ARMY AVIATION

MARCH 15, 1957

THE ARMY'S NEW
BEECH L-23D

powered by
two
Avco Lycoming
supercharged
O-480 engines
340 h.p. each

avco | Lycoming

Stratford, Conn. · Williamsport, Pa.

Dependable Avco Lycoming engines
power more different types of fixed and rotary-wing

A Possible Solut
An Inflatable Ra

The Proponent
L/Col. Gerald H. Sh

WANTED!
A Multiple-Rescue Device

Today we live in the remarkable age of being rescued by helicopter from situations, which until now, would have meant certain death.

The versatility of this fabulous flying machine literally enables you to be plucked from the earthbound disasters and whisked away to safety. This transition is oftentimes not without its inherent dangers, however, and from a careful study of the means and methods employed in helicopter operations it is evident that much is left to be desired in executing safe rescue by helicopter.

Essetially, the helicopter is the only vehicle in existence that can evacuate the earthbound victims from confined areas into the air for transport to areas of safety. For this reason, it is important that the rescue procedures *and* equipment be readily adaptable to the helicopter for this vital mission.

Correct Equipment Necessary

Persons *may* be rescued from disaster areas providing the *rescue equipment* meets the demands of the operation.

Our current techniques and equipment are many. The conventional rescue method currently employed during helicopter operations involves the lowering of a harness, rope seat or chair, or a basket contrivance on a winch cable while the helicopter hovers over the victim. The victim then *attaches himself* and is reeled up and into the helicopter. While this method has been responsible for saving many lives, it has many disadvantages and accompanying hazards.

For example, the victim, who may be injured, must fasten himself into the device lowered and may not have any prior knowledge as to how to do this. Or, the victim, already in a state of anxiety, is likely to become frightened by the helicopter hovering directly overhead and refuse to be rescued. (*A substantial number of pilot reports during the New England flood operation indicated that this does happen and happens quite frequently. Ed.*)

The relatively short length of cable requires the helicopter to hover down close to the victim placing him in the heavy rotor downwash, which in turn may increase the victim's anxiety and even blow him off his place of safety.

Obstacles Are Drawback

Should there be intervening obstacles (trees, TV antenna, ships' masts, etc.) the cable may not be long enough to reach the victim.

Standard helicopter hoist cables are stressed to 400 lbs. With attached basket or seat equipment only one person can be safely rescued at a time and this limitation may prove quite unsatisfactory. Frequently a mother is stranded with a small child and will not offer her child to the hoist alone

(*Continued on Page* 34)

KAMAN HOK-1 SHOWS ITS MUSCLE

Undergoing U. S. Army evaluation tests including airlifting externally slung cargo, this Marine Corps HOK-1 demonstrates its ability. Shown here carrying a 2500 lb. jeep, it also takes artillery pieces, gas drums, ammo cases and other bulky materiel in stride.

HOK-1 general utility helicopters are already in service with the U. S. Navy and Marine Corps where they are used extensively for search and rescue missions, medical evacuation, personnel transport and cargo carrying.

The development and production of utility helicopters is but one of many contributions Kaman has made to our National Defense effort. We're proud to be of service.

Kaman builds helicopters
YOU FLY LIKE A PLANE

KAMAN

THE KAMAN AIRCRAFT CORPORATION
BLOOMFIELD, CONNECTICUT

ARMY AVIATION

Volume 5 — Number 3
March 15, 1957

Paid Circulation — February, 1957

Courtesy of Kollsman Instrument Corp.

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PHOTO AT LEFT—General Howze (left) chats with Brig. Gen. Mercer C. Walter and Lt. Col. Donald F. Cassidy (right) upon arrival at Post Field, Ft. Sill, Oklahoma. (U.S. Army photo).

FORT SILL, OKLA.—During a recent extended trip to far-flung Army aviation installations throughout the continental U.S., Maj. Gen. Hamilton H. Howze, Director of Army Aviation, ODCSOPS, D/A, visited Post Field at Fort Sill to inspect the activities of the Army Aviation Unit Training Command.

General Howze was welcomed upon his arrival at the Oklahoma facility by Brig. Gen. Mercer C. Walter, Commander of Troops, Ft. Sill, and Lt. Col. Donald F. Cassidy, Commanding Officer of all Fort Sill Aviation activities.

Static Display

A static display of an operational platoon of Sikorsky H-34 helicopters of the 31st Transportation Company was arranged for General Howze and his party. The helicopter unit, commanded by Maj. Amore V. Juliano, depicted the various loads typically carried on such an operation and climaxed the display by a fly-by of an H-34 with a jeep carried as a sling-load.

During the General's visit, Maj. Juliano presented to General Howze an honorary membership in the 31st Transportation Company in an informal ceremony.

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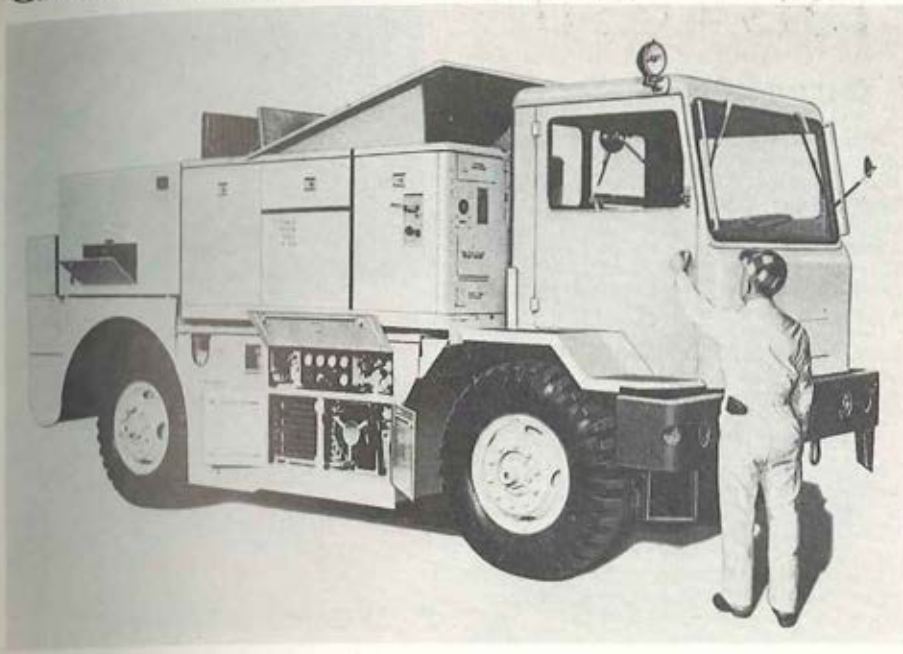
CHANGE OF ADDRESS CARDS

Change of Address cards are inserted quarterly in subscribers' issues. Subscribers are urged to employ either the publication inserts or official government or Post Office cards to effect a change of address for distribution purposes. No distribution change will be made upon the basis of address changes submitted in editorial copy.

CAPABILITIES . . . Manpower, Tools and Experience



No other ground support unit offers the complete flexibility and "fast starting" action of the Beechcraft MA-3 Multi-Purpose Vehicle, now entering service with the U. S. Air Force.

