

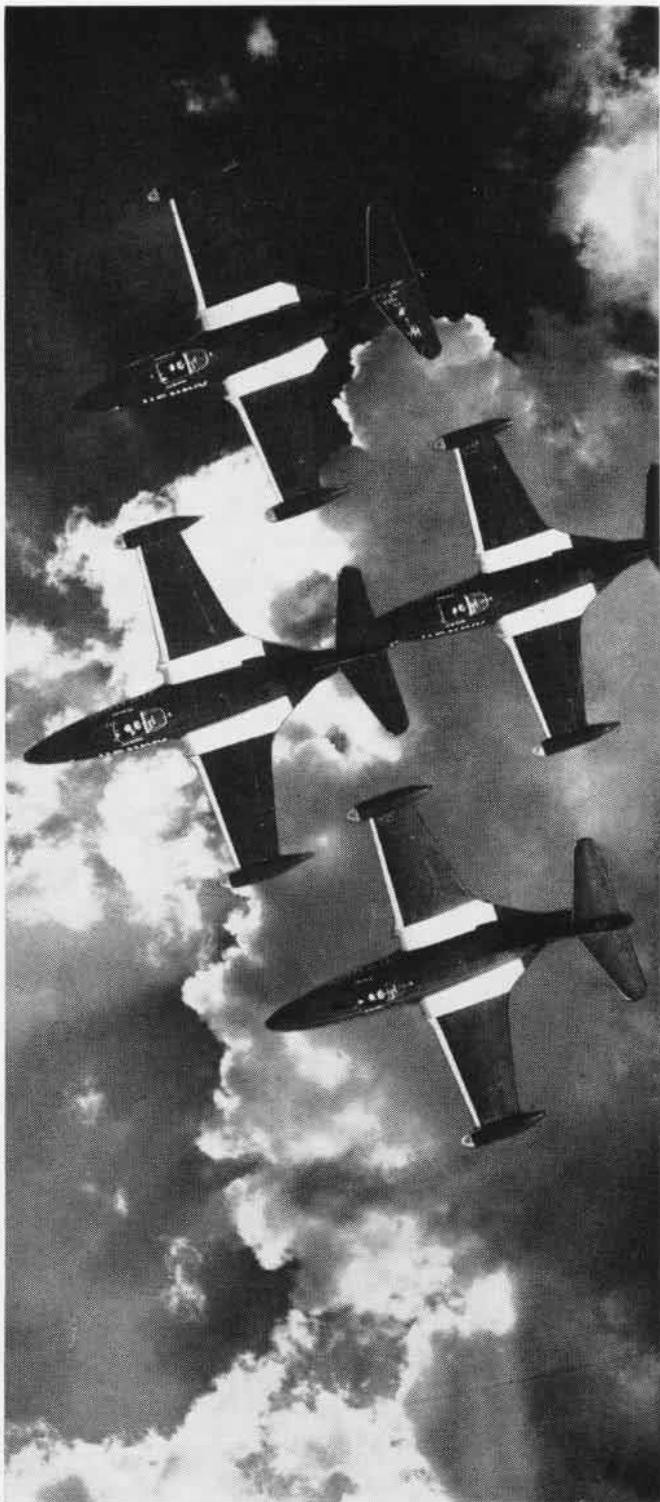
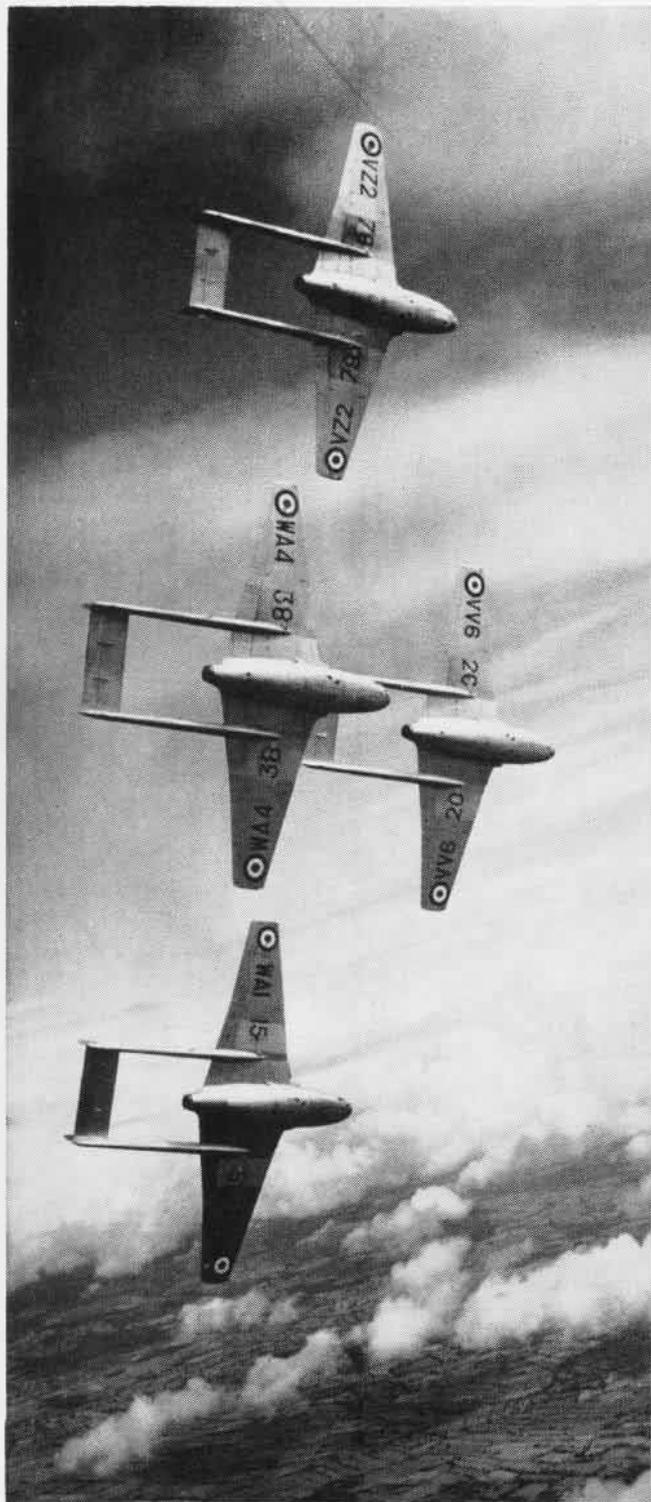
NAVAL AVIATION

NEWS



JUNE 1954
NavAer No. 00-75R-3





VAMPIRES CAPER IN 'ANGELS' REALM

BEARING no resemblance to the legendary demons of medieval Europe, these modern RAF Vampires cut an angel-like caper in the skies over Britain. It bears

a striking resemblance to the USN's Blue Angels' masterful brand of precision flying which invokes the "Oh's" and "Ah's" of all fledgling naval aviators.



'PROJECT CUTLASS'

**PERSONNEL FORM NUCLEUS OF FIRST NAVY SQUADRON
TO RECEIVE THE NEW FIGHTER, READYING IT FOR
EVENTUAL ASSIGNMENT TO OTHER FLEET SQUADRONS**

MEN BEGAN peering skyward early in the morning. The day's work progressed more and more slowly. Fleet Air Service Squadron 12 personnel began asking, "Is it in yet? Have you ever seen one?" Word filtered down to the busy line crews that 1110 was the estimated time of arrival.

Finally, the long-awaited moment was at hand. At 1116 on Tuesday, 2 February 1954, the first *Cutlass* F7U-3 aircraft allocated to Fleet operations streaked over the field and touched down on the long runway at NAS MIRAMAR, marking the end of its trip from the Chance Vought factory in Dallas.

This, the first of 12 F7U-3 *Cutlass* fighters to be assigned to *Project Cutlass*, marked the Pacific Fleet's entry into the "flying wing" phase of fighter development. On hand to greet LCdr. Ron Puckett, who delivered the plane, were Capt. D. L. Mills, Mira-

mar's Commanding Officer; Cdr. A. R. Fields, CO of FASRON-12; Cdr. H. D. Hilton, Miramar Executive Officer; and LCdr. J. S. Brown, of *Project Cutlass*.

Puckett reported that flying weather was perfect, but when he landed at the municipal airport at El Paso, Texas, he practically disrupted airport operations. It was the first time that the airport personnel had seen a *Cutlass* up close and they gave it some searching attention.

The situation wasn't much different at Miramar. As the silver craft taxied up to the west apron of the new hangar, over 100 curious men wandered out to the new plane for a look-see.

What they saw was a combination of wing and stabilizer. Arguments broke out over the question of the plane's being all wing or all tail. The only thing all hands agreed on was that it was a big plane.

MAINTENANCE personnel began searching for access hatches. Pilots began wondering how they would get into the thing in a hurry. But perhaps the most interested of the spectators were the several officers and 27 men then assigned to *Project Cutlass*. For the next six months this nucleus of men would be evaluating the plane from an operational-maintenance standpoint. The F7U-3 was their special "baby."

Pictures, stories and conjecture about the *Cutlass* have been floating around Navy ready rooms and line shacks for a number of years, even since the first tailless X-model F7U-1 took to the air in September, 1948. Now the Navy pilots who have been itching for a chance to fly the sleek plane are one step nearer their goal. The project officers and men are well into their job of readying the *Cutlass* for eventual assignment to Fleet squadrons.

FASRON-12 at NAS MIRAMAR has had some strange assignments before and some tough jobs, but well up on the list is their assignment as a "mother" to the growing *Cutlass*



AS NEW *Cutlass* is towed to the apron in front of big Miramar hangar, crowds of curious begin to gather to examine newcomer.

unit. The squadron is supplying project personnel with hangar space and handling the administrative and operational control for the unit.

Almost every day new men filter into the growing ranks of the project and new *Cutlasses* are beginning to join the sleek planes already on the line. However, in the beginning it was quite different, for it began like this.

COMAIRPAC headquarters in San Diego authorized formation of a unit charged with gaining operational familiarization, maintenance knowledge and logistic data prior to the *Cutlass's* assignment to the first operational squadron. A group of 12 Navy pilots was first given advanced training in the plane's operation at the Chance Vought factory in Dallas.

Five of the pilots were from VR-32 at NAS SAN DIEGO who would later be ferrying the jet fighters. The other seven were the pilots and maintenance officers who were to be assigned to *Project Cutlass*.

The familiarization course was offered by the technical training division. It covered all phases of the plane's systems

and flight operations. All pilots were given a chance to fly the *Cutlasses*, while they were at the factory.

This group of experienced men began arriving at the huge Miramar Master Jet Air Station early in December, 1953. They started the ground work that was to result in the formation of the project.

When, at last, the first F7U-3 set down on one of the 8,000-foot runways, the project roster boasted several officers and 27 enlisted men. All of these men were hand-picked for their abilities and knowledge of the various phases of the project.

Officer-in-charge of the unit is LCdr. James S. Brown, who was assigned to the project from duty aboard the USS *Essex* where he served as Air Operations Officer. His maintenance officer, Lt. Robert D. Belt, brought to the unit his experience as special assistant to the production officer in O&R at NAS CORPUS CHRISTI and more than a year as maintenance officer with the *Blue Angels*, precision team.

Lt. Don Christianson, the project flight officer, was a spe-



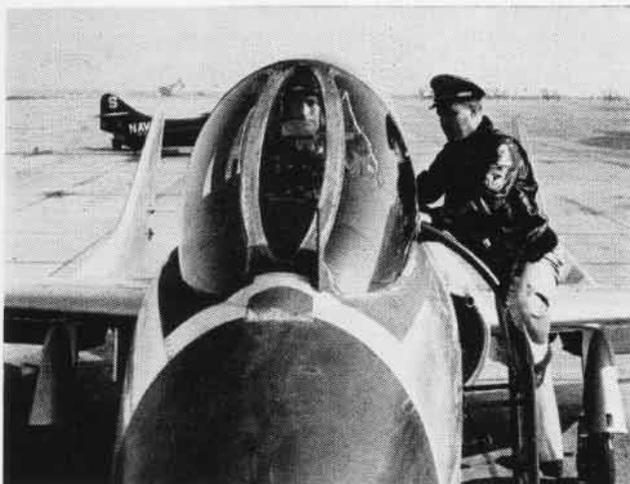
RECEPTION committee includes Capt. Mills; W. Thayer of Chance Vought; LCdr. Puckett, the pilot; LCdr. Brown; and Cdr. Fields.

cial weapons project officer at Naval Air Special Weapons Facility, Albuquerque. Lt. Don B. Shelton, operations officer, reported to Miramar from NATC PATUXENT RIVER where he pulled checks for the Board of Inspection and Survey and was Service Test project officer for the F7U-3.

Personnel officer Floyd C. Nugent, also reported from Patuxent River where he was Electronics Test project officer for the *Cutlass*. Lt. Walter M. Schirra, gunnery officer, arrived from the Naval Ordnance Testing Station at Inyokern where he served as guided missiles weapons officer and special project officer.

OUT OF all the officers assigned to *Project Cutlass*, Lt. Schirra is the only one who received his schooling in the *Cutlass* at Miramar. The others in the group had either had previous experience with the plane or had gone through Chance Vought's indoctrination.

Lt. Edwin Van Beisbroeck, administrative officer, flew with VF-52 from the USS *Boxer* with TF-77 and was squadron maintenance officer before his assignment to the *Cutlass*



LT. VAN Beisbroeck gets a pre-flight checkout from **Lt. Don B. Shelton** before taking one of the *Cutlasses* up for a flight.



SIDE VIEW of Van Beisbroeck getting pre-flight checkout in *Cutlass* gives close-up of new fighter's cockpit and canopy.

unit. His assistant, Ltjg. Burton H. Shepherd, served as administrative officer with VF-151 prior to his present assignment. Ens. Thomas L. Schanz's last duty was at NATTC MEMPHIS where he attended aircraft maintenance school. He is material officer for the *Project Cutlass* group.

The project's total enlisted complement now numbers over 80 men. They are being regularly rotated to instruction at the Miramar-based Naval Air Mobile Training Detachment Unit 1063 from NATTC MEMPHIS. At the traveling school, they are given instruction in the upkeep of their new charges.

Guy E. Doane, AMC, is the supervising instructor at this school on wheels. He and his eight enlisted instructors indoctrinate *Project Cutlass* mechs and tin benders in the flight characteristics of the plane, servicing, the operation of the different components, ground and maintenance work, turn-ups, shut-downs, inspections, major checks and the hundreds of little "trade secrets" that are a must for rapid and efficient maintenance of the new fighter planes.

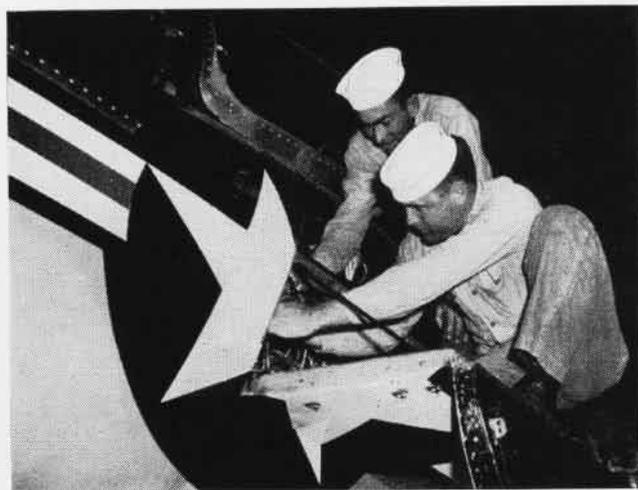
The maintenance course is of two weeks' duration and approximates factory instruction. When the first AIRPAC F7U-3 squadron is formed upon completion of the project, it will be used for indoctrinating new men in the transition to the "flying wing" phase.

THE NAMTD school arrived at NAS MIRAMAR fresh from factory instruction at Dallas in September, 1953. "Our mission," says Chief Doane, "is to provide officer and maintenance personnel with advanced technical training and information on the latest developments, general familiarization, maintenance, trouble shooting and service instructions for the *Cutlass* and its components. To help us in our classes, we have the airplane torn down in pieces, in effect, and put on casters."

Complete workable models of the F7U-3's hydraulic, electrical and mechanical systems are laid out on panels. The tail hook assembly, fuel transfer system, air conditioning apparatus, landing gear system and other components of



PLANE captain Suk and line chief Rivard look on as Belisle pulls Pearce from air intake after generator, starter check.



HYDRAULIC systems check is done by H. R. French, AM1, and J. H. Langston, AM1, through one of F7U-3's many access hatches.



THIS IS THE FIRST OF A SERIES OF FORMATION PHOTOS SHOWING THE CUTLASSES FLYING NEAR CHANCE VOUGHT PLANT IN DALLAS, TEXAS

the plane operate on panels exactly as they operate when installed on the plane.

"Our best single panel," the chief remarks, "is the cockpit mockup used to indoctrinate pilots in a two-day course. Every switch and indicator light is exactly as on the original. By the time a pilot finishes our course, he is thoroughly familiar with the *Cutlass* cockpit."

One of the plane's features covered in the course is the unique "ailavator" control surfaces. These act as both elevator and aileron surfaces, but are actuated by the same control movements as in conventional aircraft. C. E. Hyde, AM1, in charge of hydraulic classes, points out that the *Cutlass* control system is completely hydraulically boosted. "There are no mechanical linkages or semi-hydraulic assists as in other aircraft," Hyde states.

CUTLASS engine classes are taught by C. A. Williams, AD1. "These are the first Navy jets designed from the drawing board to incorporate afterburners," he declares. "And another thing . . . power output on the J-46WE8 is measured not as a percentage of RPM, but by percentage of maximum tailpipe temperature. The engine reaches maximum RPM with only a fraction of its maximum power output. Tailpipe temperature is the controlling factor and that's one of the things we stress in our classes."

Mechs working on *Cutlass* engines are aided by the system of overhead rails used to slide the jets from the fuselage. It works just like a sliding door, making work easier.

Electrical system instruction at the traveling school is handled by S. I. Jiminez, AEC. His electronic counterpart is H. J. McKee, ATC.

G. F. Bagshaw, AD1, instructs students in the fuel system of the plane. "The *Cutlass* can be completely fueled in three to five minutes by means of a pressure fueling system," Bagshaw tells his classes. "This is the first plane at Miramar to utilize this pressure-fueling feature. It also has provisions for in-flight refueling." The planes can stay airborne for a long time.

The FASRON-12 shop space available to the *Project Cutlass* unit is housed in the center "wall" of the new Miramar-type hangar and includes a complete assortment of tools and material. However, all special tools required for the project's work are kept by the unit's own tool crib. This way they keep track of them.

Once station personnel at NAS MIRAMAR had finished swarming all over the *Cutlass*, satisfying their curiosity, maintenance personnel began their work in earnest. Within a few hours after the plane's arrival, the bright new star of aviation's second 50 years of powered flight went into an acceptance check. The men were eager to start on their new charge.

JUST AS the project men had charged across the field from every direction to catch a glimpse of the new plane on its arrival, in the weeks following, a *Cutlass* was never seen on the ground without mechs, metalsmiths, electricians

and ordnancemen swarming over the access hatches, technical books in their hands. They were inspecting every nook and cranny in the plane.

A period of learning had begun which would be in evidence for many months to come. What this nucleus of men learned would probably someday benefit all fighter squadrons flying F7U-3's.

Getting familiar with the new plane took time. At first the work went quite slowly, but as the men began to get used to their jobs, the tempo picked up.

Night maintenance chief C. E. Johnson recalls that the major acceptance check on the first plane took 262 man hours to complete. Now the men knock off the job in a cool 170 man hours.

"This is the sort of experience we will pass on to new *Cutlass* squadrons when they are formed," Johnson says. "After all, that's our job." Seventeen of the chief's men are now enrolled in the NAMTD *Cutlass* school studying electrical, airframe, hydraulic and engineering features of the new planes.

PLANE captains report that pre-flight checks of the new planes are no more difficult than for any other fighters. The only difference is that they require more time because of the complexity of the airplane and the number of systems that must be "bled." Chief "Shorty" Rivard, ADC, line chief of the project says, "We've just about got our check procedures licked."

Speaking about the ordnance end of the *Cutlass* work, C. W. Kift, AO1, had this to say, "It has its advantages and disadvantages just like most any airplane." Kift feels that working conditions on the plane are "pretty darn good." On their first ordnance acceptance check, about 16 man hours were consumed but now a check can be run in about eight man hours, providing nothing is radically wrong with the plane.

