NAVAL AVIATION NEWS

RESTRICTED
SECURITY INFORMATION
NavAer No. 00-75R-3

SEPTEMBER 1953

KOREAN COMBAT PHOTOS...BY CCG

● HILTY

ONE LOOK AT MARINE POSTER CONVINCES MEN

● SCHREIBER

ONE OF WAR'S ACTION SHOTS SHOWS APD OFF HUNGHAM AS HARBOR DEMOLITION GOES UP

● ROSE

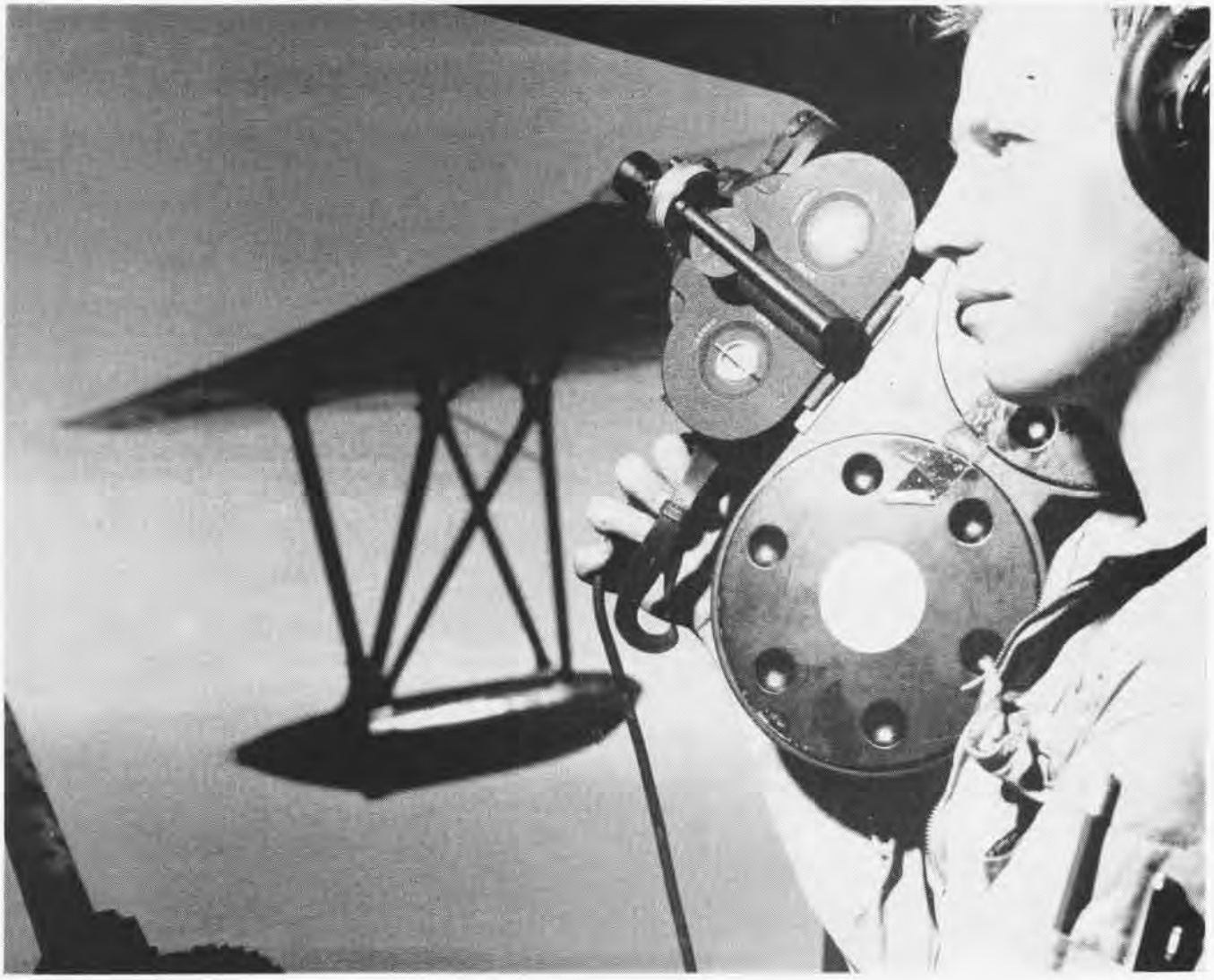
COMBAT CAMERAMAN ACCOMPANIED BRITISH COMMANDO RAID ON SHORE

● KAZUKAITIS

RADM. HARTMAN, CAPT. STELTER CONFER WITH ROK NAVY OFFICER

● DONEGAN

EVER READY COMBAT CAMERAMAN CATCHES DRAMATIC SHOT OF THREE KOREAN SAILORS SURRENDERING TO UN FORCES IN A WINTRY SETTING



COMBAT CAMERAMEN

IT'S COLD, brass-monkey cold, and you're flying your first strike as a combat cameraman.

Below you, just over those snow-covered mountains, there's a river and three bridges. Your job: newsreel coverage of the Navy's first strike on the Yalu river.

You make a last minute check of your Eyemo. Film . . . 100 feet, Plus X; more than enough. Spring . . . tight, tension enough for a 40-foot take. Lens . . . 25 mm . . . turret locked, exposure set at f. 8.

You wrap the worn leather thong around your wrist and take a firm grip on the handle. The heavy camera's metal is cold on your forehead as you sight through the view-finder and out the hatch of your *Skyraider* attack plane.

You're holding tight as your AD peels off and starts its dive. Wrinkled, dirty white earth twists before you. You suck in your breath and wait . . . wait until two 1000-pound bombs tumble to earth. Your finger presses the trigger and your Eyemo grinds, 32 frames for each long second. The pull-out pulls blood out of your brain. Your camera weighs a ton.

Now you're climbing. You see crumping mushrooms where bridges once spanned a frontier, flak splotches and the silhouettes of other AD's on their way down where you and your camera have just been.

Fly this mission as Aviation Photographer's Mates Barney J. Hausfeld and Charles F. Sprout did in November, 1950, and you'll have a good idea of the jobs Pacific Fleet Combat Camera Group photographers have had in three years of Korean war. Add the experiences of 100 other enlisted photomates and their officers and you have the story of Navy cameramen.

NAVY FROGMEN IN WONSAN HARBOR ON WAY TO EXPLODE REDS' MINES

ALERT COMBAT CAMERAMAN STEIN CATCHES S. KOREAN SHIP GOING UP

THE COMBAT Camera Group story started in Washington, three weeks after the outbreak of hostilities in Korea. Top level meetings were held to determine the future role of naval photography in the Korean conflict. It was decided to order the Navy's World War II combat photography program out of mothballs. CNO orders established the first combat camera unit on July 18th. Within a month camera crews were shooting strikes from carriers operating in the Sea of Japan.

Inchon was the first test of combat cameramen in battle. A photographer was on the bridge of each of the three destroyers that steamed into Inchon

SKIDMORE LOST CAMERA, FOUGHT AT HUNGNAM

harbor two days before the invasion in an attempt to draw out concealed enemy shore batteries. They got more of a story than they had bargained for in the engagement that followed.

USS *Collette*, from which Sigurd M. Moe, AF1, was shooting movies, was hit nine times; the officer standing next to Charles D. Kircher, AF1, on the *Swenson* was killed by fragments from a near miss. The *Gurke* was also damaged while Charles R. Sprout, AF2, filmed the hot exchange.

Meanwhile, a second relay of combat cameramen readied themselves for the amphibious assault. Emerson R. Barlow, AFC, Charles K. Rose, AF1 and Clarence C. Houchin, AF2, landed with the Marines. Joined later by Kircher, Sprout and Harold E. Stein, AF2, the photographers filmed battlefield work of Navy doctors, hospital corpsmen and chaplains during the drive through Kimpo, across the Han and into Seoul.

Still another team of CCG photographers moved up in the van of supporting naval forces to film the less glamorous but nevertheless vital operations of the *Seabees* and the logistic support force.

Korean Minesweeper Blows Up

Mines sank three U.N. ships at Wonsan. Harold E. Stein, AF2, caught one of these sinkings on film, and got a photograph Captain Walter Karig later named in *Battle Report* one of the best action photos of the Korean war.

It happened this way. Stein was leaning on the rail of an American minesweeper when a nearby ROK sweeper hit a mine. He had just propped his K-20 aerial camera on the rail, lens toward the sea. At the instant of the blast, Stein instinctively triggered his camera, catching the ROK minesweeper as it disintegrated in the water. Stein attributes his photograph to "luck" and "reflex action", both pretty important commodities to combat photographers.

BRITISH MARINES MADE C. ROSE A COMMANDO

But luck can work the other way, too. Airman Thomas G. Donegan, for example, missed a spectacular picture because of a sandwich.

Donegan was to fly jump-seat on a Marine night interdiction mission while two other photographers covered the mission from a Navy P4Y flare-drop plane. The aircraft rendezvoused over the target area—the first flare drop revealed a large Communist truck convoy, bumper to bumper along the road.

Donegan's F7F bore in to drop its first lethal load. Tom readied his specially-adapted Leica, then gulped sickly and licked his lips. The memory of a sandwich one of the Marine linemen had given him before takeoff was vivid. The brightly lighted scene reeled before his eyes. The *Tigercat* dropped napalm and pulling out of its dive, turned about for a strafing run. A volcano seemed to erupt below—a Red ammunition convoy and a pretty sight to any other pair of eyes. Donegan's were glazed over with nausea.

Cameramen Fight Way Back

Jay D. Skidmore, AF1, proved that they are also versatile. Skid and Charles K. Rose, AF1, were at Hamhung when orders came through for what turned out to be a nightmare assignment—the Chosin Reservoir.

The photographers survived two ambushes in their attempt to join the First Marine Division. At Hagaru-ri, however, Rose was stricken with pneumonia.

HOT OR COLD, KOREA SAW MOVIE MEN FILMING ALL TYPES OF WARFARE

PHOTOGRAPHERS OFTEN RISK LIVES TO GET ACTION SHOTS AT FRONT

GUNFIRE SPOTTER LT. (JG) LAMBERSON MIRRORS TENSIONS OF WAR

MOVIES OF WINDSWEPT BOXER DECK TAKEN BY CALVIN LAKSEN, AFC

The doctors ordered him evacuated.

Skid continued into the frozen fastness around the reservoir but he didn't get a chance to do much photography. His outfit was soon cut off from the rest of the Division. Fighting became intense as wave after wave of Chinese threw themselves against the Marine line. He carried ammunition and worked as a stretcher bearer. Finally he stowed his camera in a jeep and picked up an M-1.

The Leathernecks were surprised to find a sailor alongside them in the hectic days that followed. Skid's transition from photographer to rifleman became complete when heavy mortar fire destroyed the jeep carrying his equipment.

In the breakout from the reservoir he fought as an infantryman until his unit reached Hungnam.

Skid returned to Tokyo, but not to rest. He checked out another Eyemo and went back to film the Hungnam evacuation from a PBM waist hatch.

Meanwhile, Emerson Barlow, AFC, Charles R. Sprout, AF2, Clarence C. Houchin, AF2 and Raymond G. Schreiber, PHG3, recorded the final destruction of Hungnam. Barlow filmed UDT frogmen as they set demolition charges.

Twentieth-Century Fox's *With the Marines from Chosin to Hungnam* is vivid evidence of the extent of CCG coverage during this operation.

Korean Battlefront is Recorded

Despite a general slow-down in military operations after the evacuations of Hungnam, Chinnampo and Inchon, CCG maintained a fast moving tempo of action assignments.

Cameramen Norman O. Keesling, PHOT, Skidmore, Donald J. Pleason, AF3, and Lynn Moore, JO1, got one interesting job with Hollywood director John Ford and helped with the production of the Reserve Rear Admiral's *This is Korea.*

Combat photographers Lt. Henry R. Searles, Lt. E. J. Finley, and their crewmen Calvin L. Larsen, AFC, James W. Miller, AF1, John E. Hilty, AF2, Norman O. McMasters, AF2, James W. Mowrey, AF3, James S. Fletcher, AFC, and James R. Kissenger, AF1, covered battle front operations of marines and naval gunfire support teams during the fighting before the truce talks. Thomas O. Donegan, AFAN, Warran H. Hipkins, AF2 and Fred O. Furuichi, AF2, had the dubious distinction of being trapped with a Marine unit during one action.

Naval activities ashore received continued attention. Some cameramen, like Edmund Vallego, AF2, Scott P. Watson, AF1 and Alan R. Beard, AF1, participated in assaults on *Heartbreak Ridge* and *Bunker Hill* to get the story of corpsmen and evacuations by helicopter.

During three years of operations since the summer of 1950, every type of combatant naval vessel and its activities were recorded on film for public information and record purposes—carriers, battlewagons, cruisers, cans, minesweepers, escorts, amphibs and patrol craft; hospital ships, tankers, reefers and tenders; fighter, attack and patrol squadrons.

Under directors R. R. Smith, AFC, Norman O. Keesling, PHOT, and Pat Cady, AFC, CCG teams over a period of two years filmed the Navy's four active battleships in action. From this footage a composite film was produced

SAILOR ROCKS AN F9F'S WINGS TO GIVE REALISM TO MOVIE CLOSEUP FOR 'FIGHTER PHOTO'

by the Naval Photographic Center and released as *Floating Fortress*.

Television Movies Are Filmed

Carriers have been the locale for a number of CCG productions. Perhaps the most unusual of these was the *Story of a 1000-pound Bomb*, filmed for Edward R. Murrow's TV show, *See It Now*. Chief Russell W. Kuhn and photographers Glen E. Chappelear, PHG2, John F. Peterson, PH2, David R. Sinclair, PH2 and Robert R. Franks, PH2, boarded the *Boxer* with sound camera equipment, and lights, and shot their story during combat operations in the Sea of Japan. Kuhn's crew later scored with another *See It Now* feature, *A Day with Charley Tank Company*, shot with the Marines.

Carrier duty, while popular with CCG cameramen, accounted for the Group's first casualty, Chief Richard B. Hargreaves. In May, 1952, "Moose" Hargreaves and his crew, Kenneth M. Nichols, PH2, Donald A. Osgood, PH3, Charles C. Fulps, PH3, "Johnnie" Johnson, PH1, and Allen R. Beard, AF1, boarded the *Bataan* to shoot the story of the embarked Marine *Checkerboard* squadron. During flight operations in the Yellow Sea, a *Corsair* came in for a landing with a hung rocket. The camera crew stood by. The rocket shook loose, hit the deck and exploded. A fragment caught Hargreaves in the arm. *Bataan's* quick-thinking commanding officer, standing next to "Moose", saved the photographer's life by applying pressure to the wound until Hargreaves could get medical attention.

Rose Makes Like a Commando

The war's international aspects have given CCG some of its most interesting assignments. At least one photographer, Charles K. Rose, AF1, found duty with the British particularly interesting.

Rose volunteered for duty with the Royal Marines *Commandos* in early April, 1951, little realizing his quest for action photographs would take him on a raid hundreds of miles behind enemy lines.

After training with the veteran commandos in Japan, Rose sailed with the British marines to the Sea of Japan. Rose was with the first wave when the amphibious tractors climbed up the barren, unfriendly North Korean beach.

As pickets established outposts inland, the British started to work on the railroad running by the beach. The commandos worked against time. Communist troops converged on the small beach head, but too late to stop demolition of the vital rail line.

Rose photographed the destruction, getting photographs worth a spread in *Saturday Evening Post*. But Rose has something more than a *Post* clipping to remember the raid by; the British Marines presented him one of their rakish berets, making him an honorary commando.

Later the same year another international assignment came up, this one with Turkish military forces fighting on the Central front. Requested by the Department of State, the job proved interesting as well as dangerous.

Photographers James W. Mowrey, AF2, Fred O. Furuichi, AF2, and Joseph B. Beel, EN3, found the Turks slugging it out with Chinese forces near Chorwon. An interpreter helped them over linguistic barriers as the cameramen filmed the Turks in action.

ROK Navy and Marine units have also been covered on motion picture and still assignments.

Armistice is Long-Drawn Chore

There has been considerable variety in the stories CCG photographers have been called upon to cover. The armistice negotiations have been one such continuing assignment. Combat cameramen have been attached to the U.N. military armistice delegation at Munsan-ni since early in the negotiations. Lt. E. J. Finley, Phot, Norman O. Keesling and Donald J. Pleason, AF3, were with the first press convoy to visit the tea-house at Communist Kaesong. Since then more than 30 Navy combat cameramen have cov-

RELEASE OF U. S. POW'S WAS FILMED BY NAVY COMBAT CAMERAMEN

NORTH KOREAN WORKERS BUILT POW TENTS AS FRANKS, PH2, FOCUSES

ALL MANNER OF CAMERAS HAVE TO BE MASTERED BY BUSY CCG UNITS

GRIM REALISM OF WAR WOUNDED IS CAPTURED IN INCHON WAR PHOTO

ered the truce talks for the long months.

Chief Frank Kazukaitis holds the record for the longest tour of duty at UNC headquarters. Except for an occasional week-end in Japan during adjournments, "Kaz" has maintained a 26-month vigil at the conference tents. His photographs document the negotiations from their beginning in Kaesong right down to the final truce talk.

The Navy chief's seniority paid off last winter when the UN press corps selected him to represent the free press at the historic signing of the POW repatriation agreement.

As the only photographers present, "Kaz" as still-man and Eugene Meece, AF2, movie-man, readied themselves for the formal penning of the document. As RAdm. Daniels, representing the UNC, started to sign the agreement, "Kaz" triggered his flash gun. The bulb went off, but "Kaz" didn't hear the shutter snap home. He reached for another bulb, pressed it into the flash-gun socket and raised his camera for another try. But he was too late. The American representative had signed the document. "Kaz" thought he had missed the picture until word came from Tokyo that his photo had a world beat. "Kaz's" Graphic hadn't let him down after all.

Navy Cameras Record Atrocities

Another kind of assignment has entailed motion picture coverage for U. S. government agencies. Chief R. R. Smith, for example, recorded evidence of Communist atrocities at Wonsan shortly after the Red evacuation of the North Korean city. Smith, Sigurd M. Moe, AF1; Donald J. Pleason, AF3; Lyle F. Wheeler, AF2, and still-man Frank Kazukaitis, used their sound camera to record eye-witness accounts of atrocities that Communists committed in the withdrawal from Wonsan.

New developments have also received extensive coverage. The Navy broke its

KAZUKAITIS AT PEACE TALKS FOR 26 MONTHS

F6F drone missile story with CCG photographs; transport helicopters found Combat Camera Group photographers in them on their first combat missions. ASW warfare, UDT and submarine reconnaissance, shipping surveillance, air-sea rescue, epidemiological control and medical research are just a few of the other specialized Navy activities which have received Combat Camera Group attention.

Korea is only one area of naval operations covered by these combat photographers. Assignments have taken them on extended trips to Okinawa, the islands of Micronesia, the Philippines, Formosa, Hong Kong, French Indo-China, Thailand, Malaya, Burma and on round-the-world cruises with combat rotated destroyer divisions.

Not all CCG photography is done by field teams. Photographers on rotation stateside have plenty of work cut out for them at their San Diego home behind the balloon hangar at North Island. Training occupies much of their time. Every photographer must complete an extensive check-out before he is allowed to ship out on combat assignments with a Camera Group.

Supervised by experienced officers like Lt. R. L. Tomlinson, Lt. Earle E. Roberts, Lt. B. A. McLawhorn, and petty officers Pat Cady, AFC, James A. Todd, AFC and Fred Melvin, JOC, newly-assigned photo mates get training on a dozen motion picture and still cameras, lighting techniques, sound engineering and the finer points of pictorial journalism. CCG veterans maintain proficiency with training assignments. Some even take post-grad courses in Hollywood where they work on location with professionals.

San Diego area assignments give new cameramen a preview of how they will operate as teams in combat. The recently released film, *Fighter Photo*, is an example of a project produced in the States to train outgoing photographers. Lts. Roberts and Tomlinson supervised production, while R. R. Smith, AFC, directed photography on location.

By far the most successful CCG stateside training activity has been *Operation Morale Lift*, directed and photographed by the San Diego unit in cooperation with Fleet Air photo lab and VU-7 camera pool in 1951 and 1952. *Morale Lift* sent hundreds of Christmas greetings on film to AirPac personnel in the Far East. Kenneth G. Taylor, PHAN, has been one of the moving forces behind this CCG project.

After training in San Diego, photomates are sent on TAD assignments to the Japan unit at NAS ATSUGI. Here officers like LCdr. Gene T. Uht and Lt. Tomlinson, working under the Officer-in-Charge, LCdr. Lou Yaconelli, supervise assignment of photo teams to naval activities in the field. Five month rotation schedules give trainees a quick chance to put their rates to the ultimate test in WesPac. Some CCG photographers have served as many as six tours in the advance unit.

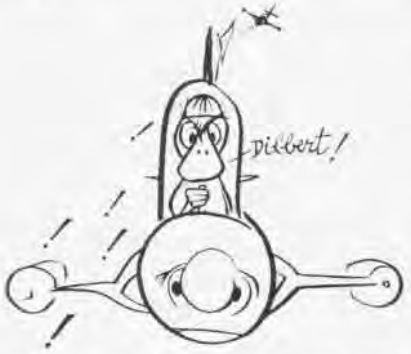
by Lynn Moore, JO1

GRAMPAW PETTIBONE

Just Like Shooting Ducks

Case #1. The pilot of an F2H-2 started his third gunnery firing run on a vertically rigged tow banner from a position approximately 2,500' above and 6,000' on the starboard beam. On this run he got too far astern of the target and approached the firing range at a deflection angle of 15° or less in a slightly nose down attitude.

He continued firing until too late to break away, and his starboard wing struck the mid-point of the tow bar. The tow bar imbedded itself in the wing at a point three feet outboard of the wing folding point to a distance of about 18". The pilot checked the controls and found



that under 200 knots he could control the aircraft. He returned to his base and landed without any further difficulty.