The MA-3 has 12,500 pounds draw-bar pull for towing aircraft, which can be increased by adding to its gross weight. It has reciprocating and gas turbine power plants, an air cycle type air-conditioner of 13-ton capacity, high pressure air compressor with capacity of 15 CFM of free air at pressures up to 3500 PSI. The vehicle can travel at 45 mph, maneuvers easily, has four-wheel power steering, four-wheel drive and four-speed torque converter transmission (four speeds forward and two reverse).

The MA-3 provides 28 Kilowatts direct current from two self-cooled 500 ampere 28-volt generators; features split and single bus; has three-phase alternating current 60 KVA-45 KW; and a self-cooled alternator, precisely controlled frequency 400 CPS.

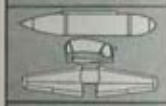
Unexcelled in-the-field service by thousands of Beechcraft ground power units and a world-wide service organization add to the advantages of this truly exceptional unit.

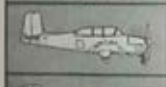
Inquiries from airlines, manufacturers, and others who desire details of the most advanced and modern ground support unit will be welcomed by the Contract Administration Division, Beech Aircraft Corporation, Wichita 1, Kansas.

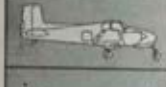
BEECH BUILDS


MA-3 MULTI-PURPOSE VEHICLES


C-26, MD-3 POWER UNITS

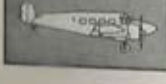

TANK-WING-MAJOR SUBASSEMBLY SUBCONTRACT PRODUCTION


BEECHCRAFT T-34 TRAINERS


BEECHCRAFT L-23 TRANSPORTS


4-PLACE BEECHCRAFT BONANZA


6-PLACE BEECHCRAFT TWIN-BONANZA


8-PLACE BEECHCRAFT SUPER 18

Beechcraft

BEECH AIRCRAFT CORPORATION, WICHITA, KANSAS, U. S. A.

THIS MONTH

► Responsibilities Defined

A new Army Regulation has been published delineating the responsibilities of the Departments of the Army, the Navy, and the Air Force in the engineering and procurement of Army air items.

Entitled AR 700-50, *Logistics*, the new AR provides the Army with direct access to the engineering and procurement facilities of both the Navy and the Air Force.

Under the new AR, complete responsibility for the depot maintenance support of the Army aircraft program will be assumed by the Army, effective July 1, 1957.

Army Determines Characteristics

Military characteristics, including both operational and logistical concepts for Army air items, will be prepared by D/A. The technical evaluation of the feasibility of meeting such characteristics will be furnished by the Navy or Air Force with the Army having final approval of and the publication of such characteristics.

Under the new AR logistical flight testing will be conducted by the Department of the Army with engineering evaluations, recommendations including specifications review, engineering flight tests, and accelerated flight tests to be the responsibility of the Department responsible for engineering and procurement in coordination with the Department of the Army.

Recommended modifications to Army air items will be the responsibility of the Department responsible for engineering and procurement. Should neither the Navy nor the AF have prior engineering responsibility for an Army air item, D/A will request one of the two to perform the service. The AR permits the Army to conduct or arrange for such an evaluation in the event that these Departments cannot meet the time schedule of the Army.

Parts Procurement Accelerated

Maintenance officers will be interested to learn that the Army may procure replenishment spare parts direct from industry, provided that the parts do not exceed $1,000 per line item. Should the requirement exceed $1,000 per line item and be procured from a Navy or AF plant facility, the Army will obtain permission from the Department affected prior to effecting direct procurement.

AOCP situations eliminate the dollar amount requirement, provided that the items are needed for the immediate performance of operational missions for the grounded aircraft and no engineering changes are involved in requesting the spare parts.

New Course

Five career Army men, the core of a line maintenance section of the 3rd Trans Co, Ft. Belvoir, Va., are the first Army personnel to attend the Wright Aeronautical Division's Service School at Woodbridge, N. J. The first of two groups from the 3rd to learn line maintenance and operation of the Wright R1820-103 engine, the group includes (l. to r.): Sgt Max Vernon, Sp/2 L. Gross, CWO Robert West, Sfc John O'Malley, and M/Sgt Albert Rhode. They're flanked by William Corneli, School Supervisor (left), and Bert Roney, Instructor.

► ZI Contract Training

Within recent months, four civilian aviation firms have been awarded contracts by five Continental Armies to conduct instrument flight training classes for the purpose of training approximately 440 rated Army aviators assigned within the six Continental Armies.

Conducted at five separate airfields, the instrument training program will be pursued throughout fiscal 1957 at an average cost of of approximately $2,750 per student.

Hinson Aviation Company, Harbor Field, Baltimore Md., is scheduled to conduct 3 classes embracing 70-odd students assigned to units in the First and Second Army areas.

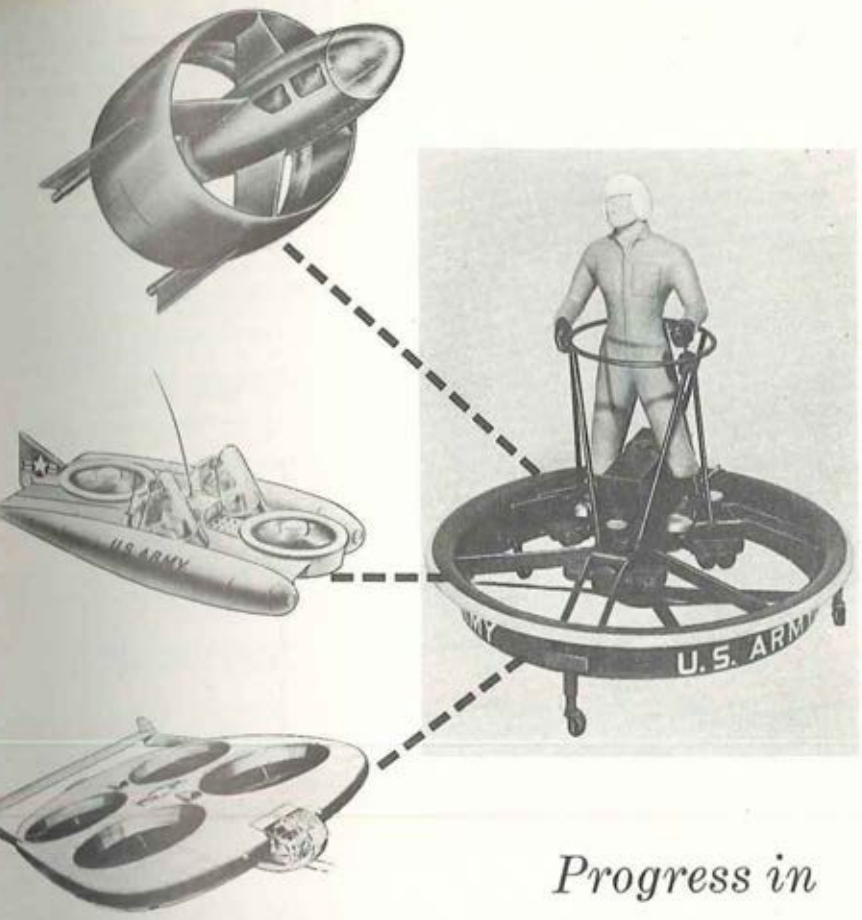
Combined Training Facility

Central American Airways Flying Service, Bowman Field, Louisville, Ky., will operate two civilian contract facilities at Outlaw Field, Clarksville, Tenn., and Freedman Field, Seymour, Ind., at which an expected 200 Army aviators assigned to Third and Fifth Army units will receive training. The combined Third and Fifth Army contract calls for five separate classes at each facility.