One day, a few months ago, to most everyone's surprise, cameramen and their equipment arrived on the scene. The Naval Photographic Center at Anacostia had been authorized to make a series of pilot familiarization films on the *Cutlass* with the help of the Jam Handy photographic

organization of Detroit, Michigan. Their camera man would photograph the film.

Supervising the job, called *Operation Shutterbug*, was Lt. S. F. Bajak. The order of the day for the next couple of weeks was, "Lights! Camera! Action!" at the economy-sized Hollywood location. Working in and around the FASRON-12 area were cameramen, directors and all the essentials of a full-scale movie production, headed by Pierre Mols.

FASRON-12 was not the only outfit to lend a helping hand to *Project Cutlass*. With VJ-61 supplying a P4Y-1P complete with pilot Ltjg. W. T. Bradley and FALLWEA-TRAPAC lending Ltjg. K. E. Ellis and his TV-2, air-to-air shots of the *Cutlass* were successfully accomplished. Stormy weather, an unusual feature at the Miramar base, held up shooting for a few days, but with excellent cooperation from all the units aboard the station, the assignment was finished in a few weeks' time.

TAKING the role of the pilot in the film was Lt. Shelton. He also acted as technical advisor on the films which are designed to acquaint new pilots with the F7U-3 by graphically supplementing the pilots' handbook and attempting to give them the experience of the first flight in the new plane.

Project Cutlass is expected to reach its full complement of 12 planes by July. The officers and men of *Project Cutlass* will then provide the trained nucleus for the first AIR-PAC squadron of *Cutlasses* to join the Fleet. Supply problems, parts procurement and maintenance troubles will have been ironed out by the hard-working project men by then.

The project's time is short and the job is big, but the officers and men at NAS MIRAMAR are working doggedly to straighten out all the bugs. The *Cutlass* is still the flying sensation at Navy air shows, but soon it will be a familiar sight in the skies over numerous naval air stations around the nation.

The time is almost at hand when Navy pilots, who have itched to put the plane through its paces, will take it up with the comment, "Man, this baby can really fly."



THREE NEW CUTLASSES ON THE LINE AT NAS MIRAMAR GET PRE-FLIGHT CHECKS FROM PERSONNEL ASSIGNED TO AIRPAC'S PROJECT CUTLASS

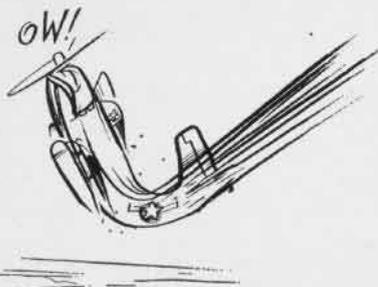


GRAMPAW PETTIBONE

Fancy Pants

The pilot of an AD-4 made three 50° rocket firing runs. After each pass he pulled out at approximately 2,000 feet, continued his pull-up to a near vertical climb, performing a half roll to the left while climbing. He then let the nose of the aircraft fall through to the horizontal in an inverted attitude, at which time he completed a half roll to the right to attain level flight.

The pilot rolled into his fourth run at 7,500 feet and entered his dive. At approximately 5,000 feet four small pieces of wing skin were seen to leave the aircraft followed immediately by the starboard wing. The aircraft flipped over on its back and then made two complete slow rolls before it



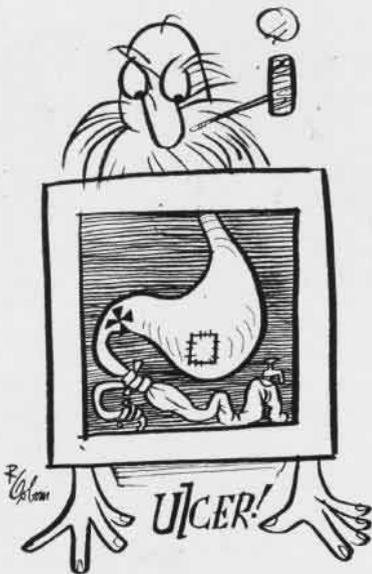
struck the water. The pilot was not recovered.



Grampaw Pettibone Says:

Sufferin' Sunfish! This one really takes the cake! Granted that this was an awful fancy maneuver, it certainly isn't conducive to long life. It may be news to some of you, but most airplanes have certain stress limitations and maneuver restrictions placed on them. These limitations are put there for your own protection. Continued exceeding of these limitations and the airplane is supposed to come apart. As a matter of fact, most of them do come apart as this one did.

If you are real bright, you will find out what the stress limitations and maneuver restrictions are on the aircraft that you are flying, and then stick to the letter of the law. Any time that you think you have overstressed your aircraft,



get it back on the ground and have it thoroughly checked. Do us all a favor and think of your buddy who may be flying the airplane on the next flight. Your buddy may be following the rules to the letter but because of your desire to be fancy, he may become the fall guy.

I believe that all squadrons who are performing maneuvers where there is a possibility of overstressing their aircraft should adopt a policy of periodic checks to see how the aircraft are holding up. What can you lose?

Like the man said "The life you save may be your own."

Deep Trouble

Four F9F-2 pilots were cleared IFR out of Alameda on a ferry flight to NAS MIRAMAR. El Centro was clear and was listed as an alternate. The flight was able to stay in the clear above all clouds at 28,000 feet. Daylight faded in the vicinity of Santa Barbara.

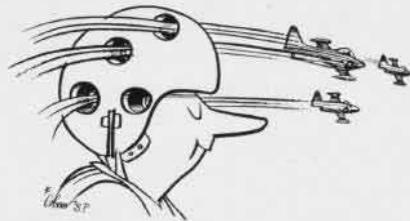
The flight leader, who was to report to Los Angeles Radio for further clearance, found he was unable to read any radio station. He turned the lead over to his wingman at Santa Barbara and they proceeded on course.

When the flight arrived over Los

Angeles, they found a solid overcast to seaward, but lights were visible east of the city through holes in the clouds. On instructions from the flight leader the wingman cancelled the IFR flight plan and the flight leader again took over the lead.

They proceeded in an easterly direction letting down from 28,000 feet through a hole in the overcast. At an alleged altitude of 8,000 feet, the formation unexpectedly entered a cloud layer. Almost immediately, a brilliant flash blinded the pilots causing each to pull up violently and become separated in the overcast.

Not long thereafter three of the shaken pilots landed individually at NAS MIRAMAR. As it turned out, that



blinding flash that the lads saw was the number four man flying into the top of a 2700 foot hill east of Los Angeles. His aircraft exploded on impact.



Grampaw Pettibone Says:

Those holes in the overcast must have somehow gotten confused with the holes in the head of the flight leader. The only thing that kept him from making a few more mistakes was the fact that the flight terminated. This is one of those cases where it is doubtful if we would have heard about it if the end hadn't been so tragic. It's just things like this that keep my old ulcers acting up.

This situation is kind of like that story that has its setting at the local bar. A few of the squadron boys had stopped by for a "short snort" before going home to the family. After about the fifth "snort," one of the boys spoke up thusly, "I don't know about you fellows, but I'm going to call up my wife and give her a piece of my mind. I'm gonna

ask her if dinner is ready. If she says 'No,' I'm gonna raise hell with her. If she says 'Yes,' I'm gonna refuse to eat it."

The moral being that if this gent did what he said, he was in for some deep trouble.

The four ensigns on this flight were also in deep trouble right from the beginning of this ill-fated flight. It wasn't enough that the flight leader busted most of the ferry regs—filing IFR and at night. He had to prove his lack of good judgment by cancelling his IFR clearance without checking his destination weather which was deteriorating. He even compounded these errors when he led his flight in a dive down through a hole in the overcast in a mountainous area, at night no less, with three wingmen who had never flown jets at night. I think that we can all thank our lucky stars that three of these lads got down safely.

About the only nice thing the accident board had to say about the flight leader was that he had one flicker of good judgment. But he didn't use it. Before electing to take the flight down through the hole, he had determined that everyone in the flight had plenty of gas to go to their alternate, El Centro, which was clear.

Under the circumstances, I believe I would have done just that. How about you?

Head Up and Locked

A pilot of an F9F-6 was returning to the home field after dark upon completion of an FCLP hop at an outlying field. From force of habit, he reported to the tower on base leg that his landing gear was down and apparently locked, with hydraulic pressure up. Just prior to touchdown, the pilot extended speed brakes to aid in slowing the aircraft down during the landing rollout. The touchdown was in a normal attitude but without wheels. When the aircraft was hoisted off the deck, the landing gear functioned normally.



Grampaw Pettibone Says:

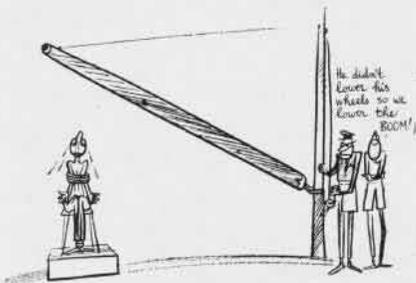
Ye Gads! Fetch me another aspirin tablet. Anyone who tells the tower his gear is down and locked when he doesn't even go through the motions just has no business being in an airplane. The taxpayers are mighty unhappy with you lads who find yourselves flying from force of habit. Do me a favor, will you. Either get that mechanical pilot off your back or introduce it to the check-off list.

This is the 37th pilot-caused wheels-up landing in the past three months. The



majority of them occur after an initial approach to a landing and a wave-off. The pilot retracts his gear and wraps up his second approach to line-up with the runway, and just never gets around to putting the gear back down. Either that or he does as this lad did—reports to the tower that the gear is down and locked without visually checking.

I think it oughta be standard policy after a wave-off, except in an emergency, to require the pilot to leave and re-enter the traffic pattern before beginning a new approach to a landing. This would give



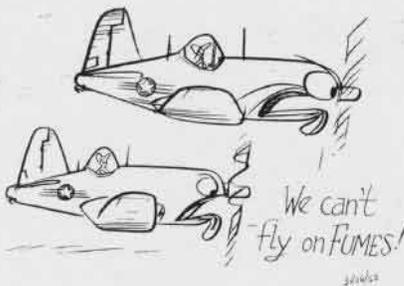
the pilot plenty of time to make sure that his wheels are down.

After such a costly mistake no words of wisdom will repair the damage, but I would like to offer the pilot's statement for those of you who wear the same size shoes. "In my opinion this accident could have been avoided if I had observed what the gear indicator read rather than just looking at the indicator out of habit and figuring they were down and locked. It was simply a matter of having my head up and locked."

Bub, I'll buy that statement.

Plan It—Then Fly It!

Two F4U-4's cleared out of Nellis Air Force Base IFR for Moffett Field at



about 0130, estimating Moffett at 0430. Although the weather enroute and at Moffett was VFR when they departed Nellis, they were required to list an alternate because it was an IFR clearance. They listed Travis AFB, a distance of 75 air miles from their destination.

Three hours and 20 minutes later, one of the F4U's wound up in San Francisco Bay sans fuel and pilot, and the other pilot made a dead stick landing just short of the runway at Moffett. The engine of the second F4U quit during the glide through the overcast.



Grampaw Pettibone Says:

These lads proved only one thing to me . . . that there are still a few fatalists tooling around in the skies. They planned a flight which would require fuel consumption at the rate of 56 gallons an hour and then flew it at a rate of 72 gallons an hour. The weather at the destination 15 minutes before their ETA was forecast to be 800 feet overcast, eight miles visibility, yet they persisted in their original mental picture of scattered clouds at 1,000 feet.

They didn't consider the possibility of communication difficulty or a GCA approach, so did not give their fuel warning lights a second thought when they came on approximately 84 miles short of their destination. It wouldn't have required a slip-stick to see that at their current rate of fuel consumption, they had about 40 minutes of flight time left then, 28 minutes of which would be needed to reach their destination.

Had the possibility entered their helmets that the weather *could* sock in at Moffett in the middle of September during the wee hours of the morning and that they might be forced to fly to their alternate, they might have realized that they were supposed to be over their alternate five minutes *before* the fuel warning lights came on.

Well, it happened. By the time they got picked up on GCA, the airplanes did what any normal airplanes would do without fuel—they quit running.

I don't know how we can impress upon you fellows the importance of real honest-to-goodness flight planning. The written word apparently isn't enough.

Some of our more pessimistic aviators have evolved this theory. "There are only two kinds of pilots, those who have had an accident and those who are going to have an accident." Don't you believe it. You can go a long way toward disproving this theory if you plan that flight and then fly that plan all the way.

PARACHUTE, PLANE AND ASW HELICOPTER

PILOTS who are destined to fly the vertical take-off fighter should credit one safety feature to a few men stationed at NAAS EL CENTRO. They developed a suitable parachute for escape from the VTOF in times of emergency.

By the very nature of the VTOF's structure and design, the pilot's critical period for an emergency exit wherein he must use his ejection seat, exists during landing and take-off operations. At this time, the VTOF has a maximum horizontal velocity of 40 knots or approximately 60 feet per second. The use of a 'chute after ejection imposes no major problems when the VTOF is operating in a conventional attitude, but it was necessary to develop some means of safe ejection to meet the conditions of the VTOF's vertical attitude during field operations.

The Naval Parachute Unit undertook the job of solving this problem. Extensive tests were conducted with a modified standard flat circular chute. In the first test the chute, with a dummy attached, was launched from a 200-foot altitude at 40-knot speed. The ripcord was pulled by a static line 10 feet long, and the 'chute inflated at a safe altitude even though it was pushed towards the earth by a helicopter blade downwash.

The difference between the drag-weight ratio of the ejection seat and the occupant contributes to satisfactory separation in ejection from conventional aircraft, but in the VTOF there is little or no forward motion during take-off and landing. Snubbing lines were installed and these, combined with the assistance of an automatic lap belt/safety harness combination, separated the pilot from the ejection seat at a predetermined distance.

The selection of a suitable material with sufficient tensile strength for snubbing lines was only possible after many exasperating tests. The search for this material was finally narrowed down to a six-foot nylon line with a tensile strength of 3000 pounds. This can absorb the tremendous strain placed upon it until the inertia between pilot-gear/ejection seat from the plane reaches its peak. At this point the snubbing line parts, thereby making sure that the pilot will not be dragged



FROM CLIFF, engineers tested parachute with dummy. The descent is clearly shown.

to his death, hanging from the end of a line.

Owing to the location of the center of gravity of the seat and occupant, both are subjected to a turning moment which tended to bring the top of the seat forward after it had left the rails. This tends to create a collision between the seat and the occupant upon separation. This problem was solved by placing the snubbing line as far aft as possible on the bottom of the seat.

It was originally planned to have the seat used in the XFY-1 fired by use of a face curtain. Six tests were conducted with the face curtain hand grip

secured by a line to two "D" rings on the dummy's harness. Photographic sequences taken of the experiment revealed that the dummy, ejected under these conditions, was subjected to a slight spinning motion as it separated from the seat, thus presenting the hazard of entanglement. In these tests, the dummy attained a height of about 55 feet above the ejection seat rails, and in all cases, the 'chute and lines were fully deployed in sufficient time to decelerate the dummy prior to landing.

After 39 tests were conducted at El Centro, it was decided that this method was feasible and additional tests were conducted near Torrey Pines, Calif., overlooking a 265-foot cliff. Here the platform was tilted so that the rails slanted upward at about the same angle—19° above horizontal—that is present when the VTOF is in take-off or landing position. On the first two tests, the 'chute opened with less than 100 feet loss of altitude.

Seven tests were conducted at this site, and all but two went off properly. The malfunction of equipment in two of the tests has since been eliminated. In the five successful tests, the dummy's 'chute was inflated by the time it had fallen from 50 to 100 feet.

As a result of these tests of the escape system, it appeared that a means of firing the seat catapult other than the face curtain method would be required so as not to interfere with the escape sequence which proposes snubbing of the ejection seat to expedite separation of the man from the seat.

The seat design has been modified to provide the arm-rest type of ejection and catapult firing control. A 26-foot, 22-gore conical canopy parachute has been perfected to assure the pilot of the VTOF that, in the event of emergency, he has better than an even chance of safely clearing his plane.

INAUGURATION of Convair's new C-131A *Samaritan* aero-med plane by MATS promises more rapid air evacuation and greater comfort for sick and wounded American servicemen.

The world's most modern twin-engine mercy mission aircraft features

safety, speed and comfort. It was recently displayed to high ranking officers and civilians of allied nations at the Washington National Airport.

One flight nurse and two medical attendants normally will accompany patients on regular runs. The 235-mph, double-duty plane has a pressurized cabin allowing many different arrangements of seats and litters. Varying combinations up to 37 seats or 27 litters and seven seats can be made. For added safety, all seats will face rearward.

Air-conditioned, the flying hospital ship is the most comfortable air evacuation plane in existence today. It is a version of the commercial Convair 240 transport.

The *Samaritan* will be used to deliver patients from ports of entry to hospitals of destination throughout the United States. It will also be used for transfers between hospitals.

More than 95 percent of all combat casualties during the Korean war were air-lifted to the United States for specialized treatment. Air evacuation in Korea not only saved the lives of many thousand UN troops, but also proved to be a most important morale factor. At no time in Korea was a combat casualty more than 60 hours away from specialized treatment in U. S. hospitals.

Equipped with two R-2800-99 P&W 2500-hp engines, the C-131A has a service ceiling of over 24,000 feet and can take off in less than 3300 feet. Fully loaded, the plane can fly and climb on one engine in case of power plant failure. Top speed is 272 knots with a range, with maximum fuel, of over 1600 miles for the hospital plane.



THE SAMARITAN is the latest work in hospital transport. It is designed to give safety, comfort and speed to patients requiring transportation to distant hospitals.



INTRODUCTION of dipping sonar is making the helicopter an active member of ASW team. Sikorsky's XHSS-1, which carries crew of four, joins the fleet next year.

For convenience in loading litters aboard the plane, a large hydraulically operated door is installed on the left side of the fuselage, aft of the wing. A standard integral stairway, which folds into the airplane for flight, is located on the right side, forward of the wing.

The main passenger cabin is furnished with adjustable upholstered seats, carpeting, trim materials, conditioned air outlets, variable-intensity overhead lighting and reading lights. Provisions are included for carrying iron lungs and special oxygen equipment.

THE LATEST addition to the Navy's anti-submarine hunters is the new XHSS-1. A modified version of Sikorsky's already famous HO4S-HRS type, this new helicopter will carry four men, two pilots and two sonarmen, on its search for underseas craft.

Powered by a Wright R-1820, the en-

gine is rated at 1525 hp, and it is one of the first helicopters in history to be especially designed for anti-submarine work. Incorporating the dipping sonar and other ASW equipment, the XHSS-1 could be utilized for shore-based, coastal sub-hunting or ship-board use.

Its armament consists of lightweight homing weapons, which are launched after the submarine's position has been determined while the 'copter hovers and lowers its dipping sonar—pinging and listening.

With delivery expected early next year, the HSS-1 will be delivered to four HS squadrons, two on the west coast and two on the east coast. With a maximum endurance of three and one half hours, the helicopter has a top speed of 126 knots and a cruising speed in excess of 100 knots.

After several preliminary tests, the XHSS-1 made its initial official flight in late May at the Sikorsky plant.

The Marine version of this helicopter is the HUS-1. It will eventually replace the HRS as an utility aircraft. The Air Force version, the H-34, will also be destined for utility work such as troop movements, transportation of cargo and liaison work.

Utilized aboard ship, the HSS-1 will be able to carry greater payloads, delivering essential men and gear from ship to ship that are operating in the task force. With the eventual delivery of this giant, anti-submarine squadrons will be blessed with ever greater ability to carry out their missions, that of seeking and destroying the enemy submarine before they become too great a threat to coastal defense units.

VF-64 Corners the Market Makes Four Thousandth Landings

NAS ALAMEDA—While VF-64 was in the far east aboard the *Yorktown*, they logged an unusual record in thousandth landings.

Lt. (jg) H. E. White, Jr., started the ball rolling in September when he made the 36,000th landing on the *Fighting Lady*. A few weeks later he was followed by Ens. J. W. Rosson



CDR. CROCKET POSES WITH HIS LUCKY PILOTS

who made the 37,000th. This should have been enough of a feat, but the *Freelancers* weren't satisfied.