Case #2. Seven F9F-5's took off on a gunnery firing flight on a towed banner. The tow plane leveled off at 25,000' and the other aircraft assumed position to begin their firing runs. On about the tenth firing run on the towed banner one of the pilots got "sucked behind" and below the target on approach. He continued this firing run despite this poor position.

The pilot of the tow plane felt several slight vibrations and then noticed that his aircraft was on fire. He finally was forced to eject and his plane burned and crashed into the sea. The plane was not recovered but both the tow pilot and the accident board are of the opinion that several rounds of 20 mm ammunition fired at the banner somehow found their way into the tow plane, causing the accident.

Grampaw Pettibone Says:

Son, anybody who can't control their trigger finger any better oughta be

horse-whipped. You would have a tough time living with yourself if the pilot of the tow plane hadn't successfully ejected.

It's a lead pipe cinch this lad won't win any popularity contests around his squadron. The last time I heard, he hadn't quit flying, but he was getting mighty jittery towing for all of the gunnery hops.

From 1 July 1952 through May 1953, there were 22 accidents attributed to jet aircraft striking the tow banner, tow bar or tow cable. Nine of these accidents occurred in May. In addition, during the month of May two tow planes were hit by gunfire. Both sustained major damage. The pilots seem to fare better than the aircraft, however, since only one pilot was injured while 19 of the aircraft sustained substantial damage.

I eased on over to the field the other day to see if I could borrow a jet and a tow pilot to make a few gunnery runs and get some first hand information on this jet gunnery problem. They just laughed and said my beard would probably obscure the gunsight as well as the target. It's just as well, though, because I couldn't get any volunteers to tow for me either.

Well, I got to thinking about hunting ducks. I recalled that it's a whale of a lot easier to get a mess of hits—and ducks—when you are shooting up the bird's sternsheets as compared to a full or partial deflection shot. (This may have occurred to some of these lads who like to get the tow target and tow plane in line before opening fire.) However, it didn't take me too long to see that I was getting into a hole as far as making comparisons of duck hunting and jet gunnery runs and that I would have to go back to the available statistics to make my point.

The majority of the jet gunnery accidents resulting in a collision with the target or towed cable show several common cause factors.

1. Pilots were apparently concentrating more on getting hits on the towed target than in the break-away.

2. Pilots approached firing range at excessive angle of deflection, had difficulty holding lead and keeping the target in sight, and carried the firing run too close to effect recovery.

3. Pilots approached firing range at too low an angle of deflection and either shot the tow cable in two and ran into the towed target or carried their attack too close on this near collision course to effect recovery before striking the target.

At this point, a little mental gymnastics reveal a fact that apparently some of our jet pilots have forgotten. On an optimum jet gunnery run the closing speed will be

F9F-5	350 knots
Tow target speed	165 knots
Angle off at firing point	20 degrees
Target altitude	15,000 feet

approximately 340 feet a second. In this case the pilot will only have 1.18 seconds from open-fire to cease-fire (Using 1000' as open-fire and 600 feet as cease-fire ranges). From the cease-fire range of 600' the pilot has less than two seconds to effect recovery. That certainly doesn't give a jet pilot much time to change his mind.

It would be a mighty fine idea for all of you jet pilots to carry a copy of the following safety hints around in your hip pocket —who knows, you may be able to absorb this information the easy way—by osmosis.

1. Observe a safety cone around the target of no less than 20 degrees or 10 degrees on either side of the line of flight of the towed target and do not fire at an angle of less than 10 degrees.

2. Stay above the target level.

3. Go over the target on break-away.

4. Never fire up at a target.

5. Do not fire on a bad pass.

6. Pull up immediately if you lose sight of the target.

7. Do not make passes into the sun.

8. Keep your windshield and canopies clean.

9. Gain experience before trying to press your passes to minimum range.

10. Know the position of the plane ahead of you before shooting.

How To Die Young

A recent over-water aircraft accident involving seven aircrewmen revealed that none of them knew how to use their pneumatic life preservers correctly. Records of the squadron showed that some of the men had not had a water check out in over a year. The records of the squadron further showed that in one swimming class, 12 men were scheduled

but only five showed up. Of the five showing up, one was too tired to swim, two showed poor technique and one tended to panic.

One of the aircrewmen who survived the accident but drowned later had his life vest on, but it was neither buckled nor snapped. This man probably drowned as a direct result of not knowing how to use the equipment provided to save his life. Perhaps this man just didn't realize the importance of the survival equipment or perhaps he was like another man in the squadron who didn't participate in water survival courses as he was afraid of the water and unable to swim. Some of the crewmen involved in this aircraft accident were not even wearing their life vests.

Grampaw Pettibone Says:

Great Jumpin' Jehosaphat! When I hear something like this, it really makes my old blood boil! A man who isn't willing to spend a little time learning how to swim or at least use his survival equipment to save his own life shouldn't be allowed in an airplane. Some of the most famous last words I ever heard read "It won't happen to me." However, when it does happen as it did to these lads and you're not ready, it's a little late to worry.

Apparently some of the current written instructions are being rather liberally interpreted. Just for the record I quote some of the requirements of OPNAVINST 3710.7 relating to the use of safety and survival equipment. (1) "Life vests shall be worn during all seaplane flights from the time of embarkation until the end of the flight; during the landplane operations where flights are made beyond gliding distance of land; and in airship flights over water. (2) "It is the responsibility of the pilot in command of a naval aircraft to ensure prior to take-off that the crew and passengers are adequately instructed on such personal safety and survival equipment and procedures as are required for the particular aircraft in which they embark."

I think that right now is a good time to review your squadron program in regard to check-outs in the use of personal safety and survival equipment. The best way to know this equipment is to use it. The time to use it is before it is needed. Who knows? The life you save may be your own!

Dear Grampaw Pettibone:

In —— we've gotten quite witty'
BOMO's the reason, a French safety ditty,
For eight months so far,
We're above safety par,
Consequently we're sitting quite pretty.

A little literary ingenuity is paying off in a big way in our squadron with the creation of BOMO. BOMO is a liberal translation from the French "Bon Mot" meaning "Good word", and in this case catchy limericks and short poems emphasizing safety in the air and on the ground. The BOMO's originally were one line slogans urging observance of safety precautions, but since have become epics in their own right. Amateur poets sprang up from every quarter of the squadron, all with some four or five ditties telling the pilots to take care.

A typical BOMO regarding deck procedures went thus on one of our schedules:

We all know a pilot named Babbit,
Who comes out of the gear like a rabbit,
One day perhaps he'll raise wheels 'stead of flaps
And Babbitt the rabbit has had it.

The BOMO system is by no means all inclusive, but by keeping the pilots' attention focused daily on flight safety, it forms an integral part of the overall safety program.

Although I fully realize that by saying this I invite a nose-up tomorrow, this squadron has had no pilot-caused accidents since the advent of BOMO.

Respectfully,

————, LCDR, USN

Grampaw Pettibone Says:

It makes no difference the language in use,
That which prevents accidents is always good news,
Congratulations on the excellent job being done,
And let us hope your effort is not the only one.

This Is Dangerous

Shortly after takeoff, fire was seen coming from the port side of a TBM-3W. The pilot had sufficient altitude to make a wheels-up controlled emergency landing on the field. He landed tail first on a grass area adjacent to one of the runways and the plane skidded to a stop. An observer's statement reads in part: "Just before the plane stopped skidding, the pilot came flying out of the cockpit."

Grampaw Pettibone Says:

I think that the observor's statement is a rather liberal interpretation of what actually happened, but there's no doubt that the pilot released his safety belt and shoulder harness prematurely. He sustained major injuries from being bounced around in the cockpit before the plane actually came to a stop.

It's a mighty good idea to remember that on most emergency landings, on land or sea, there will usually be more than one jolt before the aircraft comes to a complete stop.

As a result of this and other accidents where pilots and crew received injuries as a direct result of failure to use the safety belt and shoulder harness properly, I have reached the conclusion that certain elementary facts concerning the art of staying alive and unhurt have escaped a sizable portion of our aviation population.

Just for the record, during calendar 1952, 28 persons were injured as a direct result of failure to use this personal safety equipment—five fatal, 12 serious and 11 minor injuries. Twelve of the 28 persons injured didn't even have their *safety belt fastened*. There's no tellin' how many people get away with this lackadaisical attitude since the figures given come for actual accident reports.

I don't know exactly how to impress on you lads the importance of using this "life saving equipment" but take it from me

When things get tight—you're in a hurry
You won't have time to stop and worry
You may not have time in this crisis
To even adjust your safety devices.
So unless you want your own grave dug,
You better keep those shoulder straps snug.

KOREAN AIR WAR

GATHERED *in flag plot aboard Phil Sea are 14 stars. Adm. Radford meets RAdm. Blick, VAdm. Clark, VAdm. Briscoe, RAdm. Storrs.*

POWER *fails as Corsair gets a few feet above the flight deck of the Philippine Sea.*

AS PLANE *starts to slide off to the water, Corsair cuts the waves with its left wing.*

CROSS *grasps for rescue hook as Lt. (jg) L. M. Kile hovers overhead to make the pickup.*

EDITOR'S NOTE: Although the truce in Korea has been signed and there is no longer any Korean Air War, NANEWS is running the stories this month in recognition of the exploits of the Navy's pilots who fought the last months of the war.

Thirty Seconds of Action

A Navy *Corsair* piloted by Ens. Douglas E. Cross, took off from the flight deck of the *Philippine Sea*. A few feet above the flight deck, the engine stalled and his plane started to slide off toward the water. With the left wing cutting the waves, the plane splashed into the water just off the port bow.

As Cross struggled to get out of the sinking plane, a helicopter winged over quickly for a pickup. The pilot, Lt. (jg) Leroy M. Kile, lowered the rescue loop and successfully picked up Ens. Cross.

The helicopter deposited the pilot, wet and shaken but unhurt, back on the flight deck of the carrier. The time elapsed from the *Corsair's* crash to the pilot's return to the flight deck was 30 seconds.

Some Things Smelled Fishy

While on a patrol mission with eight other planes from the *Philippine Sea*, Lt. Robert Kuehler found his plane was running low on gas. He was trying to make the coast and a friendly airfield in South Korea with his two crewmen, G. N. Alkire and A. J. Franklin.

When the cruiser *Saint Paul* got word by radio that the plane was trying for the coast and was low on gas, she headed south at high speed with her escort destroyer *Prichett* to aid in the rescue. At the same time, the Air Force dispatched a crash boat from the coast.

Progress of the plane was followed closely by radio. About 25 miles from the Korean east coast, the pilot dropped below the fog for a water landing. He sighted a South Korean fishing boat and guided his plane close to the craft before dropping into the water.

The plane floated long enough for the three men to climb out on the wing and organize their escape before jumping into the water. Sea waters weren't heavy, but flying clothes made it difficult for the men to stay afloat. One of the men swallowed too much salt water and appeared in danger of going under. Kuehler kept him above the waves until help came.

The fishermen lost no time in heading for the downed plane. Within ten minutes after the ditching, their boat was alongside, pulling the airmen on deck into piles of fish from the day's catch. None of the men spoke English, but their cooperation was excellent. They made the men as comfortable as possible before heading for land.

About an hour after the rescue, the AF crash boat came up in search of the downed fliers. A flare from the pilot's rescue kit brought the crash boat alongside for the transfer to the *Saint Paul* which had just arrived on the scene from 25 miles northward.

Medical officers found the men in good physical condition, although a bit shaky from the experience and smelling strongly of fish. After the airmen had

washed off the fishy smell and rested a while, the crewmen told of the landing. They were worried when they started down, but Kuehler put the plane down "just as smooth as on a carrier." He kept the wings up until the last minute, then dropped her into the water with hardly a jolt.

Gunfire on All Sides

William N. Longley, AD1(AP), serving aboard the heavy cruiser *St. Paul* in Korean waters, is a member of a select Navy trio. He is one of the three enlisted naval helicopter pilots in the Far East.

Normal duties involve routine scouring patrols for the ship and aerial spotting for the frequent coastal bombardment the cruiser dishes out to the enemy. On occasions, however, Longley and other helicopter pilots are called on to rescue downed airmen over enemy territory. These pilots must continually dodge enemy gunfire and sometimes gunfire from their own friendly ships.

There was a time when Lt. Russell T. Forbush and his engineer, Robert W. Behnke, flying from the *St. Paul*, went through at least 200 to 300 salvos during a daring hop to pick up a wounded U. S. Marine. Nearly 50 salvos were fired by Communist guns at short range in an attempt to shoot them down.

When Forbush and Behnke took off for the evacuation point, they were hugging the ground to escape flying shells. Their aircraft flew most of the distance at from 10 to 15 feet off the ground and never more than 50 feet. They arrived at the pick-up site and set down in a small clearing.

Communist batteries, which had spotted them, opened fire on the clearing, pouring approximately 50 rounds of 76 or 105 mm shells into the area. The men took refuge in a nearby cave until the barrage lifted. Within a few moments, Marines arrived in a jeep with the wounded man and the helicopter took off. Enemy batteries again opened fire but failed to bring it down.

Forbush earned the DFC for this.

Polka Dots Take Over

Although Communists in North Korea have felt the fury of the *Checkerboard* pilots' attacks, that isn't the reason they're seeing polka dots these days. The checked pattern of the Marine squadron aboard the *Bairoko* is being replaced. The cowling design of the Marine planes is being painted with bright red polka dots, used by its replacement, the *Polka Dot* squadron.

After nearly three years of continuous combat flights from the decks of rotating carriers on both coasts of Korea, the famed Marine *Checkerboard* squadron has passed its tradition to the *Polka Dot* squadron, new to Korean war headlines and complemented by nearly 80 percent Reservists.

Seeing Eye Seadog

Lt. (jg) Howard Thayer saved the life of a wounded shipmate with his seeing eye tactics for the second time in a year.

Thayer gained his seeing eye reputation in 1952 while flying with Ens. Ken Schechter over North Korea in *Skyraiders* from the *Valley Forge*. Schechter was diving through heavy flak to bomb a rail target near Wonsan when an enemy anti-aircraft shell exploded in his face.

The blast ripped off the top of Schechter's cockpit and sprayed shrapnel into his face, chest and shoulders. He was blinded and losing blood rapidly. He signalled for help and Thayer came to his aid.

Giving directions by radio, Thayer

ONE OF *three enlisted helicopter pilots in the Far East, Longley boards his helicopter.*

TWICE *a lifesaver, Lt. (jg) Thayer stands beside his Panther jet aboard the USS Boxer.*

DESPITE *almost useless wing flap hit by Red shell, LCdr. W. Carver returned to Phil Sea.*

MARINE *begins to paint over Checkerboard emblem to make way for Polka Dot's emblem as LCol. Jewson, Checkerboard CO, watches.*

guided Schechter out of enemy territory and searched desperately for a place to land. Thayer, after leading the way through 150 miles of Red-held territory, talked in Schechter to a blind landing on a tiny dirt airstrip 10 miles south of the front lines. Under Thayer's expert guidance, the blinded pilot brought his crippled plane in for a perfect landing.

Back in Korean waters, flying a *Panther* from the *Boxer*, Thayer led another crippled shipmate to a safe landing. Thayer's squadron was ordered to attack a strongly-defended troop concentration area near the central front. Thayer's wingman, Lt. (jg) J. J. Chambers, was hit by shrapnel in both legs and arms.

The enemy shell blast also knocked out his radio and instruments. It was just the reverse of Schechter's plight when he had instruments.

This time, Thayer was forced to give flying directions by hand signalling. He took the job of escorting Chambers to a landing strip. Weak and losing blood rapidly, the injured pilot could fly only a few minutes more. Some 40 miles to the south and a few minutes later, Thayer led Chambers to an emergency crash on a UN airstrip.

Repairs on The Line

While pounding Communists' front-line positions in all-out carrier operations, the *Philippine Sea* was forced to operate on only two of her four shafts. Working day and night, engineering personnel made repairs at sea, allowing the ship to keep *Skyraiders, Panthers* and *Corsairs* striking over North Korea. They stayed in the fight despite a serious handicap in carrier speed.

Hoppy Meets Hoppy

While Francis Leon Cassady was passing through the sleeping compartment of a *Boxer* plane squadron, he noted a man standing to one side with the name, CASSADY, F. L., stenciled on his shirt. Since the usual spelling is Cassidy, he was surprised enough to see someone who spelled his name with two a's and more amazed to see the identical initials of F. L.

Francis Leon Cassady stopped to talk to Chief Francis Luther Cassady. He found that both of them had 12 years of naval service (counting one year of Reserve time during which both were salesman). To his continued surprise he found that both of their service numbers begin with the three digits of 321. They both married west coast girls, were born no more than seven miles from each other in northern Missouri and both saw considerable action during WW II in the Pacific theatre.

Although they may be related, they doubt that they are. Both of their nicknames are Hoppy.

They Tried Anyway

Last December five Marine *Corsair* pilots fought off four Red *Migs* while flying Rescap over Chinnampo. For their daring attempt, four of the pilots, Capts. D. P. Gillon, Jr., C. L. Mullins, A. Watson and C. M. Wallace, have been awarded Silver Stars by MGen. Vernon E. Megee, commanding general of MAW-1. The fifth pilot, Maj. David Cleeland who directed the Rescap, has been recommended for the Navy Cross.

Besides keeping the *Migs* from attacking the rescue helicopters that were trying to rescue a downed pilot, the Marine pilots destroyed four shore batteries. The fliers all were in the air more than four hours when they finally returned to their carrier. None of the flight returned with more than 30 gallons of fuel.

The flight was composed of members of the *Checkerboard* squadron which was flying off the *Badoeng Strait* in the Yellow Sea. Cleeland, Mullins, Gillon and Lt. J. B. Goery were on an armed reconnaissance mission over the coastal supply route running from Chinnampo to Hanch'on. When Goery made a rocket run on a dock area, he was hit and forced to ditch his plane in the Taedong estuary about midway between Sok-to and Chinnampo. The time was 1400.

Hearing the *Mayday* distress signal, Watson and Wallace, who were flying a naval gunfire spotting mission nearby, came to join in covering Lt. Goery. As the rescue 'copter came within one mile of the downed pilot, a warning was sounded over the radio that *Migs* were approaching the area from the north. The helicopter hovered where it was and asked for F-86 *Saberjet* cover.

Cleeland told the "chopper" pilot not to worry, saying that "*Corsairs* had fought *Migs* before." He then directed the helicopter to go in and get the downed pilot. He told Mullins to circle Goery as he was doing and asked Wallace, Watson and Gillon to provide high cover.

At 1420 the *Migs* arrived at about 12,000 feet. Gillon, Watson and Wallace started fighting them at 5,000 to 7,000 feet. Mullins provided immediate cover at 1,500 to 3,000 feet while Cleeland circled from sea level to 1,500 feet. The attack continued for nearly 15 minutes with the *Migs* making repeated runs during the entire period.

Wallace, Watson and Gillon met the attacks with head-on firing runs with their wing guns and five-inch rockets. Throughout the battle, the *Migs* pressed their attacks extremely close, often passing within a few yards of the *Corsairs*. Twice Mullins was forced to fight the *Migs*, but only once a *Mig* broke through the entire cover and reached the lowest level. There it was fired upon immediately by Cleeland, who was waiting.

ENGINEERING *personnel, A. N. Male, Cdr. N. Sonenshein, Chief Machinist O. Parrott, inspect damaged coupling on Phil Sea.*

SAME *first name, middle initial and last name astounds Francis Leon Cassady as he meets Chief Francis Luther Cassady.*

When the "chopper" pilot saw the *Corsair* cover fight off the Reds, he proceeded to the downed pilot and made several unsuccessful attempts to pick him up. As the *Migs* cleared the area, Cleeland strafed the beaches. Watson, who was out of ammunition, made a reconnaissance of the adjoining beaches.

A second helicopter came into the area, but also was unsuccessful in picking up the downed pilot. Then a crash boat entered the estuary. As it came within 1,000 yards of the pilot in the water, shore batteries opened fire and the boat was forced to make a run for safety. A close hit damaged the boat and both engines failed. During this time, Wallace spotted a gun position and silenced it with two rockets.

Meanwhile, Gillon spotted another gun and made repeated runs on the position with only one of his guns firing. Cleeland, who had the only remaining ammunition, gained altitude and made four rocket runs on a cave gun position. He scored effective hits that silenced the position.

Cleeland then directed the four pilots to return to the ship while he remained to brief the flight that had been sent out to relieve them. He returned to the ship four-and-a-half hours after leaving it with no ammunition and less than 15 gallons of fuel. Despite the heroic rescue attempt, Goery was never recovered.

They Saw The Seas

With the completion of the *Valley Forge's* fourth tour of combat duty in Korea, six pilots could claim they have sailed not seven, but eight seas and flown over them as well.

The globe girdlers are LCdr. L. B. Green, LCdr. C. H. McCabe, Jr., Lt. D. G. Jackson, Lt. H. M. Walker, Jr., Lt. S. J. Bunger and Lt. (jg) J. F. Bangham. On a world cruise aboard the *Valley Forge* in 1947-48, they saw the Mediterranean, South China, Tasman, Yellow, Red, North and Caribbean Seas. On their Korean tour in the Sea of Japan they made almost daily flights over it to strike at North Korea.

Aside from the eight seas, the six airmen have sailed and flown in the Atlantic, Pacific and Indian oceans as well as the Bay of Bengal, Persian Gulf and English channel.

That One-Half Got Them

Once regarded as an outmoded means of transportation, ox-carts have arrived again in Korea. The North Koreans use them to carry explosives. That's why the carts are designated alternate targets for UN aviators, if they can't make the first.

They sometimes receive more than their share of attention aboard the *Boxer* on account of Lt. John W. Fornof. He had just completed his day's mission against the Communists and was in the squadron ready room being debriefed. Reeling off the destruction he had caused, he concluded with ". . . killed three-and-a-half oxen."

The debriefing officer thought this over for a moment, then stared at Fornof with raised eyebrows. Realizing his blunder, Fornof amended, "I mean three oxen." Word soon spread through the carrier and his mechanic heard of it. The next day, when he went to his plane, he found, newly painted on its side, three-and-a-half oxen.

