cooperation, Soviet tries out* Hound *helicopter in transferring passengers from W-class submarine.*

AIRCRAFT CONTROL *from advanced ground units is a technique that is being practised by the aviation units of the Soviet. Use of mobile facilities is illustrated in this picture of field operations. Mig jet aircraft can be seen in background.*

★

CHARACTERIZED BY LOW *weight and drag at supersonic speeds, the Swedish SAAB-35 was test flown recently for the first time. The new single-seat fighter plane, powered by an Avon engine with afterburner, is of the double delta configuration. The plane is unique in appearance and a high degree of intake efficiency is provided by air intakes built into wings in such a way that the fuselage nose boundary layer air is led past the air intakes. Flying controls are servo-operated.*

BuAer Distributes Manual

Aircraft Rescue Procedure Defined

The aircraft fire fighting and rescue manual has been rewritten and is being distributed by BuAer. The manual contains information and guidance for all aircraft fire fighting and rescue personnel assigned to activities uder the BuAer's control.

Distribution of the manual, NavAer 00-80R-14, was started in December. Additional copies can be obtained from nearest supply point.

Jet Pilots Sprout Rotors

'Copter Flights for VF-82 Pilots

Jet fighter pilots serving with VF-82 were introduced to a slower type of flying recently when helicopter pilots of HS-1 treated them to HO4S flights at NAS Key West. This new program, instigated by HS-1, is designed to keep aviation activities aware of the capabilities and performance of the Navy's helicopter units.

After a short briefing on the theory of helicopter flight by Ltjg. W. J. Price, LCdr. Art Munson demonstrated the flight characteristics to each of the pilots in turn. Maneuvers such as auto-rotation, flares and hovering, were part of the demonstration.

JET PILOTS FOUND 'COPTER FLIGHT SLOW

VF-82 pilots who received the red carpet routine from HS-1 were (in photo from left to right): Ltjg. Dick Richardson, Lt. Bill Parish, Ens. Bob McHenry, Ens. Roger Henderson, LCdr. Simpson Evans, Lt. Bruce Nystrom and 'copter pilot Ltjg. W. J. Price. Cdr. W. M. Sessums ramrods HS-1.

Ens. McHenrys' comment after the flight was an understatement of the year. He said, "I just don't get a sensation of speed in those things." He's used to flyng the F2H-4 *Banshee*.

Carrier Landings by S2F's

2,566 Made without Major Mishap

S2F pilots tallied 2,566 landings without a major mishap during three weeks of carrier qualifications in September aboard the USS *Princeton*. Squadron pilots and co-pilots from VS-20, VS-21 and VS-23 contributed to the total. One week there were more than 1000 landings.

VS-23 S2F PRIOR TO 58,000TH LANDING

VS-21 reports that it is the first squadron to complete qualification of all pilots, both right and left seat, in both day and night carrier landings in the S2F. The squadron, commanded by Cdr. A. H. Wellman, completed the qualifications aboard the USS *Princeton* off the coast of Southern California.

A total of 2129 landings were made in the daytime and 437 at night. This was sufficient to run the *Princeton's* total during seven operating years past the 58,000th mark.

Ltjg. Roy F. Crater of VS-23 made the 58,000th hook-on. The most productive day was 28 September, when 394 landings were made. Capt. Henry G. Sanchez skippers the USS *Princeton*.

IBTUF Gets New Trainers

T-34B Mentor Replaces Texans

The reliable old SNJ *Texan* training aircraft are slowly but surely being replaced by the advanced T-34B *Mentor* in Instructor Basic Training Unit (Flight) at NAS Pensacola. The first of the advanced new trainers was received in June.

With the advantages of its tricycle landing gear, greater visibility, and improved inherent stability, the *Mentor* bids to cut primary flight training time by one third and slash the budget likewise. Cdr. W. C. Bender is CO.

TWO-PLACE T-34 MENTOR IS NEW TRAINER

P5M-2 Birthday in VP-47

Squadron Hits 83% Availability

VP-47, based at NAS Iwakuni, has celebrated the first birthday of their new planes, the Martin P5M-2 *Marlins*. During the first three months the unit operated the new planes on deployment, they were able to achieve 83% availability.

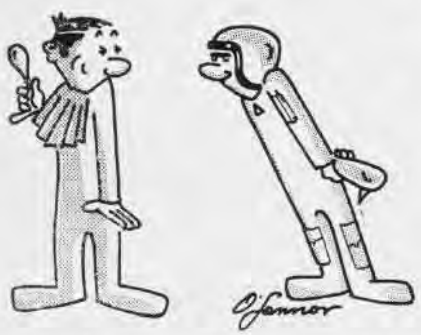
The unit now averages more than 700 hours a month and points with pride to the 5,808 accident-free hours the VP-47 has accumulated in one year.

AND THERE I WAS ...

Fowl Situation

SOMEBODY HAS filched the fighting red cock of the fighting *Red Cock* squadron, and the men are fighting mad. The bird, a gift from a VF-63 admiret who thought the red rooster an appropriate gift, was stolen from its coop in October from under the nose of a squadron sentry.

To add insult to injury, the filchers mailed the CO, Cdr. H. B. Eddy, a package four days after the fowl was taken. The box was



filled with chicken (red rooster) bones, picked clean and well bleached.

With morale at an all-time low in the squadron, the skipper voiced the opinion held by every VF-63 man, "There's not a man among us who believes anyone would stoop to such a low trick as eating our fighter, but if they have and we ever catch the bird-snatchers—well, they've had it!"

With squadron security and intelligence personnel hot on the trail, the squadron put a note in the plan-of-the-day describing the formula which would keep the bird alive and in good shape: dry martinis and bar-b-q potato chips.

Suspects have been narrowed down to three: the *Tigers* of VF-24, the *Freelancers* of VF-64 or the *Boomers* of VA-65. VF-63 shares hangar space with these three squadrons.

Kidding, Of Course!

MAINTENANCE Department of VC-3 recently came up with a personnel problem they claim could happen, but then all flight and operations personnel know that Maintenance Departments are always beefing anyway. But here is their sad tale—

Personnel assigned to maintenance	350
People deployed	150
Balance left to do the work	200
People on TAD orders	80
Balance left to do the work	120
People working in offices	30
Balance left to do the work	90
People 65 or older	20
Balance left to do the work	70
People on leave	35
Balance left to do the work	35
People in sick bay	15
Balance left to do the work	20

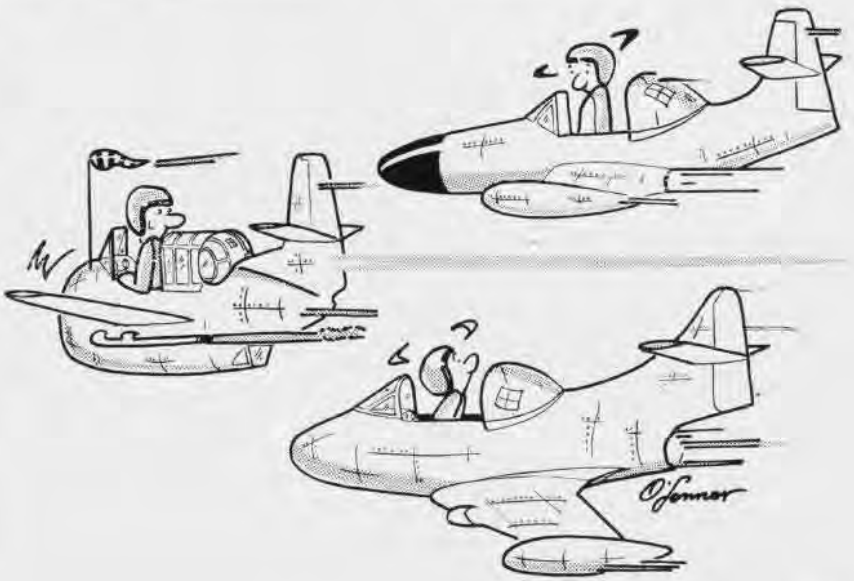
People in brig	2
Balance left to do the work	18
People on special liberty	4
Balance left to do the work	14
People on light duty chits	12
Balance left to do the work	2

(Editor's Note: These two must be too stupid to do the work, since they could not figure a way to get out of it.)