No one was more surprised than the pilots themselves when their exec, LCdr. L. J. Kash, made the 38,000th landing in November. By that time, they felt they'd really cornered the market on thousandth landings.

When the 39,000th landing was coming up, the anticipation and speculation among the squadrons was intense. As a plane touched down for the 39,000th, VF-64 was in again with Lt. (jg) S. A. Smith sitting in the cockpit.

VF-61 Piles up Flight Time Squadron Keeps 100% Availability

NAS OCEANA—After a month of intensive gunnery training at NAF LEeward POINT, Guantanamo Bay, Cuba, VF-61 returned home with what was believed to be a flight-time record for jet-fighter-type aircraft. The *Jolly Rogers* flew a grand total of 2341.5 hours in 28 flying days in 23 F9F-6's.

AirLant competitive exercises began during the fourth week of their deployment. Only six of the 29 pilots competing had previously fired jet gunnery. Regardless of this lack of experience, 26 pilots earned their Navy "E's" for gunnery. The squadron shot a 29.4 percent average in their *Cougars*, a substantial increase from their previous efforts of 12.3 percent.



PROXY GIL ERB TRIED BY KANGAROO COURT

Caught 'Stealing' Glory 'Kangaroo Court' Hangs A Pilot

USS ORISKANY—When Ens. W. B. MacColl, VF-191 pilot, came aboard to register the 26,000th landing, everything appeared quite normal. As it later turned out, however, MacColl had cut out his division leader who was flying number two spot that day.

The whole story came out in a typical VF-191 Kangaroo Court, convened by Cdr. R. M. Elder in the wardroom during the landing celebration. LCdr. Jeff Davis presided as judge, Ltjg. Robin McGlohn was attorney for the defense and, since MacColl was seated at the exec's table, Ltjg. Gil Erb acted as proxy for him.

Cdr. Elder had observed *Speedball*

MacColl "stealing" the "glory spot" from Lt. Clyde Rosener and had the case prepared against MacColl for use at the ceremony. After many humorous moments, the wardroom officers acting as the jury pronounced the pilot guilty as charged and he was "hanged" temporarily for the benefit of the many candid camera fans.

Students Have Record Day Barin Field Logs Lots of Traffic

NAAS BARIN FIELD—The home station for prospective naval and Marine aviators attached to BTU-3 believes they have the record for take-offs and landings for one day for any installation their size during daylight hours. They logged a total of 2,500.

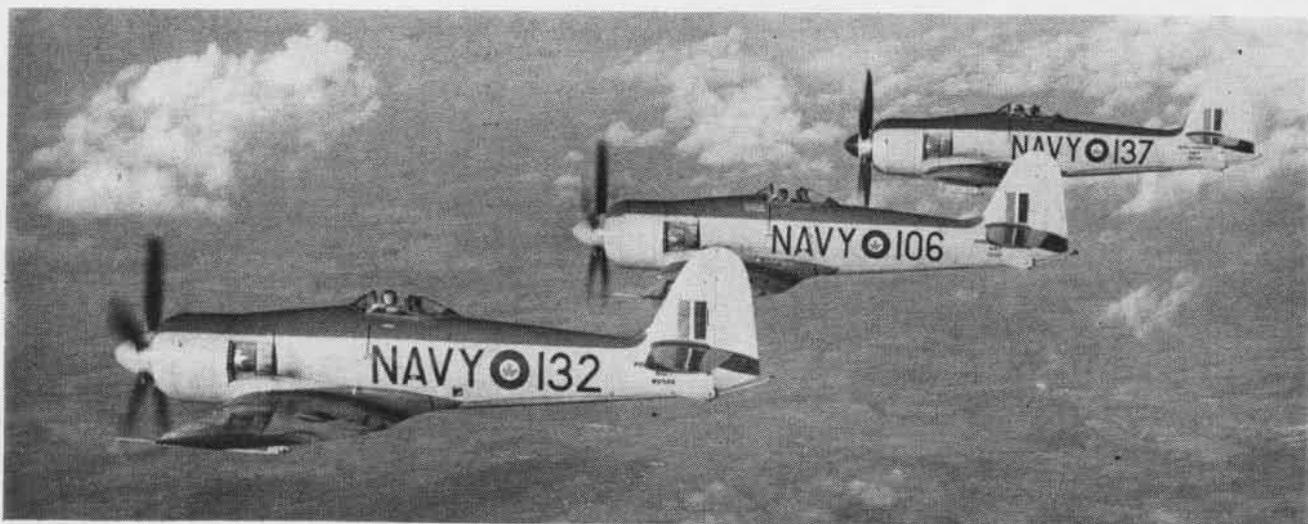
Barin has a complement of 320 aircraft and 2300 personnel and consists of two fields connected by a parking ramp. One field is used for normal traffic and the other for FCLP. On the record day, the normal operating field logged over 750 take-offs and 750 landings, while the FCLP field logged in excess of 500 take-offs and 500 landings bringing the total to more than 2,500.

Cdr. Bowers, operations officer, says the 2500 count for one day is also believed to be tops for any NAS.



LATEST ARTIST conception of Forrestal Class carriers shows a fixed island, canted deck and four elevators. The catapults are indicated by white lines. The radio antennae can be swung to horizontal position during flight operations. The first of the class, the USS *Forrestal*, CVA-59, will be launched sometime this coming fall.

NORTH OF THE BORDER WITH THE RCN



SEA FURIES OF CANADA'S VF-871 BASED AT HMCS SHEARWATER, NOVA SCOTIA, LOOK AND PERFORM LIKE THE FAMILIAR F8F BEARCAT OF USN

BACK IN his home town of Charleston, South Carolina where some folks still claim to remember Beauregard shooting off his big guns at Ft. Sumpter, Ltjg. Archie E. Benton might not prefer to be termed "Yank."

The fact is that he gets a great kick out of being so addressed by his Royal Canadian Navy squadron mates of VF-871 at HMCS SHEARWATER, Dartmouth, Nova Scotia. Such terms as "ball-a-fire" for "splendid," "fish-head" for "non-flying officers," "bats" for "LSO," and "booster" for "catapult" don't phase him either. Benton is a USN exchange pilot on duty with the RCN.

Lt. Barton W. Bartholomew, attached to the RCN's VS-881, is the other USN pilot currently on a year's exchange duty with the Canadians. He and Benton will soon be relieved by Lts. Donald B. F. Brown and John F. Stone.

Benton is flying MARK 11B *Sea Furies* and Bartholomew is flying the more familiar TBM *Avenger*. Both are performing duties in their squadrons that a Canadian of similar rank and experience is expected to perform. The squadron organizations are similar to those in the USN, so neither officer had much difficulty in fitting in when they relieved the first USN exchange pilots, Lts. Hap Gower and Terry Hardenburg, a year ago.

RCN VF-871 is composed of nine flying officers, an air engineering officer,

who is a ground officer, and about 100 men. They have 10 *Sea Furies* which are similar in appearance and performance with the F8F *Bearcat*. VS-881 has 15 modified TBM-3E's and four modified TBM-3W's (See page 13.—Ed.). Its personnel includes 15 pilots, 15 officer observers, 15 enlisted observers mates, one AEO, one ALO, one LSO, and about 150 men.

The exchange pilots have many a compliment for RCN issue flight clothing. Marked for their special praise are the Canadian winter flying suit, winter flying boots, and immersion suit.



CANADIAN pilots talk with their hands too. USN's Benton is in the center.

Benton says, "RCN operational pilots are highly trained and capable naval aviators. With flight pay at a standard \$30.00 a month, their motivation for flying is genuine. The RCN Air Branch is a small, highly motivated, highly trained, and very effective force."

Most RCN pilots get their flight training from the RCAF. When they receive their wings, they are sent to the United Kingdom for naval operational training. They have almost 500 hours logged upon completion. Several RCN pilots have received USN flight training.

The exchange program with the Canadians was commenced in March 1952 to afford a medium for exchanging ideas, tactics, operational data, and other items of professional interest from the point of view of an active operational pilot. Eight Canadian pilots are serving in USN squadrons. All but one are from the RCN. The latter is an RCAF pilot. Similar exchange programs are also underway with Britain's RN and RAF, as well as the USAF.

"Perhaps," comments Benton, "the most important result of the program to me is an appreciation, and understanding of the officers and men who comprise the RCN Air Branch. Bartholomew agrees with me that our tour with the Canadians has been most profitable and quite enjoyable."

AN ERA ENDS FOR A COMBAT VETERAN



EARLY TBF-1'S LIKE THIS FIRST WENT INTO ACTION AT BATTLE OF MIDWAY 4 JUNE 1942

WITH A combat record pre-dating even the venerable *Corsair*, the last of the *Avengers*, more familiarly known as *Turkeys*, will leave fleet operational squadrons this month. VS-23, VS-38, VS-26, and VS-32 will complete their transition from TBM-3S2's and TBM-3W2's to S2F's in June.

Twelve years ago in 1942, a group of VT-8 pilots checked out in TBF-1's at Norfolk. The rest of their squadron was deployed in the Pacific with TBD's aboard the *USS Hornet*, CV-8. TorpRon EIGHT'S *Avenger* contingent arrived in Pearl as the Battle of Midway was brewing. The *Hornet* was already at sea, having left Pearl on 28 May.

To bolster the island's defenses, six of the TBF's were flown from Ford Island to Midway. Using two ensigns borrowed from VP squadrons as navigators, the 1,200 mile flight was made

without incident in eight hours on 1 June 1942. Norden bombsights were used to calculate drift.

The six *Avengers* were launched for their first strike about 0615 on the morning of the fourth. Minutes later, the Japs hit Midway. The doughty *Turkeys* continued on their way towards the Jap carrier force—and found it. The Nipponese combat air patrol also found the TBF's as they closed on the flattops. Five of the six were splashed by Jap fighters, or AA, as they drove home their attack.

Ens. Albert K. Earnest, piloting the surviving TBF, had his elevator controls shot out by a fighter. Seconds later, he let go his fish at a screening cruiser. As he was about to hit the water, he instinctively reached for the trim tab. This was fortunate, for he was able to limp back to Midway us-

ing tab control. His turret gunner was dead, his tunnel gunner was wounded, one wheel and the bay doors were flapping in the breeze, but he came back.

ITS FIRST baptism of fire was nine months before the *Corsair* went into action at Bougainville in February 1943. At this time the TBF design was two years old. Two XTBF-1's were ordered from Grumman under a contract placed in May 1940. In December the same year a production contract was placed for 286 of them. The XTBF-1 made its first flight on 7 August 1941, and it was accepted by the Navy that December. The first production TBF-1 was in January 1942.

At the time of Earnest's adventure, TBF's were coming off the line at the rate of 60 a month. Later the same year the rate reached 150. Grumman started producing the F6F *Hellcat* in 1943. Further production facilities were needed to turn out the quantities of both the TBF and the F6F required in the fleet. In anticipation of this, General Motors Corp. had been asked in early 1942 to undertake production of the *Turkey* at their Eastern Aircraft Division plant at Trenton, N. J. The first TBM contract was let 23 March 1942. The first TBM-1 was delivered that November, two more were delivered the next month. These were assembled from parts supplied by Grumman, but Eastern was soon in full production making its own.

By July 1943, Eastern had delivered 194 TBM's, and came through with 915 during the next six months. Grumman manufactured 145 TBF-1's in the first half of 1942, 180 in the second half, 852 in the first half of '43 and 789, plus two XTBF-3's, during the remainder of the year. Grumman then tapered off, and Eastern took over all *Avenger* production. Eastern delivered a total of 2882 TBM-1's and 4664 TBM-3's. Grumman delivered 2311 TBF-1's for a total of 9857 *Avengers*.

Although most were received by the Navy, 192 TBM-3's, 334 TBM-1's and 395 TBF-1's were delivered to the United Kingdom, and 63 TBF-1's were delivered to New Zealand during World War II. Under recent defense aid programs, *Avengers* have been sent



RESERVE AND ADVANCED TRAINING WILL CONTINUE USE OF TBM-3E'S



THESE TURKEYS WEAR PAINT OF CANADIAN ASW SQUADRON 881

to the Netherlands, France, Canada and the United Kingdom.

PRODUCTION configurations of the *Avenger* included TBF-1, TBF-1C, TBM-1, TBM-1C, TBM-3, and TBM-3E. Special configurations which have been developed include the TBM-3S, TBM-3S2, TBM-3W, TBM-3W2, TBM-3N, TBM-3Q, and TBM-3R.

Although combat squadrons won't be using the *Turkeys* any more, the 804 TBM's remaining on the Navy's roles will still be around a while longer. The TBM-3E's, 3W2's and 3S2's will be used for VS training by the Naval Air Reserve and Advanced Training Command. VR-21, VR-22, VR-23, VR-5, and some FASRons will continue using the 3R's until they are replaced by TF-1's, the transport version of the S2F, in about a year. Utility squadrons will continue to use the 3U's to tow. The 3N's and 3Q's will be preserved.



TBM-3R TRANSPORTS SEVEN MEN AND 2,000 LBS. OF GEAR TO AIRCRAFT CARRIERS AT SEA



TF-58 TBF-1 FLIES OVER FORCE FOR WW II ATTACK ON SAIPAN JAPS



TBM-3S2'S AND TBM-3W2'S RETIRE FROM THE FLEET THIS MONTH

NEWS

SHOOTIN' MATCH



Squadron Honors

Fighting Squadron 81
42.9%

Individual Honors

LCdr. J. W. Lankford, VF-81
78.4%



OUTSTANDING shooting by LCdr. H. J. Harders' VF-81 is proclaimed by this 42.9% banner during recent gunnery exercises held at Guantanamo Bay, Cuba. Other good Gitmo shooting was turned in by VF-174 with 16 individual "E"s. VF-103 got 12 "E"s led by Lt. W. P. Gatewood's 67.3%. Your squadron can get in the "Shootin' Match" too. See NANews Feb. '54.

RCAF Will Fly Neptunes Canada Is Fifth Nation to Use P2V's

A striking force of submarine-hunting P2V *Neptunes* has been ordered by the RCAF to help patrol and clear North Atlantic sea lanes. The new planes will be delivered in late 1954 and early 1955 and will replace some of the Lancaster aircraft in the RCAF's maritime squadrons.

Canada will become the fifth nation using international *Neptunes* for anti-submarine patrol. Besides the U. S. Navy, P2V's are flown by England, Holland, France and Australia. The planes are being provided under the Mutual Defense Assistance Pact and will be nearly identical to the latest U. S. Navy types.

NAS Forms Pick 'n Pan Club Gold Prospecting Added to Facility

The latest addition to the growing list of Alameda's Welfare and Recreation facilities is a prospecting club.

The colorful weather-beaten prospector pulling a gear-laden burro has been replaced and NAS prospectors are taking to the hills in search of that stuff that brings \$35 an ounce on the open market.

So far this profitable pastime has taken the prospectors to several California creeks and streams, and initial panning is bearing some fruits with some of the men finding gold dust.

V. M. Peterson, TDC, was elected chairman of the new club, and he will be assisted by O. A. Fredericks, YN2, and Ltjg. W. R. Bristol. Other prospectors are: R. A. Kissack, TD3; F. W. Hoffman, ACAN; H. H. Zugman, SN; D. E. Lewis, TD3; E. N. Housdan, PH3; K. R. Price, AN; A. W. Durancik, TDAN; L. A. Worton, ADAN; D. W. Wendlandt, AC2; A. W. Kurth, PN3; C. R. Clink, YN3; R. H. Long, AD2; W. I. deWart, TD2; and D. E. Kuechle, YN2.

Drone Downed by Big Guns Cruiser Main Battery Claims First

The main battery crew of the USS *Des Moines* demonstrated the accuracy which won them an "E" when, during maneuvers off Guantanamo Bay, they scored a direct hit on an F6F drone. Commanding officer, Captain H. A. Yeager, and the entire crew hailed the feat which is believed to be the first time a drone plane was shot down by a Navy ship's eight-inch rifles.

VR-6 Prop Swap Effective Exchange at O&R Saves Shipping

Packaging and shipping of high time propellers to overhaul activities has always been a problem to the maintenance and supply organizations of any unit, but VR-6 recently arrived at a unique solution.

It was arranged with the propeller overhaul section at NAS QUONSET POINT to have four new propellers available for delivery on a certain date. However, instead of the usual costly and time consuming disassembly, preservation, packaging and shipping of the propellers to Westover, Massachusetts, the propellers were to be made available in the Quonset maintenance area where a VR-6 R6D with high time propellers was scheduled to arrive.

In a short time the old propellers were off and on the way to the O&R prop shop for overhaul while the new propellers were being installed. Because of the ten per cent margin authorized in operating time, operation "Switch Four" can be readily scheduled at a mutually convenient time.



READY ISSUE, 'CHUTE DEPT . . . DEAR SIRs:



'I'D LIKE TO TALK TO YOU ABOUT EXPOSURE 46 OF YOUR LAST BEACH STUDY FLIGHT'

AND THERE I WAS ..



Royal Welcome

THIS SEA story that should be a warning to Naval Reserve officers embarking on training cruises.

"I was attached to the *Ranger* in the winter of 1939 during maneuvers at Guantanamo Bay, Cuba. The staff duty officer on the *Lexington* offered to send me back to the *Ranger* since no regular boats were making the trip.

"He broke out the shiny barge of the Commander Aircraft Battle Force and sent me back to the *Lex* in it. As we approached the flattop, her officer of the deck spotted the admiral's barge with no official flag flying. Shades of John Paul Jones . . . a surprise inspection without a doubt.

"The *Ranger* deck watch personnel snapped into action. 'Call out the band, the Marine guard, eight side boys!'

"As the barge neared the starboard gang-



"A PASSENGER SAYS SHE'S ACCUSTOMED TO DINING AT THE CAPTAIN'S TABLE."

way, I jumped off the boat and climbed upward amid a sudden shrilling of boatswain's pipes on deck. I looked up and noted that an imposing welcome awaited me. The piping continued a moment and then died out as the welcoming officers saw the two stripes on my sleeve.

"With dragging steps, I climbed up the ladder, while on deck the entire welcoming party was curtly dismissed by the enraged officer of the deck. He demanded to know why I had not complied with rules and regulations laid down for junior officers traveling in flag officers' barges. I spent the next few nights reading up on my Navy Regs."

'Wrong-Way Doug's' Rival

IF DON Turner, YNSN, was looking forward to a tour of duty in the sunny Med, he ought to be mad at someone. If the far east suits his taste in foreign duty better, then he can call blessings down upon some little man.

Turner reported aboard the *Lake Champlain* in Yokosuka with orders directing him to report to VF-12. There was no VF-12 aboard but there was a detachment of VC-12.

A double-check confirmed his orders and



"HANG ON, SIR, WE'LL HAVE A SEAT FOR YOU AFTER CHICAGO."

the mix-up was finally clarified. Somewhere along the way, someone had innocently confused Fighter Squadron Twelve with Composite Squadron Twelve. VF-12 was aboard the FDR in the Mediterranean. Consequently, Turner was sent half-way around the world in the wrong direction, reporting to the wrong squadron aboard the wrong ship.

Rather than send Turner in quest of VF-12, COMAIRLANT decided to reassign him to the *Champ*.

Good Pickin's

ONE OF VC-61's fighter pilots was out over North Korea vainly searching for targets. He overheard another pilot

say, "I got one." A few minutes later he heard the same thing again.

Thinking that the other pilots might have a good target, he called and asked what they had found. The first pilot said, "Oh, we're down here shooting off power line insulators."

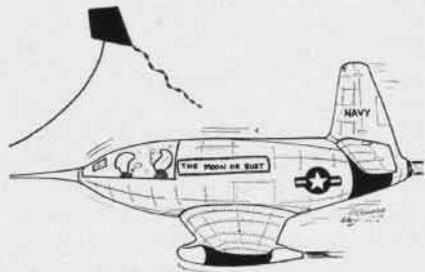
So they all went down and fought the war.

Two Piece Landing

PILOTS of the big *Mars* flying boats, which cruise at 225 knots, take some kidding from fellow FlogWing pilots of the new, faster R6D's about their speed. One claimed the Matson steamship line tried to buy one after it beat the "Lur-line's" Pacific crossing time by one day.

This does not ruffle the JRM crews. A *Mars* radioed the ocean station vessel *Nan* at mid-Pacific requesting a course and ground speed check. The vessel came back with "Course 242°, true, ground speed 285 knots."