Just to prove he had a sense of humor, the next day the pilot claimed the destruction of a telephone pole. This too was promptly drawn on his plane's fuselage.

Scratch One Train

Night hecklers from the *Phil Sea* were flying through murky skies along the east coast of Korea when a hole suddenly opened up in the overcast. Opportunity stared the pilots in the face.

Down below, Lt. D. B. Edge saw a train that had just left a tunnel in the heart of Songjin. He radioed its position to Lt. C. Z. Stevens and then moved in for the attack. Although it was pitch dark and they had no flares, the two *Corsair* pilots came in on an extra-low bombing run.

Lt. Edge placed a bomb on the tracks in front of the train, stopping it, then zeroed in on rails in back of the train. The two pilots proceeded to give the train a working over with their 20 mm cannons. For good measure, Lt. Edge scored a hit on the boxcars with a 250-pound bomb.

Farther south, Lt. J. N. Longfield and Lt. H. J. Airey picked up the position of the train and rushed to their fellow pilots' aid. They spent their bombs on the targets, then returned to the Task Force.

A little later, Lt. J. Snyder and his wingman, Ens. Paul Wasquist, both *Phil Sea Panther* pilots, were reconnitering a rail line near Songjin. They came across three groups of boxcars scattered along the line and unleashed their rockets. Moving towards Songjin, they continued to strafe boxcars they encountered. Snyder knew of the train which the hecklers had crippled and saved two rockets for it.

Knowing the area around the train was heavily defended by anti-aircraft, he made his attack at high speed and sent one of the rockets into the boxcar. Turning back, he made one more run and placed the other rocket right on target. By then the weather had completely closed in and further flights were cancelled.

SWAPPING *"sea stories" over coffee are Valley Forge's six globe trotters, Green, McCabe, Jackson, Walker, Bunger and Bangham.*

THIS IS *handiwork of shipmates for his slip-of-the-tongue. Lt. John W. Fornof, Boxer pilot approves their painting job.*

● NAS BIRMINGHAM—When the Marines say "he was really shook", they're talking about TSgt. Henry L. Hamlett of the station MAD. A Marine for six years, he received a notice from his board to come in and register for the draft. That's what shook him.

FLOBERG ADMINISTERS OATH OF OFFICE ON A BIBLE TO HIS SUCCESSOR, JOHN H. SMITH, JR.

SMITH IS NEW SECNAV FOR AIR

AT THE Capitol, the Senate was passing a resolution approving appointment of a man to become the new Assistant Secretary of the Navy for Air.

Over the Virginia countryside near Norfolk, a man flying a T-28A was coming down for a landing. He transferred to a TBM *Codfish* airliner at Norfolk and flew to the carrier *Antietam* to view operations.

While he was aboard the canted-deck flattop, Pres. Eisenhower signed his name to an official document making the red-haired former torpedo bomber pilot the new Assistant Secretary. He succeeds John F. Floberg, who a few days later administered the oath of office to John H. Smith, Jr. before Secretary of the Navy Anderson.

Smith's connection with naval aviation dates back to 1931, the year he was graduated from Harvard. He enlisted in the Naval Reserve as a seaman second class and took flight training at Pensacola. He was commissioned a Reserve ensign in August, 1932. That fall he entered Columbia Law School, receiving his LLB in 1935.

From 1933 to June, 1941, when he volunteered for active duty, he trained with Naval Reserve air squadrons. In November, 1941, he was released to inactive duty and became manager of Pan American Airways African operations.

Returning to active duty as a lieutenant in February, 1943, Smith served as a pilot with VT-24. His war duties saw him aboard the *Belleau Wood*, *Yorktown* and six other aircraft carriers. He also was on the staff of Adm. Arthur W. Radford, then ComCarDiv Six. He landed with Army units during the Makin island invasion and made a study of effects of naval air support in an amphibious operation.

Smith holds the Bronze Star medal with combat "V", three air medals and the Presidential Unit Citation. He was released from active duty in August, 1945, as a lieutenant commander. The following November he was promoted to commander and on June 1, 1953, he was placed on the retired list as a captain in the Naval Reserve.

CAPT. MITCHELL WELCOMES SMITH TO CARRIER

The Assistant Secretary returned to Pan American Airways after the war and served as Vice President from 1946 to 1949. He became associated with Slick Airways in 1949 as a director, resigning in 1953. He has been a Special Assistant to the Secretary of the Navy for brief periods since 1951. He was a resident of Aspen, Colo., at the time of his appointment by the President to the top air post in the Navy.

Former Sec. Floberg had been in that spot since November, 1949. A former destroyer commander and private plane pilot, Floberg soon distinguished himself by flying almost all types of Navy planes, making carrier landings alone and even making a practice parachute jump at El Centro to see what it was like. He has returned to private law practice in Washington, D. C.

★ ★ ★ ★

FLOBERG TURNS OVER THE REINS

With the following remarks, John F. Floberg relinquished his post as Assistant Secretary of Navy for Air to his successor, James H. Smith, Jr.:

CONGRATULATIONS, Mr. Secretary, on assuming the senior civilian responsibility for the most mobile and versatile unit of military airpower in the world. I am transferring to you the responsibility for a force that is resolute in its purpose, high in its morale, knowledgeable in its mission, peaceful in its ambition, and heroic in adversity, in combat and in the devotion of its personnel for each other.

This is a force that is independent of any foreign politics, consent or territory for the exercise of its most devastating capabilities, and yet it is able to utilize the most advanced weapons which science has been able to create.

I am happy to be succeeded, Mr. Secretary, by a "stick and rudder" man, and you are the sixth of the eight occupants of this office who has been an aviator himself. I also am happy that you have had the combat experience of World War II, for I know that that background will be invaluable in making the decisions which will face you in future months.

While I could not help having some regrets about leaving, I do so with the greatest optimism for the future of naval aviation in your hands. The happiest prospect I can wish for you is that when you turn over this office to your successor you can do so with the same confidence that he will do a better job than you have done as I have that you will do a better job than I have done. Good luck!

SALT WATER SPRAY DRENCHING CARRIER DECK WOULD PLAY HOB WITH ANY UNPAINTED PLANES

TO PAINT or not to paint Navy fighting planes is a question which is wrinkling many brows in squadrons, on aircraft carriers and behind desks in the Navy department.

Preliminary reports are in on some of the 100 F9F-5's and 100 F2H-3's which were sent to the fleet "bare" of all paint to protect their aluminum skins. The Navy wanted to know if the metal could take the corrosion of salt spray and the first carrier duty tours of the bare planes already reveals how cautious it must be before making a decision across the board. In another six months it hopes to have more facts on the question.

Painting predates World War II. Camouflage paint was the big consideration then. The Navy maintained a sizeable unit during the war at NATC Patuxent River to determine the best camouflage colors and patterns for its fighters, torpedo bombers and patrol planes.

TBF's, SBD's, PBY's and other warplanes were given gray-colored undersides so they would blend with haze or cloud cover when viewed from below. Topside, they were painted darker shades so they would merge with the sea when seen from above. ASW patrol bombers like PV's and PBM's were painted white to blend with overcast sky and snow areas of the Iceland-Greenland theater.

That was earlier in the war. As American fighting ships began growing in number and itchy-fingered gunners worried about Jap *Kamikazes*, Navy planes were shot down because of faulty recognition. Carrier gunners were known to have clobbered planes with such un-Japlike silhouettes as TBM's.

Emphasis on Visibility

The cry went up to make our planes more easily recognizable instead of trying to camouflage them, since they had to run the gauntlet of our own anti-aircraft batteries as well as the Japs. All of a sudden word went out from Admiral Halsey—paint them all solid blue. Quick recognition was important then both for the benefit of ship's gunners and so our own pilots could tell friend from foe quickly. So blue they became and blue they still are today.

There is no military requirement set up today for general camouflaging of Navy planes except to be ready with

AIR FORCE F-86 AND F-84 JETS HAVE TO BE COCCOONED FOR CARRIER

BARE AND PAINTED F9F'S ON FDR'S DECK TEST NO-PAINTING THEORY

UNPAINTED F9F PANTHER FROM THE BOXER OFF KOREA TESTS BUAER NO-PAINT IDEA IN WAR

today more weight conscious than ever, figure a pound weight saving anywhere could enable them to cut off five to 10 pounds in the early stages of designing an airplane. Or else enable the plane to carry more gasoline, either of which is money in the bank. Taking this weight off after the plane is built or designed doesn't help so much because it's too late to put in bigger gas tanks or cut heavy structural beams or shrink the airplane.

2. COST OF PAINT. A fighter gets three coats of paint—about five gallons being required for each coat. A big JRM *Mars* seaplane takes 190 pounds of paint to cover it. It rides in salt water and definitely needs adequate corrosion protection. Increased waxing when paint is left off cuts down any saving however from leaving a plane bare.

3. VISIBILITY. Dark blue planes are more easily spotted against a cloud cover and are easier for small arms fire to hit at low altitudes where our AD's and F4U's were flying in Korea. On the other hand, their dark paint jobs make them harder to see against

UNPAINTED F2H-3 ON CORAL SEA STILL HAS NOSE AND OTHER PAINT

LIGHTERING PLANES ASHORE EXPOSES THEM TO SALT WATER CORROSION

schemes for some situations. Helicopters, which work close to the ground at all times, are an example of where ground camouflage is being worked out.

The Air Force, since its early camouflage attempts to hide its bombers and fighters from enemy eyes, has gone in for shining metallic finishes. Without the problem of corrosion peculiar to spray-swept carrier decks and seaboard air stations, the USAF prefers the bright aluminum.

On the other hand, aircraft destined for countries in the North Atlantic Treaty Organization are to be painted with passive camouflage so they can be hidden more easily on the ground. Shiny silver planes are next to impossible to conceal from prying eyes above and make easy strafing targets. Night fighters usually are painted black, although visibility of any plane at night is low. Some "Dumbo" *Catalinas* which used to sneak near Jap-held islands to rescue downed American pilots also were painted black as a camouflage—for example the famed "Black Cats" outfits.

Tests Show Variation

Within the last couple of years the Navy Parachute Unit at El Centro ran some visibility tests with its TV-2 jets. One was painted black and the other pure white. Ground observers could see either equally well against El Centro's blue skies at 20,000 feet. At 25,000 feet the white proved more visible, but at 40,000 feet the black was invisible and the white plainly seen. Silver-metal planes, on the other hand, are not so easy to spot as a white one.

On the question of corrosion protection, however, to paint or not presents many facets. Some of the facts which Bureau of Aeronautics has to consider in its attempt to find the answer should be set down here:

1. WEIGHT. It is estimated paint weighs about 20 pounds for each thousand square feet of airplane surface. Aircraft designers,

a hill background, as compared to a silvery unpainted plane. At higher altitudes, a bare aluminum plane is practically invisible from the ground—but AA fire on such targets is radar-aimed anyway so this advantage does not pay off. Regardless of the color of the paint, any plane varies in its visibility according to the direction of light, cloud background and altitude.

4. MAINTENANCE. Opinions on the amount of elbow grease required to keep an unpainted plane looking good compared with painted planes differ. This is one question which only time and more experience and fleet reports will settle.

5. CORROSION. There is no substitute for paint when it comes to protecting plane skins from salt water corrosion. Paint is more durable against sand, salt and rain.

6. PAINT AREAS. Even on so-called "bare airplanes" certain parts still have to be painted. Anti-glare areas around the nose and on tip tanks have to be painted to keep from blinding the pilot with reflections. Magnesium and non-clad aluminum areas have to be painted to protect them from the elements. Exhaust and gun blast areas have

to be protected from discharge products. Radar noses of plastic have to be protected from the elements at high speed, walkways on the wings covered with paint or protective material.

7. PRODUCTION PROBLEMS. One aircraft company, asked by the Navy to leave paint off large planes which had been scheduled to be painted, declared it would cost $8,000 more per plane to produce the unpainted version. This may sound strange when the cost of painting is considered but wait—an unpainted plane has to be handled with the utmost care in the manufacturing to prevent scratching the bare aluminum.

Sheets of aluminum must be selected more carefully to be sure they match adoining sheets. All sides with markings such as "Alclad" must be mounted inward to conceal the mill markings which would otherwise be covered by paint. Scratches have to be burnished off. This takes time and leaves a shiny spot, besides wearing through the thin coating of pure aluminum which goes outermost on a sheet of clad metal.

Yellow primer paint and stains on the sheets have to be removed completely as the plane is put together or it would look too splotchy and unmilitarylike for pilot morale. On the other hand, some fighter manufacturers offer reduction from $50 to $650 when paint is omitted. So here again, cost of painting is not a simple answer.

Everyone in the Navy aeronautical organization is interested in reducing corrosion and maintenance to a minimum. The biggest reason for painting a plane, of course, is to accomplish just that. Operating as it does around salt water areas, the Navy's planes have a problem where the Air Force does not—except when the AF ships its jet fighters to such places as Korea on the decks of the Navy's TCVE's.

These planes have to be covered with a protective coccoon costing several hundred dollars to keep down corrosion on their bare "hides" of aluminum. Planes often are lightered ashore on low-freeboard barges. Spray frequently douses these aircraft and corrosion pits quickly show up all over them.

When the idea first was broached to BuAer to test whether planes should be painted, a few F9F-2's were put aboard the *Kearsarge*. Later the *Franklin D. Roosevelt* carried a load of the bare *Panthers* to the Mediterranean to give them a six-months test. Since then F9F's have been left unpainted and placed aboard the *Antietam, Midway, Tarawa, Boxer, Bennington, Princeton, Valley Forge* and *Coral Sea*. Some had tours of duty in the combat zone and reports that came back have indicated corrosion varying from slight to bad, depending on the weather and other conditions during the carrier tour.

Several of the first group of F9F's sent out for the test were given different paint jobs. Some had blue tops and aluminum paint on their under-sides, others were painted with aluminum tops, blue bottoms and some were bare.

Painting Spares a Problem

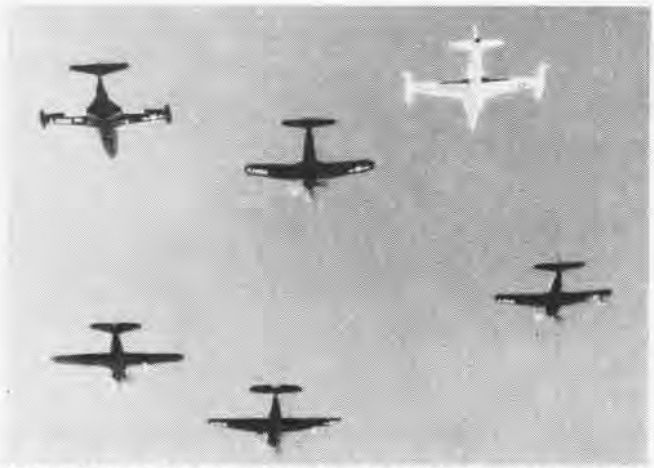
The problem of painting airplanes also has another angle—how about the spares? Should the maker leave them bare or paint them? Spares take a beating while being handled between supply points. In all kinds of storage boxes and warehouses, they are many times out in the open in all kinds of weather. Non-painted surfaces might be corroded and scratched badly without even having to be out of their original cartons.

Spillage of gasoline while refueling has been known to ruin paint-surfaced areas. Sand or dust abrades paint or metal, especially on wing leading edges. Planes sent to the fleet bare must be waxed frequently to protect the surface. It is sometimes easier to talk about waxing than to do it, as was demonstrated with carrier deck planes during a storm period.

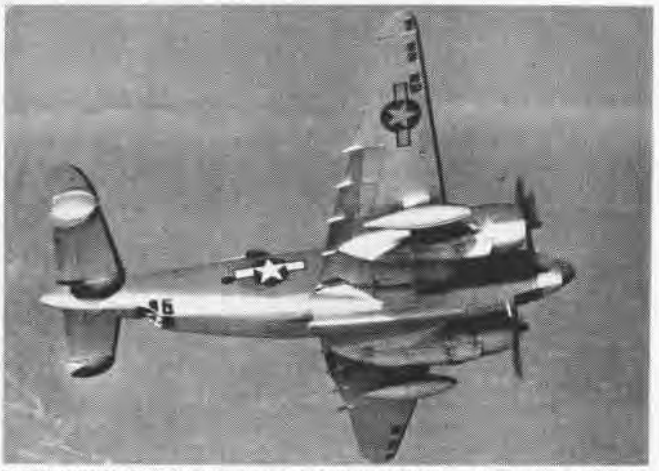
More answers on the question of painting planes may be forthcoming when the *Coral Sea* brings back its batch of F2H's. On an earlier test on the *Midway* in the same area, salt spray doused the planes liberally. Corrosion spread over the upper surfaces of the plane and pitted the anodized surfaces. Planes with aluminized lacquer surfaces or regular blue paint generally don't show this corrosion.

A report from VF-21 which had three of the unpainted F9F-5's for the past six months, said the planes were exposed to severe carrier deck weather. On the bare metal, spots of corrosion appeared where grains or bits of salt had settled, it said. The spots varied up to about $\frac{1}{8}$" in diameter and were ingrained several thousandths of an inch.

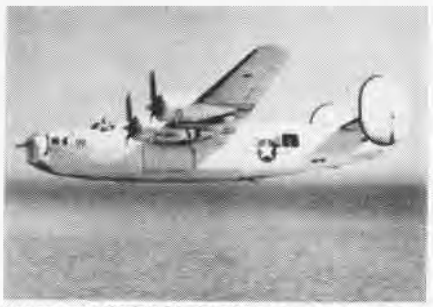
"It is believed to be inadvisable at this time to remove paint from currently painted models until it is proven that the specified wax will prevent corrosion and until that wax is available in good supply," the report said.



ONE UNPAINTED TV-2 IS LESS VISIBLE THAN BLUE PLANES IN PHOTO



EARLY WW II CAMOUFLAGE HAD LIGHT UNDERSIDE, DARK TOP PAINTING



WHITE CAMOUFLAGE PAINT WAS PB4Y-1 COAT

AIR FORCE F-51 HAD CRAZY-QUILT PAINT JOB

TWO ACES IN KOREAN AIR WAR

TWO ACES have been crowned in Navy and Marine aviation in Korea, Lt. Guy Pierre Bordelon with five "Bed Check Charlies" to his credit and Maj. John F. Bolt the first Marine jet ace, with six *Migs* to his credit.

Bordelon, the Navy's first ace in Korea, flew F4U-5N *Corsairs* from VC-3 on the *Princeton*. While on the night flying duty he was attached to Fifth Air Force at Seoul. On June 29, Bordelon shot down two of the low-wing monoplanes, believed to be YAK-18's. He followed this up with two more on July 1 and became an ace by bagging his fifth night prowler on July 16. For his feats he won two Silver Star medals and was recommended for a Navy Cross.

The night heckler planes on one occasion got some bomb hits on storage dumps and caused considerable damage at Seoul. The YAK-18 is a two-place trainer about the size of Ryan primary trainers used in World War II. It has a five-cylinder radial engine and 140 knots top speed. The plane has a radius of about 200 miles but the Reds may have added fuel tanks to boost this for the Seoul raids. Its speed is so slow faster planes have to drop wheels and

MAJ. BOLT, FIRST MARINE JET ACE, ON SABER

flaps to try to cut their own speed.

Maj. Bolt was leading a four-plane *Saber* flight in an attack on four *Migs* east of Sinuiju while on temporary duty with the 51st Fighter Interceptor Wing. It was his 37th mission. Bolt saw the *Migs* take off from Antung base and led his flight down on them before they could gain altitude.

He said he blacked out momentarily and came out only 1500 feet behind the *Migs*. "I pushed over and gave four bursts," Bolt said, "He began to smoke, rolled over and slipped into the ground.

"I made the second kill when this other dude drifted over my way. I pulled my nose up and close to within 500 feet and started firing into his tailpipe. He began burning and I was so close that I was near blinded by the dense smoke. I pulled out and got out of it just in time. I watched the pilot eject himself and float to the ground. It took me only 1200 rounds and five minutes—a pretty good return on the investment."

Maj. Bolt has completed 89 *Panther* fighter-bomber, close air support and interdiction missions with MAG-33 in addition to his 37 *Saber* sweeps. During World War II, Bolt shot down six *Zekes* while serving with Boyington's *Black Sheep* squadron, VMF-214, between 23 September 1943 and 4 January 1944.

Bordelon served with Air Group 111 and VC-183 on the *Corrigedor*, *Puget Sound*, *Boxer* and *Valley Forge*.

On June 15, Maj. George H. Linnemeier of VMC-1, flying a night interceptor hop, shot down a PO-2 night heckler and claimed another damaged.

VF-172 Wins 14 Gun 'E's'

Blue Bolts Riddle Banners at Gitmo

COMFAIR JACKSONVILLE—A month's competitive gunnery firing by VF-172 saw the *Blue Bolts'* hotshot gunners win 14 E's at 25,000 feet and 11 E's at 15,000 feet.

Temporarily based at Leeward Point, Cuba, the jetsters riddled many tow target banners while logging 1100 flight hours during the month. Lt. George Warren, a double E winner, also had the squadron's highest over-all average for the month.

Double E winners were LCdr. Gilford Acker, Lts. Robert Hamilton, Roy McClosky, George Warren, Lts. (jg) Richard B. Bellinger, Albert Wilhila, Donald Haynsworth and Ens. James A. Newcomb and Dave North.

Single E winners were LCdr. James Cain, squadron skipper; Lt. Paul Creatau, Lts. (jg) Paul Riley and Louis Racy and Ens. Thomas Fisher, James Osborn and Donald Minnigerode.

VF-102 pilots racked up 17.4% hits in gunnery at 25,000 feet, winning 23 E's, 13 at that altitude and 10 at 15,000 feet. Best competitive target sleeve was brought back by Lt. Gene Glass, Lt. Robert Horner, Lt. (jg) Richard Doan and Ens. Charles Beal, who averaged 31% hits at 15,000 feet.

Double E winners were LCdr. Roy Dalton, the skipper; Lts. Glass and Horner, Lt. (jg) Doan, Ens. John Haselton, Ens. Harry Rolka and John Nichols.