A JET PILOT'S LAMENT

Now, one fine day I was flying high
Ten thousand feet in the tropic sky,
When I thought I'd take my jet and go
For a bird's eye look at Kaneo'.
The gauges checked and the temp was right;
This F9F was set for flight.
Then a *Banshee* passed me, going fast,
And I knew my patience couldn't last.
I had one jet to the *Banshee*'s two,
But you'd be surprised what that one will do.
I grabbed the throttle and opened wide,
And soon we two were side by side.
Now we're jet jockeys, and we both knew
We'd race all day till something blew.

But why should I worry? What the heck!
The *Banshee* and I stayed neck and neck.
Over Maui, side by side,
Throttles steaming, opened wide.
Mauna Loa passed below,
But neither he nor I would slow.
The turbine screamed, the fuel pump cried,
But he and I stuck side by side.
Then I heard a roar, and looked around,
I thought "It's a rocket, by the sound!"
Then cold sweat broke out on my face,
And I knew we'd both lose the race,
For there, zooming past, was a VU-1 gem:
An ensign in a TBM!



Weekend Warrior NEWS

VJ-61'S LTJG. *H. K. Wylie (1) assists Cdr. Allen Hargrave (c), Wing Staff 87, with pilot and crew briefings. Cdr. H. C. Paige, Lt. H. Larson, photographers Rogers and Wheaton participated.*

VP-876 Trains with VJ-61

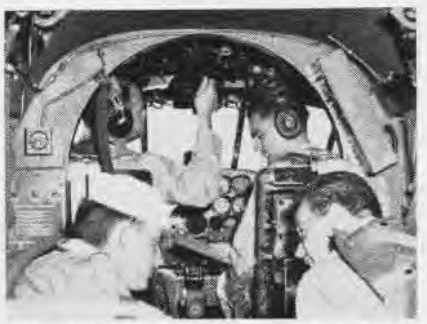
VP-876 recently demonstrated just how fast a reserve component of the Navy can fit itself into the program of its regular Navy counterpart. The reserve squadron spent two weeks on active training duty at NAS MIRAMAR under the efficient direction of the photographic experts of VJ-61.

Commanded by Cdr. H. C. Paige, the officers and men of VP-876 embarked on an extensive training program designed to familiarize them with their new plane, the P2V-4 *Neptune*,

LCDR. THOMAS *recaps some points of a coming photo mission with Paige (1) and Parker.*

and improve their skills in aerial photography. Additional refresher courses in survival, navigation and communications were also scheduled.

Before the Reservists arrived at Mir-



CDR. PAIGE *and Lt. Larsen go over the check-off list; Wheaton, Rogers are in foreground.*

amar, VJ-61 spent long hours in planning and making preparations for their training. A liaison group—two pilots, a photographic officer and a chief photographer—are ordered to VP-876 semi-annually to keep the reservists abreast of new developments, techniques and other methods pertaining to Naval photography. This is an advantage when the time comes for planning the training program.

When the squadron arrived at Miramar, each department proceeded to carry out their designated duties. The SNB-5P's were readied for photo missions by FASRon 876, commanded by Cdr. B. A. Smith, while VP-876's photo intelligence officer, LCdr. Eugene Thomas, gathered material for briefing. The support furnished by FASRon 876 on cruise is typical of the maintenance they furnish VP-876 at their home base, NAS OAKLAND.

Between sorties, and in the evening classes held for reserve personnel, VJ-61's photographers gave additional training in every phase of Naval photography. In return, VP-876's LCdr. G. Paul Bishop, a prominent commer-

A CHIEF *petty officer instructs weekenders in proper way to maintain photo equipment.*

cial portrait photographer from Berkeley, Calif., initiated VJ-61 personnel in some of the secrets of portrait photography as he knows them.

Reserve Units Win Safety Honors

RAdm. D. V. Gallery, CNARESTRA, congratulated three reserve units for winning the 1955 Aviation Safety Award for the period 1 July 1954 to 30 June 1955 in open competition with Fleet units.

The reserve units lauded were VMF-123, VF-692 and VP-921. VMF-123, skippered by Pogo pilot, LCol. J. F. "Skeets" Coleman, flew a total of 3,149 accident-free hours to win the jet aircraft squadron award.

The single pilot prop squadron hon-

ors were won by VF-692, commanded by LCdr. D. A. Carmichael for logging 1,676 accident-free hours and VP-921 was lauded for flying 1,407 hours without a mishap. Cdr. C. E. Stiever commands VP-921.

Shipmates' Reunion in Spokane

Two pilots who flew test missions in the Navy's first jet plane, the Ryan *Fireball*, renewed acquaintance recently while undergoing training duty at NAS SPOKANE.

Lt. Jim Lahtinen of VF-901 and Ltjg. Max Gottschalk of FASRon-901 compared the cockpit of an F9F *Cougar* with that of the old Ryan *Fireball*. They decided the *Cougar* was the less complicated of the two Navy planes.

LAHTINEN *(l) and Gottschalk compare Cougar cockpit with plane they flew in '40's.*

Lahtinen and Gottschalk, former members of VF-41, carrier-qualified the *Fireball* years ago aboard the USS *Wake Island* off Southern California.

Beautiful Recruiter Appointed

In the belief that the finest program in the country, NavCad Training, rates topnotch recruiters, NAS BIRMINGHAM has settled for none less than the most beautiful and talented girl in the United States, Miss America 1956, Sharon K. Ritchie.

The Birmingham belle from Denver was designated an Honorary NavCad Procurement Officer and issued orders which read in part, "Your duties start immediately and you are directed to use your influence and most gracious charms to recruit young men as future Naval Aviators." (This should prove to be an easy chore—Editor.)

Seattle Commissions VR-893

A new air reserve transport squadron has been commissioned at NAS SEATTLE. Capt. H. C. Horney, air station CO, announced the commissioning recently and designated Cdr. Benjamin Grout skipper of the unit.

VR-893 will have an allowance of 16 officers, 43 enlisted men. All officer billets have been filled, but vacancies still exist for Navy veterans who want to continue reserve training.

The squadron's mission will be to maintain proficiency in transport-type operations and to provide logistic support for Naval units in time of emergency. Drills will be held the second weekend of each month.

SHARON *gets orders from Lt. F. Garlow, NavCad Procurement Officer, and LCdr. Notting.*

Kentucky Colonel Announced

LCdr. Angelo Lewis of VF-693 is one of the newest "Kentucky Colonels." The honor was conferred by Governor L. W. Weatherby for Lewis' outstanding work as an aeronautical inspector for the State of Kentucky.

Lewis received his notification of his new status while he was at NAS COLUMBUS checking out in the F9F *Cougar*. VF-693 received their Cougars in June 1955, replacing Pantherjets.

LCDR. LEWIS *travels from Huntington, W. Va. to NAS Columbus for annual training cruise.*

'Pappy' Sharp Gets His Due

This just had to happen. Glen R. "Pappy" Sharp, TD1, proprietor of the Link Trainer at NAS LOS ALAMITOS, was hauled up before the skipper, Capt. J. B. Paschal, recently for mast and "read off."