Spartan School of Aeronautics, Tulsa, Oklahoma, under provisions of a contract with Hq, Fourth Army, will conduct 4 classes of instruction at Ft. Sill, Oklahoma in training approximately 70 Fourth Army pilots in instrument flying.

Some 100 Sixth Army aviators will undergo instrument flight training at Oakland International Airport following the award of a contract to Trans-Ocean Airlines, Talo

(*Continued on page* 8)



Progress in

MOBILITY TO MATCH OUR AIR AGE

The Army's ducted fan program is now in its second important phase.

Hiller Helicopters and the United States Army have demonstrated "flyability" with the original Flying Platform. Today, fundamental research, investigation, and design and fabrication of prototype aircraft represent solid advancements toward military requirements for the future simplified low-cost aircraft. Where flight in and around restricted areas requires compact lifting systems, the ducted fan concept provides an optimum solution.

Pioneer manufacturer of ducted fan aircraft, Hiller Helicopters, in cooperation with the U. S. Army, is blazing new trails for military mobility.

HILLER HELICOPTERS PALO ALTO, CALIF.

Academy of Aeronautics, at Oakland, California. The Sixth Army contract calls for six separate classes.

Courses conducted by the civilian contractors will parallel the instrument flight training course given at the Army Aviation School. Each student is to receive 80 hours of first pilot instrument flight instruction and will participate in 180 hours of associated ground school instruction while attending the 8-week course.

Following their graduation from the civilian contract facilities, the students may qualify for an Army "Standard Instrument Certificate" by successfully completing the written examination and an instrument flight examination as administered by an Army Instrument Examining Board.

► NGR No. 95 Revised

National Guard Regulations No. 95 prescribing basic policy guidance relative to Army Aviation within the National Guard has been under revision and will be implemented with certain notable changes.

The application procedure has been streamlined considerably, permitting National Guard officers who have been extended temporary or Federal recognition to apply for flying status in the National Guard upon meeting certain basic requirements.

Instructor pilot ratings have been revamped. AA's in the National Guard may now qualify for an IP rating on a 1 to 5 ratio if they have logged a minimum of 500 hours of first pilot time in military aircraft, have logged at least 100 hours of first pilot time in the type of aircraft for which the designation is sought, hold current permanent flying status, and have been recommended by the Army Aviation Advisor and the State Aviation Officer as qualified to discharge the duties of Instructor Pilot.

Flying Evaluation Boards, as authorized by the State adjutants general, may now be appointed within the appropriate jurisdiction. Governed by the provisions of AR 600-107, the Evaluation Boards can be summoned at the call of the president. The Regulation calls for the participation of the Army Aviation Advisor as a member of the particular Flying Evaluation Board.

One Unit Drill Mandatory

Army aviators on flying status, in being authorized to perform training flights as *Equivalent Training* in lieu of attendance at regularly scheduled drills, are required to attend a minimum of one scheduled drill per month with the unit to which they are assigned or attached.

Required reports pertaining to Army aviation matters have been augmented by recent changes to NGR No. 95.

► ARAACOM Utilization

COLORADO SPRINGS, COLO.—A milestone in the development of the aviation program of the Army Antiaircraft Command

TILT-WING CONTRACT LET

PALO ALTO, CALIF.—An initial contract for the development of a tilt-wing aircraft has been awarded to Hiller Helicopters by the U.S. Air Force.

The tilt-wing plane will be propeller driven and capable of vertical take-off and landing. An artist's conception of the Hiller H-18 tilt-wing research plane (above) depicts one of the latest trends in powered flight.

Having less hovering capability but greater forward speed than helicopters, the test aircraft may provide the model for future transports capable of vertical take-off and landing (VTOL) and short take-off and landing STOL).

Cessna T-37 designed for Jet Training

To meet jet age demands, the U. S. Air Force requires a jet trainer that makes it easy for cadet-pilots to master first line combat airplanes.

The Cessna developed T-37 introduces the cadet to all combat jet airplane characteristics while training on this safe, easy-to-fly jet trainer.

It is designed to provide the Air Force with a jet trainer that can be operated at substantial savings and cover the most important and longest phase of the cadet-pilot's jet training.

It is a privilege for us here at Cessna to team with the Air Force in its forward-thinking plans for the jet age. CESSNA AIRCRAFT COMPANY, Wichita, Kans.

INCENTIVE PROGRAM AWARD

FT. HUACHUCA, ARIZ.—Monty E. Ward, an aircraft mechanic in the Transportation Section of the AEPG, Ft. Huachuca, has received a $150 *incentive program* award for suggesting an adapter to be used along with the Kell Strom hydra-torque wrench used in his shop.

The adapter suggested by Ward consists of a plate on which the Kell Strom tool can be mounted. Adjustable arms are mounted on the plate which adapt to H-19, H-21, and H-34 helicopter rotor heads. The adapter reduces the job from an estimated half a day for five men to half an hour for two men, this effecting a saving of $1,000 a year for the government.

In tha photo above Monty E. Ward accepts the $150 award from Lt. Col. Norton Jackson while Capt. James D. Taylor, OIC of the shop, looks on from the left. Uncle Sam does pay off for time-savers; keep this in mind!

was reached recently with the establishment of the Aviation Division at ARAACOM Headquarters in Colorado as a special staff section.

The announcement of the change in status was made by Lt. Gen. Stanley R. Mickelsen, ARAACOM's Commanding General.

The Aviation Section previously functioned as a division of the G-4 (Logistics) Section. It will continue under the general staff supervision of G-4, but will have much greater leeway in its own planning of operations, training, and logistics matters involving Army aviation sections throughout the command. Maj. Roy W. Owen has been named chief of the new section.

D/A Authorization in '55

Creation of the Army Aviation Division at ARAACOM Hq came in the fall of '55, after D/A authorized the command to integrate aircraft into its operations.

Fulfilling important functions of logisics and liaison in serving antiaircraft artillery units deployed throughout the nation, Army aircraft have undergone increased utilization with the rapid integration of NIKE guided missile battalions into the air defense picture. One vital use of Army aircraft has been the speeding of critically needed replacement parts to NIKE guided missile sites.

Today, each of the five regional commands and some brigades utilize command-type aircraft. Both are used in this function while helicopters, including H-13, H-23, and H-19 types, are assigned to antiaircraft artillery groups and some brigades.

Approximately 140 Army aviation personnel serve in the command, including more than 50 aviators. In the Aviation Section at ARAACOM Hq are Maj. Owen and two assistant staff officers, Maj. Jack L. Tinnin, Jr., and Capt. Oliver C. Thomson.