Single E's went to LCdrs. Kenneth Ruiz and Tom Lindsey, Lts. Arthur Brooker, Ronald DeBaets, and Raymond McDannold and Ens. William Knowlton and Beal.

VF-43's *Fighting Falcons* picked up 15 E's, nine at 15,000 feet and the rest higher up, with Lt. Howard M. Hudspeth making the top hit percentage.

Navy Chief Becomes Citizen

He Wasn't Born Here in U.S. After All

After nearly 16 years of naval service with the U. S. Navy, Chief Yeoman Hill has finally dropped his Canadian citizenship and become an American citizen at NAAS CABANISS FIELD.

Until last October, when Hill wrote a relative to obtain a birth certificate, Hill honestly believed that he had been born in Detroit, Michigan. The relative wrote back, informing him that Toronto, Ontario was his place of nativity.

The Chief explained his position to the Navy and the U. S. Immigration and Naturalization Service and began the long process of obtaining citizenship. This spring, after living under "false pretenses" in the United States for over 35 years, he became a citizen.

SKIPPER CAIN HOLDS BLUE BOLT INSIGNE AS HIS 'E' WINNING MARKSMEN CLUSTER AROUND

LANT 'CODFISH' LINE LONG ON SAFETY

FULL LOAD *of seven men and 2,000 pounds of gear in converted TBM-3R torpedo bomber bomb bay ready for takeoff as Chief L. M. Bailey checks pilot to see if he is ready*

CODFISH Airline in the Pacific has been winning the headlines but the Atlantic Fleet also has a Carrier-On-Board-Delivery operation featuring VR-22's *Turkeys* which has chalked up a near-perfect score of more than 750 all-weather carrier landings.

The Norfolk, Va., group has flown government dignitaries, high priority passengers, critical cargo and mail in every major Atlantic Fleet exercise since June of 1951. True to the airline tradition, they have never missed a flight, and had only one minor accident.

Workhorse of the operation is the old TBM-3R modification carrying seven persons and 2,000 pounds of cargo. The ship-to-shore airline operation started off the coast of Korea and was so successful the Atlantic Fleet soon was serviced by an eight-plane, 10-pilot TBM transport division of VR-22, which normally operates R4D-8's and R5D's. After 75 qualification landings aboard carriers, the tailhook transports were in business.

On June 11, 1951, LCdr. I. A. Henry made the first scheduled landing aboard the *Siboney*. The first of a long line of high-ranking VIP movements came within a month after the unit was organized. VAdm. John J. Balentine and RAdms. Coe and Nickelson headed the list of 67 passengers transported. Later ship-shore flights included the SecNav, Assistant SecNav for Air, head of the Atomic Energy Commission and Assistant Secretaries of Defense, Air Force and Army.

During *Operation Lantflex* off Roosevelt Roads, Cuba, VR-22's *Codfishers* had the distinction of establishing a Navy Atlantic "first". The flight deck of the *Midway* was crowded with squadron planes, spotted on the deck. To disembark VIP's, the *Midway* backed underway into the wind, as the *Hornet* once had done during WW II when the forward end of her flight deck was crumpled by a typhoon. Lts. C. D. Tate and S. L. Black took their TBM's off the *Midway* over her stern. (NANEWS, *March, 1953.*)

From the VR-22 nucleus of single engine transports, four TBM's were sent to Naples, Italy, to form a third such division in the Mediterranean fleet. That unit is now FASRON-77.

The largest single items transported by VR-22's *Turkeys* were three F4U props weighing 400 pounds each. The props were flown from Quonset Point to the *Wright*, operating at sea. The carrier thus did not have to put into port and offload the *Corsairs*.

The TBM's are equipped with ADF and necessary navigational gear to permit them to operate in all weather. The *Codfishermen* have made GCA and CCA approaches under conditions as low as 200 feet ceiling and one-quarter mile visibility. Pilots maintain their high degree instrument proficiency through constant aircraft and Link practice and receive their instrument checks in R4D-8's.

THEIR biggest bit in a fleet exercise came during *Operation Mainbrace*. Two TBM's piloted by Lts. W. F. Johnson and W. T. Zebrowski flew a total of 56 hours, making 26 landings on three carriers. During the busiest day, 65 Marines and 18,500 pounds of gear were flown from the *Wright* to Port Lyautey, French Morrocco.

Although operating under diplomatic clearances at the time of *Mainbrace*, two TBM crews were captured by "enemy" NATO forces as spies for the opposing forces. Subsequent communiques established their identity as "neutrals" working for both sides.

Operation Mainbrace also enabled the VR-22 TBM crews to become members of the *Royal Order of Blue Noses* when they crossed the Arctic circle.

Aboard the *Antietam*, the *Turkeys* were among the first aircraft to land on a canted deck. For transporting VIP's to watch the first major landings, the tailhookers received another "well done."

Not all of their hops are run-of-the-

COD PILOTS *Smith, Wheat, Zebrowski kneel; Johnson, Quick and Black in the back row*

mill. Two mercy missions are on the books. Word of the death of a little girl in Minnesota was received aboard a carrier in mid-Atlantic. The father, a Navy chief, was flown immediately 200 miles to Bermuda where he made connection with an Air Force B-50 which flew him to Duluth, Minn., in a matter of hours. The second mercy mission was a sorely-needed medicine package dropped to the heaving decks of the *Coral Sea*.

As with all Fleet Logistics Air Wing activities, safety is paramount with VR-22's carrier airline. In two years of operation, this single-engine division has had only one accident. A broken tailhook caused the aircraft to hit a barrier—no injuries or serious damage. And for this kind of a safety record, both pilots and maintenance crews can be proud.

NOW WE'RE IN THE MIDDLE OF THE ATLANTIC

WHEN THE *new Navy guided missile Regulus, made by Chance Vought Aircraft Co., lands at Muroc AFB it is well-accompanied by other planes. One of the two McDonnell F2H-2P photo planes is shown here flying alongside the missile as it is guided in for a landing by the TV-2 control plane on the other wing. Note the parachute which has been popped to slow down the pilotless missile in its landing run. Regulus is the only guided missile revealed thus far which is equipped with wheels and can be recovered after a test flight.*

Mercy Hop Saves Tot's Life

FASRon-109 Flies Baby to Bethesda

COMFAIR, JACKSONVILLE—A humanitarian flight to save the life of the year-old son of Lt. Charles G. Brady was made by a FASRon-109 Beechcraft, carrying the boy from West Palm Beach, Fla., to Bethesda Naval Hospital.

The infant had a brain tumor and immediate care at the hospital was needed. Brady requested aid from Capt. A. S. Born, commander of Fleet Air Wing 11. With CNO approval, Lts. J. T. Sandefur and CAP J. P. Martin flew the boy, with Brady, to Washington for specialists' care. Brady is officer in charge of VP-16 detachment at Jacksonville. Lt. Martin G. Webb, Jr., Navy flight surgeon attended the baby during the flight north.

Hypnotist Entertains Pals

Marine Gave Many Shows in Far East

MCAS CHERRY POINT—Dark secrets of the strange art of hypnosis are being explored by Marines here through the ability of Corp. Leon Ruderman, an amateur hypnotist who put on 86 performances in Japan and Korea.

Now back in the states, Ruderman constantly baffles his audiences with exhibitions dealing with the subconscious. He toured Korea with the All-Marine Corps show, "Stars Without Bars", then followed up with a one-man show at field hospitals and aboard hospital ships.

Ruderman got interested in hypnosis when he was 18 when he read an article on its use in speech correction. One summer when working as a waiter in an upstate New York hotel, he filled in for an entertainer who failed to show up. From then on he worked the "Borscht Circuit" with success.

He now holds a master's degree in speech pathology from Columbia University and plans to get a doctor's degree when he finishes his Marine tour of duty. He hasn't decided whether to go in for hypnosis as an entertainment feature or pursue it in connection with speech correction.

HYPNOTIST ENTERTAINS HIS MATES AT POINT

CAPT. TED *Williams, big league ball player and Marine jet fighter pilot, gets his orders for inactive duty from Col. Kenneth B. Chappel in Washington, D. C. Williams had 36 combat missions in Korea in his Panther jet before an ear infection cut his military career short and led to his discharge. He returns to the Red Sox to resume baseball career.*

DAVIS CUP *tennis star Tony Trabert (left) and Gene Littler, California state open golf champion, both attached to ComAirPac units at San Diego, compare grips on their favorite "weapons" while on active duty.*

● MCAS CHERRY POINT—Capts. W. J. Barbanes and W. L. Hall of VMF(N)-531 are the first Marine pilots to qualify for carrier operation with the new radar-equipped F3D *Skyknight*. They made their "first" while aboard the *F. D. Roosevelt*.

Pilot Averts Bad Accident

Flies Skyraider over Housing Project

MCAS CHERRY POINT—Twelve years experience as an aviator saved lives and property damage when LCol. Arvid W. Blackmun of VMAT-20 landed his burning AD 500 yards from a heavily-populated housing project.

The plane's motor back-fired and cut out when he had only 150 altitude. Blackmun jockeyed it into a glide until it had cleared the housing area and aimed it at a fairly open spot in a wooded area, where he crash-landed.

Escaping from the wrecked plane without injury, he warned away rapidly-gathering spectators who were closing in on the plane. Prompt action by the station crash crew prevented the gas tanks from exploding and spreading the fire.

BLACKMUN ESCAPED CRASH WITHOUT INJURIES

GOOD SHOOTING *comes natural to Lt. Fonville Kelly of VF-32. Flying the new swept-wing F9F-6 Cougar jet, he racked up more than 40% hits in gunnery firing at both 15,000 and 25,000-foot altitudes to qualify for two battle efficiency gunnery E's. In World War II, he made two direct hits on a Jap BB while with VT-85 from the Shangri La to win himself a Navy Cross.*

TWO ENLISTED *men, members of VC-3 at Moffet Field, were among four champion athletes who were honored at a "Banquet of Champions" at San Jose, Cal. They were David and Ronald Rhoads, brothers and airmen, members of the Olympic team. David was 1951 national track cycling champion and his brother won it in 1952. With them in the photo are Jess Hill, USC coach, and Bob Mathias, Olympic decathlon champion, who was honored as "Champion of Champions."*

● NAS NORFOLK—At brief ceremonies VP-661, former Reserve squadron from NARTU ANACOSTIA, became VP-56.

WHEN THE *GCA unit at NAS Key West made its 20,000th controlled approach on 18 May, honor of flying the TV-2 in for a landing went to Capt. J. C. Toth, CO of Fleet All Weather Training Unit. Members of the Key West unit were: front row, E. M. Rankin, ET1; H. R. Babro, AC1; R. A. Sylvester, AC3. Back row, W. Golowicz, AC3; L. B. Foret, ACC. LCdr. K. E. Wheeler, Lt. (jg) Phillips, F. C. Schultz, ENC, and W. C. Lantz, AC3. The unit formerly was stationed at Roosevelt Roads, Puerto Rico.*

GUAM TYPHOON BUFFETS PLANE

NAS AGANA—Winds equalling the speed of the aircraft held a VJ-1 typhoon-hunting *Privateer* within the windstream of typhoon *Kit* and close to its "eye" for almost an hour.

LCdr. P. E. Kedigh, commanding officer of Weather Squadron One stationed on Guam, skipper of the mission, reported flight conditions as bad as those encountered in *Hester*, last season's big typhoon.

"For several short periods up and downdrafts were so severe that both pilots were on the controls," Kedigh said. "We were so busy we didn't have time to pick up the mike or to correct our altimeters with the radio altimeter of the aerologist. After dropping to 200 feet with climbing power on, it seemed the plane never would regain its altitude.

"The variation between radio and pressure altimeter frequently was more than 1,600 feet."

Co-pilot Lt. B. H. White described the flight into the typhoon as "the most helpless sensation I've ever been through. We ran into downdrafts at about 800 feet and kept going down. We added climbing power and pulled back but she still kept settling. Finally we hit the cushion at 200 feet."

D. J. Dennis, AGI, flight aerologist, said the original plan was for the plane to cut through the eye and out the other side. "We never did reach the eye," he explained. "Before we could get that far the windstream around the eye picked us up and from then on we were fighting to get out of the severe turbulence area."

Kit was the second typhoon VJ-1 has pinpointed this season. Last season it tracked 11, made 33 typhoon fixes and more than 200 weather recco flights.

Other members of the Kit flight were W. W. Melland, AD1, plane captain; **B. Tiegan,** PHC, chief photographer; **R. I. Weygandt,** AN; J. E. Walpole, AL1; J. E. Juhl, AL3; E. P. Margo, AN; R. M. Mueller, AT3, and M. L. Hampton, AO3.

Hops U. S. Twice in a Day

Ferry Pilot Jets Way Across Country

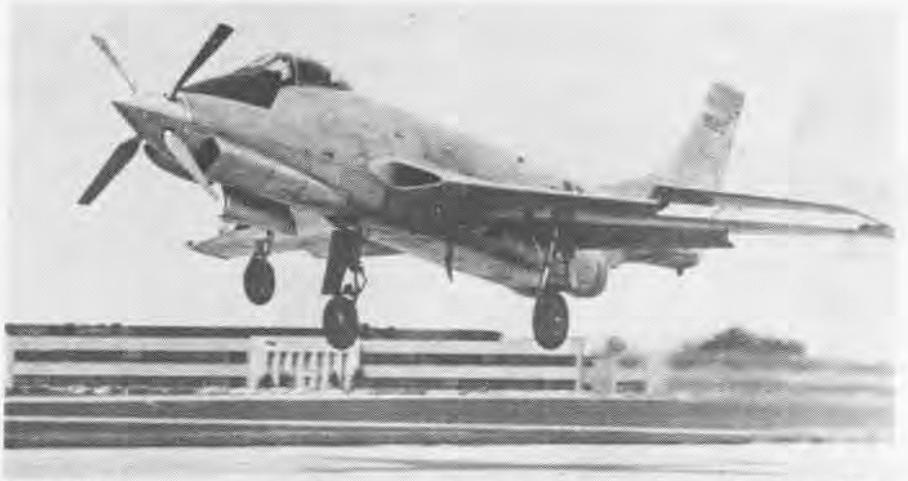
NAS NORFOLK—LCdr. George H. Whisler, Jr., really gets around, even for a ferry pilot.

A member of VR-31, left for the West Coast at 0518 on 24 July in a Grumman F9F-6 *Cougar* jet. He arrived at NAS SAN DIEGO 6 hours and 36 minutes later. There he ate lunch and climbed into a Douglas F3D Skynight to be delivered at Norfolk. On the return trip he made one stop in 6½ hours and was back in Norfolk that evening. Neither hop was a one-way record, other jets having made cross-country flights in less than four hours, but his feat is believed a record for two-way flights.

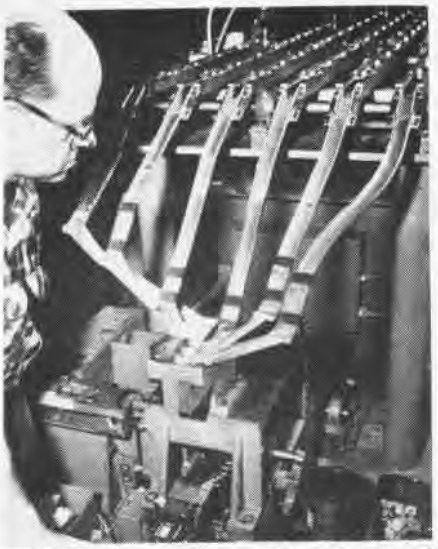
MK 8 Computers Available

Air-Nav Item for Issue to Aviators

To fully utilize present stocks, Mk 8 and Mk 8A air navigation computers are available for personal issue to naval aviators. This item has been listed for over a year in paragraph 26240 of the BUSANDA Manual and may be drawn from flight gear issue rooms at naval air activities. For the technically minded here are the stock numbers: the Mk 8 is S/N R88C1150-000-000, and the Mk 8A is S/N R88C1151-000-000.



THE NAVY *has an interest in the strange-looking plane shown taking off above with its propeller feathered. It is an Air Force XF-88B fighter built by McDonnell Aircraft Co. Two Navy J-34 turbojet engines drive the plane normally, getting their air through wingroot airscoops. In the nose is a Navy XT-38 turboprop engine which gets its air through cheek scoops on the underside of the fuselage. Takeoffs are made with the plane's regular jets and the turboprop feathered until 20,000 feet is reached. There the plane tests the supersonic propeller attached to the nose engine. NACA will fly it.*



CERAMIC wafers are assembled and soldered into modules under eye of worker at plant

VIBRATOR machines sort wafers which are used to make up modules, a basic component

NOTCH painting machine paints silver conductor metal on wafers made in the plant

PROJECT TINKERTOY

INTERCONTINENTAL jet bombers from a foreign air force are attacking the United States, laying waste to Atlantic Seaboard cities.

The U. S. air arm is unable to put swift interceptor fighters into the air to stop them. Its first wave of interceptors is shot down and no new ones are coming out of the factory assembly lines.

At the factories, long lines of swept-wing fighters sit empty and ghost-like along the concrete landing aprons. Their engines are installed and the planes are ready to fly. The only thing lacking in each is the radar sight which aims the interceptors' guns.

Those gunsights are the bottleneck which is holding up the U. S. aerial defenses. Electronics manufacturers are unable to keep pace with factories turning out new planes.

● The above situation is only hypothetical, but it is not unrealistic. Ask anyone in the Bureau of Aeronautics and the answer will be the same: Missing electronics gear often has prevented new Navy aircraft from being used as their designers intended. The planes may be flying but the radars or radios are missing or not working.

A new ZP2N airship was delivered to the Navy without its radar installed. It can be used only for training flights until the radar is finished. The set will have to be backfitted in the fleet later.

Some new P5M seaplanes reached the fleet with radar not installed or inoperable and must be used for training hops. Some AD *Skyraiders* lacked radar equipment and were flown without it until electronics manufacturers could catch up with the aircraft industry. The same thing happend to some new R6D transports, which had to be accepted by the Navy before the navigational radar was installed.

It is not entirely the fault of electronics manufacturers that their profession is so complicated and slow in comparison to assembly-line plane manufacture. That lack of electronics equipment forces the Navy to take delivery of planes without it or with the gear in inoperable condition due to the lack of trained mechanics in the fleet.

Radar and radio are slow to build under the present system of manufacture and expensive to repair, even when trained technicians are available. Some new-model F2H jet fighters were delivered to the fleet with radar installed and workable. The fleet, however, wanted to remove it until men could be trained to maintain it.

THE NAVY decided to do something about the electronics bottleneck. In cooperation with National Bureau of Standards, Bureau of Aeronautics has had underway since June, 1950, *Project Tinkertoy*. Its aims were to develop a system of mechanical manufacture and assembly of electronic functional sub-assemblies as an Industry Preparedness Measure.

During World War II and again at the start of the Korean partial mobilization, small electronic components such as carbon composition resistors, were major bottlenecks slowing down electronics production. *Project Tinkertoy*, it should be emphasized, relates primarily to development of a system, including processes and machine, to manufacture modular form electron tube stages, including the related resistors and capacitors, from basic raw materials.

In addition, the system provides for mechanical assembly of these modules into printed circuit base plate combinations compatible with one another and with other large dimension basic components to form functional sub-assemblies. It does not make or assemble antenna systems or power transformers, for example, nor apply to large structures such as magnetrons or other high-power transmitting tubes.

The system was designed to speed up manufacture, reduce the cost, simplify maintenance, save space and cut down on usage of several critical materials. It is estimated that lead time required to produce new electronics equipment will be reduced 75% by use of this assembly system.

One trouble with electronics gear has been the vast amount of handwork required to put it together and maintain it. There has been no shortcut to eliminate the worker with the thin wires and soldering iron. In the absence of an adequate supply of trained workers, production has been comparatively slow and cost sky high.

As a result of experience in World War II, the Navy learned how to mothball fleets of ships and planes for future use. Industry closed down assembly lines and stored away special tooling, but it never found a way to mothball the trained people. The Navy's Air Reserve program kept men in training to fly and maintain its planes. But when the Korean war broke out civilians to build specialized military equipments in the

PILOT PLANT machine makes individual capacitor wafers under 3,000-lb. pressure; Operator Thomas checks one for thickness

RESISTOR tape is applied to module wafer as a pre-test to evaluate its resistance, correct width before going into assembly

factory had to be trained all over again.

Project Tinkertoy has resulted in a streamlined method of making electronics parts and assembling them by machinery. An important feature of this method is the continual checking and rechecking of all components used as the process progresses. One hundred percent checking is achieved; this greatly reduces the final rejects and should improve reliability in operation. The method has wide possibilities for commercial makers of television and radio and is being released this month to American industries for adaptation and use.

TO GIVE the manufacturing method a practical tryout, a pilot plant was constructed in Arlington, Va., under technical direction of National Bureau of Standards. This plant will test feasibility of the machine process.

The installation will show commercial manufacturers how best to adapt the system to their own use. The pilot plant starts work from the ground up, beginning with talc and other basic ingredients for ceramic "wafers" which make up modules used in the system. Various automatic and semi-automatic machines built especially for the project produce assorted component parts and assemble them, much in the manner of an automobile or plane assembly line.

Any manufacturer now will be able to acquire similar machines and adopt the system. The original plant cost several million dollars since each machine had to be designed and built separately. Once the design has been proven, future machines can be produced at a fraction of this cost.

They are so flexible that in a few minutes the product being produced can be changed from a simple radio sub-assembly to a complex electronics system. This versatility makes feasible the dual-purpose plant which may be switched quickly from civilian to military output during time of mobilizaton. Therein lies the secret of the Navy's strong interest in the project.

A number of existing electronic equipments were studied for adaptability to machine construction. These included equipment for a sonobuoy, the AN/APN-22 aircraft altimeter and a radio control receiver for target drone aircraft. The sonobuoy has been selected for trial production by the pilot plant because of the large number of different circuit applications and techniques involved.