"Pappy," who is veteran of 19 years service, has displayed "unselfish service to the Naval Air Reserve Training Command and to NAS LOS ALAMITOS." In addition, he has devoted many hours to special projects that have assisted the recruiting community relations programs. He recently completed a novel and unusual mechanical display about Naval Aviation, in miniature.

This was accomplished on his leisure time. Then, why mast? Well, it just had to be — meritorious mast.

WITH A NAVY *R5D as backdrop, officers and men of the newly commissioned VR-893 pose for informal portrait at NAS Seattle. Commanding Officer Grout is regular pilot with United Air Lines.*

LET'S LOOK AT THE RECORD

Marine R4Q-2's Log Time
Fly 9,000 Miles in 50 Hour Trip

MAG-35's four roving R4Q-2 *Flying Boxcars* have returned home to Cherry Point. Logging 9,000 miles in 50 hours of flight time, the crews of the four planes departed Cherry Point for the west coast via Miami, across the U. S. to El Toro, north to Alaska and back across the northern U. S. to complete the trip.

According to LCol. G. W. McCombs, CO of VMR-153 and leader of the group, the 12-day trip provided invaluable in-flight training.

The four planes, two from VMR-153 and two from VMR-252, were manned by three pilots and two navigators each, plus the normal complement of crew-chiefs, mechanics and radiomen. A special maintenance crew of six men from Headquarters and Maintenance Squadron-35 accompanied the flight.

Upon leaving Cherry Point, the planes flew south to MCAS MIAMI to assist in the transfer of personnel and equipment of MAW-3, which moved to El Toro. At El Toro, the planes were committed to FLogWingPac for a cargo haul of fresh vegetables from San Francisco to Kodiak, Alaska.

The trip from Seattle to Kodiak offered navigators realistic training, for the 1,200-mile flight was made almost entirely by Loran, an electronic navigational aid.

Col. McCombs stated that: "Because of the wide variety of terrain and weather encountered, the flight was ideal for proficiency training of pilots and aircrewmen. It gave them a wealth of experience not ordinarily acquired in routine operations."

Fallon Instigates Award
VF-91 Cops the First With 27.8%

NAAS FALLON has initiated awards for champions in its competitive gunnery exercises. A bronze plaque with winning squadron designators and percentages, is awarded for air-to-air and air-to-ground weapons training.

The awards are for a six-month period, January to July and July to January. The January to July 1955 honor was won by pilots of VF-91, a part of CAG-9 based at NAS ALAMEDA, who shot a 27.8% squadron average for the air-to-air award. They were flying the F9F-8 *Cougars*.

The air-to-ground award—rockets and bombs—was copped by pilots from VA-95, who made a splendid showing by dropping bombs within 59.5 feet of the target and hurling rockets to within 45 feet. This score was achieved in a three weeks deployment to Fallon. Eighteen pilots of this squadron later qualified for individual "E's." VA-95 is commanded by a double "E" winner, Cdr. D. L. Irgen. The squadron flies the AD-6 *Skyraider*.

VF-91, commanded by Cdr. B. N. Gockel, shot an all-time Fallon high in September when the pilots tallied a squadron average of 38.1%. Lt. C. M. Brown's 72% was the highest score.

FASRon-6 Man Wins Honors
Attends Military Justice School

Top honors at the U.S. Naval School of Military Justice, Newport, R. I., have been earned by Gerald Sohn, SN, whose scholastic average was among the highest ever recorded in the school's history.

Sohn, attached to FASRon-6 at NAS JACKSONVILLE, topped a class of 59 to win the honor-man distinction.

Sohn was graduated from the University of Florida College of Law and is also a member of the Florida Bar.

LT. L. C. ANDERSON *(r), VA-196's "Ole Deadeye," is praised by squadron CO, Cdr. R. B. Giblin on two counts—six bullseyes in rockets and promotion to lieutenant on the same day.*

HAVING LOGGED *100 accident-free arrested carrier landings each, these ten VS-32 pilots, including the squadron CO, Cdr. R. E. Brown, are accepted into the USS Leyte's "Centurian Club" by Capt. E. W. Parrish, Leyte CO. The squadron amassed over 3000 consecutive accident-free landings aboard the ship in the S2F. Their names will be added to a plaque hanging in the wardroom.*

VC-11 Pilots Hit a High
Detachment Item Aboard Phil Sea

Four pilots of VC-11's Detachment Item have flown a total of 826.9 hours with 174.6 hours being logged at night on a recent cruise aboard the USS *Philippine Sea*.

The four pilots made 294 day landings and 73 night landings for the impressive record. They were LCdr. John R. Herb, 53 day landings; Lt. John Ferarri, 55 day, 19 night landings; Lt. Edward Schaeffer, 57 day and 17 night landings and Lt. Rod Haas, 56 day and 17 night landings.

Marine Air Units Lauded

CG AIRFMFLant Presents Awards

Two Marine air units, VMJ-2 and HMR-263, have been awarded CNO's Aviation Safety Awards. MGen. V. E. Megee, CG, AirFMFLant, presented the bronze plaques during ceremonies conducted at MCAS CHERRY POINT and at the Peterfield New River Air Facility, where HMR-263 is stationed.

VMJ-2 logged an impressive 4,710.7 accident-free hours while accomplishing a two-fold mission of providing tactical air reconnaissance for Naval forces and FMFLant, and providing training in aerial photography for pi-

PLAQUE WAS GIVEN AFTER A UNIT REVIEW

lots who will be assigned to aircraft carriers and overseas posts.

HMR-263 was recognized for its number one standing in the aviation safety competition with all AF and Atlantic Fleet helicopter squadrons.

LCol. T. J. Cushman, CO of VMJ-2, accepted the award for his squadron. LCol. C. W. Koff, new CO of HMR-263, accepted it for his unit.

A Change of Pace for CVS

Valley Forge Fuels Craft at Sea

The USS *Valley Forge* has established what is believed to be a peacetime refueling record for AirLant CVS-type ships. In 45 days of steaming, the anti-submarine carrier has served as a "fleet tanker" on 52 occasions to her escorting vessels, which included three French Frigates—*L'Escarmouche, La Surprise* and *Croix de Lorraine*. The *Valley Forge* is commanded by Capt. L. W. Williams.

Bunker oil was received from British tankers RFA *Wave Baron* and RFA *Wave Chief*, as well as Fleet oilers.

THIS COMPOSITE PHOTOGRAPH SHOWS JD-1 RAG-DRAGGER AND THE ATTACKING AIRCRAFT

THE FAR EAST RAG DRAGGERS

TARGET TOWERS of VU-5, based at NAS ATSUGI, are modest individuals who would put Will Rogers to shame with their understatements and indifference to praise. With their knack for good humor and willingness, the unit is the only squadron of its kind in the Far East, which accomplishes a mission while being shot at.

These pilots have helped train shipboard gunners of ships from Korea, Japan, Nationalist China, England and Australia, as well as gunners of the U.S. Navy. When ordered to "drag a rag" for a foreign outfit, one pilot remarked, "We like to pull sleeves for other navies for we can be sure they've just recently read the rules," Then he winked.