After a short pause, the pilot came back with "If that is us, I wish to give two ETA's for destination, one for the wings and one for the fuselage!"



HOW HIGH DID YOU SAY WE WERE?

Miraculous Mullet

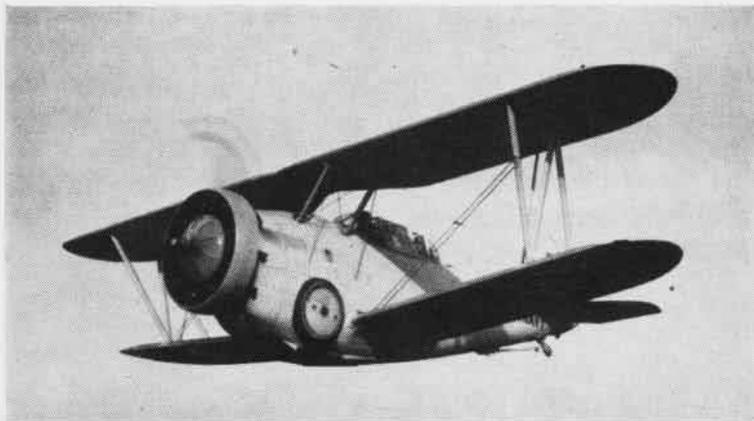
OLD FISHERMEN around MCAS CHERRY POINT have a hard time convincing themselves of the reliability of this fish story.

Three Marine fishermen, Lt. J. D. Dearmon, T/Sgt W. L. Gregg and S/Sgt W. Nevins, bailed out of the pad and departed for Slocum Creek at 0430. This was Lt. Dearmon's 12th straight fishing trip where his batting average had hit .000.

While attaching the outboard to the boat, Dearmon cut his hand. Next he lost one of his favorite plugs when he reeled his line in. As if this wasn't enough to discourage the most hearty of fishermen, he was cold.

After another stint of .000 average, the trio headed home only to have something hit Dearmon a glancing blow in the chest and bounce into the bottom of the boat. Unable to identify the object, and frightened by it, Dearmon sprang to his feet and was almost thrown overboard. Lo and behold, in the bottom of the boat lay a one-pound mullet! (Ed.—No spirits were taken on this trip, or so we are told.)

Almost **FORGOTTEN EVENTS**



FIRST WITH WHEELS UP

THE ARMY pilot made a desperate attempt to overtake the odd looking wheelless biplane ahead of him. He poured on the coal to his aircraft, but to his amazement, he was unable to close the distance.

Had this pilot known what the other plane was, he would never have tried to catch it. This was in 1933, and he was trying to catch a Navy FF-1, a two-seat fighter, the first military plane with retractable landing gear, and 20 mph faster than any fighter of its day.

The XFF-1 made its first carrier landing on board the USS *Lexington* on 21 January 1933. VF-5B was the first outfit to be

fully equipped with the plane.

The FF-1 was powered by a Wright R-1820-F incorporating a down-draft carburetor. Fire power of the FF-1 was two synchronized machine guns firing through the prop, and the tail-gunner manned one free swinging 30 cal. gun, for protection to the rear. Weighing in at 4655 lbs. fully loaded, the FF-1's landing gear was hand cranked.

With an absolute ceiling of 30,100 feet, the FF-1 cruised at 140 knots and could range for 885 miles. Its landing speed was 65 mph, and it had a rate of climb of 1150 feet per minute.

One FF-1 is said to be still flying in the Spanish air force.

for several minutes, then rushed the boy to the air station dispensary for emergency treatment. Later Marion was moved to the Naval Hospital at Oak Knoll where he was pronounced out of danger.

A week later, the three trucks again sped to the Speed home. This was a different type of call. Wyckoff and Fitzgerald were delivering a big new toy fire engine to the boy they had helped save.

Air Stations Are Honored NAS's Get Fire Prevention Awards

Selected for fire prevention Certificates of Merit from among 1,641 contestants by the National Fire Prevention Association were NAS SAN DIEGO, NAS JACKSONVILLE, NAS ALAMEDA and NAS PATUXENT RIVER. NAS ANACOSTIA also shared similar honors with other naval activities in its immediate area. Fifteen other naval stations also received the award in competition with military activities and government agencies, cities, and industrial plants in the United States and Canada.

In presenting a Grand Award to the U. S. Navy, Mr. Percy Bugbee, judging committee chairman of the Association commented, "The caliber of all entries from the Navy in 1953 Fire Prevention Week contest was most impressive and indeed reflects a commendable degree of fire security consciousness throughout the Navy."

Central Repair Shop Set Up Jax Unit to Make Minor Prop Repairs

A new policy was recently put into effect at NAS Jacksonville as a result of BuAer study for the purpose of determining the best method of accomplishing minor repairs on propellers outside of the Overhaul and Repair Shops.

The purpose for this Central Repair Shop is to return propellers to service at the earliest practicable date and to reduce the workload on O&R shops in order that the O&R can concentrate on overhaul of propellers rather than minor repairs.

As a result of the plan described above, FASRON-109 now has a Central Fleet Propeller Shop, with personnel assigned from that squadron and other Jacksonville units to assist in work required on propellers by Fleet activities.

NAS Firemen Save Child Oxygen Rushed to 2 1/2-Year-Old Boy

Little Marion Twibell lay gasping for breath while his father, Lt. M. D. Twibell, applied artificial respiration.

The Twibell family had just arrived from Guam and was visiting with Bos'n and Mrs. A. B. Speed at Alameda. During the voyage from Guam, Marion had apparently contracted a virus and been taken to the dispensary shortly after his arrival. The doctor had

sent him home to await the arrival of a child specialist.

While Mrs. Speed made a desperate attempt to contact the police and a doctor, Lt. Twibell called out to her to summon the fire department. A neighbor, N. Gassman, heard the father call and turned in the alarm which brought three engines and a rescue truck headed by Fire Captain J. R. Wyckoff and Asst. Fire Chief W. P. Fitzgerald. They administered oxygen

NPC, THE NAVY'S PHOTOGRAPHIC MENTOR

PHOTOGRAPHY is an indispensable tool of aerial warfare. Every naval aviator who has seen a training film or who has flown a strike based on photo intelligence knows this, though he would be amazed to learn that it was not until 1941 that the Navy took steps to increase its photographic facilities.

At that time, SecNav directed BU-AER to expand its photo facilities and to build in the Washington area a laboratory to provide photographic services for the Navy.

There were a multitude of missions to perform, but almost all of them came within the following categories: education and training; microfilming; development and testing of experimental and proposed photographic materials; initiating standards and specifications; photographic documentation; and public information.

The modern air-conditioned, three-story brick and tile building of the Naval Photographic Center was first occupied in February 1943. A model of utilitarian design, the building with its temperature and humidity controls more than meets modern photographic requirements.

The present commanding officer of the center, Capt. John H. McElroy, and



GOOD EDITING MAKES GOOD MOVIES. SOUND TRACK AND PICTURES MUST BE COORDINATED

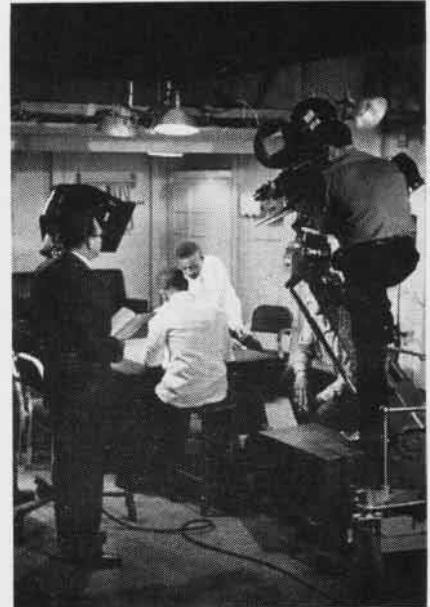
his executive officer, Cdr. John S. Harris, head an organization that makes every effort to meet efficiently and promptly all kinds of requests for assistance, pictures, movies or technical advice. The veteran fly-boy who wants a print of some vaguely recalled

incident which took place "sometime in the 1920's" can be sure that if the picture is at NPC it will be ferreted out and reproduced. Aviation Training can be equally sure of the same cooperation on a feature-length film.

The biggest organizational unit is the



SOUND CAMERA AND CREW MAKE MOVIES ON STAGE WHILE TECHNICIAN RECORDS SOUND TRACK



SHOOTING FILM TO BE RELEASED THIS MONTH



ONE "CEL" IS PHOTOGRAPHED AT A TIME IN MAKING ANIMATED MOVIES



ARTISTS PAINT "CEL" FOR EACH FRAME OF ANIMATED TRAINING FILM

Motion Picture Branch. Here film experts and educators pool their knowledge and experience to produce training material. Because such material is far from simple, there are complicated, but thoroughly coordinated, processes behind each production.

A film is first planned on paper by the Script Preparation Department. The complete script, outlined on a storyboard, becomes the master blueprint for the production. Then all art work and animation called for are produced in the Animation Division. Overlay drawings, called "cels", are photographed one frame at a time. One minute of animation may require 1440 different drawings.

NPC has a gigantic sound stage and scene designers who create illusions

that are undetectable. Viewing a recent movie, a high ranking admiral vowed that one scene had been taken from a certain carrier. Actually it was filmed on the NPC sound stage.

All exposed footage goes to the Processing Division which can handle more than 9,000,000 feet of film per month. Once the film is developed, and printed, it is sent to the Editorial Division, and from here on, the picture begins to take shape.

Why was "The Fighting Lady" a proud part of the Navy's history? What makes a good training film or a stunning documentary like "Victory at Sea"? First, of course, it's good photography, the kind that Edward Steichen demanded of his officers and men in World War II. But it's also skillful

editing. Taking the best of the best and putting them together.

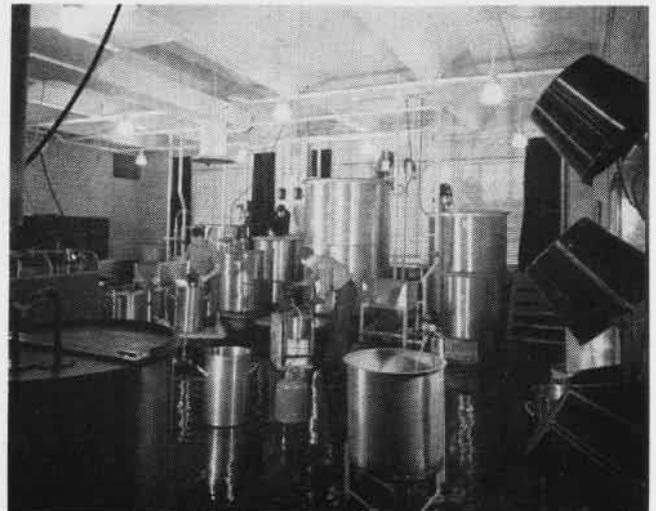
At that point you're ready to put together the recorded commentary and the pictures. And this is done at the Mixing Console in the Main Theater. After the film has been accepted, prints are made and the film distributed.

But important as movies are, still pictures occupy a tremendously important place. NPC is equipped to put out 5,000 8x10's and 20,000 aerial prints in an eight-hour day. Continuous printers can print aerial negatives on rolls of paper at the rate of 60 feet a minute. Black and white or color negatives from 24x36 mm to 8x10 inches can be readily processed.

NPC Still Library boasts a sure-fire reference system. There are now over



CHEMICAL LABORATORY KEEPS CONSTANT CHECK ON CHEMICALS USED



CONTROLLED CHEMICAL MIXTURES ARE PIPED TO PROCESSING ROOMS



TESTING CAMERA IN -67 DEGREE ARCTIC ROOM



CAMERAS ARE REPAIRED, TESTED AND CHECKED



STILL LIBRARY PROMPTLY HANDLES REQUESTS

a million pictures catalogued, and an average of 10,000 a month is added each month from Navy photolabs and ships all over the world. Cross-referencing of the files is so complete that a particular print can be found in a few minutes. An urgent order can be completed in a matter of hours. Naval Aviation News itself has been the grateful recipient of this kind of service every once in a while.

Photography is not a static art and science. It is, therefore, the mission of the Research and Development Department to conduct research and develop materials, methods and processes which will give the Navy better pictures than ever. All kinds of cameras—still, aerial, motion picture, underwater—are its province. R&D sets the standards for

film, chemicals, papers, and all types of miscellaneous photographic equipment. It tests new equipment and, when field activities report difficulties, the equipment is re-tested in an attempt to overcome the difficulty.

At the center itself, the Chemix section mixes the solutions. Then they are piped to the processing rooms at the desired temperatures. Brady should have seen this! Three to four hundred pounds of hypo are used daily. Still another statistic that packs a wallop is this: Over \$1,000 worth of silver is reclaimed each month by an electrolytic process, enough to pay for all the chemicals used in NPC in the same period.

Naval photography has its own technical bulletins, manuals, hand books

and news letters. The Publications Department prepares this material for the Photographic Section of BUAER. Currently the department is working on a hand-book entitled "Cold Weather Photography" which has already received praise from experimental units working in the Arctic.

Naval aviators in the jet age guide costly aircraft at terrific speeds. It is no simple matter to train them for flight. Every means of instruction is used, and visual presentation fastens an idea in the mind of an aerial neophyte. Skilled photographers, gifted craftsmen, astute editors, aided and abetted by scenarists, scene designers, and other specialists add up to an imposing faculty, a powerful ally in the training of future naval aviators.



CONTACT PRINTERS ARE KEPT BUSY FILLING WORLDWIDE REQUESTS



FINISHING ROOMS CAN HANDLE 25,000 PRINTS IN EIGHT-HOUR DAY

VP-9 PUTS GRAMP'S ADVICE TO WORK



THE DAY AFTER THE BIG SNOW AT NAS ATSUGI, ONE OF THE ORDNANCE CREWS STARTS CLEANING THE GUNS ON A VP-9 NEPTUNE PATROL PLANE

FOR A FULL year, VP-9, the only regular Navy patrol squadron commissioned since WW II, successfully completed every training and operational mission without mishap. Thus, they maintained a constant standing among the safest squadrons of the fleet. They believe they are a good example of the full application of Grampaw Pettibone's advice as well as safety rules.

Starting in February of 1953, the squadron was changed from P4Y's to P2V's with no pilots qualified in the *Neptunes*. During the following 12 months, which included the training phase, TransPac and operations in the Far East, the squadron logged 8,551 accident-free hours.

The "old VP-9" had just returned from the Far East in February where, in addition to its regular patrols, it had worked closely with MAW-1 night

fighter squadrons in Korea, dropping flares in raids on Communist supply lines. Cdr. M. T. Ebright had just assumed command and the roster of officers was almost new with only seven officers being carried over.

The foundation of the unit, the enlisted complement, had just undergone a 50 percent changeover. In all, there

were 16 "plank-owners," one officer and 15 enlisted men. So, with the new skipper, new aircraft, new pilots (many of them recalled Reserves) and a freshened enlisted contingent, VP-9 embarked on an intensive reorganization program.

The first few months went into check-outs in the shops, offices and planes. When the first P2V was received, the squadron had four pilots with a limited amount of *Neptune* experience. In February, 238 flight hours were logged. Each month the total steadily increased until, at this time, the monthly average has reached over 850 hours.

All hours were safely flown. This included familiarization, instruments, ASW, ECM, mining, rockets, bombing, navigation, shipping surveillance, numerous HUK exercises and the squadron's share of operational com-



VP-9'S NEW INSIGNE SIGNIFIES ITS MISSION



CDR. EBRIGHT EXPLAINS THE MECHANISM OF A PROP TO MIDSHIPMEN



SAFETY TROPHY PROVES THAT VP-9 IS GRAMP'S FAITHFUL DISCIPLE

mitments during this training period.

In conjunction with the training, the combat air crews were schooled on the ground in survival, engineering, recognition, electronics and all the many phases necessary for crew qualifications. When the ground school hours were reviewed just before deployment, the crews found they had spent an aggregate total of over 17,000 hours in the classroom.

WITH GRADES of "excellent" in both its Administrative and Operational Readiness Inspection, 4310.8 hours in its log books and more ground school than it had experienced in a long time, VP-9 was ready to take on any assignment. Then the blow came. Two weeks before its deployment date, 12 plane commanders and first pilots were released to inactive duty. Nevertheless after a quick reshuffling of crews, all planes took off on schedule.

Besides getting off on time, every plane arrived at and departed from each stopover point on schedule. The aircraft maintenance difficulties were at a minimum. All planes arrived in Japan on schedule. This was an achievement equalled or bettered by few, if any, squadrons.

After a brief checkout in Japan, VP-9 set out to uphold the good reputation it had established previously in the Orient. It still claims the record for total missions flown by patrol squadrons deployed to the Far East with its score of 595 missions flown during the height of the Korean War.

On its deployment, after the truce,

every operational commitment was fulfilled with the exception of one flight. That one hop stayed on the ground along with every other plane at NAS ATSUGI the day of the heaviest snow of the century.

Since heavy snow is the exception rather than the rule in that section of the world, NAS ATSUGI found itself without a single snow plow. So, a little time was lost as the *Sea Bee* detachment road graders cleared 12 inches of snow from the runway.

In view of the sudden change of pilots before moving and the need for constant vigilance in maintaining proficiency in operation, the training program was continued. Approximately 400 flight hours a month were spent on the training syllabus.

The squadron took time out from its own training activities to explain



VP-9 MECHS PULL POST-FLIGHT INSPECTION

their operations to Japan's first crop of post-armistice midshipmen. Crew Ten acted as guides for the visitors who were just as interested in the service ribbons of the reception committee as they were in the long-range patrol planes they inspected.

These midshipmen are the first naval officer candidates being trained for the budding Japanese Security Force which will eventually relieve American Security Forces in Japan. Each officer candidate was selected by competitive examination from among over 15,000 college graduates throughout Japan. Upon completion of their one year of technical indoctrination, they will be assigned to the Japanese air and surface naval security force.

Thus, for a solid year, the "new VP-9" assumed its responsibilities, met each challenge and carried out its mission safely and efficiently. ComAirPac recognized this record and, during the second quarter of 1953, VP-9 was a second-place safety award recipient. The ComAirPac Safety Award was presented to the squadron during the third quarter of the year. Because of its overseas deployment during the fourth quarter, VP-9 wasn't eligible for the award. However, 2278.1 accident-free hours were flown during the quarter.

The pilots place the credit with the high maintenance standards of the ground crews and the careful pre-flight checks by the flight crews. It's also standard routine to give each engine a quick going over after every hop. This habit has paid off in thousands of hours of accident-free flying for the pilots.

FROM HERE TO THERE ON INSTRUMENTS



BROCKMAN, CHAMBERLAIN AND BRADY THOROUGHLY PLAN FLIGHT BEFORE FILING WITH ODO

IT WAS beginning to rain. Low scud was moving in west of the field, and the wind, which until now was a slight breeze down the runway, suddenly increased in intensity and flattened the grass at the edge of the taxiway. The pilot of the large "iron bird" on the turn-up ramp winked at his co-pilot and patted the pocket of his flight jacket. Therein was a small rectangular card that pointed out the fact that the bearer was qualified in all respects to perform this mission, an instrument flight from here to there.

A few minutes later a casual observer gazing out a rain spattered window shook his head, tossed the last drop of coffee down his throat, and reached for another weed. "Looks like Ed is going to earn his flight pay today," he muttered. "He disappeared at 300 feet."

Scenes like this are taking place daily. On the surface the success of the mission depends upon the capabilities of you as the pilot and your flying machine. If you are qualified to battle the elements by virtue of possessing an instrument card, you can get from here to there in fair weather or foul as long as your airplane has the proper equipment.

But there is more to this than meets the eye. Let's go back and review what happens "behind the scenes" an hour or so before you or anyone else two-block the throttles and disappear into the murk at the end of the runway. Many wheels are set in motion, all for the purpose of assisting you in the successful completion of your IFR flight.

The first step begins with proper pre-flight planning. We bow our heads

in memory of those who waltzed up to the clearance desk and said, "Put the weather on it and I'll fly it."

OUR PRESENT system of clearing IFR flights is so detailed that now it takes almost as long to plan a flight as it does to fly it. An analysis of the entire route is necessary in determining airways to be flown. Flight altitudes, distances between fixes, estimated times for each leg, estimated fuel consumption, holding patterns along the route, let-down procedures for both destination and alternate airports, the Notam file, and others must be determined before you make out the flight plan form.