Because of its use where high accelerations are common, the electronics circuit and parts developed by the plant are built to stand forces up to 300 G's. This great strength is a far cry from the ordinary conception of radios being fragile and easily made inoperable by jars. Space and weight savings of the new design mean that more fuel or a bigger payload can be carried.

From the Navy's standpoint, this ability to take punishment and the quick interchangeability of components without endless hours of rewiring and soldering will prove a maintenance godsend. Component assemblies can be put together like sectional bookcases.

OLD SONOBUOY component (right) shows the complex wiring eliminated in new (left)

The pilot plant is designed to turn out 1,000 modules an hour and 6,000 to 7,000 sonobuoy electronic installations a month. It occupies 15,000 square feet of floor space and requires about 35 workers to operate.

One of the advantages of the machine assembly system is the concentration under one roof of a nearly complete production facility. This eliminates numerous sub-contractors who have to supply parts, a short supply of which can bottleneck the whole electronics assembly. Most component parts can be made directly from raw or semi-processed materials in the single plant.

A NUMBER of civilian firms had a hand in producing the new machines which the Navy needed to set up its electronics assembly line. Since no such machines existed at the time, each had to be designed, built and tested to get the "bugs" out of it before the line could get into production. Kaiser-Frazer Corp.'s Detroit Engine Division produced more than half the machines.

Other industrial firms which made equipment or supplies for the project were: Doughnut Corp. of America, Ellicott City, Md.; Kaiser Mfg. Co., Nashua, N. H.; Communications Measurements Laboratory, Inc., Plainfield, N. J.; Davies Labs, Inc., Riverdale, Md.; Sanders Associates, Inc., Nashua, N. H.; and John G. Ruckelshaus Labs, Madison, N. J.

● VR-23, ATSUG!—This transport squadron thinks it should be called VR(C)-23. The C would be for composite since it flies R4D-8, R4D-6Z, P2V-Z, R5D and TMB-3R aircraft.

THE ENCHANTMENT OF THE NEAR EAST WAS SO EFFECTIVE THAT PILOTS DRESSED UP AS ARABS

LAKE CHAMPLAIN TRANSITS SUEZ

THE CAVALIERS of VF-22 have written friends at NAS JACKSONVILLE tales of their experience in traversing the "big ditch", the Suez Canal.

They were impressed with the seemingly endless stretches of desert on either side of the 103-mile canal and the oven-like blasts of heat that swept across the *Lake Champlain's* flight deck. According to those aboard the ship felt like a Turkish bath with even the outside water temperature registering a tepid 90°. Sleeping under the stars has proven itself a popular diversion.

Ens. Ed Broyles, Jr., a pilot in VF-22 writes, "This has been an enlightening 18 hours, traversing the 'big ditch', 103 miles of brackish water which sloshes with the tide, first north to the aquamarine Mediterranean then south to the jade Red Sea."

He continues, "Actual shipboard preparations began while off Port Said. The flight deck was respotted leaving a large clear area forward for better visibility from the temporary flying bridge built thirty feet abeam (across) the island structure. Poles were erected on each side forward, similar to surveyors' guides for the convenience of the Egyptian pilot."

Broyles describes the actual getting underway of the carrier, thusly, "At seven bells the anchor winches commenced their grinding. The ship slowly pulled away from muddy swirls astern as she arced toward land and the canal entrance. Our lead tug, sent ahead to clear the way, led the regal procession between stone jetties, past swarming 'bum boats' fended off with high pressure fire hoses, between rows of cargo ships waiting their turn to fall in column astern, past clusters of one-story clay buildings adorned with Arabic script and an occasional American or British advertisement."

"Five hours later we had covered 35 miles, or more than one third of the complete route. As far as the eye could see, nothing except blistering sand, salt flats and occasional scrub clumps lay on either side.

"Along the western bank was a two-lane macadam road and beyond it a narrow, shallow auxiliary canal. The blazing sun and oven-like blasts had cleared all but the hardiest from the flight deck.

"Close by we saw a group of nomadic Egyptians clustered around an open fire and their half dozen camels feeding. The Egyptians squatted on their haunches and watched us pass. Apparently the intrusion of a super-man-of-war had made little impression on the camels as they remained in their awkward feeding position, lying on their stomachs with their legs tucked under.

"After dinner that night the word spread that there was a small British settlement and sure enough as we drew closer, there flew the Union Jack over several neat little houses and small manicured lawns all surrounded by a white picket fence. On a short pier stood the Englishmen, their wives and families, all waving and smiling.

"Welcome Yank! was all we heard as the pier disappeared beneath our towering decks. Like meeting old friends unexpectedly, welcome we felt!

"Our anchorage on Great Bitter Lake was hot and humid. The slight breeze topside and the twinkling lights of nearby Suez proper brought all hands out. The passage is complete, we're on our way."

The picture the "Arabs" sent back shows the pilots of VF-22 aboard the carrier. In the background is the Suez Canal while in the foreground is their squadron "Puss and Boots" insignia with "United States Navy" spelled out in Arabic. Left to right, sitting, they are Lt. (jg) Wade Kemerer, LCdr. Stan Montunnas, LCdr. Millard Wolley, squadron skipper; Ens. Henry Wallace, Ens. Charlie Smith, and Ens. Ed Broyles.

Kneeling (l to r) Lt. (jg) Bob Sanford, Lt. William Russell, Lt. Eldon Cameron, Ens. William McManus, Lt. William Kurtz and Lt. (jg) Berkeley Hall.

Standing (l to r) Lt (jg) Dan Trimble, Ens. Billie Phillips, Ens. O. D. Johnson, Lt. (jg) Sam Martin, Ens. Charles Chittick, Ens. Stanley Smith, Lt. (jg) Henry Halleland, Ens. Hal Averyt and Lt. (jg) Tom Francis.

POWER WRESTLED WITH THIS DEVIL AND WON

Grabbed It By The Tongue

Jax Chief Saves The Situation Quickly

The taxpayers of America can thank NAS JACKSONVILLE Chief Luther G. Power for saving them the purchase price of a new F2H-2 *Banshee*. His presence of mind and disregard for his own safety prevented a costly accident.

A starter cart, which carries a generator used for starting jet engines, broke loose from its towing jeep and was heading for the wing of an F2H-2 *Banshee* when Power saw it. He attempted to avert the accident by placing himself directly in the path of the oncoming cart, but was hurled to the ground by the impact. Retaining his presence of mind, Power seized the towing tongue of the cart and used it to turn the cart.

BIG ENOUGH *to break windows and damage auto paint jobs, these hailstones slammed down on MCAS Cherry Point during a sudden summer storm. The stones did no damage to the parked planes. TSgt. Gus Dagenais, alert photographer, lined up several of the doughnut-appearing stones for a photo.*

BIG OR SMALL—RESERVES HANDLE ALL

THE BIG AND THE SMALL IN AIRCRAFT IS SHOWN AT NAS DALLAS WITH A TINY MARINE OBSERVATION PLANE STANDING BESIDE STATION R5D

SQUADRON members of three NAS DALLAS Reserve groups were gathered in the station drill hall one hot summer day. Some were getting shots, others were in the pay line, drawing their drill pay for the last quarter of fiscal 1953.

Over to the east at NAS NEW ORLEANS, where it was equally as hot, one squadron was engaged in similar activity. All were waiting to be airlifted to another naval air station for their two weeks annual training duty.

The big question aboard these two stations and throughout the NARESTRACOM was: "Has aviation technical training been beneficial for enlisted personnel?" The cruise would answer the question one way or the other. For the first time during the year, the squadrons would function as self-sufficient units with the opportunity of putting the year's learning into practical application.

During the past year, there has been a de-emphasis on squadron self-sufficiency on drill weekends. With more and more recruits filling squadron allowances, the accent on training has gained tremendous importance. An enlisted man, scheduled for line operations in support of his squadron flights, isn't there any longer just because a strong back or a pair of hands is needed on the line. That man is there because he needs that particular training.

The Aviation Technical Training Division (more familiarly known as Tech Training or ATT) is responsible for training these enlisted men in their specialties and qualifying them for advancement in rating. Air Reservists can elect to receive their training in concentrated summer training programs or during their regular monthly weekend drills.

New men without previous military training undergo airman recruit training to qualify them for airman apprentice. To qualify for the airman rate, they receive additional training designed to acquaint them with each aviation rating.

Tech training also qualifies squadron personnel for the aviation ratings of AD, AM, AO, AE and AT through basic and advanced courses. It also handles a refresher course to help personnel maintain proficiency in a rating.

ACCOMPANIED *by Lt. Edsall, SecNav Anderson inspects handcraft in Hobby Shop.*

Two general methods of instruction are employed. The first is the classroom and limited practical work instruction. There the men learn the theory they will apply during in-service training which places the emphasis on the mechanical skills necessary to perform the jobs in billet assignments. On-the-job training also fulfills the practical factor requirements essential for advancement in rating in accordance with NavPers 18068.

The tech training division and the aircraft maintenance department at NAS DALLAS work as two cogs geared to accomplishing one job. The opportunity for training hundreds of enlisted men who pass through their hands every weekend has unexplored possibilities.

The Texas station is known to pilots throughout the Navy as USS *Hospitality*. Running on a 24-hour schedule, Dallas is a transcontinental ferry stop for pilots flying numerous service-type planes. The average number of transient planes handled a month is around 500. From the biggest to the smallest, both "Weekend Warriors" and stationkeepers have a chance to work on the latest Navy planes.

Keeping track of all squadron personnel aboard for weekend drills would be a gigantic task without a simple yet workable schedule. A training assignment schedule is mailed to each man prior to drill weekend, showing his training assignments for the drill period.

NEW ORLEANS *boots watch as Anderson, BM1, and Sawyer, AD1, demonstrate judo.*

RECRUITS spend their time in the classroom, learning the basic fundamentals they'll need to know for advancement. The remainder of the enlisted men are scheduled for time in the classroom, in-service training or on the line.

Lt Hank Edsall, tech training officer, schedules the rated men for classroom in the afternoon while the strikers are taking their in-service training. He finds that the rated men often turn up in the afternoon, after morning practical work, with questions that can benefit the rest of the class.

There's a massive amount of paper work involved on weekend drills, but tech training doesn't carry the load for the squadrons. Each squadron ATTO has his own separate desk space in the tech training building where he and his yeoman expedite paper work. They maintain their own squadron records and see that their enlisted personnel don't deviate from their training schedules.

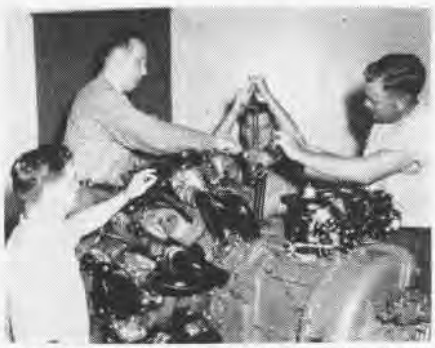
On a station as large as Dallas, it would be easy to lose track of the proper proportions of theoretical classroom training and on-the-job training without a close liaison between tech training and aircraft maintenance. All instructors have been qualified at the instructor training school, NATTC MEMPHIS.

In addition, to prepare in-service training personnel in the basic fundamentals of teaching, these men come to the ATT Building for 90 hours of training as instructors. Carrying this coordination between tech training and aircraft maintenance even further, on the first Thursday of every month, in-service instructors return to meet with tech training instructors and inter-relate the month's operations as far as training is concerned.

Tech training has found a solution to the old problem of moving heavy training panels from one spot to another. Animated training panels have been developed which are lightweight and can be stored in a small amount of space. Dallas uses several of these mockups in training their enlisted Reservists.

Under direction of LCdr. Joe Kerrell, aircraft maintenance officer, in-service training has made notable progress. Drawing from an area that abounds with aircraft plants and commercial airlines, NAS DALLAS has acquired squadron Maintenance Officers who are tip-top maintenance personnel in civil aviation.

Early in July, Secretary of the Navy Robert B. Anderson paid an official visit to NAS DALLAS. It was SecNav's first visit to a Reserve naval air station and his first chance to inspect Airmen Recruits in the summer training program.



CHANGING *cylinder on R-2800 engine. Egan, Smith, Wascom follow E. Jacops' directions.*

Outside the ATT building the USS *Alamo*, Dallas' miniature carrier, was gaily decked with flags. *Corsair* and *Cutlass* models, built by Chance Vought Aircraft company, lined her flight deck. After commenting on the carrier, SecNav Anderson was taken to the station's hobby shop where the ship was built by tech training personnel. Although the hobby shop is maintained to provide recreational facilities, it's also used as extra space for weekend training of AM's in acetylene and arc welding.

Had SecNav travelled east and paid a visit to NAS NEW ORLEANS at the same time, he would have seen another method some Reserve stations use in conducting their training program. New Orleans, known throughout the south as "the city that care forgot," has a sunup to sundown Reserve naval air station.

On a station the size of NAS NEW ORLEANS, which has fewer squadrons reporting aboard each weekend, the problem of keeping the left hand always knowing what the right hand is doing in the matter of enlisted training can be solved with a different approach. Under the supervision of LCdr. Pat Finneran, aviation tech training officer, New Orleans provides 10 enlisted men to handle classroom work for the aviation rates. All instructors have attended four weeks of training at NATTC MEMPHIS and two weeks of refresher training at the naval station at Algiers.

During any typical weekend this summer, recruit training and basic ordnance training courses are secured so that "Weekend Warriors" can use the classrooms and instructors. At 0800 Saturday morning squadron officers muster without the enlisted men. Division officers meet with their station division officers and go over the schedule for the weekend. It's up to the squadron division officer to see that classroom schedules jibe with the subjects planned for the weekend's study.

Saturday afternoon the enlisted men spend in the classroom, learning the why's and how's of aircraft operation. New Orleans too is keeping abreast of the latest equipment provided the operating forces. Aviation electronics personnel are given up-to-date maintenance instruction on the sonobuoy trainer.

WITH THE commissioning of a helicopter squadron, mobile animated trainers of the HTE-2 were secured by the tech training division. The enlisted men in HU-821 are now receiving theoretical training on the "whirlybirds."

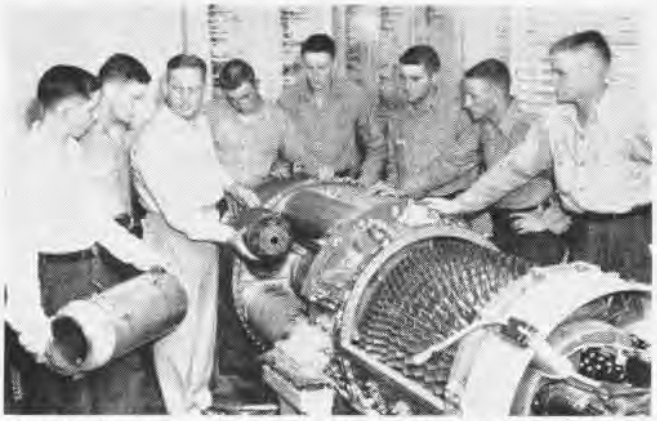
BASIC *rate strikers from New Orleans and Atlanta depart for rate training at Dallas.*

On the second day of a drill weekend, the squadron musters as a unit. From 0800 to 0930, all hands are busily engaged in completing the squadron productive work. Once they are finished, the enlisted men begin their in-service training.

To insure complete continuity between theoretical work and the practical factor training, LCdr. Finneran employs the same instructors for both methods of training. Depending upon what facilities are available and can be utilized to the fullest, in-service training is conducted in both maintenance and tech training spaces.

The entire responsibility for in-service training doesn't belong to tech training alone, even though its instructors do follow the men into on-the-job training. The aircraft maintenance officer, LCdr. Melvin Severson, and squadron maintenance officers work in conjunction with tech training to aid materially in improving the quality of Nola's enlisted training.

Between the two departments, plans are carefully made to provide adequate



THE JETS *have gone from Dallas, but E. J. Michaels, ADC, keeps trainees abreast of the fleet as he teaches jet engine theory.*

BOOTS *in recruit training at NAS Dallas get pointers on principles of welding from C. W. Robinson, AM1, of Tech Training.*

facilities, people and equipment for proper training of personnel. A collateral duty for one of the maintenance chiefs is to act as coordinator of training.

Sunday afternoons from 1230 to 1630, the enlisted men are under the jurisdiction of their cognizant division officer, enabling them to get team training. The squadron works as a unit, as it would if it were called to active duty.

One of the biggest tasks at Nola's maintenance department, aside from

INSTRUCTOR *E. M. Clary, AD1, conducts aircraft engine familiarization for Nola boots.*

work on their own planes, is on the NavCad SNJ's which arrive frequently from Pensacola on cross-country hops. When NAS NEW ORLEANS moves to Alvin-Callendar airport, "Weekend Warrior" and stationkeepers alike will get a chance at the latest service-type planes.

In training Naval Air Reservists, many problems arise that are not encountered in training regular Navy personnel. Of necessity, Reservists are primarily interested in their job and family as civilians. Generally, they are engaged in some occupation entirely different from that for which they are in training.

With time strictly limited for training Reservists (38 days per year), it was imperative to develop a rate training program that would not only simplify learning but would also be written in a style that would provide motive for a considerable amount of home study. With such a program, the enlisted man could use more of his drill periods to accomplish his practical factor requirements.

The basic electronics training course, 26-K-1, is the first to reach the Reserve stations. Developed for the training of basic electronics personnel, both Lt. Edsall and LCdr. Finneran believe it is one of the greatest training aids developed for the tech training program.

The most important part of these rate training courses will be the home study manual. All the information necessary to provide the theoretical background that his regular Navy counterpart receives at Navy schools and off-duty study will be compiled for the Reserve.

In most aviation ratings, a shopwork or laboratory manual will be developed to outline the practical work that must be completed in order to meet practical

ABOARD *USS Tarpon, a sonobuoy maintenance class from Nola studies sound gear.*

factor requirements. It will also serve as a guide for in-service training instructors, simplifying their problems of standardizing this important phase of training throughout NARESTRACOM.

In some ratings a project kit will be developed similar to the 26-K-1. In all rate training courses, training aids or devices are being developed to simplify the teaching problem. These will make it easier for the trainee to understand the theories and principles of operation of the various components of aircraft that come within the rating.

The *Navy Airman's Manual*, second of the courses to be completed, should be delivered within the next month. Until this manual was completed, there was no one complete study course available for the AA preparing for advancement to AN. It contains 16 subjects which will also act as an excellent guide in helping the man select the rating for which he is best suited.

The AD and AM manuals are scheduled to be completed in the very near future. A course for advanced electronics, designed to prepare the trainee for advancement to AT1 and ATC, is scheduled for completion in December 1953.

While methods of conducting the aviation technical training program may vary today at the various Reserve stations, their goal is a common one. Regardless of squadron or geographical location, standardization of the program will become an accomplished fact with completion of rate training courses.

AN INTERESTING follow-up to the tech training program can be made to see whether or not these Navy-trained men will benefit in pursuing civilian careers. The 26-K-1 course paid off for NAS SQUANTUM's enlisted men (NA-NEWS March 1953. New opportunities in civilian life should present themselves when the other courses are developed.

LEARNING *electric prop from V. M. Cubbage are VF-823's Randazzo, Bordelon, Crawford.*

WORK HAS *started on a community-military project on Blackwater river, near Milton, Fla.—a combined public park, boat club and Navy docks. Here Capt. L. C. Simpler, Whiting Field commanding officer, drives a stake marking the project boundary lines.*

Tender Gets Bigger Cranes

Salisbury Sound to Handle P5M Marlin

USS SALISBURY SOUND—While this seaplane tender is stateside from the Far East she is having her cranes beefed up so she can handle P5M's, the Navy's newest and heaviest operational combat seaplane.

The tender will handle the *Marlins* when she returns to the Formosa patrol force, so her seaplane cranes are being lengthened and reworked to handle these planes. Well over 80,000 pounds, the aircraft need slow, sure power when they are being hoisted and lots of swinging room as they are placed on deck.

Alterations were halted temporarily when the *Salisbury Sound* left Hunters Point shipyard to participate in *Phibex 2* as flagship for Commander Minron 5. During the exercise two Kaman helicopters from HU-1 were based aboard and invitations to officers and men to ride as observers were quickly taken.

The *Salisbury Sound*, first of the AV's to have this alteration, is due back to the Far East shortly to resume her duties on the Formosa Straits patrol.

'Fighter Photo' Movie Out

Portrays Work of Cameramen in War

The story of the Navy photo pilot is graphically shown in a new color movie, *Fighter Photo*, which is ready for public showing.

Taken by combat camera group photographers of VJ-61, at Miramar and in the Pacific, the movie portrays the reaction of a typical fighter pilot assigned to duty with a fighter photo squadron. He is reluctant to leave his fighter assignment and fly unarmed photo planes off carrier decks.

The 27-minute movie contains some fine carrier and aerial photography. It shows how the photo pilot becomes "converted" to his job when he helps locate an AA battery that has been giving his air group a bad time. His photos also help rescue a buddy shot down behind the lines.

The movie number is MN-7893. Copies will be released to television networks and through the naval districts for non-profit public information showings to the public.

SUCCESSOR *to the famed "Jeep" of WWII days is this "Mighty Mite", a 1500-pound vehicle which can be picked up by helicopter. MCAS Quantico demonstrated the car to the public with various combat equipment on it, including a 105 mm recoilless rifle, wire-laying gear, a 4.2" mortar and an ambulance rig. It is 1,000 pounds lighter than the older model jeep.*

Medal Winner Now a Pilot

Marine Vet Wants More War Action

NAS CORPUS CHRISTI—Naval aviation has its second Korean war Congressional Medal of Honor winner with the graduation of Marine 1st Lt. Henry A. Comiskey, Sr. from flight school.

Comiskey won the CMH for single-handedly wiping out two Communist machine gun nests. He won three Purple Hearts, although regulations say two are enough to keep him out of further combat. He's still trying to get the regulation waived.

He entered flight training in October, 1951, because he could figure no other way to get back into the Korean fighting.

"I had a banged-up knee," he said, "and couldn't walk fast enough to stay in the infantry. I figured I couldn't be a fighting man in the infantry and would end up with a desk job. A regular Marine hasn't any business ducking a fight and I figured the only way I could get back to Korea was as a flier."