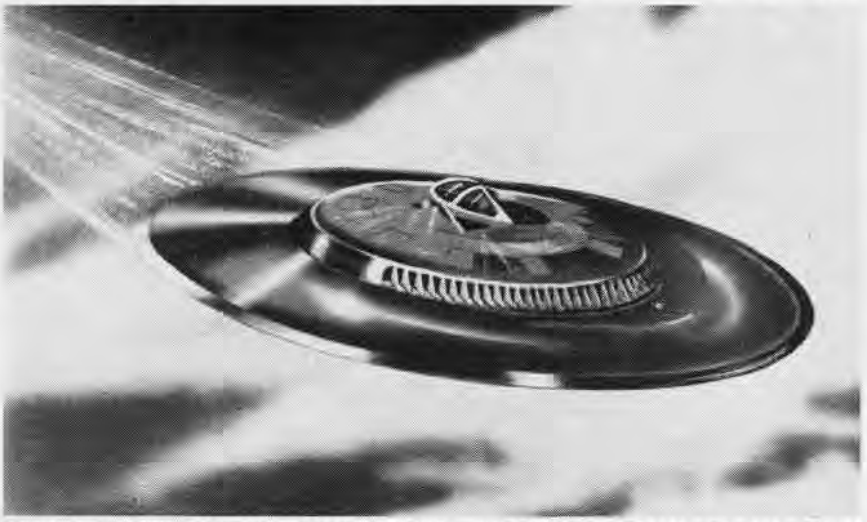
Another remarked, "Once in a while we have to remind the ship's gunners that we're pulling that thing, not pushing it." A favorite cartoon shows the pilot of a tow plane standing up in his cockpit frantically trying to direct the ship's attention to the trailing target as shells explode around his plane.

One pilot who had done his share of "rag dragging" was giving a visitor a guided tour. As they walked to the rear of the plane, he pointed to a small door and two thin pipes on the underside of the fuselage. "The tow sleeve is dumped out that hatch, then reeled out to six or seven thousand feet on a cable through those pipes." he remarked. The visitor was highly impressed, "Seven thousand feet! That must make a lot of drag on the airplane." "Oh," said the pilot, "you can feel it, but it's actually a bit of help—keeps us from being shot down, y'know."

Although this job seems routine to VU-5, they are really like a modest teacher. They minimize their contributions to the fleet-wide training program, but pilots and gunners of air groups and ships consider it differently. They rely on Utility Squadron Five for practice that makes them perfect.

CREW CHECKS GUNNERY BANNER FOR HITS

SHAPE OF THINGS TO COME



ARTIST'S DRAWING OF THE VERTICAL-RISING, DISC-SHAPED AIRCRAFT OF THE FUTURE

CANADA'S Avro, Ltd. is working on a project for the USAF which could result in a "whatsit" similar to the artist's conception shown above. A vertical-rising, disc-shaped aircraft is apparently feasible, and aerodynamically desirable.

Recently reported in the Royal Air Force *Flying Review* was the startling progress on such a craft which has been made by the famous French aircraft designer, M. Rene Couzinet. He has a small workshop on an island in the Seine River, just outside Paris.

M. Couzinet detests the term "flying saucer," and prefers to call his creation, now in the workshop model stage, the *Aerodyne*. He stated that the idea is very simple. "A conventional aircraft propels its lifting surfaces through the air in a straight line until it has sufficient lift to leave the ground. But why start in a straight line? It wastes so much space.

"My idea is to have 96 miniature wings revolving around a fixed center, so that they produce as much lift as a single airfoil of the same total area. By that means, we are able to achieve vertical takeoff. Once in the air, my machine will be propelled by a small jet engine."

The *Flying Review* explained that the *Aerodyne* was very simple, structurally. Two collars, or crowns, each resembling a shallow bowl with its center cut out, are free to rotate around a central drum whose upper and lower surfaces follow the curves of the crowns. A simple model could be made by placing two saucers face to face, with a napkin ring or thread spool to keep the rims apart.

Around the circumference of each crown there is a braced collar, in which there are slots to receive 48 vanes or miniature airfoils. The top row is staggered in relation to the bottom one. M. Couzinet plans to install six light reciprocating engines in the drum, three for the top crown and three for the bottom. When the contra-rotating crowns are moving at 84 rpm, the vanes will lift the *Aerodyne* off the ground, according to the designer.

Suspended below the drum he will have a small jet engine, which will be used for forward propulsion. In his prototype, M. Couzinet hopes to use an Armstrong *Viper* turbojet which produced 1,640 pounds of thrust.

The first *Aerodyne* will be of wood, but later models will be in stainless steel, which M. Couzinet prefers to aluminum alloys. He could not reveal the flying control systems, which he described as "beautifully simple," because of a French regulation forbidding publication of such details within eight months of applying for a patent.

Couzinet has designed hundreds of aircraft, and 33 of his prototypes have flown. His first plane was developed in 1927 when, at the age of 23, he designed a three-engined airliner. The Couzinet *Aerodyne* is the fruit of three years' work and 28 years of thought on the intricate problems of vertical takeoff. (*Information courtesy Royal Air Force Flying Review.*)

Tow Rig for AD Designed

Reservist Develops New Gear

NAS GLENVIEW's Ordnance Officer, Lt. I. M. Brown, has designed a new tow rig for AD-type aircraft. At the same time that Brown was working on his idea, BUAER's airborne equipment experts were doing a like job. The results of BUAER's efforts are being issued in Armament Change 113.

Brown's design was a MK 1 tow target container modified by riveting four eyelets on the container so it could be carried between two Aer-14A bomb and rocket launchers. A 20-mm gun solenoid was riveted to the top of the container with a cable running to the latch.

BROWN (L) EXPLAINS GEAR TO CDR. MOORE

The solenoid was wired to the outboard gun so that the pilot merely pulled his gun trigger switch to stream the banner. The target was towed from the front hook of the wing pylon with a tow pot attached to the after sway brace to prevent fouling. To drop the target, the pilot selects the correct pylon and presses the bomb release switch.

BUAER recommends that Brown's change be considered as an interim measure since BUAER is issuing the armament change which provides for the modification of the container to include the incorporation of an Aero 4B shackle release in place of the 20mm cannon solenoid in the Brown design.

BEFORE TAKING *off on a photo mission, Ltjg. G. G. Farrell plots his course and altitude.*

THE WIDE *assortment of cameras in the AJ-2P Savage are all carried in after end of plane.*

AN LSO *assists a Savage crew in practice carrier landings in preparation for deployment.*

THE WORLD IS THEIR CAMERA BEAT

THERE IS NOTHING small about the tasks VJ-61 performs in carrying out its mission—getting information by means of aerial photography.

Before WW II, aerial photography in the Navy was a relatively unimportant specialty. Then suddenly, the Navy faced an enemy about whose forces and land bases little was known. Aerial intelligence could supply vital information.

Thereupon several photographic squadrons were commissioned and deployed. The last of these, VD-5, was commissioned at Kearney Mesa (now NAS MIRAMAR) in June 1944. This squadron participated in the gathering of information for the invasion of the Philippines, Okinawa and Iwo Jima. After WW II, VD-5 mapped the entire coast of Japan.

The squadron has had a series of designations: VJ-5, VPP-1, VP-61, and finally VJ-61. Since WW II, it has served many needs and had detachments all over the world—in the Caribbean, Canal Zone, South America, the Mediterranean, Alaska, and the Far East.

The squadron's specially equipped AJ-2P's are a far cry from what they once flew, the old PB4Y's. The newer *Savages* are equipped with the latest electronic automatic equipment for instantaneous calculations. An electronic control system holds cameras steady in rolling, pitching aircraft. It is also capable of automatically adjusting lens settings to compensate for changing light conditions beneath the plane. This amazing device can also freeze the terrain as it streaks past the camera lens of high speed photographic aircraft at any altitude.

When Mt. San Benedicto erupted off Baja, California, in 1953, VJ-62 flew photographic missions for the Scripps Institute of Oceanography. They brought back proof that all life on the island had been killed. This showed, through photography, how scientists can now study the life-cycle of remote areas such as San Benedicto.

The photographs also supplied hydrographers with their first accurate detailed study of the island, which hadn't been charted since 1874. A map was made from the aerial photographs and is now a part of every chart portfolio carried by West coast ships.