Once the flight is planned, the next step is to get the weather picture. It has been whispered around that most weather guessers glance out the nearest port and measure the ceiling and visibility with seaman's eye. Don't you believe it. Millions of dollars in research and equipment have gone in to provide you with an accurate picture of the weather at any place and at any time of the day or night.

If your aerologist says, "It's wet in Podunk," it's wet in Podunk. It may be dry when you get there, but he can probably tell you that too. Many of our late friends either ignored the advice of the forecasters or tried to out-guess them. Each has become a milestone in the progress of aviation safety. The weather forecast enroute, at the destination, at the alternate, and a two-hour terminal forecast are yours



WEATHER BRIEFING IS A SAFETY NECESSITY



INSTRUMENT FLIGHT CLEARANCES ARE RELAYED FROM NGU TOWER BY SAUNDERS AND WALDROP

for asking—"forewarned is forearmed."

After you have been briefed on the weather and the forecast signed by the aerologist, your flight plan is ready for scrutiny by the operations duty officer. When the ODO affixes his signature to the flight plan form (DD 175), he is in effect certifying that the proposed IFR flight as indicated on the plan can be safely flown with the required minutes of flight time remaining upon reaching the destination, or alternate if necessary. Don't sell him short. He is relying on you to do as you specify in your pre-flight planning.

Upon approval of the IFR flight plan, the ODO turns it over to the

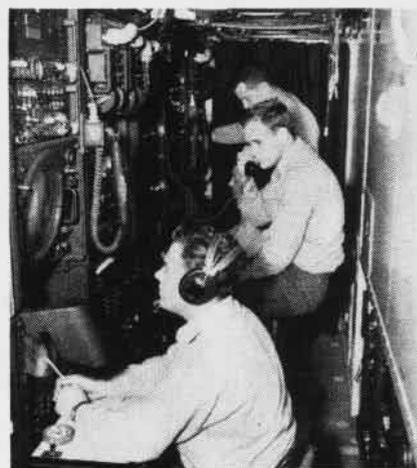
periodic position reports are recorded by CAA personnel whose jobs are to monitor IFR flights. Since all IFR flights are expected over the compulsory reporting points within three minutes of the estimated time given, it can be seen how important pre-flight planning becomes. If you are a prudent pilot, you will check the enroute weather broadcasts to ascertain the possible changes in the weather ahead. In the USA, all airways communication stations having voice facilities on continuously operated radio ranges or beacons, broadcast weather reports and other airways information at 15 and 45 minutes past each hour of the day.

get mighty hairy if you don't pay attention to your altitude and time. That slipstream you sometimes run into in your holding pattern isn't always yours. If you could get a look at the rest of the stack, you'd never vary your assigned altitude again.

A large majority of the instrument flights terminate in a GCA approach and landing. To accomplish this the final wheel is set in motion and another team "behind the scenes" in instrument flying takes over. To attempt to stress the importance of GCA in a few words is impossible. The confidence that naval aviators have in GCA is an indelible tribute to the per-



NAS CHAMBERS FIELD GCA UNIT IN POSITION TO BRING AIRCRAFT SAFELY THROUGH 'SOUP'



GCA STATIONS MANNED FOR AN APPROACH

dispatcher, who in turn puts it on the proposed flight board and notifies Air Traffic Control. The dispatcher then notifies the air controlman in the tower. When the approved ATC clearance comes back from the air traffic control center servicing the area, it comes to the air controlman in the tower. After reading it back for clarification, the tower operator is ready to transmit your clearance to you.

If possible, ATC will give the clearance as requested, but there are occasions when congested traffic makes it necessary to amend the proposed route or flight altitudes. After you read back the IFR clearance to the tower and have been assured that it is correct, you are finally ready to go. Maybe it took a little time, but time is expendable when it means your safety and the safety of others.

After you are airborne and progressing along your IFR flight route, your

Along your route it may be necessary to clear you to a particular holding fix with instructions to report over that fix for further clearance. When you report over the fix, you are either instructed to hold and await further clearance or you are sent on your route with a new clearance. Needless to say, accurate reporting is necessary. Air traffic control people are human beings too, and nothing shakes them up more than your tooling around in the soup miles or minutes from where you ain't. Pay a visit to your nearest ATC center some rainy day and get an eyefull.

When you reach your destination, another wheel is set in motion in the form of Approach Control. It is the responsibility of approach control to regulate all instrument traffic within a specified area, including the issuing of expected approach times. At this point, you may be put in a stack to await your turn for an approach. It can

sonnel who man the familiar yellow trailers out by the instrument runway.

GETTING your aircraft on the ground in one piece at your destination does not end your IFR flight. One other important item that must be accomplished, before you can relax and chalk up another routine instrument flight to experience, is closing out the flight plan. By doing this, the overworked wheel of "search and rescue" and the wheel of "justice" will not have to be set in motion. You are then living proof that those who sacrificed their lives to make instrument flying safe for you have not died in vain.

Your instrument flight is no longer a matter of capability of pilot and aircraft alone. It includes close cooperation with the personnel "behind the scenes." Their presence, inconspicuous as it may seem, is your ticket to safety in the battle of the elements.

JET PILOTS SET CROSS-COUNTRY RECORD



RECORD-setting Navy pilots Barrow, Rich and Brady stand beneath the refueling tube of the plane Brady flew. This was prior to 2,438-mile dash from the west to east.

NOT ONCE, not twice, but three times within the space of a brief 99 seconds of flying time, three Navy jet pilots set a trio of new unofficial speed records for a cross-country flight.

The pilots from VF-21 at NAS NORFOLK, flying carrier-based *Cougar* F9F-7 planes, were on a routine training flight. LCDr. F. X. Brady, Ltjg. J. C. Barrow and Lt. W. Rich had made no preparations to establish a new mark when they took off from NAS SAN DIEGO for NAS NEW YORK. The first indication came when an officer in Operations called LCDr. James Fuller in the Command Liaison Office at New York and asked what the existing transcontinental record was.

When he was told that Col. W. M. Millikan had set a record of four hours, eight minutes and five seconds, the Operations officer informed Fuller that a flight plan had been filed on the West coast which estimated it would take four hours to be over the New York air station.

The 2,430-mile, non-stop flight was facilitated when the fliers took on 750 gallons of fuel in four minutes from a *Savage* tanker while flying at 200 knots over NAS HUTCHINSON. The pres-

surized cockpits permitted the pilots to fly the "jet stream," a phenomenon which consists of high-speed winds encountered usually at altitudes above 30,000 feet. It helped tremendously.

The pilots flew between 40,000 and 45,000 feet and averaged 645 miles per hour. At times they reported over 700 knots.

LCdr. Brady began letting down over Harrisburg, Pennsylvania, at a rate of 4,000 feet per minute. The three Navy men reported the flight as "uneventful and routine," after landing at NAS NEW YORK. They said they rolled "poker-dice" to determine their order of take-off and which of the three *Cougars* each would fly.

LCDR. BRADY, the swiftest, made the flight in three hours, 45 minutes, 30 seconds; only one minute, 19 seconds faster than Ltjg. Barrow who took three hours, 46 minutes, 49 seconds; and less than two minutes faster than Lt. Rich who required three hours, 47 minutes, 9 seconds.

Barrow might have bettered Brady's record had he not been delayed for a few minutes at NAS HUTCHINSON. Brady and Rich were refueled first by the AJ tanker. Then it had to land to refuel itself in order to resume its position "on station."

As Barrow arrived over Hutchinson, he was a minute-and-a-half ahead of



THE PROSPECT of dinner on the east coast after a bite of brunch on the west coast pleases the space-eating jet pilots as they pose happily after New York arrival.



TRIO roars over NAS New York flying almost too fast to be stopped by camera.

Brady's time, but the tanker was still climbing up to the 25,000-foot level, the altitude at which the pilots were to refuel. Barrow went down to meet the plane and refueled at 16,000 feet.

That broke Barrow's chance of bettering Brady's record. The time it took him to maneuver to a rendezvous with the tanker and climb back up to his altitude cost him approximately four precious minutes in his flight.

S2F-1 Makes Crash Landing Pilots Circle Field for Two Hours

NAS QUONSET POINT—Two Navy pilots escaped injury when their Grumman S2F-1 *Sub-Killer* was forced to belly-land because the port landing wheel was jammed.

After circling the field for two hours, the plane was directed in by the LSO, Lt. Nathan F. McDonald. LCdr. Conrad G. Welling and his co-pilot, Lt. Robert S. Marts, brought the crippled aircraft in for the landing before a crowd of about 1,500 persons who gathered as word spread the aircraft was in trouble.

The S2F-1 is one of several new hunter-killer planes assigned to VS-32 and believed first of its type to crash-land.

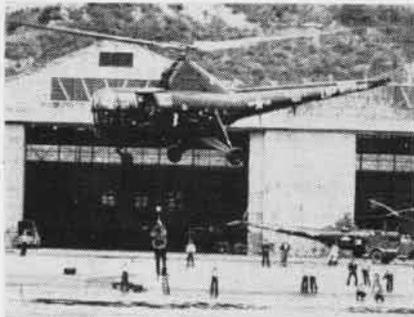


UNINJURED PILOTS THANK LSO N. F. MCDONALD

It Was a Wet Initiation Chief Gets His Hat the Hard Way

When most "white hats" make chief, they must first be tossed into the water before donning their new hat. When helicopter pilot C. J. Fenton, ADCA (AP), of NAF OPPAMA made chief, he got a different kind of initiation into the hat-wearing fraternity.

He was tossed out of a rowboat in Tokyo Bay and then "rescued" by a helicopter piloted by LCdr. J. T. Braithwaite, OinC of HU-1's DET-1. The



FENTON BEING HOISTED OUT OF TOKYO BAY

water temperature at the time was 59°, so the new chief was slightly blue when he finally landed.

This type of initiation was considered appropriate because Fenton is believed to have made more live water hoists than any other helicopter pilot and had never been hoisted himself. During his tour as an HU-1 pilot, he amassed a total of 1155 water hoists. The majority of them were made while checking out pilots at COMAIRPAC's Survival School. His one-day record is 84 hoists.

LSO School Is Established

Two More Will Be Located in East

NAS JACKSONVILLE—Fleet Air Jax logged another "first" with the establishment of the Navy's only Landing Signal Officers School at White House Field. Located 10 miles north of NAS CECIL FIELD, the site is used by the Navy for FCLP and aerial exercises.

The school is the first of three proposed by VAdm. J. J. Ballentine, then Commander Air Force, Atlantic Fleet, as the answer to the severe shortage of qualified LSO's in his command. Two others are to be located on naval installations at Norfolk and Quonset Point. Approximately 72 qualified LSO's will graduate annually.



CAG-1 SENIOR LSO SHOWS "PADDLE WAVING"

The first group of student LSO's began classes under the supervision of LCdr. T. G. Buckenmier, RAdm. O. B. Hardison's staff LSO. There were six naval aviators from CAG-1 and four others from CAG-10. During the three-week course, students were taught to direct aircraft landings on practice landing fields and aboard carriers, both at day and night.

According to LCdr. Buckenmier, two requisites for a good LSO are the ability to keep a cool head in a tight situation and a sort of sixth sense for differentiating between good and bad carrier approaches.

NAF Naha is Opened Again Facility is Closed for Over a Year

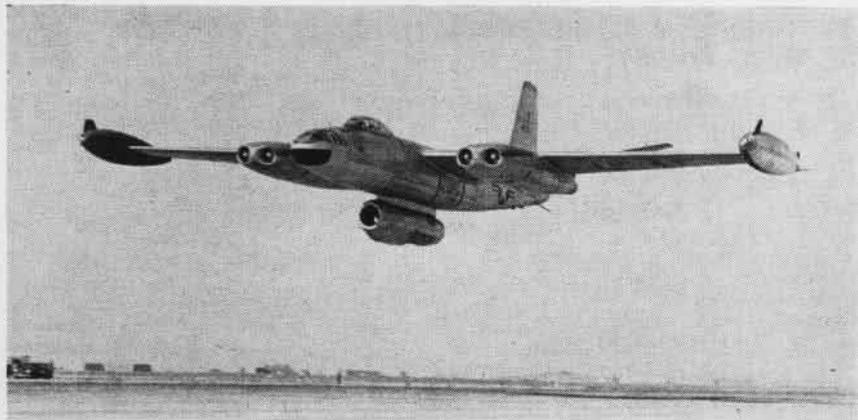
NAF NAHA—After 13 months of inactivity, the air strip has been reopened. The facility was closed while a new runway and new taxiways were constructed.

During this period, the facility conducted all of its activities at KADENA AIR FORCE BASE. VP-22, VP-1 and VP-4 remember the hectic period of bad roads, poor communications, no transportation and difficult operational commitments.

In late February, NAF NAHA commenced air operations when it brought home the station's *PBY*. The *Yoke Boat* was followed by VP-4's P2V's.



THE SKIPPER AND EXEC MEET A RETURNING PBY



STRANGE-looking bomber is caused by an Allison J71 turbo-jet engine slung in a retractable pod built into the bomb bay of a B-45C bomber. The engine is being test flown from a flight test facility recently established by Allison at Edwards AFB.

Flare Warning Pays Off Costly Crashes Avoided Three Times

NAS ALAMEDA — The recently-installed flare warning system used by the runway wheel watch has more than paid its way thus far. In the short space of five days, the system was used three times to avert possible crashes.

The first incident occurred when D. J. Wyatt, AN, was standing the wheel watch. An F9F was making an approach to runway 31 with the port landing gear not in the locked position. When the plane was in the final approach, Wyatt noticed the landing gear wasn't fully extended and fired his flares. At the same time, the pilot commenced a wave-off to the left because of his high approach speed and didn't see the flares. If the circumstances had been slightly different, a crash would have resulted.

The second save was made by R. L. Heck of the Air Traffic Control Branch of the Operations Department. This potential accident was avoided when an F9F was making an approach to runway 31. Heck noticed that the F9F didn't have its nose gear extended and fired the flare warning system while the plane was in the final approach. Another plane, following the F9F in the landing pattern, saw the flares and immediately radioed the pilot to take a wave-off. The pilot did and fully extended his gear on the second pass for a normal landing.

The third incident occurred when a TBM taxied into the off spot for take-off. Thomas Tompkins looked at the tail section of the TBM and no-

ticed that the red rudder batten was still in place. Tompkins fired the flares and the pilot stopped his take-off run in time to avert a possible accident. A new wrinkle on the use of the flare warning system was born and created a happy pilot.

Form WAVE CAP Squadron FAETU's Briddell Sparks The Program

An old hand at civil air patrol squadrons has formed the nucleus of a new branch of that organization for Waves at NAS QUONSET POINT.

Vince Briddell, TD1, who has been an active member of CAP for the past six years, has to date enrolled seven members into his program. This girls' unit will serve as an auxiliary unit to

the Providence-Cranston squadron.

The purpose of the CAP is to stimulate interest among the youth of the nation in civilian and military aviation. They also act as observers in the ground observers corps.

Some of Briddell's group will become observers, while others will qualify as instructors. The program is open to all. Males also are being accepted, as members of the group.

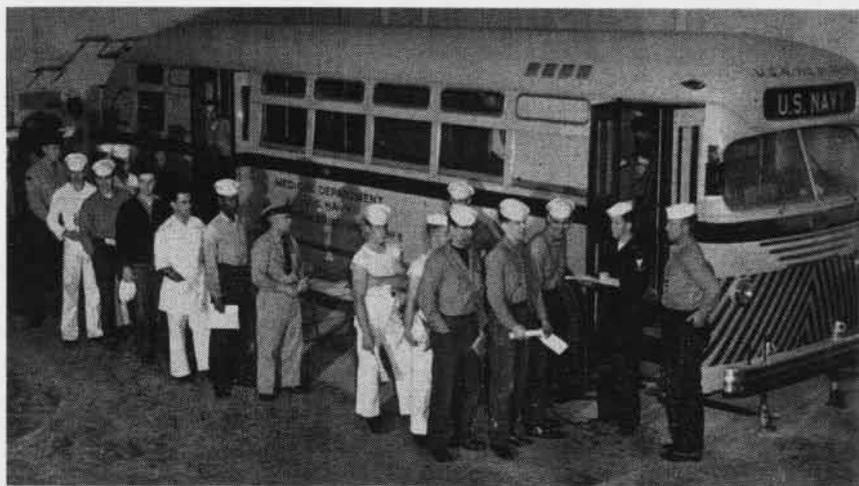
Copter Rescues Fishermen Two Pulled from Shoal at Key West

Lt. R. D. Cogswell and AP F. E. Heggod from NAS BOCA CHICA recently rescued two fishermen from Middle Sambo Shoal near Key West after their boat capsized.

The two men, L. D. Edwards and J. S. Granger, were anchored near Sambo Shoal early on the morning of 29 March when they decided to move to another location. They forgot to hoist the anchor, and the boat sank. Using two kapok pillows, the men managed to reach the shoal four and a half hours later.

They were sighted early in the afternoon by a Navy pilot flying a F3D *Skyknight* over the area during training exercises. He notified the air station.

Within 15 minutes, Cogswell and Heggod were on the scene executing the rescue. The fishermen were rushed to the Naval dispensary for a checkup. Neither suffered serious injury.



SEA-GOING bus containing a chest x-ray mobile unit had no trouble getting oriented aboard the Coral Sea, although it had the distinction of being the first of such units to experience sea duty. Hoisted aboard the carrier by a giant crane at Portsmouth, the mobile unit was lowered into a hangar bay on one of the plane elevators. X-rays, using the ship's power, were given to 2200 men in two weeks.

THE AIR NAVY BELOW THE WATERLINE



THE FLIGHT DECK OF THE ORISKANY IS A BUSY PLACE AS CREWMEN GET READY FOR 'OPERATION PINWHEEL' STEAMING INTO SASEBO HARBOR

AS THE *Oriskany* steamed into Sasebo Harbor recently, flight deck crews were bent on an all-hands task. They were busy respotting the carrier's planes for "operation pinwheel" using CVG-19's prop and jet planes to provide the carrier with her maneuvering power.

Steaming out to join TF-77, these same crewmen provided the teamwork necessary for CVG-19 to garner an "outstanding" in three fields and an "excellent" in ten during their Operational Readiness Inspection by COMFAIR HAWAII. These marks were attained despite the fact that the air group was the first group to be deployed to the Far East with each of its four squadrons flying different aircraft. Furthermore, the flying was done in near "no wind" conditions.

The teamwork on the flight deck is always apparent. Hundreds of men are bent on performing one task—getting planes into position for an operation,

fast. But the greatest teamwork of all, probably the most coordinated effort made during carrier operations, isn't visible on the flight deck. That's why it often goes unrecognized.

This action takes place many decks below, hidden from the documenting lens of the camera. Far removed from the rapid tempo of flight deck operations, the casual observer is unaware of the men in the engine rooms and boiler rooms below. Yet without them, not one single plane would leave the deck. The big muscle of the Navy's air arm would be nothing but a helpless mass of steel drifting aimlessly on the ocean.

To most persons, flight operations begin when the air officer, overlooking the flight deck from "primary flight control," gives the green light signal. Actually, operations begin when the Officer-of-the-Deck receives the order to increase the speed of the ship to compensate for the existing wind.

Before the first plane can be safely launched, at least 30 to 35 knots of wind must be blowing down the flight deck. If sufficient wind isn't present, the work of the men below decks becomes more important than ever. The difference has to be made up by the ship's engines. The skill and precision with which the men in the engine rooms and boiler rooms answer the engine orders issued by the OOD on the bridge means the success or failure of the mission, whether in combat or in peacetime training.

SPEED of a 33,000-ton, 150,000-hp ship isn't regulated by pressing an accelerator or turning a switch. It still takes hard manual labor. When the OOD sends an order below to increase speed, 32 men manning the four engines and 28 others in the boiler rooms spring into action.

The valves are turned, pumps speeded up, throttles are opened, addi-

rional burners are "lighted off," and scores of gauges are watched anxiously. There can't be any departure from the highly critical readings; they must remain nearly constant at all times.

A FEW wrong moves or gauge readings missed and not compensated for may result in loss of steam pressure which could lead to loss of power. This is a dreaded event for any commanding officer and a true nightmare to the chief engineer. Engines would stop, turbo-generators would no longer produce electricity, the galleys would be unable to prepare food and ship-board activity would come to a standstill.