► Camp Wolters Solo

CAMP WOLTERS, TEX.—Another milestone went by, virtually unnoticed. The Army Primary Helicopter School soloed its first students after the minimum instruction period of 12 hours.

Warrant Officer Candidates Joseph L. R. Pinard and John C. Moodt were the first students to complete a solo at this Army installation. As members of the first class to undertake training at the Camp Wolters facility, the two candidates were quickly joined by many other members of their 49-man class.

Flight instruction is given by civilian instructors of the Southern Airways Company.

► Quick Thinking

FT. CLAYTON, C. Z.—The 937th EAC is quite proud of one of its crewmen. Sp/3 Adelbert Davis, Jr. is being recommended for the Soldiers Medal for his quick-thinking and courageous action following a swimming tragedy.

Hearing the cries of eight young people who were swept off their feet by a sudden undertow at nearby Maria Chiquita beach, Sp/3 Davis swam to rescue one of the group who had been thrown against a rock, rendering her nearly unconscious. After swimming to shore, Davis quickly re-entered the water and swam toward the scattered group, this time effecting the rescue of a second victim who by this time had been swept 125-150 feet off shore.

Physically spent, Davis attempted a third rescue but was unsuccessful due to the choppy seas. He then lent assistance in securing boats to extend the rescue effort and applied artificial respiration in a futile attempt to revive still another victim.

A Kaman "Halter" Puts the Dog on the Leash . . .

At Your Beck and Call!

Kaman Aircraft engineers have developed an external control system known as a *halter*, for the Kaman robot (remotely controlled) helicopter, which permits ground personnel to "walk" the robot to any desired location.

The *halter* is connected to the robot's control system in such a way that movement of the halter in any direction by a man on the ground results in a corresponding movement of the robot. Using the halter, a ground crewman can cause the robot to take off, hover and land, or he can lead the helicopter around in forward, backward or sideward flight. Simple to operate, the halter can be used by ground personnel after only two or three minutes of explanation as to what it does.

One application of the halter which has been successfully demonstrated, is its use in the loading and unloading of externally slung cargo carried by the robot. In this case, the cargo is placed in a cargo net on the ground.

Using the halter, a ground crewman walks the robot to a hovering position over the cargo and attaches the load to the robot's cargo hook. Once this is accomplished, the crewman operating the halter relinquishes control of the robot to the operator of the ground control station.

Through *radio control*, the ground control station operator flies the robot to its destination where another ground crewman takes over the control with the halter, walks the robot to the spot where the cargo is to be unloaded and while hovering the robot, releases the cargo.

The robot can also be taken off and landed by the ground control station operator or it can be flown from an *airborne* control station in another helicopter. Control *can be passed* back and forth between halter operators, ground control stations, and airborne control stations, or the robot can be flown on a *memory course* fed into either airborne or ground control stations.

The robot helicopter has successfully demonstrated its ability to perform other special missions while being guided by ground and airborne control stations, or by memory fed into either of the two.

These special missions include simulated battlefield surveillance through a small light-

(*Continued on Page* 30)

The operating ease of the "halter" control of the Kaman robot helicopter is visibly demonstrated by Miss Connie Angelica, a secretary at Kaman Aircraft. After brief instructions on "halter" operation, Miss Angelica took over the robot, taking off; walking it backward, forward, and sideward, hovering it, and then landing it. Test pilot Jack Goodwin, hands aloft, did not touch the controls during the demonstration.

Chopper Versus Fruit Fly

FT. BENNING, GA.—The Mediterranean fruit fly, destroyer of Florida's multimillion dollar citrus industry, has been largely controlled and partly through the aid of two Fort Benning helicopter pilots.

Capt. Robert MacKlannon and CWO Bobbie Bruce were sent to southern Florida to aid the U.S. Department of Agriculture in combating the fly.

The fly is unique, breeding and thriving in citrus groves, some of which grow wild in uninhabited, uncharted swamp country, inaccessible except by helicopters.

The Army pilots had a double job; first, to chart the locations of the citrus groves and secondly, to test the groves for the possible presence of the fly.

According to Capt. MacKlannon, the assignment was completed by arduous slow speed and low altitude flying.

"The survey was broken down on a county-by-county basis." MacKlannon said. *"I was accompanied at all times by the agricultural representative of the county which I was checking. We'd leave early in the a.m. and survey the area in a criss-cross pattern, looking for citrus growth."*

Mr. Bruce, who relieved Capt. MacKlannon in later months, explained the second part of the mission.

"When we spotted a citrus grove I would land the aircraft in the nearest clearing and then set a trap to test for the presence of the fruit fly. Let's say the trap appealed to the insect's romantic nature."

"The lure was a jar attached to a citrus tree, containing a poisonous substance which gave off an odor similar to that of a female fly. Lured by the smell, the insect is killed upon touching the bait. When we check the traps at a later time, we can establish the presence of the parasites by the dead flies."

Once the presence of the insects is established, the big stuff moves in; they're exterminated by a chemical sprayed from a B-17, the old World War II *Fortress*.

"The use of this spray actually led us into a third assignment—that of U.S. Army public relations representative to the Florida housewives," Mr. Bruce continued. *"Although the spray is very effective against insects, it is not very conducive to clean laundry."*

"As a result, much of our free time at first was spent in answering phone calls from irate women. We finally solved this problem by releasing information as to to the dates and hours of the scheduled spraying operation to the local press," he added.

Actually, public relations proved to be

The C-123 can't land on a postage stamp...

but almost any clearing is its landing field!

On almost any clearing—almost any field—you can safely land the Fairchild C-123 assault transport.

Actual short-field tests have demonstrated that the rugged C-123 is able to take off and land from *deeply eroded, sandy fields;* that it can work from unprepared clearings *under downwind conditions;* that it is capable of mass landings into ungraded "combat zones" . . . *at 8-second intervals.* And literally thousands of flights have proven that the C-123 requires *no more than 700 ft. for takeoffs and landings.* During these strenuous tests, no C-123 was lost, none was damaged.

What better proof of the C-123's near-universal assault and logistics capability?

FAIRCHILD

AIRCRAFT DIVISION • HAGERSTOWN 10, MARYLAND

A Division of Fairchild Engine and Airplane Corporation

...WHERE THE FUTURE IS MEASURED IN LIGHT-YEARS!

an extremely important segment of their operation. Help was needed from natives of definite part of the program.

An H-23 helicopter from the Army Aviation Center was used on the project. CWO Bruce is assigned to the 4th Helicopter Company at Ft. Benning, the Georgia installation also being the home of Capt. MacKlannon's unit, the 37th Medical Detachment.

All in a day's work.

(Ed. We do not say that this story is correctly titled. The title may have lured you into reading the article. If you've read this far, it indicates that the contents in any package often surpass the warppings.)

Pictured on the previous page is CWO Bobby Bruce, right, with a Department of Agriculture representative as passenger at the start of a survey run. The Ft. Benning pilot and his fellow "trapper" aided in the control of the Mediterranean fruit fly, a decided fly in the Florida citrus industry picture.