VJ-61 is combining the older sciences of cartography and optics with the newer sciences of electronics and jet propulsion to assist the Navy in accomplishing its assigned missions.

F. E. GOINES, *PH3, is one of crew in laboratory that process aerial film after mission.*

AN UNCONTROLLED *mosaic map of the San Diego area is put together by L. J. Rudenjak.*

LTJG. K. L. *Terry measures ground distances. and measures distortion of the final prints.*

LEXINGTON

CVA 16

WHEN THE USS *Lexington* rejoined the Pacific Fleet recently, she aroused old memories of the days in WW II when, as one of the great ships in the "fleet that came to stay," she carried out her missions with aplomb and valor. It is good news that the veteran battler, called *Lex* by most, is once again in the Navy line-up.

Since the time of the Continental Navy, ships carrying the name of the famous Revolutionary battle fought in Lexington, Mass. on 19 April 1775, have seen service in all of the nation's conflict except the War of 1812 and the Spanish-American War.

The *Lexington* (CVA-16) that moves into the active carrier strength of the Fleet had a distinguished predecessor, the CV-2. This carrier was built on the hull of a battle cruiser. Launched in 1925, she with her sister ship, the *Saratoga*, were two of the early seaborne practice fields of carrier aviation.

The career of the CV-2 in WW II made up in drama what it lacked in length. In her grand finale as a fighting carrier, she participated in the first carrier-against-carrier battle in history—the Battle of the Coral Sea.

On 7 May 1942, pilots from the *Yorktown* and the *Lexington*, Task Force 17, shot down 67 Japanese planes and sank the light carrier Shoho as they fended off the Japanese attempted offensive against Port Moresby.

Early the morning of the 8th, contact was made and simultaneous air attacks were launched. Planes from the *Yorktown* attacked the Shokaku at 1057, and scored two bomb hits. The *Lexington* planes attacked at 1140 and scored one hit. Meanwhile the *Yorktown* and the *Lexington* was being attacked by 70 planes.

The Japanese counter-attacked while the carrier-based planes were still attacking the *Shokaku* which was left ablaze from stem to stern. The principal target of the Japanese was the *Lexington*. Japanese torpedo planes roared in low and fast amid the smoke of blazing guns.

Next, bombers peeled out of the sun. Even with ship's guns and fighter protection, the Japanese were so numerous that two torpedo hits and at least two bomb hits ripped into the *Lexington*. The big carrier battle was over by 1145.

The *Lex* succeeded in putting out the fires and recovering her aircraft, but several hours after the battle, while steaming at 20 knots, a terrific explosion rocked the carrier, causing

serious fires to break out in many parts of the ship. The explosion was the result of an accumulation of gasoline fumes from ruptured fuel lines. As a result of this loss, changes were made in later carriers to prevent the same thing happening again.

For five hours, the crew fought heroically to save the ship, but finally with all machinery disabled, Capt. F. C. Sherman ordered the crew to abandon ship. He was the last man to leave the *Lexington*, and as he slid down a line from the deck into the water, the torpedo warhead locker of the *Lexington* exploded. With all the men in the water rescued, the ship was sunk by the USS *Phelps*.

The *Lexington* did not go down in vain, for the attacks on Salamaua and Lae along with the Battle of the Coral Sea disrupted the attempts of the Japanese to advance southeastward of New Guinea.

Time marched on and in the next few years, the new *Lexington* (CV-16) avenged her predecessor. The *Lexington's* first mission was a one-day raid on Tarawa late in September 1943, followed two weeks later by a two-day attack on Wake Island. From the 19th to the 24th of November, she supported the hard fought landings in the Gilbert Islands, flew searches and made a series of destructive strikes on Mille Atoll. On the 23rd, her fighters and fighter directors cooperated to down 17 out of 20 Japanese planes.

The next day, another 12 fighters shot down 12 more enemy planes.

A NAVY AVENGER, FAMOUS WW II BOMBER, IS SIGNALLED TO LAND ON THE LEXINGTON

ROARING HELLCAT REVS UP FOR TAKE-OFF

INTO THE EARLY MORNING SUN, THE EAGER AVENGER IS LAUNCHED AGAINST THE ENEMY

Ship and air groups were now a smoothly working team. "Fighting Sixteen" demoralized the enemy in the Marshalls by shooting down 29 planes in two days.

It was a grand opening to what proved to be a magnificent battle record. The *Lexington* destroyed 372 enemy planes in the air and 475 on the ground. She sank or destroyed 300,000 tons of Japanese shipping and damaged nearly 600,000 tons additional.

The ship's guns shot down 15 planes attacking her and assisted on five others. With air groups from other carriers, she sent three Japanese aircraft carriers to the bottom along with a *Natori*-class cruiser.

The *Lex* participated in nearly every major operation of the Pacific war. She spent a total of 21 months in the combat area.

Her planes supported action in the Gilberts and Marshalls, Hollandia, the Marianas, Palau, the Philippines, Iwo Jima, and Okinawa; hit Truk, the Western Carolines, the Bonins, Formosa, and Tokyo; and helped destroy the power of the Japanese Fleet in the Battles of the Philippine Sea and Leyte Gulf. Strong in gunnery as in air operations, the *Lexington*, received but two hits in all that time. Her record more than avenged the fate of her namesake. So now a great warrior returns on active duty with the Fleet.

SAFETY RECORD IS NO ACCIDENT

WHITING Field's BTU-1N has set what is believed to be an all-time Naval Avaition safety record for military type aircraft. The unit operated for 96 consecutive days, accumulating 117,701 landings in 32,026 hours of flight time without a single accident. Most of this flight time was accomplished in normal primary flight training operations in the SNJ, the reliable old *Texan* trainer.

UNDER DIRECTION *of LCdr. C. C. Durant (l), unit gives excellent maintenance to SNJ.*

At least 30% or 10,000 hours, were flown by solo students who have less than 55 hours flight experience. Included in the total number of landings were many cross-wind landings, a tricky operation in the SNJ, simulated small field emergency landings and a large number of practice landings.

CDR. DELATOUR *(r) congratulates BTU-1N's safety officer, LCdr. Toon, on the record.*

It is in this primary flight training unit that the Naval flight student receives his introduction to flight. After about 25 hours of practice and instructions in the fundamentals of flight, the student is ready to solo in a trainer. After that he receives instruction in precision flying, acrobatics and basic instrument flight as well as an additional 30 hours of solo practice.

BTU-1N's safety record is no accident. It is the result of a co-ordinated effort by a closely-knit, well organized unit. It is not at all uncommon for a veteran pilot to amass 1000 hours of accident-free flight time in the rear seat of the *Texan* during his tour with BTU-1N. Those doing so are awarded a commendation by CNABT and the unofficial title of "Grampa Pettibone (junior grade)." It is a much-coveted honor.

Responsible for keeping the *Texans* flying is the unit's maintenance department, headed by LCdr. C. C. Durant. Capt. J. J. Lynch commands NAAS Whiting Field and Cdr. L. L. DeLatour is skipper of the basic training unit.

ATTACK CARRIER *USS Shangri-La will be the setting for two forthcoming installments of Navy Log. The scenes were shot during a five-day air operations cruise of the big carrier off the coast of Southern California. The TV series is directed by a former Naval officer Sam Gallu.*

VP-18'S 'War on Whales'

Depth Charges used on Killers

VP-18 has completed its "War on Killer Whales" near Keflavik, Iceland. The squadron was called upon for assistance recently when Icelandic fishermen ran into trouble with huge schools of 30-foot killer whales. The whales were tearing drift-nets to shreds while feeding on herring, a prime export of Iceland.