Naval aviation's other CMH winner in Korea is Lt. Thomas J. Hudner.

British Rescue P4M Crew

Destroyer Saves 14 from Med Ditching

NAS PT. LYAUTEY—Some of the best boosters for the British Navy can be found among members of a P4M squadron here who were rescued from the Mediterranean by a British destroyer, HMS *Chevron*, after ditching their *Mercator* on 7 February.

They spent four hours in the water before being picked up and given spirits for shock and hot soup for warmth. The British tars then went from room to room replacing all wet clothing and distributing blankets while search was continued for the pilot, Lt. Hager, who never was found.

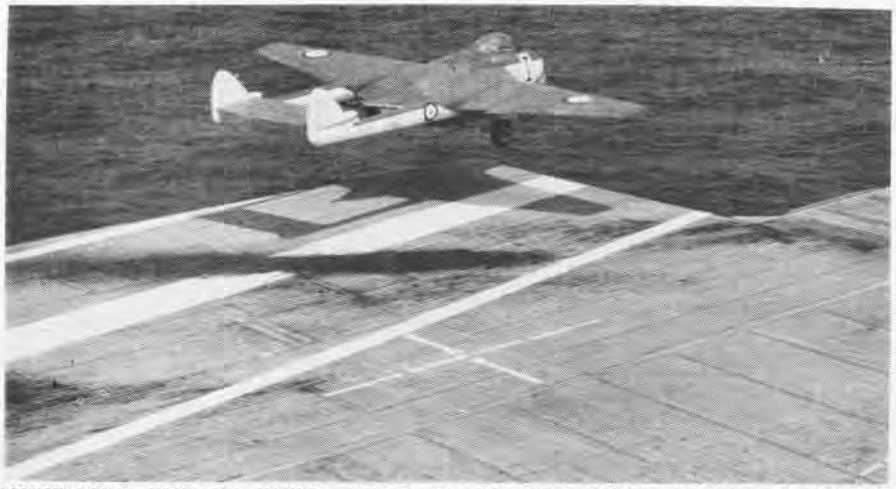
The *Mercator* had a complete loss of power and had to ditch at 0100. The co-pilot, Lt. (jg) R. H. Parsons, suffered a broken neck and multiple leg fractures, while the navigator, Ens. John J. Wojnar, received head injuries.

The *Chevron* was based at Cyprus and went to the aid of the survivors as soon as it received Hager's SOS. All the injured were cared for by the destroyer's lone corpsman until put ashore and loaded into an R5D for flight back to base.

Other members of the crew of the plane were **E. J. Connelly, AT3; George R. Bundy;** James J. Melo, AT3; Ens. R. M. Ostersmeyer; H. W. Shaw, AT1; A. L. Bostick, AL3; K. J. Woll, AO2; D. P. Johnson, AL1; W. G. Gregg, ADC; E. J. Blair, ADC; W. B. Flanagan, ATC; and Lt. Dan R. Huddleston.

TO MAKE *a landing signal officer more visible during daytime landings, Lt. (jg) Dave L. Wright of CAG-15 on the Princeton developed the above idea. Black cotton cloth covers his whole LSO suit, with the usual luminous cloth markings. It is easier to see when a pilot is landing with the sun or with a bright haze in front of his plane.*

QUEEN'S JETSTERS TRY ANTIETAM'S DECK



BRITISH ROYAL NAVY SEA VAMPIRE HURTLES OFF THE CANT DURING THE ANTIETAM EXERCISE

ADMIRALTY'S OFFICERS WATCH JETS LANDING

SLEEK Hawker *Sea Hawks* and Supermarine *Attackers* from the British Royal Navy's 806 and 703 Squadrons and *Sea Vampires* from the RNAS FORD, Sussex, operated off the USS *Antietam's* canted deck for RN pilot familiarization. The recent four-day exercises off the coast of southern England saw the 5000th canted deck landing chalked up on the *Antietam.*

Ranking USN and RN observers were aboard for the operation at the invitation of VAdm. Jerauld Wright, CINCNELM. The Admiralty's Capt. A. S. Bolt commented, "The Royal Navy pilots look as though they feel right at home."

The canted deck, or "angled deck" as the British call it, was originated by them, although the *Antietam* was the first ship to have one installed. After her current overhaul, she will join Atlantic Fleet ASW forces.

The HMS *Hermes,* now under construction at Barrows-in-Furness, will be the first British angled-deck. The new USS *Forrestal* and USS *Saratoga* will have the canted decks too.

LCDR. CHILTON, FIRST RN PILOT ABOARD, MOUNTS HAWKER SEA HAWK

SEA HAWK JET FIGHTER STREAKS ACROSS ANTIETAM'S CANTED DECK AT 120 KNOTS DURING FOUR-DAY OPERATION OFF SOUTHERN ENGLAND

FAREWELL TO SOME COLLATERAL DUTIES

THE TERRAIN *model of the Alaskan-Siberian area used in training for Air Intelligence billets was made to exact geographic scale by Lt. George M. Engleshy, left.*

A NUMBER of fleet pilots are in for a welcome surprise when the first aviation ground officer joins their unit. With the arrival of each new AGO, some fleet pilot will be relieved of one of his collateral duties.

During the past year, the Aviation Ground Officers School at NATTC JACKSONVILLE has been turning out aviation ground officers every eight weeks. It all started out with 50 to 75 men in a class and now has grown to a student body of between 150 and 170 men for every class. The things they know about naval aviation when they graduate would make the average "ten-year" Navy man sit up and really take notice.

The only school of its kind in the Navy, the AGO school was established by CNO on 21 January 1952. Cdr. P. E. Greenlee, Jr., was named as training officer.

Primary mission of the school is to provide junior officers with background familiarization in preparation for duties as AGO's and to classfy and select these officers for further instruction in a specialized aviation school or assign them directly to AIRLANT or AIRPAC. Another equally important objective is to encourage in these junior officers a desire to grow professionally in the Navy, as they go up the ladder.

AGO students are received directly from the Officer Candidate School at Newport, Rhode Island. All of them are college graduates and some possess advanced degrees in various fields. The average age of students is 23 years.

The curriculum consists of 320 instructional hours covering every phase of naval aviation and lasts eight weeks. The course is divided into five main phases: Introduction to naval air organization, naval administration in fleet air units, naval air operations, familiarization with ground officer billets and classification and assignment.

A new unit in the curriculum, area briefing, was initiated late in 1952. It gives the students a chance to prepare and deliver an oral briefing on an assigned subject or area. Sample subjects are NATO, United Nations, Indo-China, Russia and Korea.

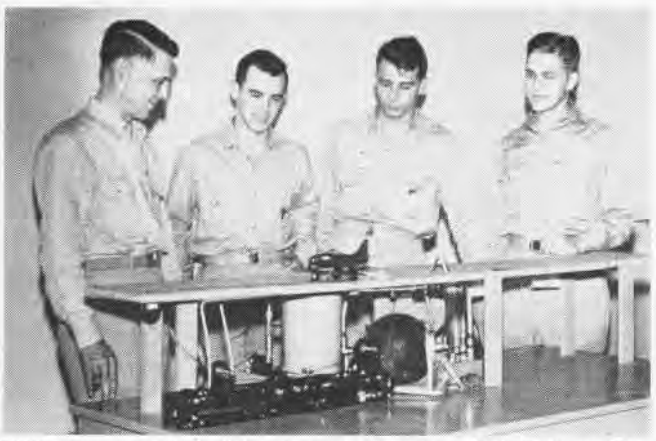
AS AVIATION ground officers with the fleet, the students will often be called upon to make various types of briefings. This training in area briefing is designed to give them an opportunity to leave AGO school with the knowledge of "how" and "what" to do when faced with this situation.

Ingenuity on the part of the AGO instructors has played a major role in determining just how good these embryonic officers will be when they report to the fleet. The familiarization shops, which include operational, electronics, ordnance and maintenance, are loaded with mockups of aviation equipment. These include engines, gun turrets, survival gear, radar scopes and countless other devices.

Two of the mockups were conceived and constructed completely by instructors. The model of the H-2 type catapult was built completely from spare parts by Joseph A. Bell, ADC. It is built on the exact principle of the real catapult and enables the student to see what goes on below decks before he gets aboard a carrier. Chief Bell plans, in the future, to rig wires in such a manner that the model plane is shot from the catapult,

THESE ARE *four of the cartoons done by the Training Facilities Art Shop at NATTC Jacksonville. Although the drawings are intended to be humorous, they are a constant reminder to the students of the type of billets available when they graduate.*

STUDENT *Aviation Ground Officers get a good look at all phases of carrier operations during two-day trip aboard the Monterey.*



BUILT *on exact principle of real catapult. Chief Bell explains model to Ens. Burt M. Vitali, Ferrell Wyatt and Donald Vogt.*

makes a circuit of the classroom and returns to make an arrested landing on the same deck it took off from.

Lt. George M. Englesby, an instructor at the AGO school, made the other mock-up, a time-distance terrain model. Students training for subsequent air intelligence billets are given problems in time and space movements of land-based enemy aircraft. Navigation of aircraft and ships is essential knowledge to all officers connected with aviation and a realistic view of what goes on affords a much better understanding of air operations.

A NEW training device, the synthetic training device for representation of sonobuoys, has added greatly to ASW instruction by stimulating interest through realism. Michael Boylson, AEC, developed the device at a huge savings to the Navy.

It automatically reproduces the sound of a submarine as it would be heard on a standard pattern of sonobuoys. A maximum of 50 students can simultaneously "plot" the position, speed, course, bearing and other data on a sub in a given problem. Using the instrument, Boylson varies sound intensity, which represents a change in the position of the sub. After students have taken a predetermined number of fixes, they drop their "weapon" and, if they have plotted correctly, Chief Boylson then gives them a "kill."

The idea is not only to acquaint the students with the theory they will need to know as aviation ground officers, but also to give them an operational viewpoint of everything they might come in contact with in naval aviation. For instance, in the F6F cockpit trainer, the student handle the controls, while an instructor sets up conditions with a remote control panel. This procedure acquaints the student with some of the problems of the pilot.

Furthering this theme are field trips for the students to many types of aviation units in the fleet. The biggest climax of the eight weeks of training comes with a two-day trip aboard the training carrier at Naval Air Basic Training, Pensacola. Aboard ship, the fledgeling AGO's watch NacCads make their carrier qualifications and get a chance to observe operations in all the different aspects.

It was during the visit of a recent AGO class to the *Monterey* that carrier personnel began to think they had better "swear off" for a day or so. Confusion reigned until the men realized that there were identical twin brothers among the class.

The twins, Ens. Richard H. Barham and Ens. Robert P. Barham, have followed identical careers through college, into industry and finally into the Navy. Both hope to specialize in electronics as AGO's.

About the only real difference in the boys' lives is that Richard is married and Robert isn't. Richard has been working on his brother to complete their identical pattern, but hasn't had much success as yet. Robert, who remains non-plussed about the situation, says he's not in any hurry anyway.

At Aviation Ground Officers School, the Barham twins and all other students were given preparatory training for billets in aircraft maintenance, communications, ordnance, air intelligence, counter intelligence, catapult and arresting gear, photo intelligence and electronics. Nine cartoons, representing the nine billets available to AGO students, decorate the spaces in the school. All except one are originals done by artists of the training facilities art shop at NATTC JACKSONVILLE.

DURING the seventh week of instruction, the students are recommended on the basis of their duty preference, past training and experience, and performance in the AGO school for further specialized training. More than 75% have received schools of their first choice and less than 50% are ordered to AIRLANT and AIRPAC for assignment without further training.

Student questionnaires (gripe sheets) give the training department an insight into the value of the course to the trainee. Constructive criticism is welcomed by all instructors. It's on this basis that some modifications of the curriculum have been made to make the eight weeks of training as realistic and practical for the benefit of junior officers as is possible.

Undoubtedly the Aviation Ground Officers School affords one of the best possible overall pictures of the naval aviation establishment. Highest average to be obtained by any student graduating from the school was made by Ens. Robert L. Larsen, a summer graduate. Larsen's final mark was 91.92, giving him top honors in a class of 154 students.

After news of Larson's record came out, a naval aviator of five years' experience was heard to say, "I think I'll go over in my spare time and learn something about naval aviation myself."

By Lt. (jg) R. D. Harris, SIO

TWIN *Bob mans control box while Dick holds parachute of a target drone aircraft model.*

PLANES BOOST MORALE ON SUBS

VS-22, NORFOLK—*"Discharge. Discharge,* this is *Apprentice* with Lil Orphan Annie aboard."

"Apprentice, this is *Discharge.* Release Lil Orphan Annie."

"Released!"

"Apprentice from *Discharge.* Lil Orphan Annie is aboard."

That's how newspapers were delivered to a wolf from a guppy.

These aviationese messages crackled between a picket submarine known as *Discharge* and a Grumman AF *Guardian* from VS-22 as the aircraft dropped daily newspapers to the sub.

Hunter-killer aircraft teams solve submarine detection problems by working with undersea boats. This brought about daily newspaper deliveries by VS-22 aircraft.

LCdr. C. E. O'Brien, the squadron exec, is an ex-submariner and knows how out of touch a crew can be without daily news. He asked if the radar picket submarine *Tigrone* would like to have daily papers. The answer was an emphatic "yes!"

He asked Lt. C. A. Gearhart, squadron flight officer, to initiate a delivery system. This was worked out with regular flight schedules and waste material.

The first morning flight on Tuesdays, Wednesdays and Thursdays (days when the squadron works with a submarine) delivers morning editions of metropolitan newspapers. A late afternoon flight drops evening editions to the boat.

Morning papers delivered are the *New York Times, Washington Post, Washington Times-Herald* and *Norfolk Virginian-Pilot.* Evening papers are the *New York Herald-Tribune* and *Norfolk Ledger-Dispatch.*

LT. GEARHARD, CDR. GOODING INSPECT PAPER

Drop packages are constructed from disposable ordnance containers, a short length of cord and a piece of waste lumber. Papers are placed in the container which is sealed with masking tape and fastened to the wooden float with cord.

Flying at 80 knots about 75' above the water, the aircraft drops the news package approximately a quarter mile ahead of the submarine. Past drops have been within 20 feet of the sub's path. The packages are picked from the water with a boat hook.

Drop containers are returned to the squadron when the submarine comes in for the week-end for reuse.

This extra portion of cooperation between two branches of the naval service is a morale booster for submariners.

BORROWING *an idea from carrier aviation, the USAF has built a plane arresting barrier on its Korean combat bases to stop planes whose brakes fail or come in with battle damage. The barrier, similar to those on aircraft carriers, is attached to a long chain stretched alongside the runway. The plane snags the barrier and drags the chain down the runway. This $14,000 project has saved about a dozen planes already for the Far East Logistic Force's "clients." It is useful for planes which have engine failures during takeoffs. The Navy has used similar ideas for stopping planes on its land bases. Since its planes usually have tail hooks, they pick up wires and drag tires or other heavy gear behind.*

SAMARA PLACES WREATH ON PLAQUE IN CHURCH

English Honor FAW-7 Dead

183 Men Lost Lives Defending England

CINCNELM—George Samara, wartime member of Fleet Air Wing 7, is shown in the accompanying photo placing a wreath on a plaque listing names of the 183 officers and men of FAW-7 who lost their lives during World War II while operating from Dunkeswell, England, air base from 1942 to 1945.

Placing of the wreath was part of a memorial service held in Dunkeswell's picturesque St. Nicholas church. The service was attended by men of the U.S. Navy, Royal Navy, Royal Air Force and local citizens.

Capt. R. W. Faulk, U.S. Navy Chaplain (right) and Vicar R. H. Vokes conducted the service. Music for the service was played on an organ donated by the men of Fleet Air Wing 7.

Now They're Saving Planes

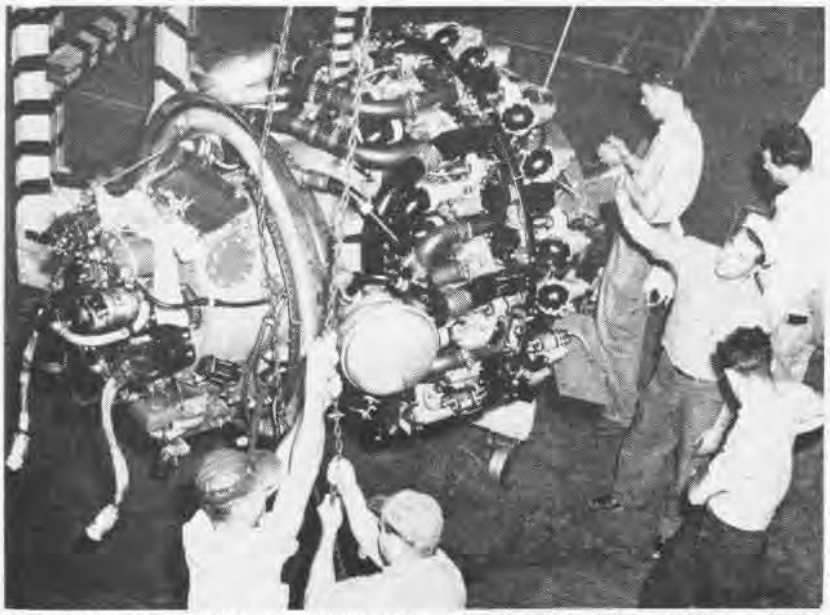
Helicopters Foil Rising Flood Waters

An NAS DALLAS *Weekend Warrior* recently experienced engine failure in his FG *Corsair,* and set it down neatly with little damage on a swampy bottom near Texas' Trinity River.

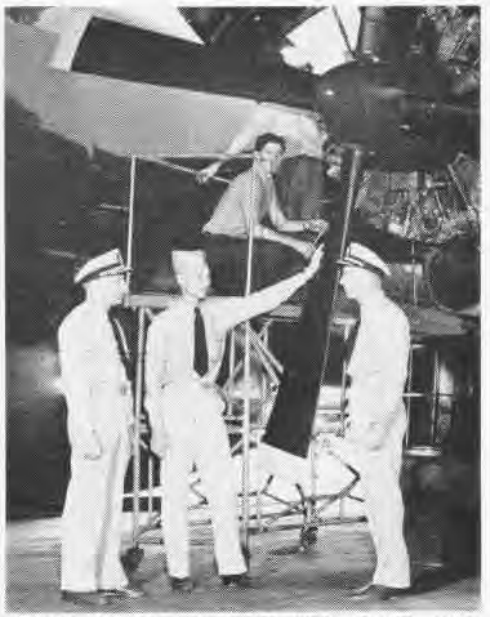
The salvage problem faced by Lt. R. E. Redmond was complicated because 1500 feet of two-foot deep mud lay between the nearest road and the plane. To add further complications, the river was rising rapidly to flood stage. If fast action weren't taken the *Corsair* would be reached by the water for a possible total loss.

Two VR-32 naval aviation pilots, B. B. Strain, AD1, and D. C. Blevins, AL1, were in Dallas at this moment ferrying two HRS-3 choppers cross-country.

Rising to the emergency, Strain and Blevins loaded ⅝-inch steel cable into their whirly birds and whirled out to the salvage scene. The cable was unreeled over the swamp between the crash and the road from the air by the HRS's. Salvagers mated the plane and their winch on the road. In the nick of time, the *Corsair* was high and dry, safe from the flood waters that lapped precariously close to her tail. The complete operation took only three hours to accomplish and at little expense.



VP-22 MECHANICS REMOVE AN ENGINE FROM ONE OF THEIR P2V-5 NEPTUNE BOMBERS



TANNER DISCUSSES PROBLEMS WITH HARDY, MOSS

VP-22 SCORES MAINTENANCE RECORD

IT WAS Friday, the day after Thanksgiving 1952 when VP-22, with Cdr. W. P. Tanner, Jr., at the helm, landed nine P2V-5 *Neptunes* at Naha AF Base, Okinawa, to begin its third tour of duty in that area since the beginning of the Korean War.

Broad smiles, shining eyes, warm handshakes and cold beer were waiting as the pilots pulled into the parking area. The squadron whose tour was ending and the Naval Air Facility personnel, had perfected the warmest of *Alohas*. But the new arrivals found little to be thankful for, except for seeing old friends. This was just another Thanksgiving away from home.

Nothing had changed except the year. The weather was the same as VP-22 had left it—clobbered. The squadron had arrived under instrument conditions. There were the same impassable, impossible roads, and the water still ran deep in the operations office on rainy days. Nevertheless the men grinned, shook the hands of those they were relieving, drank their beer and sent them on their way to the land of pineapples and round-eyed *Neisans*.

The mission of VP-22 was familiar: primarily to conduct shipping surveillance of the north and south China Seas and act as "watchdog" of the Formosa Strait, the latter to prevent Chinese Communist attacks on, or invasion of Formosa. Secondarily, VP-22 was to provide aircraft and crews for round-the-clock air-sea rescue service, administrative flights for high priority mail, cargo and personnel; and, last but not least, to maintain all flight crews in a 100% battle-ready status in all phases of ASW.

Two days after arrival, operational wheels began to grind. Six months later, they had ground out 6,174 flight hours during 486 combat patrols, over 350 training flights, and 35 special flights. VP-22's average of over 1,029 flight hours per month is believed to be well in excess of any other land-based patrol squadron in the western Pacific.

Owing to the "over, above and beyond" attitude of an energetic maintenance gang, flight crew members and "ground pounders" alike, an average aircraft availability of 93.2% was maintained during the tour. The pre-flight/post-flight system of maintenance checks —a system wherein each aircraft received the equivalent of the former 30-hour check just prior to and immediately after landing—was another factor in yielding VP-22 an average availability 30% higher than that of any patrol squadron in the Pacific area.

TRAGEDY struck twice during the tour. On January 18, while conducting a routine reconnaissance patrol along the China coast, one of the *Neptunes* received several direct hits from hostile AA shore batteries.

An engine fire soon developed, forcing the patrol plane commander to ditch three miles off the China Coast. All hands emerged safely, but a Coast Guard aircraft which rescued them some three hours later crashed and burned on take-off. Only seven of the original 13 crew members survived the second crash.