LOADING

FT. LEE, VA.—Members of two Army companies recently participated in a joint Army aircraft-air supply exercise at Blackstone Army Air Field and Camp Pickett, Va.

Taking part in the exercise were members of the Army's 1st Aviation Company from Ft. Benning, Ga., and the 109th Quartermaster Aerial Supply Company, of Ft. Lee, Va.

Reason for the training, according to an authority, is the *"new mobility concept (conceived) by atomic wars."* Smaller aircraft can operate from small airfields located far to the front in battle situations and maneuver into *"smaller and tighter areas to make rendevous with the drop zone."*

Following a morning *briefing* session, a refresher tour demonstrated the working of various items used in dropping supplies and equipment from all types of aircraft, both Army and AF.

The pilots of the 1st saw detailed demonstrations of the care and packing of a large number of types of parachutes, ranging from the giant, 100-foot canopy cargo chutes to the ones they wear themselves.

Daylight and after-dark drops by the *Otter* crews were then practiced, each simulating the actual procedures that would be followed by the Army aircraft and QM aerial supply personnel in furnishing support to small ground units. The five-day joint training period was climaxed by supply drops in a simulated tactical situation in support of the 2nd Army Cavalry Regiment, at Ft. Meade, Md.

Planned by the G-3 (Operations) section of the QM Training Command headquarters at Ft. Lee, the training period afforded the two types of companies and opportunity to 'work together" as they would in actual combat conditions. Maj. James R. Wood, executive officer of the 1st Avn Company, commanded the Fort Benning contingent composed of ten *Otters* and crews.

ABOVE—Part of the ten plane Otter-contingent lined up at Blackstone Army Air Field prior to the start of the 5-day training exercise with QM aerial supply troops. BOTTOM—Capt. James Cleveland (left), first of the Benning pilots to land at the Virginia facility, is greeted on his arrival by Maj. James R. Woods, executive officer of the 1st Army Aviation Company

AND LASHING

AROUND THE WORLD WITH SIKORSKY HELICOPTERS

IN ASIAN WATERS—Aboard the U.S. Navy aircraft carrier *Boxer* off the coast of Japan, sonar-equipped Sikorsky HSS helicopters carry out anti-submarine exercises. The commercial version of this helicopter, the S-58, is active offshore in the Gulf of Mexico flying men and material to oil drilling rigs.

AT FORT RUCKER, Alabama, the Sikorsky H-37A is being service-tested by the U.S. Army Aviation Board. Data on maintenance and logistics will be gathered, in preparation for the time when the Army flies large fleets of these twin-engined helicopters, each able to carry 26 combat-ready troops.

ANTARCTIC OPERATIONS prove the ability of versatile Sikorsky helicopters to work under extremes of climate and under unusually difficult maintenance conditions. Here a Sikorsky HO4S, one of four with Task Force 43, lands beside the ice-breaker *Glacier* to pick up cargo.

SIKORSKY AIRCRAFT

BRIDGEPORT, CONNECTICUT

One of the Divisions of United Aircraft Corporation

A Maryland-NG Artilleryman-pilot in reviewing the past history of aviation in the Army predicts the return of the full cycle and disavows the theory . . .

the bigger

by Captain Theodore L. Prevost
Division Artillery Aviation Officer
29th Infantry Division
Maryland National Guard

As in every other field of endeavor Army aviation has developed well qualified experts, men who, through many years of association with and great interest in and ambition for Army aviation, are now rightly regarded as *the chosen* to conceive and guide the future of Army *observation aviation.*

However, the same qualities that may make a man an expert often cause him to reach that point where he "can't see the forest for the trees."

Although I am an Artilleryman-pilot, I do not qualify as an expert on Army aviation. Therefore, perhaps, I am reasonably well qualified to point out the *forest,* a fundamental concept of division aviation support, by which the experts may do well to guide themselves through the *trees,* the fads, the fashions, and the deviations from the true objectives of Army observation aviation's future course. To the open minds of these experts, I sincerely submit the following thoughts.

AA at Crossroads

The primary mission of division aviation originally was—and still is today—the aerial adjustment of fire, i.e., to supply an elevated and maneuverable platform for the observation of combat fire missions. Since its inclusion in the standard equipment of a Division many secondary uses have been found for Army aircraft, abetting, and yet distracting from the original concept. I feel that Army aviation has reached an important crossroads—and is about to take the same wrong turn it made back in the period between WW I and WW II.

First, let's review very briefly the short history of Army aviation. It was rediscovered during WW I that fire missions were best observed from a balloon or airplane rather than from the ground as *"elevation increases one's field of observation."* So we had observer planes. Next, one *observer* plane pilot shot a pistol at an enemy *observer* plane and we begot fighter planes and fighter pilots. Then, fighter squadrons were formed. Next, some smart pilot dropped a 50-lb. bomb from his observer plane and a genius got the idea that larger bombs could be carried by larger planes. Then, the first bomber squadrons were formed.

"Bigger and Better" Boom

Between the World Wars vast strides were made in aircraft design. Unfortunately for the observer planes, the American idea of *"the bigger and faster being better"* was applied to them and they became completely worthless for their primary mission through *improvement.*

A squadron of these "improved" planes was assigned to each infantry division in those days. Annually at summer camp, it was proven that separation at the Division level from the organic units using observer planes, principally the Artillery, made their use ineffective. Their speed and the lack of good communications and adequate personnel training with ground elements made them virtually useless. As a final step, these observer squadrons were removed from the Infantry T/O's upon mobilization in WW II to bolster up the Army Air Corps. This left the Division with no planes.

Back to the Cub

World War II practice maneuvers reputedly produced a genius, a Major W. W. Hunt, an Artillery Battalion commander, who rediscovered the practicability of small light observer planes and hired a Piper Club and a civilian pilot. Thereby, through the success of his idea, started the *new* Army aviation which was so successfully employed in WW II.

Since then, the period of peace has given the Army a chance to relax and play with its new toy. This (relaxation period) started the recent and inevitable unfortunate "improvements"—the bigger and better being applied to Army observer planes and to their pilots. In playing with its new toy the Army found it could also be used for wire-laying, message drop and pickup, resupply, instrument flying, night flying, and,

the better?