In September, Army riflemen armed with M-1's tried unsuccessfully to rout the intruders, and the fishermen themselves were unable to maintain any control over the whales with their armed boats. It was then that the Iceland Defense Force was called upon to disperse the "enemy" with bigger and better weapons.

Two jet-equipped P2V-7's were ordered readied for the first strike by Cdr. J. T. Straker, CO of VP-18. Eight depth charges, eight 5-inch rockets and 800 pounds of machine gun ammunition were loaded aboard each plane.

Leader of the first strike was Lt. Wayne L. Jensen. After a brief flight west of Iceland, the crew spotted three small fishing boats, two underway for home and the other making preparations to follow. The reason for their hasty departure from the area was over 1,000 killer whales.

Jensen dropped the *Neptune,* levelled off at 150 feet, and released three depth charges on one of the concentrated schools. The depth bombs, fused to blow at 25 feet below the water, started to take their toll.

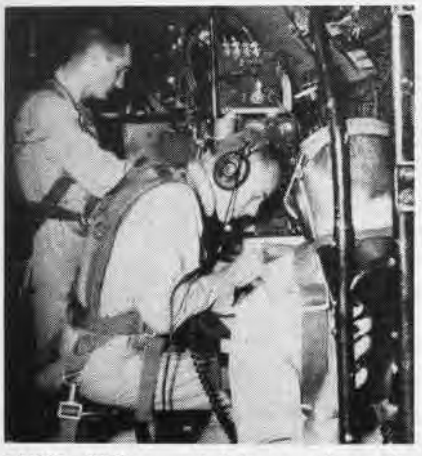
For another 25 minutes, Jensen and his crew bombed the killers until the water ran red. The surviving whales turned tail and headed to sea with the plane in pursuit.

The second, commanded by Ltjg. J. E. Wall, continued the bombing in the area, and his P2V-7 brought its twin 50's in the crown turret into action. Some 40 to 50 whales were destroyed.

NAVIGATION STRESSED IN PILOT TRAINING

BEFORE DEPARTURE *from NAS Corpus Christi seaplane anchorage, Lt. D. A. Webster, instructor, and NavCad Crider check weather report.*

WITH NAVCAD *Williams acting as recorder and timer, NavCad Johnson shoots a navigational sunline from crown turret of the aircraft.*



CRIDER, *Williams and Johnson utilize radar, loran, and star sights to pinpoint position.*

PILOTS OF multi-engine seaplanes frequently are faced with flying to microscopic bits of land not much bigger than the aircraft itself. Often they must rendezvous at some pinpoint over the trackless sea. Skillful navigation must match skillfull flying.

The Advanced Training Unit 501 at NAS CORPUS CHRISTI stresses this navigation during the 22 weeks of training for preparation as fleet pilots. At the end of training, there is an overseas hop.

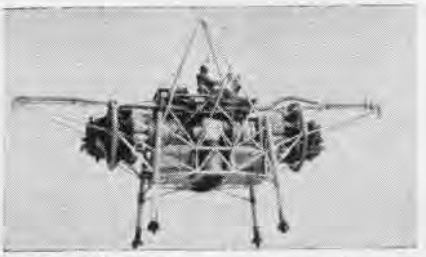
Long range flights are scheduled to Coco Solo, Grantanamo or Bermuda. During the final hop, the student uses radio, loran, dead reckoning, range finders and celestial navigation to determine position of the plane.

LT. WEBSTER *checks Crider's latest fix and recommends course change enroute to Bermuda.*

ARRIVING AT BERMUDA, *Williams, Crider, Johnson, Webster (l. to r.) study local points of interest in St. George's town square.*

THE FOUR *"tourists" window-shop at one of St. George's many gift shops as local natives pose along with them for the photograph.*

SIDE VIEW *of the "Flying Mattress" shows the shape of the inflated airfoil, wood fuselage.*



FLYING BEDSTEAD *has no wings or rotors, can take off vertically from horizontal position.*

BRITAIN'S AIRBORNE BOUDOIR

THERE IS no connection between the "Flying Bedstead" (NANEWS, February 1955) and the Flying Mattress," both shown above, but the sobriquets are highly descriptive. The Society of British Aircraft Constructors recently announced the development of a light plane with an air-inflated wing.

The "Flying Mattress" was designed as a simple, cheap, light airplane for use with the Military Services, particularly the Army. In order to provide adequate wing area and structural strength, and at the same time, keep down the total weight, the pneumatic construction of a delta shape wing was specified. Aerodynamic contour is maintained by internal, spanwise diaphragms which join the upper and lower surfaces, so that the external shape, when inflated, is similar to that of a conventional airfoil.

The wing, made of liferaft-type fabric, weighs about 100 pounds and is cheap to produce. When not in use, it can be rolled up into a relatively small container. In the air, a windmill pump maintains the required pressure of less than one lb./sq.in. Inflated elevons, or controls which can be used together as elevators or differentially as ailerons, are fitted to the trailing edge of the wing.

The wing is attached to the fuselage by vertical struts. In the first prototype, the fuselage was a wooden carriage with space for one pilot and a passenger. It was powered by a 65-hp constant speed engine.

The unusual plane weighs 550 pounds and can carry a load of about 400 pounds. Take-off speed is 18 mph and maximum speed is 45 mph.

Drawings of a later development of the "Flying Mattress" reveal that the vertical fin, which on the first model was fitted to the center section of the wing, has been discarded, and that the fuselage, in particular the engine installation, has been cleaned up. The manufacturers state that the method of pneumatic construction can be carried a stage further so that the entire plane, except the engine, mounts, and controls, may be made on this principle.

Another feature is adaptability. In a forced water landing, a back flip will convert the mattress into a raft. This is an editorial comment.

FLYING MATTRESS *has a take-off speed of 18 mph and top speed of 45 mph. This is the first prototype with a wingspread comparable to other light planes, but with a delta-shaped wing.*

Brewer Trophy Presented

To Aviation Education Pioneer

Mr. Willis C. Brown received the 1955 Frank G. Brewer Trophy at the annual Wright Day Dinner in Washington last month. The award, the nation's highest acclaim for achievement in the field of youth aviation education and training, is NAA-administered. It was presented on 17 December, anniversary of the Wright Brothers historic powered flight at Kitty Hawk, N. C. in 1902.

NAA president, T. G. Lanphier, Jr., cited Brown, who is a staff specialist for aviation training with the U. S. Office of Education, for "rendering services beyond the call of duty" in seeking to interest more youths in aviation through group action.

Brown, a pioneer in aviation youth activities since 1911, joined the Office of Education in an aviation capacity in 1924. He was transferred to the Secondary Education section as an aviation specialist in 1947, after he had assisted in developing an aviation-supporting military training program in vocational schools during WW II.

In addition to effective work in this capacity, Brown served as a Vice President of NAA and was a key figure in its Air Youth Education Program.

In 1954, he was chairman of anAviation Education Ad Hoc Board and assisted in forming national policy for the Air Coordinating Committee.

AF Honors Naval Aviator

Lt. Zajichek Wins Shaw AFB Awards

A Navy exchange pilot has been placed in the Hall of Fame at Shaw AFB to become the first man so honored. He's Lt. R. A. Zajichek, who also was selected as Shaw's pilot-of-the-month for both April and July.

His selection came as a result of his outstanding airmanship and safety record plus his selection as pilot-of-the-month twice in six months.

Zajichek has flown over 400 hours at Shaw without a pilot-error accident. In his only mishaps, an electronic-malfunction landing at Elgin AFB and a flame-out landing at Shaw, his exceptional skill and airmanship enabled him to land without damage or injury.

He has held a number of positions with the 17th Tactical Reconnaissance Squadron and at present, is a flight commander, flying safety officer and instructor pilot in the RF-84F fighter.