Obviously, everything and everyone aboard a carrier relies on the steam

third of a pound of salts present in each gallon of seawater has to be extracted by the evaporators which also operate on steam. Two sets of three run day and night to quench the thirst of crew and turbines.

The water they produce is purer than distilled water placed in an automobile battery. It has to be because, as steam, it is heated and reheated to 850°, then forced into the engines under a pressure of 600 pounds per square inch. At this great temperature and pressure, even the slightest amount of impurity eventually clogs and corrodes steam lines and boiler tubes, causing serious damage to complex propulsion machinery.

Some of this heat is bound to "rub off" in the air that fills the engine

water content of the fresh water passing from the *Essex's* evaporators into the storage tanks.

The first impression an outsider receives in either the fire rooms or machinery rooms is the presence of tremendous power. Each of the four whining engines, larger than the living room of an average home, produces 37,500 hp, enough to push 33,000 tons of steel through the water at 33 knots.

The boilers, comparable in size to two-story houses, continually produce a constant supply of super-heated steam. Evidence of great power is everywhere—steam pressure gauges with the needles quivering at 600 pounds, temperature gauges indicating 850°, huge steam lines, giant gener-



SALT WATER CONTENT TESTED BY D. SHARP



NUNN SEEKS ELUSIVE FLAWS IN OIL STRAINER



STEAM CONTROL VALVE ON ENGINE REPAIRED

produced by the boilers. Vital needs may be met temporarily by emergency diesel generators and motors, but steam is the life blood of the carrier. It flows from the boilers through main arteries a foot in diameter, branches into hundreds of miles of capillaries which reach throughout the ship, then circulates back to the engine rooms to be condensed into water again and is refed to the boilers.

Every drop of fresh water must be used and re-used carefully. The evaporators manufacturing it are capable of producing only a fraction of the 2,500,000 gallons which must be converted into steam during a day of standard operation.

The water must be chemically pure before it enters the boilers. The one-

rooms and boiler rooms. Although these spaces would seem extremely warm to the unacclimated, they are amazingly cool under the circumstances. Elaborate exhaust and ventilating systems keep thermometers at 100° or less, depending on the temperature of the outside air and seawater. A visitor soon forgets the heat as his interest turns to the array of machinery of all types and sizes.

Anyone who shows enough interest to make the trip "south" of the third deck aboard a carrier such as the *Essex* will encounter real hospitality. The men in the engineering gang, all 500 of them, are eager to explain the operation of even the smallest motor or pump. There he can see Dean B. Sharp, FN, carefully testing the salt

ators, electrical switchboards and pumps. All of these add to the crescendo of sound which leaves the outsider's ears ringing long after the climb topside.

DESPITE the enormous size of these pieces of machinery, the machinist's mates still speak in terms of thousandths of an inch. To insure against breakdown owing to the great demands placed on the propulsion machinery by fast carrier task force operation, carriers have a program of continuous preventive maintenance similar to the one carried on by the *Essex's* chief engineer, Cdr. C. R. Brandt.

Under the direction of his main

propulsion assistant, Lt. H. A. May, men check critical points, measure clearances and replace worn parts. Everyone from chief petty officer to fireman apprentice has his job to keep the ship running efficiently.

WHETHER it's William C. Giles cleaning the firesides of the boiler furnaces or another man calibrating a temperature gauge, each task is done with equal skill. The men are keenly aware of the fact that individual performance of their duties often decides the delicate balance between full power or loss of power.

If serious trouble develops, the engineering machine shop turns out any part necessary for emergency repairs. Well-trained machinists manufacture

Panthers and *Corsairs* striking over North Korea at the Communist Reds.

The engineering team made it possible for the *Phil Sea* to stay in the fight despite her serious handicap in carrier speed.

Five separate divisions compose the engineering team aboard a carrier. The Auxiliary Division is responsible for the refrigeration plants, machine shop, heating and emergency diesel generators. The Boiler Division operates and repairs the boilers and their auxiliary machinery as well as manufacturing the fresh water and maintaining the evaporators.

THE ELECTRICAL Division maintains the lighting and power systems. The Machinery Division operates

mobility of the carrier depends on the skillful execution of engine orders by these men.

Many instruments are installed in the crowded fire rooms and machinery rooms to help personnel to better understand orders issued by the OOD on the bridge. These include compass repeaters, rudder angle indicator repeaters and wind direction and force indicators.

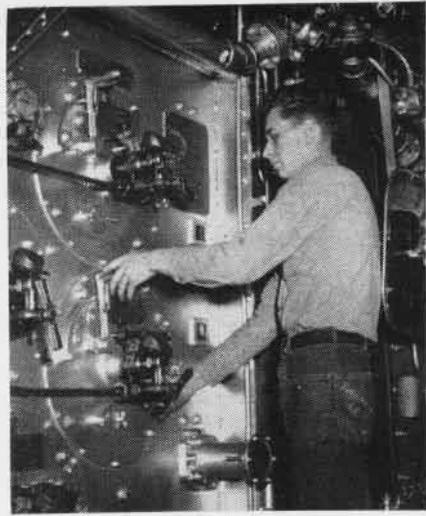
There's a fascination to these jobs below the waterline and most of the men wouldn't trade their jobs for any other aboard a carrier. The best example of this devotion is Jerry D. Freckleton, a fireman aboard the *Yorktown*. He went below the waterline to visit a shipmate and liked the work so well that he changed his job to fire-



W. C. GILES CLEANS FIRESIDES OF A BOILER



MM2 DAVIS ANSWERS ENGINE ORDER WIRE



ADDITIONAL BURNERS ARE LIT FOR SPEED

a bearing, part or gear from blueprint or sample. Philip C. Duncan, MM2, and John T. Page, MM1, and other machinist's mates can complete an important repair job while underway without affecting the ship's speed or operating schedule.

The urgency of repairs while the carrier is underway was aptly demonstrated during the Korean War. It happened to the *Philippine Sea* while she was pounding Communist front-line positions in all-out carrier operations.

Damaged couplings forced her to operate on only two out of her four shafts. Working day and night, engineering personnel under Cdr. N. Sonenshein made the repairs at sea, allowing the ship to keep *Skyraiders*,

and keeps the main propulsion machinery in top condition. The Repair Division is composed of the ship's welders, ship fitters and damage controlmen.

Immediate and proper response to the engine order telegraph is the first objective of the ship's engineering force. Fred H. Davis, MM2, stands the throttle watch at one time or another. He answers the engine order telegraph at main engine control and begins the chainwork of coordinated action necessary to change the speed of the ship.

Responding to the order to increase speed, Lloyd C. Torgerson, BT3, lights off additional burners as Darrell L. Holladay, FN, regulates the flow of fuel oil to the boiler furnaces. The

man. As Freckleton says, "Of course it's hot down here, but there's something about it that gets in your blood."

AS AIRCRAFT carriers, cruisers and destroyers of a task force turn into the wind and prepare to launch aircraft, the team below the waterline swings into coordinated action. As flight deck activity increases when the pilots man their planes and plane handlers direct the aircraft into launching position, the engine rooms and boiler rooms increase their tempo too.

The actions of these men are every bit as important as those of men "topside." Although their rates don't show it, they're entitled to recognition as part of today's "Air Navy."



PLANE (upper left) was in two-plane runway accident at the Cleveland-Hopkins Airport, and the other (upper right) was trucked 90 miles by crew from NAS Akron from the crash site near Willoughby, Ohio. Lower picture shows finished product.

RESERVISTS CREATE 'BLUE-TAILED FLY'

ANOTHER "blue-tailed fly" has been born. Four men at NAS AKRON sparked the difficult job of rebuilding a crashed AD-4N which would ordinarily have been stricken from the Navy lists.

It started when word was received that a plane had crashed at Lost Nations Airport, near Willoughby, Ohio. NAS AKRON immediately sent a salvage officer to the scene. The aircraft had landed on a newly constructed runway, over-turned and partially settled in the soft earth. Class B damage was evident with possible Class A damage.

NAS AKRON was assigned the tedious task of salvaging the aircraft. After receiving the permission and aid of the Ohio State Highway Patrol, and overcoming numerous handling difficulties, a nine-man stationkeeper crew transported the plane over approximately 90 miles of state highways to NAS AKRON.

Coordinated investigation revealed that an estimated 1200 man-hours and

considerable technical ability would be required to renovate the plane. Officers and men of the Aircraft Maintenance Department accepted the challenge to their Navy-bred skills. NAS AKRON does not have AD aircraft, so a Douglas Aircraft representative was called upon for technical assistance.

The canopy, instruments, horizontal stabilizer, windshields and fairing were procured from a stricken AD-4N involved in a two-plane runway accident at Cleveland-Hopkins Airport, Cleveland. Its engine had been previously installed in another AD-4N, involved in the same accident.

The tail section was procured from an AD-1, delivered to Norfolk, Virginia by barge from Chincoteague, and then flown to Akron in an R4D. The rudder was obtained from NAS GROSSE ILE, brake pucks from NAS QUONSET POINT, a new prop from Philadelphia, and other small parts from Norfolk Supply and Salvage Yard.

The work was accomplished as manpower was available. Four men finished

the job, using 1037 man hours over a nine-month period, led by W. D. Morse, AM1. Estimated cost of labor was \$1,555. Strike value of an AD-4N is \$186,990, so the "blue-tailed fly" saved the Navy a tidy sum.

Tampa Sacked by Pirates

Every year the city of Tampa, Florida, takes a week off from the routine of daily life, and dedicates itself to a celebration in honor of Jose Gasparilla, a colorful pirate who years ago ransacked the west coast of Florida.

"Spearheading" this year's invasion, consisting of 100 boats and a full-rigged pirate ship, were members of the NavCad Procurement Team from NARTU MIAMI. "Miss Gasparilla NavCad," in civilian life Miss Eleanor Brautigam of Long Island, assisted in the NavCad publicity during the celebration. The bloodthirsty (very thirsty) Pirate Crew of the ship are, in private life, Tampa's leading businessmen. Many are Air Reservists.



THE KEYSTONE Cops, otherwise known as NAS Los Alamitos Seaman Guard show new uniforms which make them look, feel snappy.



IN RESPONSE to a request, TV show "You Asked For It," came to NAS Los Alamitos for survival gear demonstration for ABC net.

Life Raft in Every Home

Someone in Fort Wayne, Indiana, asked Art Baker of the "You Asked For It" television show what the Navy's aerial life rafts contained, and Art came to NAS LOS ALAMITOS for the answers. Art got the answers, and they were televised on the coast-to-coast TV show, via kinescope. LCdr. Howard Sturm, CLO of the station, explained and demonstrated each item while paddling about a specially constructed tank.

Technical work on the survival equipment was done by C. A. Peterson, PRC, and the four sets of rafts and allied equipment used in the production functioned perfectly.

Station Roundup

● **NAS ST. LOUIS**—Members of hurricane-hunting VW-4, based at NAS JACKSONVILLE, staged a two-day indoctrination of

St. Louis squadron VP-921 on the finer points of hurricane and weather reconnaissance as well as fleet activities. The instruction period, designed to instruct the Reservists in the latest methods and techniques used in the Navy, climaxed three months of preparations and planning with Fleet Air Jacksonville. St. Louis news media evidenced keen interest in VW-4 activities.

● **NAS COLUMBUS**—Twice a month five Navy wartime chaplains, members of Naval Reserve Chaplain's Company 4-9, meet at NAS COLUMBUS. Meetings are devoted to training, counselling and discussions of regulations and program. In addition the Reserve chaplains conduct divine services at the station and are on call for military funerals, counselling, confessions and to console the next of kin of deceased servicemen. The Company's CO is Cdr. Donald Shaw, pastor of the Oakwood Methodist Church. He served aboard the USS *Wake Island* in all theaters during WW II, taking part in the battle of Iwo Jima and Okinawa, and anti-submarine patrols in

the Atlantic. Executive Officer of the unit is LCdr. Earl Papke, Dean of Men at Capital University. LCdr. William G. Mottey, professor of Science and Religion at Aquinas College high school, was attached to the First Marine Division at Okinawa and later China during WW II. Other members of the Chaplain's Company are LCdr. Andrew Blackwood, pastor of Northminster Presbyterian Church, and Lt. Harry Bright, Jr., pastor of the First Methodist Church, Ada, Ohio.

● **NARTU MIAMI**—Good drill attendance by NAS COLUMBUS Reservists should result if the idea of LCdr. E. C. Peterson, CO of Columbus' VA-693, catches on. During a recent winter weekend, 30 enlisted men of the squadron were flown to Miami to soak up the sun and cavort at Miami Beach's famous hotels. One young Reservist, sporting a lobster-hued sunburn, said, "It hurts like fire, but it'll sure be worth it when my friends back in Columbus ask where I got so much of this red."



JOLLY ROGER held by Miss Brautigam of Long Island, N. Y. doesn't scare Miami NavCad Procurer "Red" Sellers during Tampa fete.



RECRUITER George Everding, ADC, attracts attractive decorations at Sports Travel and Boat Show recruiting booth in St. Louis.

SAFETY FIRST SAVES CREWMEN

ABOARD all U. S. Navy vessels and attack carriers in particular, safety factors assume dimensions of great importance. Their value aboard a carrier can't be underestimated.

These 40,000-ton ships, which contain huge quantities of fuel and ammunition can't operate successfully without proper precautions on the part of every one of the 3,000 crew members. Each day holds manifold potential dangers in the routine work of the ship.

Handling and loading ammunition, fueling aircraft, transferring fuel at sea and taking it on from tankers are all part of the average day of a carrier at sea. Lack of precaution in the smallest degree could conceivably cause a major disaster to nearly a half a billion dollars worth of material and machinery and over 3,000 lives.

The *Oriskany* has always had an extensive safety program aboard. It is founded on countless signs, regular classes and a library containing 550 safety motion pictures.

Even though the safety factor is heavily stressed, it's still human nature to minimize potential dangers after living intimately with them over a period of time. But a recent incident aboard the *Oriskany* exemplified the importance of the program and made a lasting impression on each man of the actual value of the old slogan "Safety First."

A *Banshee* jet, returning to the carrier from an afternoon of routine flying over the East China Sea, crashed into the stern of the flight deck and broke in half. The cockpit and engines hurtled forward and the tail section fell into the gun mounts on the fantail.

Flames exploded skyward. Engulfed with fire, the pilot escaped uninjured, aided by a "hot pappa." Within two minutes the alert crew had the flames under control.

The other danger area was on the fantail. Normally, this area is crowded with sailors employed in the normal routine of ship's work.

After the crash, debris littered the fantail deck and the battered *Banshee* tail rested vertically where it had fallen on the gun director. Directly before it was a large sign reading, "All personnel keep clear of the entire fantail



GRAPHIC EXAMPLE IS WORTH THOUSAND WORDS

while recovering planes. By order of the Executive Officer."

All hands escaped the accident without injury. Until the wreckage was removed, the tangled tail stood as mute but practical evidence of the actual importance of safety precautions.

Jax Aviation Radio School Only One of its Kind in Atlantic

The success of naval communications hinges upon accurate transmission and reception of radio messages. To assure ComFAir commands that their radiomen will be properly trained, FAW-11 recently graduated 34 students from a 12-week course at Jacksonville.

Since its establishment in August 1952, the school, the only aviation radio



CAPT. DAHL RECEIVES AS HARVEY SENDS

school in the Atlantic Fleet, has graduated 90 qualified apprentices. Capt. T. O. Dahl, wing commander, presented diplomas and praised them for the 3.39 class average.

J. B. Harvey, AT3, the class honor man, maintained a 97.3 average during the extensive course. Utilizing all available equipment, the students were taught the international Morse code, typing and radio operator procedure, disc recording, sound tape recording, perforated tape recordings and live sending. A minimum code receiving speed of 14 words per minute was required for graduation.

Headed by Lt. H. D. Roberts, FAW-11 communications officer, the staff consists of two chief aviation electronicsmen, one radioman first and one student assistant technician.

VU-4, Small Outfit—Big Job Equipped with JD's for Mock War

Probably the smallest aviation command in the Navy has one of the biggest jobs. VU-4 flying JD's consists of but 11 men and two aircraft.

Operating under the command of ComFAir, Jacksonville, VU-4 personnel pit their skill against that of surface vessels operating from Pensacola and Fleet Air aircraft squadrons based at NAS JACKSONVILLE. Mock air-to-air or ship-to-air battle procedures are practiced daily by these units to keep the coastal alert defenses on the ball.

Flying the counterpart of the Air Force B-26 bomber, VU-4 is based at NAAS CHINCOTEAGUE. As a rule VU-4 gets the short end of the stick, for interceptor planes report frequently that the "enemy" has been destroyed.

When the alert eyes of an ever-suspicious carrier pick up the presence of an intruding aircraft on their screens, fighter planes are launched to intercept it. On many occasions, VU-4's two JD's have been reported "shot down" as much as five or six times a day. Acting like the enemy also includes mock attacks at high altitudes.

Towing targets at 15,000 feet on a pre-arranged heading, fast interceptor aircraft fire at the sleeve as the VU-4 aircraft hits speeds ranging from 160 to 200 knots per hour.

● NAF WEEKSVILLE—GCA Unit Two, based at the Coast Guard Air Station at Elizabeth City, North Carolina, completed its 25,000th controlled approach.

A 'HELL RAZOR'S' GUERRILLA DAYS

FIGHTING a war with fire axes, knives, a few grenades, an M-1 rifle and just plain guts was the experience of Federico S. Romero, SD-2, of VF-174's *Hell Razors* at NAS JACKSONVILLE, during WW II.

Romero was a member of Magsaysay's guerrillas in the Philippine Islands. Their major objectives were organized attacks on a local Japanese airfield, rescue of American airmen shot down in the area and collection of military information.

Explaining how they raided a Jap airfield in his home town of Zambales, Romero tells that the Japs had civilians working on the airfield, only the civilians were guerrillas. They saw everything and made the plans, drew maps of the area and located the main objectives in the attack.

Prior to an attack, Magsaysay's guerrillas would go deep into the jungle and train. Then they'd make their way into a base, some with knives and fire axes, others carrying only grenades. Romero had an M-1 with three rounds of ammunition when they raided the airfield at Zambales. The guerrillas hoped to pick up more guns as the raid progressed.

Their first objective was the tower guard to insure the alarm would not be sounded. The men with knives went into the barracks and killed Japs, one at a time while they slept. The fire axes were used to smash gas cans and aircraft. They threw grenades into the crowded barracks with loads of damage resulting.

Romero's unit saved ten American pilots before the Japs could reach them. The men effecting the rescue

were congratulated by top officers and received a reward. Rumors promised pay for all guerrillas when the war came to an end, but Romero wasn't present to collect.

"The day the Americans came, I had good morale already for fighting," the former guerrilla added. "When they landed in Subic Bay, I enlisted in the Navy." Romero served the remainder of the war aboard the USS *Bootes*, an ammunition ship.

Explorer Scouts Are Trained

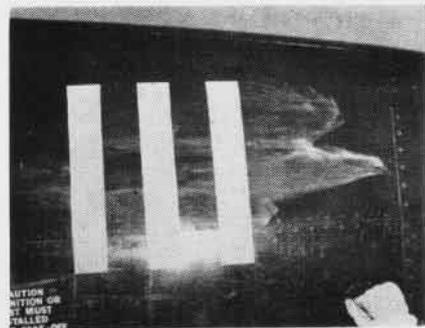
Flight Climaxes Pensacola Schooling

Explorer Scouts of Post 95, NAS PENSACOLA, recently received 13 hours of aviation ground training, climaxed by a two-hour flight in an R4D. Sponsored by the commanding officer of the air station, the scouts attended ground school classes consisting of aircraft engine familiarization, instruments, communications, theory of flight, and nomenclature and operations of aircraft.

The last phase, demonstration of flying basic patterns and one hour of link trainer operations, was the highlight of the training, according to the scout-students.

Prior to the flight, during which each lad had a turn at flying as co-pilot, the boys toured NAAS CORRY FIELD and witnessed a helicopter demonstration by one of Corry's search and rescue pilots.

Mr. John Gieseke, civilian fire captain at the NAS is chairman of the Explorer Scout post committee. H. H. Haley and John Hinni, enlisted men attached to NAS PENSACOLA, are post advisors.