Thirteen days later while returning from a training flight under extremely poor weather conditions, the entire crew of another *Neptune* perished when the aircraft hit a Ryukyuan mountain.

Coincident with the above accidents, the squadron was in the throes of moving to Kadena AF Base, near Naha.

Formosa Strait patrols, escort duty assignments and round-the-clock alerts were far from exciting. Frequent hunter-killer and antisubmarine exercises with 7th Fleet components, however, served to break the monotony, enhanced the training program and enabled VP-22 to complete the tour 98% battle ready.

In March, the P2V "Hong Kong Special," departed Kadena every fourth morning for Kai-Tak airport to deposit one happy crew in that fabulous city. All who could muster sufficient "green" were permitted to squander it. Then after three unforgettable days and nights, they were retrieved, invariably clutching Oriental "bargains."

APRIL and May passed in routine fashion. About the only noticeable change was weather—it got worse!

On May 27, VP-1 landed in Kadena to take the helm. VP-22 met the reliefs with broad smiles, shining eyes, warm handshakes and cold beer. VP-1 managed to grin and took the refreshments.

Departure was routine, instrument flight rules prevailing. After all, VP-22 had logged 1,200 hours of actual instrument time and executed 520 ground-controlled approaches.

Upon reaching cruising altitude, the squadron broke into the clear and when the last patrol plane commander reported to the skipper, "Operations normal," VP-22 relaxed for the first time in six months.

by LCdr. M. A. Graham, USN

PYGMY LEADER NOW FIXES P2V'S

PYGMIES are hard to handle until you learn their customs and language, according to Leonido Cabal of VP-3, a wartime guerilla officer in the Philippines during World War II.

Cabal was in charge of 60 mountain pygmies who harrassed the Japanese invaders. Now based at NAS JACKSONVILLE with VP-3, he attends the P2V-5 plane school conducted by a naval air mobile training unit and is a striker for aviation machinist's mate rating.

Cabal has some interesting tales to tell of his experiences leading the tiny Philippine pygmies. Ordinarily seldom seen except when they left their mountain homes to sell root crops, the pygmys proved able fighters around Zambales on Luzon.

Ammunition shortages which plagued many of the other guerilla forces seldom bothered these 4' high people, for they fought with poison-tipped arrows and sprung deadly jungle traps on the enemy.

"They were good fighters and quick," Cabal said. "Sometimes on the trail there would be a shot and I would move fast for cover but the pygmies would literally disappear."

Their accuracy with the bow and arrow was "very good" up to 300 yards but where discipline was concerned he had difficulties.

Cabal was an officer in his high school's military unit before the war. He joined the Army engineers and became a master sergeant in a Philippines soldiers unit, then a second lieutenant.

During the early fighting he performed often as a scout and was assigned several times to spying missions. At this time his father, grandfather, uncle and several cousins were in his outfit.

"We knew what the enemy was doing and when a point was weak we would hit it. When they sent out a patrol, we ambushed it. They didn't get their patrols through."

Rifles were useless during some of this jungle skirmishing and many times the big bolo knives came into play.

One day Cabal came on a downed *Zero* plane on the beach and began stripping off the guns for use in the jungle warfare.

That almost proved his undoing for a P-38 pilot spotted him and not knowing which side he was on, made a shooting pass at him. Cabal fled but later got the guns.

His luck didn't hold out another time. A sniper put a bullet hole in his leg but the wound was not serious.

Communication between guerilla units and headquarters was bothersome. There were no radios and messages had to be sent via horseback or on foot.

CABAL SHOWS GUERILLA TACTICS IN JUNGLES

After the war Cabal was sworn into the Navy at Subic Bay and served on several cruisers. While at Norfolk he got six months' time in light private planes and won a private license. He is a member of Aircraft Owners and Pilots Association and a pilot in the Virginia Wings CAP.

CPO'S CALLING *the roll at VF-31, NAS Cecil Field, get a double "Here" when they call the name "Davenport". William T. and Charles E., both AD's recently joined the squadron after finishing school at Memphis.*

LITTLE *"Bogey", half-starved and shaking with fright, was found on a fairway of golf course at MCAS Cherry Point. The fawn was nursed back to health on formula of milk, sugar, syrup and water. "Bogey" often interrupted feeding time to nuzzle face of one of his masters, SSgt. F. Czeck. Sad aftermath came when the fawn died suddenly.*

Navy Pinch-hits for USAF

VP-8 Takes Part in Evening Retreat

VP-8—American service and civilian personnel at Keflavik, Iceland, look forward to the impressive retreat sounded each evening with the playing of the national anthems of Iceland and the United States. As a special treat, the Air Force sends one of its jets in on a low pass over the flagpole except when the weather is marginal. Then the feature is cancelled for that day.

Recently Lt. J. F. O'Neil and Lt. (jg) K. L. Butler of VP-8 in a P2V-5 returning from a routine flight, broke out of the overcast on a GCA approach just as retreat was being sounded. Quickly getting clearance from the tower, they extended their approach so as to pass over the flagpole with the last strains of "The Star Spangled Banner." The all-weather Navy in Iceland made its point with the unexpected piston roar.

Gitmo PBY on Mercy Flights

Quick Action Follows Haiti Aid Calls

NAS GUANTANAMO—Two emergency flights, almost within 24 hours of each other, were made by the station's PBY in the middle of June.

The American Naval Mission at Port au Prince, Haiti, requested emergency air transportation for Mrs. A. B. Morrison of the mission, a hemorrhaging stretcher case. Eight minutes later the PBY was airborne, flown by Cdr. W. G. Winslow and LCdr. J. D. Bedford, for Port au Prince with a hospital corpsman aboard. A few hours later the patient was at the Base Hospital for treatment.

Twenty-six hours later the American Embassy at Port au Prince requested emergency air transportation for Marc Ashton, 13, son of the embassy's building superintendent, who had symphsiolysis and an injured bladder. In 10 minutes the Catalina was on its way again with LCdr. P. W. Ustick and LCdr. J. D. Bedford at the controls. The boy soon was in the hospital.

Swerves Jet, Saves Lives

Berger Averts Worse Carrier Crash

VC-4—Faced with the choice of ramming his F2H-3 into four parked jets and 30 men or two *Skyraiders* on the bow of the *Coral Sea*, Lt. (jg) R. E. Berger swerved his jet into the latter planes, losing his own life but saving those of the deck crewmen.

The accident happened on 17 June when the arresting hook failed to catch a wire and the *Banshee* hurdled the barriers. The jet and the two AD's were carried over the bow but Berger's quick thinking undoubtedly saved many lives and several additional planes. He was a member of VC-4 all-weather detachment.

INSPECTION DAY PUTS SQUADRON OVER JUMPS

BOMB LOADING *by CAG-3 ordnanceman is done under watchful eye of Lt. Orvil W. Bass who checks if squadron's technique is right*

ORDNANCEMEN *of CAG-3 attach a 5" HVAR rocket under wing of Banshee while ComFair Jacksonville inspector approves how it's done*

IT ISN'T just by accident that ComFair Jacksonville pilots rack up 50% E's in gunnery, bombing and rocket firing. Part of the credit may be given to the rigid operational readiness inspections their squadron and air groups have to pass under the watchful eye of ComFair Jacksonville experts.

For about 24 hours these inspectors talk to the plane captains, the mechs, the pilots and the rest of the team. They question them to see how well they know their job and how well they do it. With pads and pencils they check all this off. Ready room procedures, refueling, takeoffs, landings, maintenance, safety are all evaluated.

After this annual inspection is over the checkers rate the squadrons: Outstanding—excellent—good—satisfactory—unsatisfactory. Last year ComFair Jacksonville's squadrons rated 40% "excellent" and 55% were given "good" rates on their showings.

These pictures taken when Carrier Air Group 3 went through its paces aboard the *Franklin D. Roosevelt* show how the inspectors checked their shipboard and squadron efficiency. VF-11 and VF-173 won Atlantic Fleet Battle Efficiency E's in jets and props.

TAIL HOOK *operation is explained by plane captain of Banshee on Roosevelt to Lt. Hall during ComFair Jacksonville readiness check*

FLIGHT *operations on the Roosevelt's deck are checked by LCdr. J. E. Tefft of Jax*

GASSING—*LCdr. Donald E. Runyon checks a plane crewman gassing up FDR CAG-3 F2H*

PLANE *Captain in cockpit is quizzed by Lt. William D. Hall on how he does his duties*

SQUADRONS BACK FROM THE WARS

FAMILY WELCOMES MARINE PILOT CAPT. SMITH

SQUADRON homecomings from overseas duty are always happy occasions for pilots and their wives and kids. Two such outfits which recently came back to *Eisenhower's Island* were VP-17, the last squadron to fly P4Y-2's in Korea and VMF-114 from the Mediterranean.

Cherry Point's flight line was the scene of high excitement as the latter outfit's *Corsairs* taxied up after flying off the *Taratwa*. A big banner "Welcome Home Barcelona Playboys" greeted the happy fliers.

Maj. Paul Fuss, commanding officer of the squadron, was the first to land. Soon the apron was filled with laughing, hugging couples, with youngsters being squeezed in between. Capt. George McDermott whisked home to see his new infant son for the first time.

During its 10-months stay on the *Taratwa*, VMF-114 visited many Mediterranean ports, from Athens to Istanbul to Barcelona. Turkish and Spanish ports were considered the best for liberty, hence the welcoming banner.

VP-17 during its tour of the Orient kept the equivalent of one plane in the air continously for the past half year. Pilots flew 435 missions over Korea and the Yellow and Japan seas, losing no planes or men on these ASW and shipping surveillance flights.

A total of 220 Air Medals were earned by the 370 officers and men. It is estimated they had enough time in the air to make two round trips flights to the moon. On their return to NAS WHIDBEY ISLAND they put aside their old *Privateers* and took over new P2V-6's. Cdr. R. L. Dahllof is squadron skipper.

Teachers Learn How to Do

Chiefs Taught How to be an Instructor

NATTC JACKSONVILLE—To a Navy chief, the know-how in his field may be as simple as ABC, but to enlisted men under him they may be as complicated as calculus—unless he knows how to teach it to them.

Training facilities at this center has set up an instructor's program to train the teachers in the fine points of teaching other persons. The 200-hour course is open to instructors at the Training Center and CPO's from the fleet, with F. J. Burnett, TDC, as "schoolmaster".

TEACHERS HAVE TO KNOW MORE THAN SUBJECT

Classes in "Basic Principles of Teaching" are small to intensify the benefit the men get from the course. In the photo Nelson Hurley, TDC, of VP-3; Don L. Smith, TDC, of VP-18; both from Fleet Air Wing 11, and Burnett inspect one of the classroom posters.

Lands Jet on CV at Night

VF-32 Pilot Claims a Navy 'First'

NAS CECIL FIELD—Blinded by lightning and the heavy steady rain of a night storm, Lt. Al V. Barber of VF-32 unexpectedly became the first fleet pilot to make a night carrier landing in the Navy's new F9F-6 *Cougar* jet fighter.

While participating in *Operation Flashbulb*, a special project conducted by the Navy and Sylvania Electric Corporation, Lt. Barber was prevented by weather from landing at NAS OCEANA.

Returning for new weather information to the *Antietam*, from which he was launched by catapult half an hour before, he was informed that the storm was spreading swiftly throughout the entire area. The safest procedure, it was decided, would be to land on board the *Antietam* immediately.

With not a night carrier landing to his credit in five years, Lt. Barber received radioed instructions preparatory to landing the Navy's sweptwing jet, heretofore unsubjected to night carrier landings except in test stages.

Repeatedly blinded by nearby lightning flashes, and with falling mist obstructing his vision, Lt. Barber made two passes without engaging his tail hook on an arresting wire. This was due in part to the fact that the *Antietam*, with its many innovations including an angled flight deck, has only half as many arresting wires as other carriers.

Failing to engage the last wire by only three feet on his second attempt, Lt. Barber circled, made a third landing, successfully "picked up a wire" and was pulled to a stop. He jumped out of the cockpit a distinguished fleet pilot—the first to make an F9F-6 night landing.

THE CARRIER *Coral Sea had a busy day recently while anchored off Golfe Juan on the famed French Riviera. She entertained former Queen Elizabeth of Greece, 60 French youngsters and 20 high school students. The queen was greeted with an 18-gun salute and met by RAdm. Charles R. Brown, Commander Carrier Division Six, and his chief of staff, Capt. William O. Burch. She is the daughter of Romania's ex-King Ferdinand, sister of King Carol, former Romanian king, and Queen Elizabeth of England's aunt. In the photo are Lt. John Brown, flag aide; Capt. Burch, LCdr. W. R. Manby, flag secretary, RAdm. Brown and the royal party in civilian clothing. The queen wears the dark sun glasses.*

QUONSET PROVIDES CUT-RATE LOGISTICS

CLAIMING the largest air logistics unit in the world, NAS QUONSET boasts a roster in excess of 800 pilots. More than 200 senior officers ranging up to Navy captains and Marine colonels are members of this versatile unit.

Doubling in brass as transport pilots and flying such diversified aircraft as the SNJ, TBM, SNB-JRB, UF, R4D and R5C, these pilots are aviators attached to the Navy War College, students in the Naval School of Justice, air station officers, aviators attached to naval science units of local colleges, and more than 600 pilots in the Fleet squadrons in the Quonset area.

By using these pilots who perform scheduled navigational, instrument training and proficiency flights, the logistic service has picked up and delivered supplies for many units and squadrons based at Quonset and at other eastern seaboard activities.

For many months this system, which has been called *Logical Logistics* by its sponsors, has been employed by the Operations and Supply Departments at Quonset.

Here is a typical example of how it functions. The Material Division of the Planning Group in O&R submits an emergency request for a number of turbine blades for jet engines undergoing overhaul. The blades are not available at Quonset, but there is a set at Cherry Point.

Normal air shipment, including packaging, processing, paper work and priority assignment will take at least two or three days. Supply calls Operations by telephone requesting that the logical logistics unit effect delivery. The Operations Department through the duty officer surveys possible flights into the area and, in a matter of hours, O&R's jet engines are rolling off the assembly line. And here is the best part of the service—it costs the Navy nothing.

LOGISTICS *goes into action as duty officer asks for urgent pickup of turbine blades.*

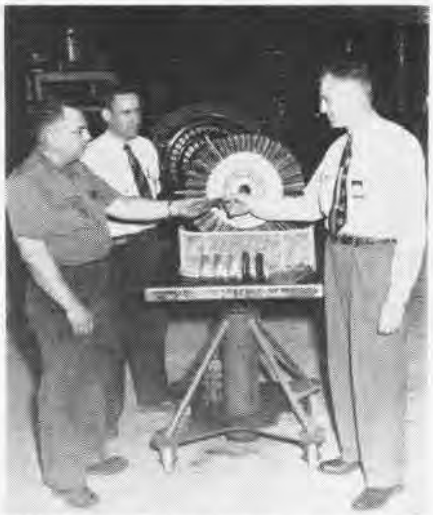
Something for nothing is a little hard to believe these days, but *Logical Logistics* works that way. All pilots flying to a destination outside the local area must have their clearance checked and signed by the Operations duty officer. He therefore comes face to face with the pilot of potential airspace. In a matter of minutes, the duty officer enlists the services of the pilot and the necessary arrangements for delivery are made.

Screening all inbound and outbound flights, the duty officer utilizes the space as it becomes available. So it really costs the Navy nothing, for the material is transported on an already scheduled hop. The money that would have been spent for transportation is saved, and better utilization of an aircraft is a reality.

CAPT. J. P. REMBERT *returns from training flight, delivers blades to duty officer.*

The supply personnel are hand-picked and especially trained in the procedures employed in this service. They learn the range and capacity of various aircraft, pilot procedures in filing a clearance, scheduling, and above all, the diplomacy necessary in expediting pick-up service. Most pick-ups are requested of a pilot already scheduled for a flight into an area of material availability or of one who can alter his itinerary without inconvenience.

"No time lost at destination" is guaranteed the pilot. Pick-up arrangements are handled in advance by supply personnel. Whenever problems are likely to be encountered, a storekeeper goes along to make sure that the pick-up is without delay. Paper work, telephone numbers and transportation, are all arranged ahead of time.



PAYOFF *occurs when the men in Power Plant Division receives blades for J-34 engine.*

Pilots gladly volunteer for *Logical Logistics* when they can help the Navy without interfering with the purpose of their own flight. On this same "not to cost extra and not to interfere" basis, personnel on official travel orders, emergency leave, and staff inspection sorties are frequently air-lifted by logistics.

FROM snowy Argentia on Saturday to the sunny Caribbean on Sunday is another example of the extensive itinerary of *Logical Logistics*. The pilots in Operations are still talking about the Friday night they loaded a couple of P2V engines into an R5C, arrived in Argentia early Saturday, and after a quick turn-around, carried a load of priority gear back to Quonset. At Quonset a new crew with ComSubLant and staff aboard, took off in the same R5C, arriving the next day, Sunday, at NAS GUANTANAMO.

No matter what the cargo—personnel or material—this economical service is efficient. The Navy saves time and money on every flight made by the *Logical Logistics* unit at Quonset. The plan is practical, and it yields dividends.

● MCAS CHERRY POINT—The families of HMR-261 men attended a one-day "school" to familiarize them with the helicopter and the work they do in connection with it. Before the day was finished, the families understood the "lingo" their men use in talking about the "whirlybirds."

● USS BON HOMME RICHARD—The 32,000th landing aboard this carrier marked another milestone, because it was the first 1,000th landing made at night. Lt. Tom Lague of VC-35 made the nocturnal landing.

AN OUTSTANDING *mark and 11 individual "E's" have been awarded VF-171 at NAS Jacksonville for competitive aerial gunnery exercises held at 15,000 feet. Flying F2H-3's, the "Screaming Demons" established this new record. Left to right, front row: Lt. C. L. Miller, Lt. K. K. Walker, Cdr. A. O. Morton, Lt. (jg) Thos. Bingham, Lt. (jg) W. H. Fowler. Capt. A. L. Consta, USAF, (back row) Ens. H. A. Corley, Jr., Ens. J. E. Watts, Lt. F. T. Brown, Lt. T. T. Ware, Jr., and Lt. (jg) L. R. Sarosdy.*

BRIGHTER LIGHTS FOR CARRIERS

THE NAVY has developed a new brighter system of illuminating aircraft carrier decks for night operations to keep pace with the faster landing speeds and changed pattern of jet aircraft.

The system was given a thorough tryout aboard the *Antietam's* canted deck and won praise from pilots who made night landings. The system is being incorporated in the two *Forrestal*-class carriers now being built and all existing carriers will be modified to take the new lights.

Major features of the new system is a line of white lights down the centerline of the landing area, whether it be canted or axial. A small, high-intensity bulb, almost flush with the deck level, will cast its beam 15° to the starboard and 50° to the port. This centerline will give pilots a reference point so they can tell whether they are lined up with the center of the deck.

The bulbs will be protected by a flat metallic bronze casting which will protect it from carrier hooks and tires.

The second feature involves replacement of the old surface lights with ones of much higher intensity. These lights face aft and are designed to illuminate the deck without causing pilot or deck handlers to lose night vision.

The intensity of the red lights, outlining the deck edge, have also been increased. On canted deck ships, a row of flush red lights, similar in design to the centerline lights, will outline the starboard edge of the "runway". Also the beginning and end of the runway will be outlined by athwartships flush-type white lights.

The lighting system described above was tried out by several hundred landings at night aboard the *Antietam* with good results. Turning and homing lights on the carrier island will be made brighter so the pilot can see them from farther out, since jets have a longer final leg than prop planes and come in considerably faster.

Three Chiefs Make New Tool

NAS ATLANTIC CITY—Three VC-33 chiefs received letters of commendation for their contributions to the operating efficiency of the Maintenance Department in their squadron.

The commendations went to ADC's W. S. Farquhar, R. W. Franzen, and H. L. Hocker for designing a new tool which measures starter and accessory drive shafts of R-3350 type engines.

The instrument has saved many man hours of labor in determining the degree of twist or run-out of starter and accessory drive shafts. It is made of a 19½" length of steel pipe with a 2" pipe coupling at one end. It is tubular in shape with pressed bushings at either end.

A simple protractor welded to one end and scribe marks at the opposite end provide a means of checking shaft twist of the accessory drive shaft to as accurate a degree as necessary for determining need for replacement.

HOCKER, FARQUHAR, FRANZEN SHOW NEW TOOL

A TAIL *wheel jack pad for HUP helicopters has been successfully manufactured by HU-1, Seaplane Base, Key West, Fla. Full details of how the pad was made from scrap material can be obtained by writing the squadron, HS-1.*

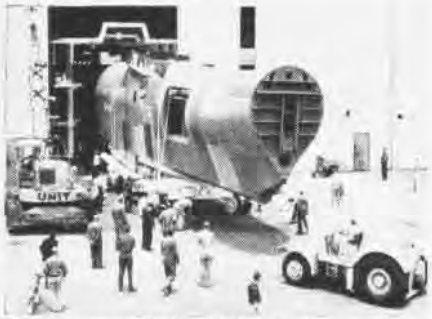
Bungee Spreader Is Devised

When a bungee in the R4D-8 landing gear retracting system is broken, it is necessary to remove the landing gear yoke and the bungees. The problem of spreading the bungees after the broken one is replaced for reinstallation is almost impossible because 5600 pounds of force are required to spread the bungees.