SEARCHLIGHTS FOR RESCUE 'COPTERS

SEARCHLIGHT MOUNTED ON HELICOPTER IS DESIGNED TO EXPEDITE NIGHT RESCUES

THE LAST part of October, the Bureau of Aeronautics demonstrated for interested civilians and military personnel the use of helicopter searchlights for search and rescue. In a dramatic presentation of experimental equipment, an HO4S-1 helicopter found a target in Chesapeake Bay at night and simulated a pick-up.

There is tremendous interest in the problem of air-sea rescue at night and a great need for the development of equipment that will increase the chances of survival. Right now what a downed aviator at night must depend on is a small, single-cell battery flashlight whose range and life is limited. Furthermore, if the pilot should be unconscious from wounds, impact with water, or exposure to cold, he will be unable to operate the light. The most difficult problem in rescue occurs when a man is alone in the water without a life raft and no light of his own.

An attempt is being made to solve this problem by designing a lightweight searchlight carried by the rescue helicopter and a liberal use of retro-reflecting materials on the aviator's helmet and life vest. With this combination, detection is virtually assured if the location of the downed aviator is known within a few thousand yards and the atmospheric visibility is sufficient for night VFR flying.

In the October demonstration, a standard ASW searchlight modified with incandescent lamp source was used to demonstrate the practicability of the proposed installation. The searchlight under development for helicopter use will be similar in appearance to the anti-submarine patrol plane searchlight, but smaller, lighter and of lower candlepower. It will operate with reduced input power but with a wider beam. The lower candlepower is adequate because the range of the searchlight need not be as great for the slower helicopter.

Even with the searchlight, detection of an unilluminated target is difficult and the chances of missing it are great. The range at which the target can be positively detected can be doubled or even tripled by equipping the target with retro-reflective material. Two types of material, developed commercially for highway applications are available, one type is a reflective adhesive sheeting, the other a molded plastic disk.

RETRO-REFLECTING MATERIAL ON HELMET

The demonstration was held at the Chesapeake Bay Annex of the Naval Research Laboratory, where a 100-foot cliff overlooks the water of Chesapeake Bay. Here four searchlights were mounted and demonstrated. All were AN/AVQ-2A ASW searchlight, three of them modified by the installation of lower power light sources. One had a 3000-watt incandescent lamp, (a duplicate of that used on the helicopter) one a 1000-watt mercury arc lamp, and the third a 1200-watt carbon arc lamp. The unmodified searchlight has the standard eight kilowatt 70-volt carbon arc lamp.

Twenty floating targets were anchored in the Bay at distances from the searchlights ranging from 750 to 1500 yards. These targets consisted of plain life vests and rafts; and reflectorized helmets, vests and rafts. The targets of most interest were the reflectorized helmets and these were anchored in radial rows, each row having several identical targets. This quickly demonstrated the maximum range at which that type of target could be detected with each type of searchlight.

DOWNED PILOT IS MADE EASIER TO SPOT

Once the target has been located and the pilot wishes to descend for rescue purposes, the three floodlights mounted under the nose of the helicopter and the one at the side are turned on. This gives the pilot the kind of light he needs as he hovers over the downed aviator and completes making the pick-up rescue.

Lift Stand Speeds Loading

Equipment Is Sent Where Needed

A Lockheed-built Aero Lift Stand, designed for loading unusually large and bulky commodities aboard R7V *Constellation* type aircraft, is being used by VR-24 of Port Lyautey on its own R5D *Skymaster* type planes.

Recently well trained crews using this equipment proved its worth. Under the direction of E. V. Wagner, AMC, the equipment was disassembled and flown to Valencia, Spain, where four J-65 engines from the Intrepid, weighing over 5,000 pounds each, were unloaded in short order.

Upon completion of this job, the "Giant" was stowed aboard an R5D and transported to Marseilles where seven other engines were loaded with the same speed and ease.

Since there are several airstrips abroad where unloading facilities are limited, transporting the special lift eliminates costly, inefficient delays.

BELL AIRCRAFT'S *helicopter division recently demonstrated a new approach to the design of rotor hubs for choppers. Snow White (1), a commercial 47-G series, utilizes stabilizer bars on the rotor hub while the new design in the foreground does not. Removal of the stabilizer bars reduces cost and eases maintenance. Bart Kelly, chief helicopter engineer, pilots test version.*

RAF AIR *Marshall G. W. Tuttle (C) and Wing Commander J. H. Craven (L) board a Navy blimp at Key West with Cdr. Walter D. Ashe (R) for a flight to demonstrate the airship submarine hunter/killer capabilities.*

Pressure Navigation Study

R5D Serves as a Flying Classroom

A Marine R5D from MCAS CHERRY POINT has returned home after completing an 11-day, 8,265-mile training flight across the Atlantic. Student navigators enrolled in the Aerial Navigator's School at the air station took the flight to acquaint themselves with pressure navigation.

Pressure navigation, a relatively new concept in dead reckoning, is accomplished by measuring barometric pressures at intervals in flight. This information, applied to a simple formula, gives the navigator necessary data to plot lines of position, determine wind effects on his plane, and predict weather conditions ahead on his flight path. Pressure navigation equipment is affected very little by bad weather, not at all by poor visibility, and is especially useful when flying under instrument conditions.

The school's director, Capt. D. L. Jenson and two of his instructors, MSgt. W. L. Breen and TSgt. L. C. Horton, Jr., accompanied the flight.

Safety Program at Memphis

ATU Establishes Long Range Plans

Clear accident record of the Advanced Training Unit's industrial safety program in the maintenance department will go unblemished if their new efforts prove successful. Recently the unit appointed W. R. Page, AOC, as industrial safety inspector, who stressed the safety of personnel working on the ground and in and around aircraft.

Ten basic rules compiled by the National Safety Council have been adopted for the safety program.

Follow instructions. If you don't know—ASK. Correct or report unsafe conditions. Help keep everything clean and orderly. Use the right tools and use them safely. Report all injuries and get first aid promptly. Use, adjust, and repair equipment only when authorized.

Use prescribed protective equipment, wear safe clothing, and keep them in good condition. Do not horse-play and avoid distracting others. When lifting, bend your knees. Get help for heavy loads. Comply with all safety rules and regulations.

Seems to us that a program such as this has a good chance of being a success if personnel abide by these simple rules.—Editor.

MCAS Pipeline Completed

Armed Forces Project Successful

The Marines at MCAS EL TORO have a new pipeline which carries vital jet fuel to the air station from Norwalk, Calif., 29 miles away. Constructed at a cost of over one million dollars, the line furnishes the Marines with fuel that flows through an eight-inch Navy pipeline, from an Air Force tank farm built by the Army.

The new line will speed delivery of jet fuel and cut down transportation costs. Before the line was completed, 7,000 gallon tank trucks carried JP-4 from widely dispersed fuel supply points.

BGen. A. W. Kreiser, CG, MCAS EL TORO, officiated at the line opening.

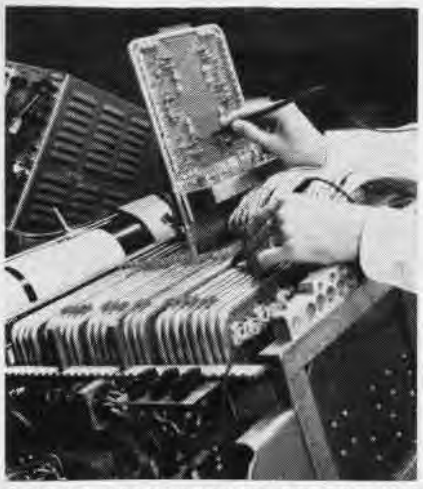
Airborne Brain Tested

Solves Problems Swiftly in Flight

An airborne digital computer in which transistors have replaced vacuum tubes has been developed and successfully flight-tested by North American Aviation's Missile and Control Equipment Operations for the U. S. Air Force. Similar techniques are being investigated for application to Naval airborne computers.