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WASHINGTON REPRESENTATIVE — D. J. GIVENS

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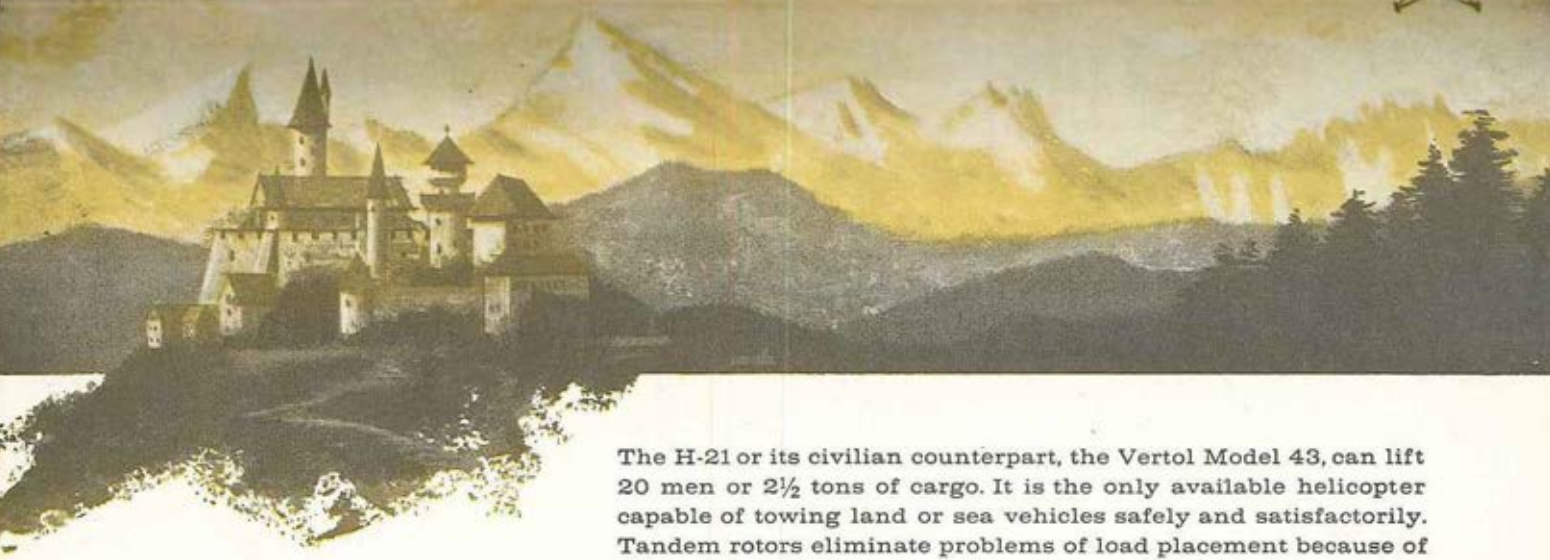

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of course, courier work. The planes got bigger and faster. They'll now carry more passengers, greater loads, bombs on the wings, and in addition have enough blind flying instruments to run an airline.

The only thing that has *not* been improved is the ability of the observer to see his target and guide Artillery fire upon it—the primary mission of the plane and its main reason for existence in the military picture. In fact, the so-called "improvements" for the most part decrease this ability.

Aviation Company Concept

The new concept of Army aviation is to have an *Aviation Company,* organic to a Division and consisting of a pool of planes and men upon which the various units of the Division can draw for the type of assistance they need. It sounds perfect. I have no quarrel with this idea except for one most important thing: *Observer planes should be excluded* from this company and should remain an integrated organic part of the units to which they are essential.

Let the empire builders pool the courier service, the wire layers, the instrument pilots, the resupply planes, the helicopters—but do not destroy that essential quality of intimate knowledge of his unit's problems that is necessary for the successful use of an observation pilot.

During WW II a scheme similar to the Aviation Company operation was tried between the Army and the Army Air Corps. It should have worked—there was every reason to believe it should have worked—but it did not because the necessary quality of *intimate knowledge* was missing. The Russian Army realized this fact early in the war and integrated their close support aircraft with each division with great success.

Recommendations

My personal ideas are as follows:

1. It is time to separate observation from the secondary uses of aviation in Army divisions.

2. After initial flight training a pilot should specialize in observation (including a sound working knowledge of Artillery) or in one or more of the secondary or other uses of aviation. It will be impossible to train *each* man in all fields of Army aviation in that future wars will not permit such an extravagance of training time.

3. The time now wasted on instrument training by observer pilots could be far better applied to more practical fields such as artillery training and air strip selection and improvement. However, instrument training should be a *must* for *courier* pilots.

4. I feel that an entirely new observation plane must be developed. The current observation plane offers no observation forward or to the rear and because of this fact the pilot must constantly fly his plane in a manner that will permit the observer to view the target from the side of the plane. An observation plane should be developed in which the observer may lie prone in a plexiglas rounded bottom of the fuselage. This should give him observation forward and to both sides as well as backward to an angle of about 80 degrees from the vertical in all directions. The target cannot be obscured to him by any maneuver of the plane.

One of the greatest pitfalls of the *new* Aviation Company is that initially, from the point of view of the Artillery Battalion commander and the individual pilot, it will appear to work beautifully. It must be kept in

(*Continued on Page* 30)

"I wonder what effect this will have on our recruiting program . . ."

TRIPOLI, U. K. of LIBYA—The 572d Engineer Platoon (Topo Aviation), having recently arrived here from Stockton, California, wishes to inform all and sundry that the Middle East is now secure in its able hands.

Divorced and independent, we are at present assigned to the 329th Engineer Detachment (Geodetic Survey), a unit with which we shall remain for approximately two or three years on our assigned mission of tracking the trackless desert.

We are firmly established on Wheelus Air Base, overlooking the beautiful blue Mediterranean Sea (and for any skeptics, it really is blue) and we are conducting our operations from it (the Air Base, that is).

Our advance party arrived here on 18 October to lay the groundwork for the main body to arrive later. We had four H-23's (complete with crews) shipped from Stockton via C-124 to Wheelus. They arrived on 11 November to supplement the advance party.

From that point until the time the main body arrived, we gave support with the four choppers to the Detachment on two survey operations, which they completed for the Air Force in their spare time.

Oh yes, we carried out one additional *major* assignment before the arrival of the unit: Santa Claus was carried by Army H-23 from the *North Pole* to Wheelus Air Base (I think we set a new record for the distance involved, something like 22 minutes.)

Tripoli Carries Main Body

The main body of the platoon arrived in Tripoli on 30 December '56 aboard the escort carrier U.S.S. *Tripoli*. We promptly used the occasion as an excuse to call the nex: day (December 31st) a holiday.

When the weather became VFR again, we busied ourselves setting up operations. We'll begin our major project this week by sending out four of our H-23's on survey reconnaissance.

If you're statistically bent, you may be interested in knowing that our strength is 23 pilots and 50 EM and that our participation here involves the use of two H-19's, twelve H-23's, and two L-19's, two *Beavers*, and one *Otter*.

One last note of interest—You may not be able to discern it in the aerial photo of Wheelus but the *Otter* parked on the line is without wings and tail. We had to remove them in order to get the *Otter* through the narrow gate cut in the walls of *Tripoli Castle*, famous 16th Century Turkish fortress. YC, (Lt.) Herb Neseth

Members of the 572d Engr Plat with His Excellency, Abdulagei Allam, the Libyan Minister of Defense. The Libyan official and his staff were flown in H-23's on an inspection tour of the Tripoli area, L. to r: Mr. Falconer, US Inf Off; Maj Hyde, Provost Marshal of District Engineers; Maj Nielson, CO 329th Engr Det; Maj Bellieu, Exec Officer of 329th; E. S. Sayed Husein Mabrouk, Dir of State Property; Capt Howell, 572d Engr Plat; His Excellency; Lt Neseth, 572d; E. S. Sayed Mohamed Musu, Dir of Defense; Maj Melzer, CO, 572d; Capt Greer, 572d and Capt Roberts, USAF.