NOT A PAINTING, but the unusual result of a collision between a seagull and a Congar during FCLP near Port Lyautey. Plane speed was 125 knots at 200 feet.



TRADITION was shattered when a female reported for duty with the staff of RAdm. O. B. Hardison, ComFairJax. Not only is 21-year-old Ens. Shirley Scott the first feminine member of his staff, but she is also the Navy's youngest WAVE Officer.



AS PART OF the fitting of Navy's newest Mk 3 and Mk 4 exposure suits, VP-3 "Huskies" are dunked in the St. Johns river at Jacksonville to test the waterproof fit of the suits. The new suits are "form fitted" at the neck, wrist, leg and, after the correct shoe size has been fitted, rubber boots are cemented to the suit. Over 135 VP-3 airmen have been tailored for the survival suits by the squadron's parachute riggers in early preparation for their forthcoming deployment to northern climates.



NAVCAD Timothy C. Mason may find his brother a harder taskmaster than almost any instructor he could draw. When the cadet finished ground school at NAS Hutchinson, he discovered Lt. (jg) Sidney R. Mason was going to be his instructor in the aerial phase of multi-engine advanced training.

PILOT MANEUVERS DERELICT JET



PILOT GIVEN KEY BY CORONADO'S MAYOR

THREE NAVY fighter pilots of VF-112 at NAS MIRAMAR started out on a routine camera gunnery flight at sea. They had taken off minutes before from the field in sleek, new F9F-6 *Cougars* and were in the vicinity of the Coronado Islands 80 miles south of NAS SAN DIEGO, when Ltjg. James R. MacCoun, entering a high side run, went into a spin at 22,000 feet.

The pilot fought the controls to 10,000 feet with the *Cougar* still spinning. Then, realizing that he had only seconds to escape, he ejected himself clear of the plane at 9,500 feet and pulled the ripcord at 5,000 feet. He drifted down and went into the sea where he inflated his rubber life raft.

His plane plunged on down to about 4,000 feet where it surprisingly pulled out of the spin. What happened in the next 12 minutes ap-

proaches the utterly fantastic, and only through the cool daring and precise maneuvering of the flight leader, Ltjg. Clarence W. Vandenberg, was a possible major disaster prevented.

After MacCoun left the plane, it righted itself at about 4,000 feet, rose again to 8,000 and began a slow descent towards thickly populated San Diego. Sensing danger, Vandenberg raced after the pilotless jet and succeeded in turning it around and heading it back out to sea by using the air flowing over his wingtips to guide the plane.

This is the way Vandenberg describes the episode: "I saw MacCoun spinning, and I heard him broadcast he was getting out of the plane. When he was at 10,000 feet, I saw the canopy from his plane blow off. This meant he was ready to fire himself out of his plane. I didn't actually see him get out.

"I did see his canopy glittering in the sun and then I turned my eyes away to see my instrument board—and that's when he must have bailed out. I broadcast that I was going after his plane. I thought MacCoun was still in the plane, and I kept thinking that until I pulled up by his plane and saw that the seat and the pilot were gone. His plane by that time was back up to 8,000 feet and flying evenly.

"I eased under the starboard wing

of his plane and brought the tip of my port wing up close so that the air flowing over the top of my wing pushed against his wing.

"What I was trying to do was to turn his plane around because, by that time, I had realized it was heading toward the beach. I wanted to make it crash at sea, since it was going down gradually and was certain to crash.

"I didn't touch his wings. Just the air flow did it. I tilted his plane to turn it, then I dropped back and went around to the other side and pushed the other wing up.

"I did this a couple of times. The strange thing was that his plane had come out of the stall and spin with such good trim and was flying so evenly. Finally, I got down to 800 feet, pulled away and let the other plane go."

The jet crashed into the sea seconds later. Meantime, the third flier, Ens. Bruce G. Huntley had been orbiting around the area where MacCoun had landed in the sea. He had contacted a Navy ASW helicopter from HS-2 at NAAS REAM FIELD.

The 'copter, piloted by LCdr. R. H. Crowder and LCdr. M. A. Stone, rescued MacCoun from the sea, although it didn't have the conventional hydraulic rescue apparatus. Crewmen G. W. Hamilton and N. G. Brunn made the rescue with a rope. MacCoun was in the water for 35 minutes.

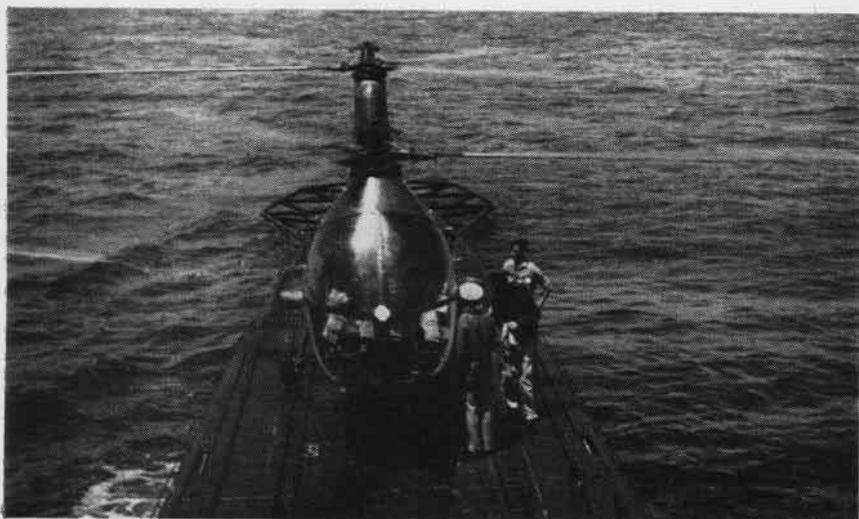
Hart Memorial Award Made VP-45 Pilot is First Trophy Winner

The first annual presentation of the Silas C. Hart, Jr. Memorial Award was made at NAS NORFOLK recently by VAdm. John J. Ballentine, who was at that time, ComAirLant.

The award was established by Mr. and Mrs. Silas C. Hart, Sr. of Elizabethtown, Ky. in memory of their son, a naval aviator who was killed on an operational flight when his plane crashed at Atlantic City, N. J. in January 1953. It is to be presented annually to the student naval aviator who exhibits the greatest skill in instrument flying while in aviation training.

Ltjg. Kenneth C. Miller, Jr. of Baltimore, Md. was designated as the first recipient of the award. He is attached to VP-45 in the Canal Zone.

The young aviator received a precision chronometer and a replica of a large engraved plaque which will be kept at the headquarters of CNATra.



AS TIME passes, the versatile "whirlybird" proves day after day it can do just about anything the pilot wants. Latest accomplishment is performed by a Piasecki HUP as a pilot from HU-1 brings it in for a landing on the aft end of a submarine.

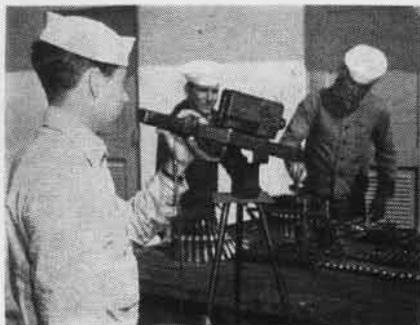
VF-174's New Training Idea Ordnancemen Get Active Instruction

NAS JACKSONVILLE—The old maxim, "Practice makes perfect" applies only when the practice is perfect. The maxim is put into practice daily in VF-174 ordnance work and, as a result, the Fleet Air Jax unit has come up with some new training ideas.

Instead of assuming that each man knows his job or leaving each one to learn the correct systems, VF-174's ordnance group has an active, progressive method of instruction.

Each newcomer to the ordnance group gets a first-hand introduction to the rules and demands of his job. Then he is taken to watch films showing him the correct and incorrect ways of handling ammunition.

Ed Farady, AOC, is mainly responsi-



CAMERA FILMS RIGHT WAYS OF BELTING AMMO

ble for this training. It stemmed from an idea he came up with some time ago to help the *Hell Razor* pilots in carrier qualification landings. Since each had to rely on the squadron LSO, previous training and memory to improve his carrier qualification landings, Farady searched around for some additional aid.

His solution was to acquire an aerial gun camera and shoot pictures of each pilot making landings. The camera was mounted on a tripod and located far enough behind the LSO to record both participants and the response each aviator made to LSO instructions.

It worked so well with the pilots that Farady turned his attention to improving his ordnance crew and putting the camera to use in that group.

● MCAS MIAMI—An F3D *Skyknight*, the first jet to be attached to the station, has been received by SOS-3. Major W. F. Guss flew the plane from El Segundo, California to Miami in about 5½ hours.

THE UNSUNG MEMBER OF ASW



THE TENDER TIMBALIER, VIRTUALLY UNKNOWN MEMBER OF THE ASW FAMILY, SLIPS OUT TO SEA

THERE isn't much mystery left in the field of naval aviation as far as most people are concerned. In recent years, the public has read more and more about the seaplane as it has gained in importance as a military weapon, yet the seaplane tender hasn't gained in prominence along with it.

The USS *Timbalier* (AVP-54) is one of these unknowns, a behind-the-scenes supporting unit that has been almost completely overshadowed by the more dramatic exploits of her charges. With a complement of 12 officers and 210 enlisted men, she's the only AVP-type tender in the Atlantic fleet currently assigned to FAIRWING 11 and under the operational control of FAIRWINGSLANT, anti-submarine patrol command.

The tender is 310 feet long, has a 41-foot beam and is powered by four diesel engines. Her displacement is about 2,500 tons, making her large enough to carry the men and supplies essential to her major function, yet small enough to navigate into the relatively sheltered bodies of water needed for the safest seaplane landings and take-offs.

Her primary mission is to offer seaplane support away from established bases, supplying fueling services, spare parts and maintenance assistance. She provides central communications, guards flight operations, offers berthing and messing facilities to the seaplane pilots and crewmen, as well as maintaining boat services for flight

operations, logistics and liberty.

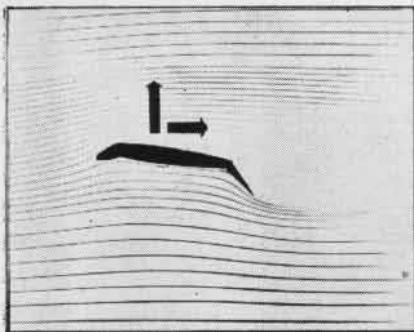
The *Timbalier's* operations are conducted apart from the rest of the fleet. She's virtually a "lone wolf," operating without escort. Normally, the tender slips into small bays, harbors or a river, in many instances finding natural camouflage which makes detection difficult.

Once the tender anchors, her boats are lowered into the water and used to lay the seadrome buoys, mark off the landing area and set up the mooring buoys to which the planes are secured when not in flight. Night operations are helped by portable lights attached to the buoys.

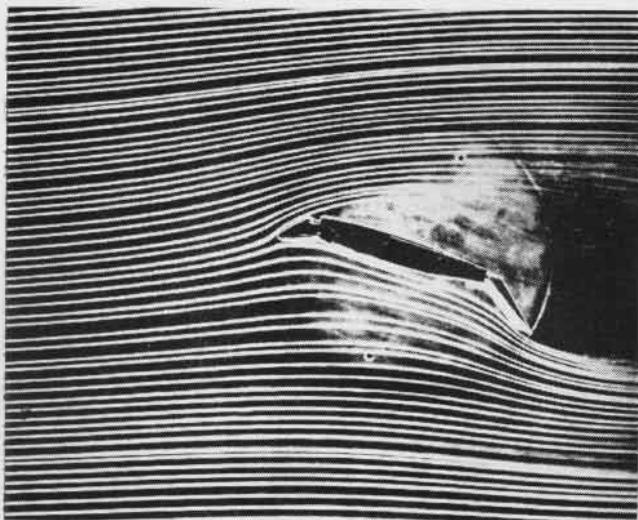
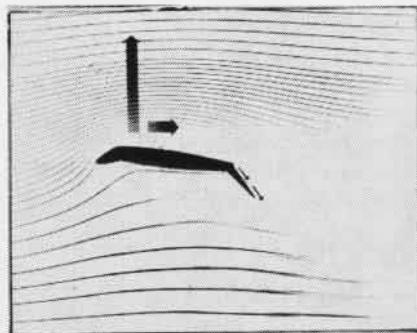
One of the *Timbalier's* most important functions is refueling the seaplanes. The aircraft is secured to the refueling buoy and a windlass draws the bow of the plane up to the fantail of the tender. The refueling lines are passed to complete the operation.

The ship's crash boat is ever present near the seadrome. Life-saving equipment is always aboard and a medical corpsman is a regular part of the crew, ready to furnish immediate, on-the-spot first aid in an emergency. If a seaplane crashes out of the seadrome area, another plane goes to its aid with rescue equipment.

Although working behind the scenes, any seaplane pilot will vouch for the fact that the *Timbalier* and her men perform an important mission, through constant training, as a member of the anti-submarine warfare family.



BOUNDARY LAYER CONTROL



FLOW FIELD about an airfoil with a droop nose and slotted flap was photographed in smoke tunnel. Note separation over flap at approximately 45° flap deflection. Above vertical arrow represents lift; horizontal, drag. Now look at the same air-

foil and angle of attack with supercirculation. Notice re-adherence of the flow to upper surface and also to the flap. Comparing the airflows in the parallel diagrams above, it is clear that lift increases tremendously; drag is nearly halved.

A "SIGNIFICANT aeronautical development" by a BUAER engineer will give future carrier-based planes the ability to land slower and carry thousands of pounds more armament than is now possible.

John S. Attinello has perfected a simple, practical system of boundary layer control. This is an aeronautical term relating to the control of air flowing over an aircraft wing in order to increase the lifting capacity of the wing.

Mr. Attinello's device has been given thorough laboratory tests before it was installed in a Grumman F9F-4 Panther. The plane was first tested at NATC PATUXENT RIVER, and is now undergoing carrier tests aboard the USS Bennington.

Tests thus far show the supercirculation of air made possible with Mr. Attinello's system increases the bomb or rocket-carrying capacity of the test plane by 3,000 pounds and allows a

landing speed of 20 knots slower than normal. This system for boundary layer control may be applied to most jet planes. The slower landing speed is of particular importance because of the short distance in which the carrier-based planes must be stopped.

For his exceptional work over the past three years, Mr. Attinello has been presented the Meritorious Civilian Service Award by RAdm. Apollo Soucek, Chief of BUAER. The citation



ADM. SOUCEK PINS AWARD ON MR. ATTINELLO

reads, in part, "Mr. Attinello's contribution towards solving this acute problem is considered an especially significant technological advancement in naval aviation."

Aeronautical engineers have been working for decades on the problem of boundary layer control. This year it is a half century since Dr. Ludwig Prandtl of Germany spoke on "Fluid Motion with Very Small Friction." In the field of aerodynamics his early experimentation was tremendously important. Now the years of research in this field have a practical application.

Drawing heavily on the work of early investigators, the system perfected by Mr. Attinello and the engineers with whom he worked is considered to be the first practical application to jet aircraft. Very simply, air is bled from the jet engine and blown out over the trailing edge of the wing. Through holes in the duct, the air blows out at high speed and tends to make the nor-

mal flow of air hug the wing skin rather than "burble" when the plane is at slow or near stalling speeds.

By making the flow of air over the wing at slow speeds steady, the lifting capacity of the wing is greatly increased, thus lowering the safe landing speed. During take-off, the same system will measurably increase the load-carrying capacity of the plane.

VF-13's Oxygen Mask Tester

VF-13 has CPO M. B. McCubbins to thank for a new device called the Oxygen Mask Mock-up.

Relatively simple in assembly, it consists of two oxygen bottles, the 2867 AIB oxygen regulator, an aviator's breathing hose and supplementary tubing. It can be used to check effectively oxygen masks and accessory equipment while the pilot is still safe in the ready room.

It can also be used to familiarize pilots with the aircraft system and with the operation of their masks.

VR-32's New Safety Device

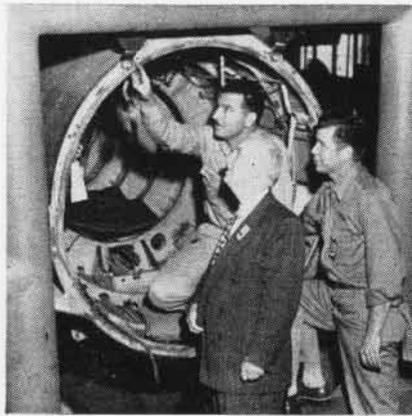
NAS SAN DIEGO—VR-32 has developed a new device to safeguard personnel engaged in inflating or assembling tires on jet aircraft.

Inflation pressures on tires assembled by VR-32 run as high as 300 psi. Even when proper procedures are followed, this extremely high pressure is a danger to the men working on these tires. This is especially true during the time of initial inflation when a defect in the tire may cause a blow-out with the force of a high explosive charge.

The new safety device is a woven wire cage heavily reinforced with steel. It is so constructed that the tire and wheel assembly can be rolled into it for inflation. Thus, if an explosion should occur, the men working with the tire are screened from the force.



TWO maintenance men of VP-104, R. R. Robinson and L. C. Shanks, have designed a tool for assembling and disassembling main oil strainers on Skyraider engines.



CLARK, MILLER AND PAGE DISCUSS APPARATUS

Repair Jig Wins Big Awards

NAS ALAMEDA—Two Bay area civilian employees converted an idea into money in the bank. In their sincere effort to save money for the government, they submitted an idea in 1952, and today they are \$720 richer for it.

Robert L. Page and Alvin R. Clark were awarded \$275 jointly in 1952 for their suggestion of a jig to reconstruct and realign F9F Panther jet aircraft tail sections. After this award their suggestion and the design of the jig were forwarded in 1953 to BUAER. Recently BUAER directed that an additional joint award of \$445 be presented.

It all started when Clark and Page were riding to work one morning. NAS ALAMEDA had just begun to receive its first Panther jets in O&R. They noticed a half-dozen twisted tail sections in the salvage yard awaiting their turn for the melting furnace. Agreeing that there must be some way to repair these twisted and ruined \$17,000 sections, they designed a rough proto-type jig out of wood.

Soon thereafter O&R's engineers designed a steel jig from Clark and Page's proto-type, a device that saved the air station and the government \$101,700 the first year of its employment. Since then, three such jigs have been built and put into operation at Alameda.

Truman Miller, head of Awards Program of Alameda, states that it costs only \$1500 in man hours and material to rebuild and repair each jet tail assembly. Each one new costs the Navy \$17,000. Before this jig was constructed, no one had thought of a way to repair economically the section, and so all damaged sections were to be salvaged and smelted. Under present production schedule at NAS ALAMEDA, an assembly is finished every two weeks. The present savings are \$15,550 each, or \$393,000 annually.

● NAS CORPUS CHRISTI—The first R6D Liftmaster to be overhauled by the Navy came out of the O&R shops here recently and was turned over to CO of ACTRU.

Autopilot Approved by CAA

A Lear L-5 automatic pilot installed in a 1049-B Super Constellation has successfully completed CAA tests and has been approved for installation in the entire Super Connie line.

The installation includes Lear approach coupler for automatic landing approaches, as well as an automatic altitude controller.

A Navy R7V-1, manned by a Navy crew, was used for the CAA tests conducted at Santa Monica, Calif., Municipal Airport. Prior to the CAA tests, the R7V-1 autopilot installation had logged nearly 300 hours during routine Navy operation, including several trans-Atlantic crossings.

Access Door Eases Repair

In a ceremony at NAS ALAMEDA, Gilbert W. Howell, ASM/IC, received a meritorious commendation for a beneficial suggestion that is estimated to save the Navy \$18,000 annually.

Howell's suggestion consisted of modifying the present hydraulic power panel in the Navy's F9F jet fighter. Acting upon his suggestion, aeronautical engineers installed an access door in the jet's hydraulic panel which makes it possible to repair frequent fluid leaks in the cockpit's canopy emergency hydraulic system without removing the entire panel.

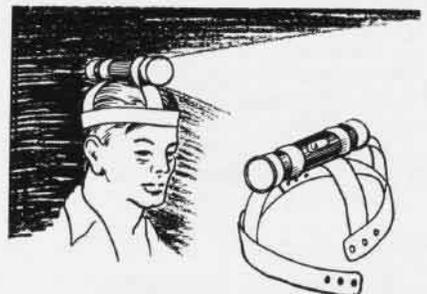
His suggestion has undergone severe tests, including intensive checks under adverse conditions. The air station's O&R department has found it works.