Acting as an "electronic brain" in an aircraft, North American's computer automatically and continuously processes in-flight data. It can solve a number of mathematical problems in one second. An engineer would have to work nine hours to solve the same problems with pencil and paper. This computer can, according to its designers, continuously integrate 93 quantities simultaneously.

Miniaturization techniques permitting use of some 1,000 transistors instead of vacuum tubes and "etched" circuits in place of conventional wiring, give this computer many advantages over conventional ones. It is more compact, occupying only three cubic feet and weighing only 125 pounds. A similar vacuum-tube computer with only one-half the capacity if four times heavier.



FIFTY-ONE STANDARDIZED PANELS USED

Requiring minimum power to operate, the North American computer uses less than 100 watts. A similar vacuum-tube device with one-half the capacity consumes some 3,000 watts.

Ammo Can Jamming Cured

Ordnancemen Perfect New Method

Drag of the feed mechanism and ammunition jamming in cans of the *Banshee* gave VF-71 pilots a headache for a while. Now, thanks to the ingenious efforts of two squadron men, R. S. Greenwalt, AOC, and S. A. Gencarelle, AO1, that headache has been cured.

The remedy used was not an aspirin, but a sheet of aluminum. The men inserted the wedge shaped sheet, in the form of a baffle, in the bottom of the ammo cans of the F2H.

This sheet holds the ammunition level where formerly it tended to set at an odd angle or to slip forward.

GREENWALT DEMONSTRATES NEW SYSTEM

New Invention is Shown

Jet Flap Helps Plane Up and Down

A new method of deflection thrust tapped from jet engines, designed to improve "lift," was among the inventions displayed at the Farnborough Air Show in England this year.

An entirely new dynamic principle is involved in the jet flap method, as it is called. A thin layer of air, bled from the jet or gas turbine engine runs at high speed along the trailing edge of the wings. For low-speed flight, inclining downwards, this acts just like a large conventional flap, generating very high lift and pushing the aircraft up.

In level flight, the long thin spanwise sheet of air issues horizontally and does not affect performance.

The method can also be used to retard take-off and landing speeds, thus eliminating the need for long runways.

Jets in Australian Navy

First Units Go To HMAS Melbourne

The first jet and turbo-prop squadrons have been formed by the Royal Australian Navy for service aboard HMAS MELBOURNE. The three units were formed in August at the Royal Naval Air Station, Culdrose, Cornwall, England, with Australia's High Commissioner in London, Sir Thomas White, attending.

One of the new squadrons will fly the de Havilland Sea Venom all-weather fighter. The two others will fly the *Gannet* anti-submarine aircraft.

Fire-Fighting Helicopters

RCAF Uses H-21A in Fire Patrol

EQUIPMENT WAS CARRIED UNDER FUSELAGE

The Royal Canadian Air Force is using Piasecki's H-21A *Workhorse* helicopter as a fire-fighter. In early autumn, the big tandem-rotored helicopter was used to rush fire-fighting gear and men to remote timber areas in Ontario, which could only be serviced from the air.

In a typical day's operation, the *Workhorse* flew 11,000 pounds of cargo and 66 persons into fire-fighting areas. The total flying time for this operation was four hours.

During the 31 days the H-21A was on fire patrol, it was flown 120 hours or the equivalent of 10,000 miles.

IFR-IQ?

Right hand traffic patterns are denoted by a..... light.

Answer on Page 40.

LETTERS

SIRS:

In the past issue of NANews (October 1955), VP and ZP squadrons were omitted from the Battle Efficiency Award list for the year 1955.

If possible, would the editors include in the next issue of the News the squadrons omitted from the "E" list?

T. G. GILES

VP-56

The editors would be very happy to print a list of all winners of the Battle "E" award. We too, would like to know who they are, and offer our congratulations. The lists we printed were compilations from almost as many sources as the squadrons and units named. Please pass the word.

Old Aerology Unit Moves

Forrest Sherman Field New Home

Pensacola's aerology division was formed in April 1918. It occupied office space on the fourth floor of the Ad building for these many years, but recently Cdr. C. H. Talbert, Aerology Officer, and his crew picked up their gear and moved lock, stock and barograph to the new jet airfield at Pensacola.

Pensacola's aerology division was one of the first weather units to conduct a school for aerographer's mates and aerological officers.

One of the main features of the division is an open-forum type of weather briefing and display area. Pilots can go into the aerology space and browse around. This way they can help themselves and learn more about weather information. An aerological officer is always on duty to give pilots forecasts and detailed weather briefing.

Information relative to upper winds, terminal - area - regional - upper wind forecasts, freezing levels, stability analysis, local weather conditions, analyzed synoptic maps, teletype sequences, upper air data, facsimile maps, are convenient for pilots' study.

The division also maintains nearly all aerological display and briefing equipment available for weather usage. Very soon a radar scope will be installed in the briefing area.

Fleet Introduction Program

Authorities at Patuxent River's Service Test have advised us that the phase of the FIRM Program (NANews, May and October 1955) in which Fleet personnel are ordered to NAS Patuxent River to fly and maintain new aircraft during initial service testing, is designated as FIP, or the Fleet Introduction Program. The Service Test Division coordinates and supervises the testing, which is administered in a manner similar to that of an operating Fleet Squadron. Squadron personnel have been, or will be scheduled to participate in the program in tests of new aircraft such as the A3D, F3H, A4D, F11F, TF, F4D and F8U.

PITOT ICING

Off in my aircraft in one jump,
I hit the throttle and the wobble pump.
Instead of a pilot, I was a boob.
The board found ice in the pitot tube.

• Officers and men of the carrier USS *Wasp* recently contributed $300 through the American Korean Foundation to help sustain the Sung Kwang Won Orphanage at Pusan.

• The Ordnance Department of MAG-32 is making tests and evaluating the new 20-mm. bore-sighting mechanism for BUORD. After the tests are completed, BUORD will act on this new innovation for all fighter-type aircraft.

IFR-IQ?

According to OPNAV ATC Procedures Section the answer is "Flashing Amber."
Ref: ANC(PCAT), Para. 3.240.

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• SUBSCRIPTIONS

Naval Aviation News is now available on subscription for a $2 check or money order made payable to Superintendent of Documents, Government Printing Office, Washington 25, D. C.

• THE COVER

Crew moves sub-hunting blimp out of the huge hangar at NAS South Weymouth.

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SQUADRON INSIGNIA

THE BACKLOG of approved insignia awaiting publication is getting low. Units are invited to forward pictures of their insignia for consideration. This month, the eagle, bearing symbols of all-weather radar and electronic capabilities of VMC-1, leads the parade. In the eagle's slipstream is VU-1's octopus. Multiple missions of this utility squadron are represented by the eight tentacles, and the crash helmet injects the aviation element. FASRon-5 chose a sailor supporting a jet plane as its symbol of aircraft maintenance support. FASRon-115 displays recognizable symbols of like mission.

VMC-1

VU-1

FASRon-5

FASRon-115

RESERVES GO PLACES

TRAINING is the key to a future in the world today, and a place in the Naval Air Reserve Program allows you to do two things at once: play your part in your country's defense and increase your technical know-how. Being a Reserve takes you out of the monotonous routine of every-day life and surroundings. In the picture above, two members of Reserve Patrol Squadron 881 are shown while on training duty in Hawaii. Their squadron-mates welcomed the two-weeks training which took them from Kansas to NAS Barbers Point. Aviation training can take you just as far professionally—from your job on Main Street to a big job in the world of technology.

USNR