BASIC AT BRAGG

FT. BRAGG, N.C.—One solution to the continuing critical shortage of trained aircraft mechanics has greatly eased the problem here at Ft. Bragg.

A Basic Aviation Mechanics School recently graduated its *fourth* class. The training of mechanics' helpers is *"not the final solution, by any means,"* according to an official of the school.

"Helpers," said the spokesman, *"admittedly cannot possibly replace trained men who are lost when their term of service expires or when they are placed on overseas levies."*

But they can, he points out, appreciably lessen the pressure by relieving the skilled technicians of elementary routine tasks and, as they individually acquire added skills and experience, can eventually move into key maintenance slots.

No attempt has been made here to compete with schools operated by the Department of the Army. The *primary* objective of the school has been to train men capable of offering *effective assistance* to trained mechanics on the flight line, and to continue with their on-the-job training *until* D/A school quotas can be obtained.

With the graduation of Class 4's twenty-four members on Feb. 2nd, a total of 138 men have now completed the Basic Mechanics Course. The fifth class started on Feb. 18th.

Thorough Screening Process

In screening applicants who desire to enter the aircraft maintenance field, men who show little aptitude or promise are eliminated at the outset. Only men who have the prerequisites for later attendance at Ft. Rucker or Ft. Eustis classes are accepted.

Thus, say school officials, the few trainees who have earned non-com status in unrelated fields will, within a reasonable length of time, acquire skills commensurate with their rank.

In selecting trainees, retainability and Regular Army status are emphasized. Other requirements are a minimum of 100 or more in aptitude area MM and normal color perception.

An intangible quality—a strong desire to enter the aircraft maintenance field—is sought with the view that there is no substitute for natural enthusiasm.

Pvt. Thomas Tracey, left, co-honor student of Basic Aviation Mechanics School Class 4 receives a Certificate of Completion from Brig. Gen. Robert N. Tyson, commanding general of the XVIII Airborne Corps Artillery in ceremonies held at Fort Bragg in early February. (US Army photo).

Importance of Third Dimension

The importance of Army aviation in the new national defense scheme was emphasized by Brig. Gen. Robert N. Tyson, XVIII Airborne Corps Artillery Commander, in his address to the graduating members of Class 4.

"The Army is moving up into the air," said Gen. Tyson. *"The mobility we had on foot in World War I and by the 2½-ton trucks in WW II is being extended to the third dimension."*

(Ed. Without doubt, maintenance officers assigned to Fort Bragg aviation units look upon this unique school with pride and with feelings of appreciation. The very thought of a Basic Mechanics School to alleviate the critical shortage of maintenance personnel is commendable. Also to be commended are the commanding officers of the "line" outfits who, shall we say, spare the manpower to attend the school. As Army Aviation officers in other less fortunate commands will admit, the "sparing" is the key to the problem and in the tug-of-war for limited manpower they usually draw the short straw.)

(The monthly Change of Address column serves subscribers in three ways. It enables a subscriber to place his address change before 4,500 people closely allied to Army aviation and to do so in a manner that is most expeditious to the reader. The listing also confirms to the remitter that his Change of Address notice has been received by this publication and that future issues will be forwarded to the listed address. Address changes for distribution purposes are made upon the basis of individually submitted Change of Address notices, and not upon references to such changes as are made in editorial copy.—The editor.)

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Maintenance Tips

The editor has provided this space to be used every month for maintenance news. This will be conducted on a very informal basis ,and your comments, suggestions, or questions are encouraged.

We are particularly anxious to receive questions concerning supply or maintenance problems encountered in the support of Army aviation.

Send your questions or suggestions to the following address:

MIKE BUTTON
c/o Army Aviation Magazine
Westport, Connecticut

Fire away and put old "MIKE" to work.

—★—

I presume all of you realize the Army is now knee-deep in the depot support of Army aviation. A lot of thought and planning went into this new responsibility; but, like all plans, without doubt something has been overlooked. So far, everything has progressed smoothly, due a great deal to the excellent support and cooperation of our counterparts in the Air Force. There will be more and more activity in the depot support of Army aviation that will become apparent to you in the field. We urgently solicit your cooperation during this transition period.

—★—

Had any trouble with failure of the cable assembly (C2-N-2197) at the generator and suppressor connections on L-20's? If you haven't, you're lucky. If you have, be watching for TM 1-1L-20A-542 that will authorize replacement with a longer and more flexible cable assembly, C2-N-2705. A special procurement of the new cable had to be made, but delivery is expected commencing in April.

—★—

In case you haven't heard officially, there has been quite an increase in component replacement schedules for H-21C helicopters:

Central, forward, and aft transmissions from 250 to 450 hours—Rotor hubs with crowned roller bearings from 200 to 450 hours—Swashplate bearings from 250 to 450 hours.

Rotor control disassembly and inspection from 250 to 450 hours—Forward and aft upper controls disassembly and inspection from 450 to 1000 hours.

—★—

There have been some reports of defective DS6 bearings on H-19's. Instructions have gone out to the field, but they warrant repeating:

Prior to the next flight, make a one-time inspection of all DS6 type bearings to determine if any binding exists. Make the inspection as follows:

Remove the lower rotating scissor bolt and move bearing inner race through a complete range of movement. If roughness is detected, purge the bearing until the roughness is removed.

If the procedure outlined above doesn't remove the roughness, replace the bearing with a like serviceable item.

Lubricate DS6 type bearings every 150 hours instead of the 450 hours stated in the —2. The next revision of the —2 will reflect this change.

—★—

There have been some isolated reports of erratic operation of airspeed, altimeter, and rate of climb indicators installed on H-34A helicopters. Present indications are that this erratic operation is due to the location of the static port at the top of the fuselage that allows moisture to collect in the static system lines. An investigation is being conducted to determine the feasibility of relocating the static system port. Meanwhile, check the static system for moisture, with the drain caps removed, during preflight inspections. This inspection requirement will be in the next revision of the—6.

—★—

A recent extension of engine replacement time to 1000 hours for 0-470-11 engines (L-19) has caused some misunderstanding of the component replacement time of oil cooler, oil temperaeure regulator, and engine-driven fuel pump. The replacement time for these components has also been extended to 1000 hours. The —6 will be changed accordingly.

—★—

There is a continuing program to improve the quality of material placed in the hands of troops. Before an order is placed for any type of equipment, every possible precaution is taken to insure procurement of nothing but the best. With all the precautions, there are bound to be some items that slip through that are unsatisfactory for one reason or another. These unsatisfactory conditions must be reported so that corrective measures can be taken. The Unsatisfactory Equipment Report system, establisher by AR 700-38, is just about as simple a method that can be devised. You are urged to use this system. The receipt of a UER commands the attention of some of the best engineers and technicians in the business. But these technicians and engineers must be made aware of unsatisfactory conditions by the UER's submitted from the field.

The findings, recommendations, and "fixes" developed from UER's are published monthly in the Unsatisfactory Equipment Report Digest. This publication is in the TB AVN 23- series. It is a valuable document that should be read every month by all maintenance personnel.