Head Helmet Holds a Light

Making repairs to or refilling oxygen bottles in the black Korean nights, a two-handed job in the best of light, has led to development of a flashlight-holding device by TSgt. Joseph S. Lenar of VMF-311.

Reporting to the Marine Corps Equipment Board at Quantico, Va., Lenar said the "headlight" enabled the oxygen man to have both hands free for refilling the bottles in the squadron's F9F-5 jet fighters.

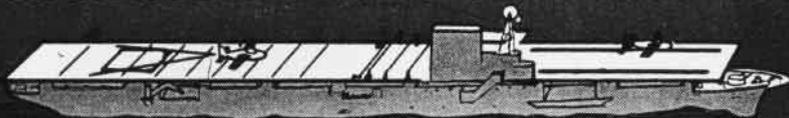
Materials used were the sweat band out of a pilot's hard hat, some 1" elastic bands,



HELMET HEADBAND HOLDS LIGHT FOR MECH

six snaps for head-size adjustment and one flashlight. One look at the accompanying drawing will show how the device is used.

CARRIER NOTES



BUREAU OF AERONAUTICS—SHIPS INSTALLATIONS DIVISION

Auto-Ignition Prevention

While auto-ignition action in hydraulic catapults has been rare, a two-phase program was initiated in November 1953 at NAMC to determine means to reduce incidence of such action with the existing oil-air-system, and to eliminate this hazard.

In connection with the first phase, reduction of incidence, the following catapult bulletins and changes have been issued to the Fleet:

- "Instructions concerning periodic draining of oil and condensate from the air flasks" covered by the following catapult bulletins: H2-1, No. 94; H4B, No. 136; H4C, No. 103; H4-1, No. 111, and H8, No. 77.

- "Instructions concerning the proper operation of high pressure shut-off valves" covered by the following catapult bulletins: H2-1, No. 90; H4B, No. 138; H4C, No. 105; H4-1, No. 113, and H8, No. 72.

- "Modification of pressure regulator and accumulator pressure gauge piping." In this connection, the following catapult changes have been recently issued: H2-1, No. 38; H4B, No. 53; H4-1, No. 47 and H8, No. 27.

It is anticipated that in the near future instructions will be issued for the use of nitrogen in lieu of air in the catapult accumulators.

In connection with the elimination of auto-ignition, high priority efforts have been directed toward the testing of non-flammable fluids. Several fluids meeting the fundamental specifications for catapult and ship-board use have been selected for test.

One of these has successfully passed shorebased tests in the H2-1 and H4 catapults and is now undergoing tests in the H8 catapult. It is expected that this fluid will be given a six-month service evaluation in an H4B catapult in the fleet beginning in May 1954.

Other non-flammable fluids will be tested in the catapults located at NAMC on a high priority basis.

Deck Pendant Clamp Device

In order to permit operation of the after-center line elevator, it is necessary to stow the cross deck pendant which normally runs across its surface. This problem has been met in various ways with each ship incorporating its own method.



FOR STOWING, PENDANT IS FOLDED AND PINNED



HERE CROSS DECK PENDANT IS SHOWN ON DECK

The quick release device developed and used successfully aboard USS *Randolph* (CVA-15) appears to have certain advantages over those used by other ships.

The clamping device is fabricated from 2" x 1/4" bar stock and is made in two parts fastened together by a 3/8" hinge pin. One end is bent and secured to a deck cleat while the other end is folded over the arresting wire and secured by means of a tapered pin.

Optical Landing Aid

The British-sponsored optical landing system, recently given widespread newspaper and news magazine coverage, has been praised highly by both British and U. S. Navy exchange pilots who participated in its evaluation aboard a British aircraft carrier.

At the present time, arrangements have been completed by BU SHIPS and BUAER to procure two of these devices from the British in order to conduct a thorough shorebased evaluation. Thereafter, a modification of this system will be placed on a carrier to obtain full service evaluation.

Canopy in Carrier Landing

The question as to the advisability of landing aboard with the canopy opened versus the canopy closed has long been debated. Each method has its proponents. As a result of one fatal accident wherein the top strand of a barricade entered the cockpit when the aircraft engaged the barricade, and several "near-misses" of the same type, this question once again came to the fore.

BUAER again asked the Fleet Commanders for their opinions on the subject and both ComAirPac and ComAirLant agree that the matter should be left to the discretion of the individual squadron commanding officers and their pilots. BuAer is in complete accord with this opinion.

The installation of the 21-foot barricade on all CVA-34, CVA-19 and CVA-41 class ships, which reduces the possibility of strap entry into the cockpit, is proceeding according to schedule.

Engine Testers Save Money

BARBER'S POINT, HAWAII—FASRon-117 has received several new pieces of equipment which will increase service facilities.

A Greer Governmentic tester that can check all types of the latest high pressure engine propeller governors has been set up.

According to LCdr. E. A. Hayes, maintenance officer, the tester is the newest and most versatile of its kind on the market today. Previously FASRon-117 had to send their defective governors to VR-8 at Hickam AF Base or back to the mainland for repair. Now it can test, repair and have them available for ready issue in a matter of hours.

Another great money saver is the new land-air mobile engine analyzer. Using this machine, engine repairmen can keep constant check on all aircraft engines for any mechanical failure that might occur before the normal engine change time.

Defective engines with less than the prescribed flying time—800 hours on the P2V type engine—must be shipped back to the states for overhaul. But now FASRon-117 men will be able to check and repair minor failures and prolong the engine life by rectifying these conditions as they occur.

FASRon-117 has also received a new engine magneto tester and spark plug testing machine, but probably the device they are most proud of is their flow bench carburetor tester. This intricate instrument with its many gauges indicates precisely the amount of gasoline the particular "pot" is consuming in proportion to the volume of air required for correct engine operation at the various power settings.

This machine allows minute corrections to fuel flow which cannot be accomplished by patrol squadron repairmen. With a few adjustments, the carburetors can be put in condition and reinstalled on the engine.



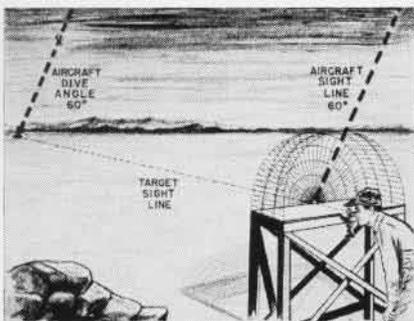
AVIATION ORDNANCE

HARPS Measure Dive Angle

Certain dive angle calibration fixtures are called HARPS. They are used on ranges to measure aircraft dive angle, slant range and altitude in air-to-ground tactics—strafing, dive bombing, and toss-bombing.

The HARP operator can direct the pilot through a completely programmed dive, giving him pushover notice, informing him as to his adherence to the planned dive angle, and giving pull-out warning at the prescribed altitude. Although originally designed for use in test work, the HARP has become a valuable training aid.

The HARP shown here was designed by NOTS INYOKERN. The instrument is located on a line through the target perpendicular to the flight line. The distance from



INYOKERN HARP IS VALUABLE TRAINING AID

the target depends upon the design of the HARP and on the magnitude of the slant range to be measured.

Consisting of a grid of radial wires and circular wires, it is oriented in the vertical plane parallel to the flight line. The radial lines, spaced at intervals of five degrees are used to measure the angle between the horizontal and the aircraft to target flight path while the circular wires serve as slant range markers. Calibration of the slant range hoops is determined by the following proportion:

$$\frac{\text{Slant range}}{\text{Circle radius}} = \frac{\text{Distance from HARP to target}}{\text{Distance from eyepiece to HARP grid}}$$

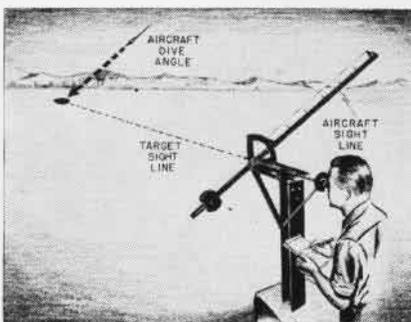
Altitude markers are added by stringing horizontal wires across the grid at the points of intersection of the radial wires and the circular wires. The altitude wires are calibrated by this formula: altitude = slant range sine of dive angle.

The instrument shown here is 33 inches in outer radius and 13¾ inches deep. The slant range hoops are spaced at radii of 7".5, 15".0, 22".5, 30".0 and 33".0 on the face of the grid and at 5".33, 3".67

and 4".72 aft the face of the grid on the grid on the cylindrical portion. The eyepiece is located 20 inches from the face of the HARP. This distance may be shortened if it is desired to observe aircraft dive entry at higher altitudes.

The instrument with the counterbalanced rotating arm was designed by Public Works Department of NAS ALAMEDA. The arm carries the dive angle wires and provides a series of tapped holes for insertion of slant range marker pins. A protractor indicates the dive angle when the dive wire is aligned with the flight path of the aircraft.

The basic design does not have the operating limits of the dive shown in the Inyokern illustration, nor does it have altitude marker provisions. However, BUORD field service engineers at NAS JACKSON-



ALAMEDA ENGINEERS MADE THIS INSTRUMENT

VILLE have modified the instrument by extending the rotating bar and dive wire perpendicular to the existing bar so that it serves the same purpose as the cylindrical section of the grid on the Inyokern HARP. The eye distance has also been shortened, and an altitude marker post has been attached to the left side of the protractor bracket.

Naval activities desiring drawings for manufacture of the Inyokern HARP may obtain them from NOTS INYOKERN or BUORD. Drawings for the Alameda instrument may be obtained from NAS ALAMEDA, while drawings for the modification of this design may be obtained from BUORD.

New Front Line Work Trailer

BUORD is developing a workshop trailer to be used by fighter and attack aircraft squadrons. It can be flown into combat areas for use. The plan for the trailer was originated by Marine Corps personnel in the Korean area.

The trailer will serve as a shop base for maintenance and overhaul of aircraft machine guns and to service certain fire control elements. It is stocked with all spare parts and power units necessary to maintain a squadron for a period of 90 days. It is also equipped with a tent and an auxiliary power unit for emergency service.

The trailer is to be completely independent of other sources of electrical power supply until such time as the base is in operation and normal electric power becomes available.

Upon reaching the area from which the group is to operate, the trailer is removed from transporting aircraft, and towed to the squadron area. The canvas cover is removed and the tent erected over the trailer. After the two tables are unbolted and lifted off the spare parts cabinets, a table is placed along each side of the tent.

Spare parts cabinets are then placed on the table. The six spare guns may now be removed from their storage space and placed at a convenient location in the tent. As soon as the exhaust lines for the compressor and power unit are installed, and



MARINES WORK TRAILER SPEEDS MAINTENANCE

the lights strung, the trailer will be ready for operation.

One prototype unit has been shipped to the MCAS CHERRY POINT for evaluation.

GSAP Shutter Opener Key

NAOTS CHINCOTEAGUE — Cecil B. Chambers has devised a simple method of opening the shutter on a GSAP motion picture camera when no power is available. His suggestion has been approved under the Navy Awards and Incentives Program.

In the past, because cameras are often permanently attached to aircraft and the aircraft batteries are not to be used on the ground unless engines are turning up, it has been necessary to have a portable generator or battery brought to the aircraft to power the camera until the shutter is at the open position.

All this is now unnecessary. Chambers has devised a key which opens the shutter in three easy steps and cuts down the time required to make the adjustment from 20 minutes to a matter of seconds.

LETTERS

SIRS:

In answer to the query by VF-61 in your April issue, VMA-331 can say the following:

1. Flew 144.2 daylight hours on 9 March 1954, completing 85 scheduled sorties in eleven hours.

2. Flew 139.5 hours on 11 March 1954.

3. Flew 529.8 hours on five consecutive days, 2 February to 6 February 1954, logging over 100 hours each day.

4. Flew a total of 2,007 hours for the month of February 1954.

5. Flew over 5,800 accident-free hours in less than five months, from November 1953 to March 1954.

We do not claim this as a record. However, we are interested in knowing if any squadron has surpassed these figures in recent years.

W. L. GAFFNEY, LCOL., USMCR



SIRS:

In answer to NANNEWS' query (March issue, p. 8) as to whether there are other chaplains than Ltjg. J. M. Ashcraft who have been naval aviators, I herewith submit the name of Ltjg. Robert Trett, now assigned to ComAirLant.

Trett received his wings on 1 May 1942 and spent WW II flying patrol planes in the Pacific. After the war, he took his theological training and returned to duty with the Navy as a chaplain. Since his father was an Army chaplain, Trett follows the family tradition.

FLOYD L. HARRIS, LCDR.



DONATING blood on the average of about once every ten weeks, Chief Boatswain L. W. Livingston aboard the Randolph lines up his total—68 pints. He believes that possibly only three civilians throughout the U. S. outrank him in individual donations. He's never received blood himself.

SIRS:

If VF-61 with 83 gunnery sorties in one day holds a record (NANNEWS, Apr. 54, p. 32), then VMF-115 can hardly miss having some sort of record also.

VMF-115, located at K-3 in Korea in April 1953, flew 114 combat sorties in one day with an average radius of over 200 nautical miles. The bomb tonnage and 20 mm ammunition expended, figured on a basis of tons hauled at a rate in knots, would make the AD drivers blush.

One pilot flew six combat missions; several pilots flew five. The line crew in one instance completely refueled and rearmed eight planes in 17 minutes. The average turn-around time on the planes, F9F-2's and -4's was less than 30 minutes.

Throughout the day, the operation was delayed by turn-around time on the pilots as much as the planes. The squadron had 22 planes at the beginning of the day and 26 pilots. No outside assistance in maintenance or pilots was used during the day.

JOHN F. BOLT, MAJOR, USMC



SIRS:

Participation in recommissioning of USS *Intrepid* and reunion of all hands who served aboard are being planned for 18-19 June at Norfolk Navy Yard. For details write to James T. Clark, 844 Washington Building, Washington 5, D. C.

G. G. CRISSMAN, CAPT.



SIRS:

In recent months you have published letters from squadrons claiming records for the number of flights in one day. All of these records were made during shore-based operations. VF-12 has a flight record accomplished under the more difficult conditions of shipboard operations, which we think deserves notice.

This record was achieved on 20 July 1953 during *Operation Blackwave* when the squadron was aboard the USS *Franklin D. Roosevelt* off the coast of Greece. On that day, with only 14 *Banshees* and 16 pilots attached, the *Flying Ubangis* flew 70 of a scheduled 80 daylight sorties for a total flight time of 105 hours. Our last ten flights were cancelled since each pilot had flown four sorties and six had flown five times that day. In terms of individual flight time, this averages roughly 6.6 hours per pilot for the day.

H. MCWHORTER, CO, VF-12

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● FRONT COVER

Navy tugs guide the Bennington alongside the Quonset pier as she ends a six-month tour of duty in the Mediterranean. Photo by Nancy Horner, PH3.

● PICTURE CREDITS

Picture of the Vampires flying in formation on inside front cover is from the British Air Ministry Photographic Reproductions Branch.

Photographs on page 1 and 4 are by Arthur L. Schoeni.

● THE STAFF

Cdr. Matthew H. Portz

Head, Aviation Periodicals Unit

LCdr. William A. Kinsley

Editor

Lt. Dorothy L. Small

Managing Editor

Izetta Winter Robb

H. C. Varner, JOC

Associate Editors

Cdr. Samuel G. Parsons

Contributing Editor

Doris E. Ingalls

Editorial Assistant

James M. Springer

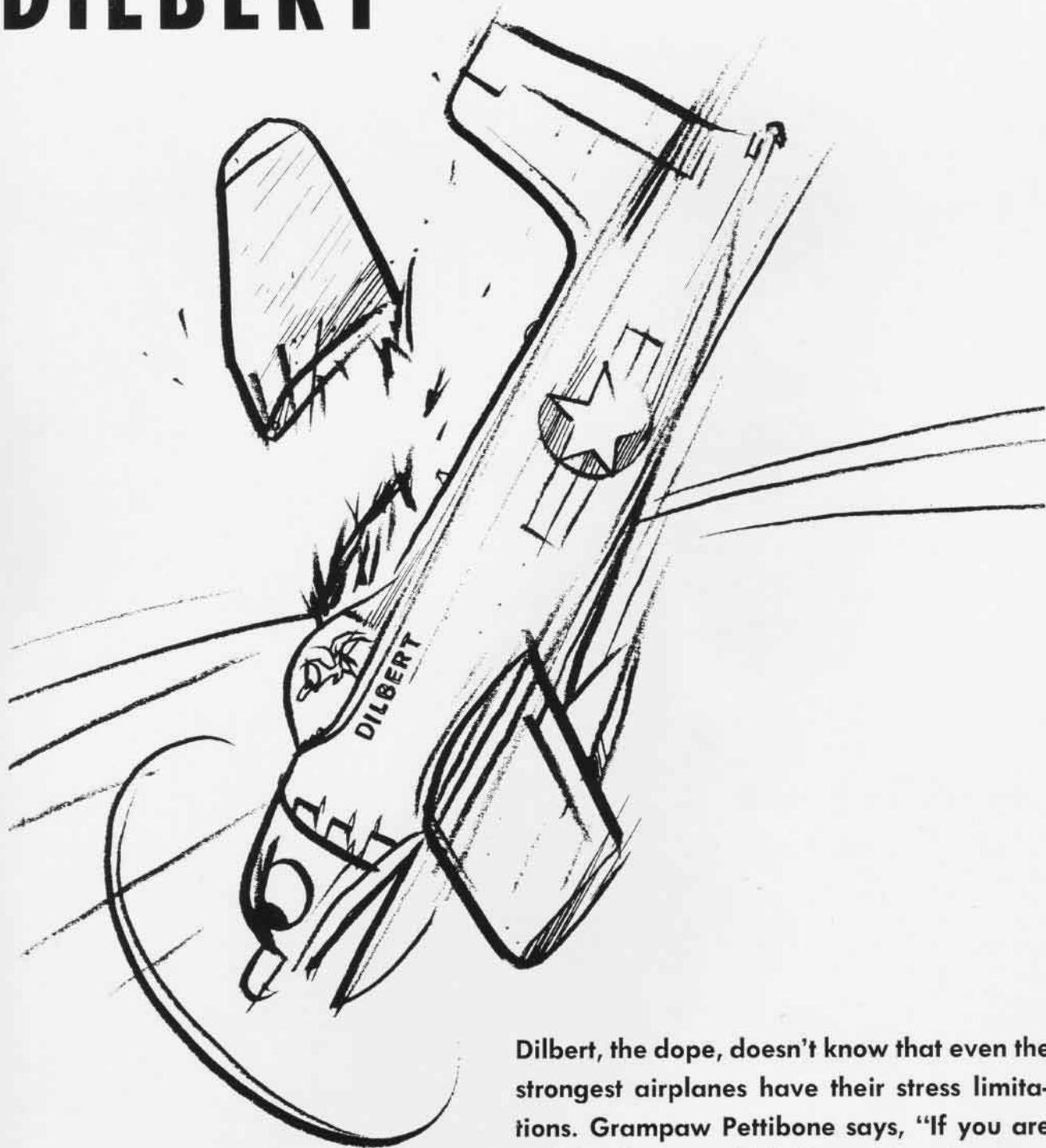
Art Director

● Printing of this publication has been approved by the Director of the Bureau of the Budget, 31 March 1952.

NEWS

Published monthly by Chief of Naval Operations and Bureau of Aeronautics to disseminate safety, training, maintenance and technical data. Address communications to Naval Aviation News, Op-05C4, Navy Department, Washington 25, D. C. Office located in room 5D624 Pentagon, Phones 73685 and 73515. Op-05C4 also publishes the quarterly Naval Aviation Confidential Bulletin at the same address above.

DILBERT



Dilbert, the dope, doesn't know that even the strongest airplanes have their stress limitations. Grampaw Pettibone says, "If you are real bright you will find out what the stress limitations and maneuver restrictions are on the aircraft that you are flying and then stick to the letter of the law." Don't be a Dilbert.



You can fly new planes in the fleet. Ceilings unlimited await college men. Check your opportunities as a Naval Aviation Cadet, NAVCAD, at your nearest naval air station or recruiter.

NAVAL AVIATION

NEWS

IN THE SKY WITH MEN THAT FLY