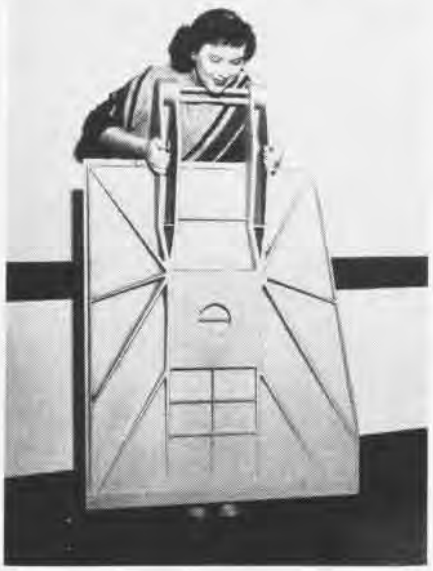
MSgt. C. R. Heard, Sgt. D. H. Taylor, and PFC E. L. Thomas have designed, MAW-1 reports, a system to meet the problem. An F4U wing fold cylinder is bolted to an I beam while the strut of the cylinder is bolted to the landing gear yoke. A hydraulic hand pump, a two-way selector valve, an old pressure pot is connected so that the cylinder can be actuated by hand pump action. Once the bungees are spread, a spreader bar is inserted between the yoke and the unit is readily installed in the R4D-8.

Frequent field tests have demonstrated that the difficult feat of replacing a broken bungee can be readily accomplished in a few minutes with the aid of the hydraulic spreading device.

THE BUNGEE SPREADER CUTS TIME FOR FIX



PRODUCTION *of the R3Y-1 turboprop flying boat has moved into the final assembly phase at Convair San Diego. The first of the transport seaplanes will be used for static tests, with the second production seaplane, which will be the first to fly, making its maiden flight in March of 1953. Four Allison T-40 gas turbines developing 5,500-hp each and driving counter-rotating Aeroproducts propellers will drive the R3Y. Top speed is 350 mph and take-off 30 seconds on calm waters.*



YOU ARE *given three guesses as to what Miss Bette Harvey of Chance Vought's engineering department is holding. Is it a giant sandwich toaster or some kind of a suit presser? Actually it is a cast magnesium speed brake for the F7U-3 Cutlass.*

New Jig to Check Diffusers

Checking runouts for warpage of J-34 diffusers has usually taken two men one and a half hours each, using a Westinghouse jig. Because of the weight and awkwardness of the jig, it was unsafe and had a tendency to damage the job being performed.

W. J. Motes Jr., a machinist at Cherry Point, N. C. has designed a special jig that saves time and is safer to use. It requires only one man to handle the jig, and he can do the job in one half hour. Work damage is eliminated.

Motes describes the new jig in this way: "Portable centers are inserted and held in place by two cap screws in each end of the diffuser, and the runouts are checked between the centers in a lathe."

The suggestion has been approved under the Navy Awards and Incentives Program.

RED ARROW ON F2H HELPS LOCATE THE HANDLE

Arrow Aids Jet Pilot Rescues

MAG-33, KOREA — Battle-damaged jets from this group have landed at advanced fields where personnel unfamiliar with them have had difficulty getting the pilot out of the plane.

To solve this problem, the group has painted large red arrows or other big signs pointing to the emergency canopy releases on the TV-2, F2H or F9F planes flown by its pilots.

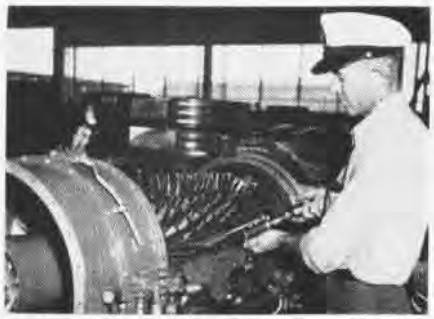
Another flight safety idea used by the group is publication of the *Monday Morning Quarterback*, a mimeographed pamphlet supplied to all pilots. It reviews accidents and near accidents, pointing out other courses of action that were open to pilots involved. The pamphlet is put out while the incident is still fresh in everyone's mind.

Very Pistol Discharger Aid

NAAS KINGSVILLE—Three enlisted men have come up with an ingenious device. The gimmick, a super deluxe model Very pistol discharger, was invented by C. J. Nichols, AM1; F. S. Chapanski, AN, and T. M. Harlicker, AM3. It is designed to fire two Very pistols simultaneously by the application of a little foot pressure in the proper place.

With this discharger, only one man is necessary on the runway during night flying to talk to the students on the radio and at the same time fire the Very flares should a wave-off become necessary.

A foot lever pulls down a bar which passes through the trigger guards, thus depressing the triggers and firing the pistols. A wire mesh screen around three sides of the machine prevents inadvertent firing.



HOLDING *the results of the handiwork is Chief Domingo Amuchastegui of FASRon-6 who perfected a jet turbine blade cleaner which reduces amount of time needed to clean the blades from 60 to 14 man-hours of work.*

Special Tool Speeds Repair

One of the troublesome bottlenecks of fighter plane maintenance was solved recently by an ingenious wrench, the invention of W. O. Joseph H. Swindell and Master Sergeant Rovert Jeter of VMA-334's engineering department.

Trouble with an accumulator, a vital part of a plane's hydraulic system, previously grounded aircraft for as long as two weeks while the defective part underwent factory overhaul. With the new wrench, repairs can be effected in as little as fifteen minures.

Essentially, an accumulator is a hollow metal sphere composed of two threaded flanged-hemispheres and divided in the middle by a diaphragm. It checks surges in the hydraulic system against an air cushion.

The fault lies in the diaphragm, which occasionally ruptures. Changing the diaphragms has been a factory operation because no standard tool would take the accumulators apart. Swindell and Jeter solved the problem with two heavy iron plates, each pierced by a circular hole.

The holes fit over the accumulator and small lugs on the plate engage small holes in the hemisphere flanges. The accumulator is then dissembled simply by holding one plate fast in a vise, while the other is turned with a handle. Fifteen minutes later a new diaphragm has been installed and the accumulator is ready for installation.

WELL-COORDINATED *teamwork on the part of pilots, plane crews and beaching crews enabled* VP-56 *at* NAS NORFOLK *to set an unofficial seaplane launching record with 11 PBM Mariners waterborne in 23 minutes. It was accomplished during an operational training exercise calling for depth charge attacks on towed targets and aerial mine-laying practices. Pictured are plane crew men detaching the tail and side wheels from a Mariner as beach crews strain at their lines in order to haul them ashore in a hurry and launch the next one.*

AVIATION ORDNANCE

Mk 8 Feed Mechanisms

All activities having *Mk 8 Feed Mechanisms* in their possession are requested to advise BUORD of all discrepancies and malfunctions encountered. This information will be used by BUORD to assist in improving material quality and maintenance procedures which will in turn bring about a more reliable performance.

Aircraft Gun Tompions

Attention is invited to the article in the November 1952 issue of the NEWS concerning aircraft gun *tompions*. It is requested that all commands, including Bureau of Aeronautics Representatives, utilize these tompions before flights, after cleaning of guns, and before ferrying.

New NavOrdinsts

The latest NAVORD Instructions out on Aircraft Guns are: NAVORDINST 8710.6, Feed Mechanisms, 20mm AN-M2, manufactured by Davis Aircraft Engineering Company, replacement and disposition of; 8710.7, 20mm feed mechanism AN-M2, modification of feed chute adapter for; and 8710.4 Sup 1, log books for 20mm aircraft guns, NAVORD Form 2086 (New 1-52), and feed mechanisms, NAVORD Form 2092 (New 1-52; use and availability).

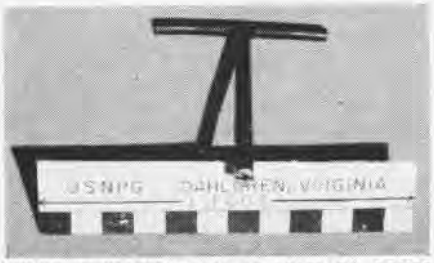
Aviation Ordnance Tool Sets

NAVORD *List No. 21416, Rev. "C"* has been issued to operating activities of the aeronautical organization in order to provide them with the most practical range of spare parts for the maintenance of *Aviation Ordnance Equipment*. (This publication supercedes NAVORD List 21416, Rev. B).

Recommendations from the Fleet have been incorporated in this NAVORD list. The latest equipment is included in the list, and all changes from the previous list have been made a part of the foreword and instructions.

Replenishment for Operating Activities. Line maintenance spare part sets are designed and allowed in sufficient quantity to maintain the specified number of installations for a period of approximately ninety days combat operations. When replenishment is necessary, individual items are to be ordered in quantities as required. No deviations, or substitutions for items listed in this publication will be permitted without specific authorization by the Bureau of Ordnance.

Distribution and Replenishment by Supply Activities. Equipment listed in this allowance list will be stocked as individual items throughout the aviation ordnance supply system as outlined in *Ordnance Pamphlet 1820*. Issues will be made on the basis of established allowances. All line maintenance spare part sets and tool sets, and component parts of these sets returned to supply activities, will be taken up in stock as individual items.



SIMPLE 'T' WRENCH GETS AT BOLTS ON BOMBS

'T' Wrench for Practice Bomb

A "T" wrench for securing the charge in the tail of a Mk 15 practice bomb was recommended by George W. Flippen, Jr. and Richard C. Brown, III, of the Naval Proving Ground, Dahlgren, Virginia.

The method formerly used for securing charges in the tail of the bomb was done with the fingers, often causing cuts and abrasions resulting from striking against the fins. The threads for the wing nuts often have paint or rust on them, making it very hard to remove nuts and plate so the charge can be placed inside.

This operation is slow and often causes loss of time in loading aircraft when practice bombs including a charge are used. Further, after a charge is placed inside, it can be secured only "finger tight".

The suggestion is that a "T" wrench 6⅜" long across the handle and 11¼" long, made of ½" rod having a slot cut in the middle of the rod at the bottom of the "T" be used. At the bottom of the "T" there is a hole in the center of the rod which is ¾" deep.

The bottom end of the "T" can be placed inside of the fins and nuts and plate speedily removed, and the charge can be placed inside secure and properly. Three to four charges can be placed in bombs using the "T", while one is being done by hand.

BUORD concurs that the suggestion will make for a faster and better operation with less labor.

SAY, CHIEF, YOU KNOW THAT STORM. . .

Correction Mates!

Article appearing in the July 1953 issue of the NEWS on page 38, entitled *VF-53's New Re-Arming Tool* should be corrected to read: Stock No. R41-W-624-855 instead of Stock No. R14-W-624855.

New Type Lock and Key

The Bureau of Ordnance is going to replace the breechlock locking key and lock of the 20mm aircraft machine gun M3 with a breechblock locking key and lock of similar design to that used in the M24 aircraft gun. This lock does not utilize the lifting ears, but relies on a straight camming action.

The new locks and keys are expected to be available in December, 1953. Therefore, it is requested that commands use stocks on hand of the old type lock until that time. If activities have more than enough of the old type lock to meet their demands, it is requested that they be returned to supply for re-issue to those activities in short supply. Supply activities are hereby informed that compliance with NAVORDINST 8600.2 will partially replenish stocks on hand of the old type lock, as they are no longer being procured.

A NAVORD Instruction will be issued when the new type lock and key become available.

SHIPS *have their plank-owners and now comes Helicopter Antisubmarine Squadron Three (HS-3) with a Rotor Owner's Certificate. Conceived by LCdr. Ernest C. Harris, Jr., the exec. and R. P. Welch, Ph3, the certificate went to all personnel who were assigned when commissioned last year.*

New Hangar at Litchfield Pk.

NAF LITCHFIELD PARK—The Navy has expanded its aircraft preservation activities here by recently commissioning a $3,000,000 hangar project to coordinate production lines for modification and preservation processes.

The new 280' x 450' hangar has 15 acres of concrete aprons and wash racks. Included is a $55,000 waste-water treatment plant, used to remove oil and preservative compounds from wash water so that no contaminated water is dumped into Arizona rivers.

Located in an area where summer temperatures are over 100°, the hangar is cooled by rotary drum-type evaporative coolers mounted on the roofs. Heat, if needed, comes from a steam boiler plant.

Dedication of the new hangar was attended by Gov. Howard Pyle of Arizona, RAdm. G. R. Henderson, commander NAB, 11ND, and VAdm. H. N. Martin, ComAirPac.

SAFETY RULES FOR JET FUELS

As Navy jets switch from aviation gasoline to jet petroleum (JP) fuels, new rules of safe handling and storage are coming to the fore.

Bureau of Yards and Docks, which builds the storage tanks and pumping systems for naval air stations, stresses a number of safety practices for storing jet fuel. These include:

1. Only non-sparking tools should be used in work in gasoline or JP tank farms.

2. Flow of fluids through nozzles and pipes can produce static electricity which can discharge itself by arcing and cause explosions, particularly with less dense fuels and with higher velocity of flow. Attention should be directed to proper electrical grounding facilities.

3. All fixed-volume tanks containing jet fuel should be provided with flame arresters.

4. Tetraethyl lead is not present in jet fuel. However, there may be lead deposited in jet fuel tanks which formerly were used for leaded gasoline. The toxic hazards of jet fuel are similar to those of gasoline.

5. Jet fuel is considerably more active than gasoline in removing rust and scale from steel surfaces. When jet fuel is stored in a steel tank formerly used for gasoline, there may be considerable rust and scale deposited on the bottom and included in the fuel from the tanks. This kind of thing can cause aircraft engine stoppages. More frequent cleaning of filters and strainers is required.

6. Spillage of jet fuel on asphalt pavements in parking areas or runways can damage them. Jet fuel dries slower than gasoline and can do greater damage to the asphalt.

7. When jet fuel is stored in existing pre-stressed concrete tanks lined with either sheet form or latex thiokol, the fuel may adversely affect the lining. There are materials and techniques for new linings and rehabilitating existing linings which can be used to make a tank satisfactory for jet fuel use.

Every effort should be exercised to supply fuel free of foreign matter. In the case of jet and gasoline there is danger of contamination resulting from intermingling of the two types of fuel. For instance, a small quantity of JP-4 can adversely affect the anti-knock quality of 115/145 aviation grade gasoline. Similarly, in adding JP-4 to 115/145 avgas, a fuel with greater quantities of accelerated gum is introduced into one with smaller amounts. Sizeable quantities avgas could be added to JP-4 without jeopardizing the gas.

CARE REQUIRED IN HANDLING NEW JP JET FUEL

Contamination such as described can be caused by accidental opening of and leaking valves between the two fuels in an interconnected piping system. It also could result from intermingling of the two fuels in a transmission pipeline, or by delivering fuel to a tank which had not been properly purged of another fuel.

● For on-station fuel storage and dispensing, it is preferable to use separate piping for gasoline and jet engine fuel. At interconnecting points, the two systems should be separated by use of spectacle blind flanges. Where existing plug or gate valves perform this blocking function, they should have tight seats.

● The matter of long fuel transmission pipelines, such as for delivering fuel from an unloading point to the fuel tanks of a distant station presents a somewhat different problem. Long transmission pipelines are costly and two such lines for avgas and JP fuel are not always justified.

Under careful control, a long single pipeline can be used successively to transfer gasoline and jet engine fuel—with one large bulk delivery being completed before another fuel is introduced into the pipeline. Rapid changes of these fuels should not be attempted.

Long fuel transmission lines that are to be used for successive deliveries of gasoline and JP fuel are designed so the velocity of the flowing liquid is in the turbulent range. When this exists it is possible to reduce the telescoping between the "tail" of one product and the "head" of the succeeding fuel. While two products are in the pipeline, the pumping rate should be maintained.

When the dividing point reaches the receiving tank farm, the transfer of the stream between the different storage tanks always should be made so that a small quantity of gasoline is downgraded into the jet fuel tanks, never inversely.

When a new pipeline is put into operation, samples of products should be taken at the receiving end of the line to check and time the passing of the interface between the two fuels. Radioactive isotopes are known to have been used in commercial practice for following an interface between two fuels. There is a Navy transmission pipeline now being designed to transfer fuel between two west coast activities which will use these isotopes.

By Earle L. Corliss
Bureau of Yards and Docks.

THIS GIRL *brought along her own shotguns when she reported for duty at MCAS Cherry Point. She is Pfc. Marjorie Gardner, New York state 20-gauge skeet champion and now a member of the women Marines. When she was 14, she broke 125 birds without miss.*

AMONG THE *40 French youngsters from Abbe Martini, near Marseille, who visited the Coral Sea was this small fry who inspected an F9F with Eugene T. Stepinac, ADAN, his "Father for a Day". The youngsters toured the hangar and flight decks of the flattop.*

NAVY WINGS *of gold adorn the uniforms of Lt. H. S. Muller and Lt. (jg) Bennendyk of the Netherlands Royal Navy. They are the first Dutch Naval Aviators to complete successfully the full flight training syllabus of the Navy and be designated at Pensacola.*

LETTERS

SIRS:

To settle an argument, has any pilot ever taken a P-boat, such as a PBM or PBY, off the water on one engine?

READER

NAVY DEPT., WASHINGTON, D. C.

¶ Checks with some old P-boat pilots, aviation history section and BuAer design desk for patrol planes fails to uncover anyone who remembers it being done. Anyone ever hear of such a feat? Pilots say a heavy wind might weathercock the plane enough to offset the pull from the single engine but the engine would not have enough power to get the seaplane up on its step for takeoff.

SIRS:

Having read a number of issues of your magazine, I thought I'd write and tell you how much I enjoy reading them. They are very informative and the photographs excellent.

While strictly a groundman myself, except as a passenger, I get a great deal of pleasure reading of aero development. Naturally I'm interested in conditions in other air forces, ours are excellent.

As chairman of our small Corporal's Club, I wondered if you could put me in touch with say three units of the Marine Corps. I'd like to correspond with members of a similar organization. It is difficult to find out just where one gets in touch with a unit of the corps. For example, they (a unit I write to) might not have any Corporals.

CPL. BASIL NUNN

ROOM 445, AIR DEPARTMENT
PRIVATE BAG
WELLINGTON, NEW ZEALAND

¶ We've heard the services were becoming all Chiefs and no Indians, but there must be some corporals left in the Marine Corps. Any NCO clubbers at MCAS's might write Nunn.

WORKING *in spare hours after classes and flying time, NavCad Albert M. Leahy designed a float for Whiting Field's Armed Forces Day observance. It featured a miniature plane, control tower, runways and cloud banks. Whiting's public works department assisted Leahy in making the float.*

SIRS:

I am a regular reader of your magazine, which American fliers based at Guam Island send to us. I was wondering if you could get me in contact with a girl in the Armed Services which is based at Guam.

For information, my age is 20. I will close, hoping that in some way you might be able to help me.

NOEL KELLNER, ABLE SEAMAN

HMAS TARANGAU, RAN P.O. #3
LOS NEGROS, MANUS ISLAND
c/o GPO, Sydney, Australia

¶ All Waves stationed on Guam are hereby requested to write Seaman Kellner. Since there are none on Guam, on second thought, don't bother to write.

SIRS:

Reading your article on telemetering devices attached to pilots, I note that Dr. Barr who developed the system was an Army flier who became a Navy flight surgeon and that the Navy had only 16 in such classification (fliers and doctors).

I thought you might be interested in a fellow who did just the opposite. I was a Navy pilot in World War II and was in the ETO with VPB-112 and in England with VPB-103.

I graduated from Corpus in September, 1943, and was released in October 1945, as a senior lieutenant. Went to Tulane medical school and then into the Air Force as a flight surgeon. Was released last June.

DR. ERNIE A. YOUNG

CHARITY HOSPITAL
JACKSON, MISS.

New Safety Book is Ready

25-Chapter Volume Lists Many Rulings

The "bible" for safe operation of naval ships, aircraft and stations will be issued in October—the long-awaited *U. S. Navy Safety Precautions* issued by Fleet Operational Readiness division of OpNav.

This 500-page loose-leaf publication has been in the making for five years. It presents in readable form widely-scattered safety instructions heretofore available only through reading many bureau manuals and Fleet directives.

In the field of aviation, the new book covers such safety topics as fire prevention, taxiing, towing, aircraft fuels, defueling, crash and rescue, danger markings, ordnance, ground maintenance, hangar and shop safety, arresting gear, barriers, catapults, JATO, guided missiles, inflight safety, air traffic rules, aerial maneuvers, aerological and navigation.

Official distribution of the volume, which is unclassified, will be similar to that of *Navy Regulations*. It also will be available through the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

NAVAL AVIATION NEWS

Published monthly by the Chief of Naval Operations and the Chief of the Bureau of Aeronautics to disseminate safety, training, maintenance and technical data. Address communications to Naval Aviation News Op-05A3, Navy Department, Washington 25, D. C. Office located in room 5D628 Pentagon. Phones 73685 and 73515. Op-05A3 also publishes the quarterly Naval Aviation Confidential Bulletin.

1903 Golden Anniversary of POWERED FLIGHT 1953

CONTENTS

● THE COVER

This month's "Faces of Naval Aviation" features the Navy's leading parachute jumper, Carp. L. T. Vinson formerly with the Navy Parachute Unit at NAAS El Centro. Jumpmaster at that busy unit, Vinson made 417 jumps, believed to be the record for anybody in the Armed Services. He now is with Fasron-7 at San Diego. Photo by Jack R. Beaver, AF3.

● PHOTO CREDIT

The picture of Jane Russell and Marilyn Monroe on the back cover courtesy of Twentieth Century-Fox Pictures.

● SUBSCRIPTIONS

An unclassified edition of Naval Aviation News, containing special articles of interest to Reserves, is available on subscription for $2 a year through Superintendent of Documents, Government Printing Office, Washington 25, D. C. Changes of address for this edition should be sent to the above address.

● THE STAFF

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

SQUADRON INSIGNIA

Ships, squadrons and exhibition teams are represented in this month's insignia page. The famous Blue Angels team wears an emblem featuring the Air Training Command shield plus four planes zooming over a cloud bank. The newly recommissioned carrier Lake Champlain features a crowned eagle with the motto "Excelsior". Fanciful is the insigne of VF-82, with its electronic man and the nickname "Iron Men" on the plaque. VC-33 has on its squadron insigne a chess "knight' and flying falcon with talons bared, separated by a lightning flash.

BLUE ANGELS

USS LAKE CHAMPLAIN

VC-33

VF-82

SOMETHING FOR THE BOYS

If you don't know who the two lovelies above are we won't tell you. We will tell you, however, that you can get Naval Aviation News every month by sending $2 to Superintendent of Documents, Government Printing Office Washington, 25, D. C. Send a copy home to your folks; keep them posted on naval aviation.