—★—

That does it for this month. Be glad to hear from you; and, if you have a problem, I'll certainly try to find the answer for you.

Yours for better maintenance,

Mike Button

Pro's Say

Informal Voluntary Reports Giving the "AA" Picture In the Line Outfits

► No Wave Off Here!

FORT KOBBE, C. Z.—We think we're the first unit to use an aircraft carrier as an operational base for helicopter flights.

A roar will probably arise from the "L" pilots who flew toward Africa in WW II and from those chopper units who have been ferried overseas aboard carriers. (We use *"toward"* in that sentence due to the accuracy of the fleet's AAA gunners and the inaccuracy of the aircraft recognition people) But please note that we said *operational* base and that means more than a one-time takeoff and landing affair.

The USS *Wasp* docked in Balboa, C. Z., prior to rounding the Horn and we got a hurry call from some of the pilots aboard serving their *ground duty* as ship's company. They needed those four golden hours not in contact with the earth (or sea.)

We put everything into the air for them that would fly, including the fanciest ship-to-shore taxi service they'd seen in years before the mast. That's where the first claim comes in. Landing on the deck, we hauled them to Ft. Kobbe for their flying and then took them back to the carrier when they had finished.

The three pilots who landed aboard the *Wasp*, Capt. Bill Hawkins and Lts Bill Lax and John Ottley, were all dubious as to how one logged carrier landings in the Form One. We finally settled for *"B"* landings when we got photographic proof that it happened.

Felt a little silly having a crew spot-land us on that immense deck with all kinds of hand signals, especially after dropping into rotor-wide jungle holes in other operations. Took a look at the *Wasp's main runway*, and were glad that it was a chopper after all.

Time for *writtens* and Capt. Jack Ray and Lt. Jim Claunch left for Columbia, Venezuela, Haiti, and Puerto Rico on the first of two trips to give the annual writtens to far-flung pilots of the 937th Engr Co. The souvenir request list they left with precluded their taking any personal baggage. *Day-O, Day-O, show me a* 70, *I wanna go home!*

An old accident file revealed a good idea for shutting down F/W aircraft. Most recent Ft. Rucker grads are told to full-bore the throttle after closing the mixture control.

One of our mechs did this on an L-17 awhile back and went plowing into a gas shed, demolishing everything but himself. Yep, the mixture control malfuntioned and he got full bore just as he was about to crawl out of the ship.

A safe procedure would be to leave the throttle at the fast idle position after closing mixture. If the mixture fails, the engine's running no faster than before the shut-off attempt and no one gets shook.

Ran into a new use for Army a/c the other day—police work. Thieves had been stealing vital trans-isthmian cables for the valuable copper contained therein. They usually made the grab at quitting time which threw this Tropic Eden into an unheard-of-flap.

Having tired of overtime and embarrassment, the Signal people sicked an L-19 patrol on the cable rout. The dialogue goes something like this: *"My fin number is* 746. *I'm an aviator. This is the jungle. This is where I work."* It must have worked for as long as the L-19's kept flying the route the thefts stopped.

We got a(nother) new name the other day. What was once the 7438th AA Detachment now bears the grandiose title, *U.S. Army Aviation Detachment, Carribbean.* Great for the egos but hell on the sign painters.

YC, (Lt.) John K. Ottley, III

Posing in chilly weather on the snow-bedecked ramp at Heidelberg, Germany are members of the Aviation Detachment, Hq. USAREUR. In the front row (l. to r.) are Lt. Richard H. Duckworth and Capts Jack Martin, Weldon C. Britton, Edward C. Brown, Robert Blakley, and Herschel E. Reynolds. Standing are Capts Harry W. Willse, Guy R. Claybourne, Fred W. McGowan, and John R. Goodrich; Maj. Norman W. Goodwin (C.O.); Maj. Clarence E. Holliday (ExO); & Capts Hubert N. Reed, James M. Frederick, Paul H. Roundy, & Wallace J. Fenn.

► Could Be Better!

FT. RILEY, KAN.—Activity at the Big Red 1's Aviation Section has attained a more normal pace since Operation Red *Arrow* ended. Our normal duty flights, however, have all been accomplished with an added feature. Cold weather, fog, snow, and just about everything else in the way of flight hazards have given our 1st Inf pilots a good taste of inclement weather flying.

Two transient Ft. Wood pilots can attest to our unfavorable conditions in being delayed here for three days due to fog. We weren't exactly happy to see them leave as they mistakenly took our newly-arrived L-19D with them. Due to a mixup in the receiving orders we received their aircraft but by the time the little mistake was uncovered our little gem was taken away.

The elections and other competitive events have come and gone but the keen rivalry between the *Two* Sections of our Division's consolidated Air unit continues.

FORT RUCKER, ALA.—A student and an instructor pilot were killed on Feb. 19th in a helicopter accident near Newton, Ala.

Maj. John B. Dickson, 37, a student undergoing training in the AHATC course, and pilot-instructor 1st Lt. Donald J. Osburn, 28, were victims of the accident which occurred during a routine training mission.

Surviving Major Dickson are his wife and three sons. Lt. Osburn is survived by his parents, Mr. and Mrs. Jabez Osburn.

"A" Flight led by Capt. Austin K. Veatch vies constantly for honors with "B" Flight commanded by Capt. John H. Richardson. Our DAO, Maj. Richard L. Poulos, recognized the value of *competition* and organized our present unit along these lines. It's definitely proven its worth and greatly facilitates the handling of our assigned duties. Aviators of our unit, regardless of Flights, maintain a close relationship with their respective Regiments and Battalions and, in turn, the units are better served by the constant availability of trained pilots to serve their needs. YC, (Lt.) James L. Carney

► Award Ceremony

FT. BENNING, GA.—The 1st Army Aviation Company underwent a little excitement recently when three distinguished gentlemen, Mr. Bartles of TWA, Mr. Klapp of United, and Mr. Talcon of the Airline Pilots' Assn presented gold watches, engraved wings, and commemoration plaques to the six pilots of the unit who participated in the Grand Canyon Operation last July. The civilian dignitaries received full VIP treatment during their short stay at Benning.

In mid-February, ten of our *Otters* left Benning for a week's TDY to Camp Pickett, Va., where they worked with the QM people at Ft. Lee. During this period of TDY we tested the capabilities and methods of aerial re-supply by Army aviation.

We're now carried on a new ledger. The 1st has been assigned to the 3rd Army Transportation Battalion (Helicopters), Lt. Col.

Pro's Say...

Charles Ernest being the C.O. of this unit. Sort of a blend of the FW/TT and the RW/TT. YC, (Lt.) Jimmy N. Moore. (*Ed. See photo on Page* 31.)

► German "San Marcos"

MEMMINGEN, GERMANY—The weather here today being typical of Bavaria (snow and rain), I thouht it as a good time to let the readers know somethhing about the *San Marcos of Germany.*

Capt D. H. Money and your correspondent were asgd here in Sept for a 4-month TDY period, but after one month we were given PCS orders assigning us to Bonn, Germany, the headquarters of the Military Assistance Advisory Group (MAAG).

We were given the mission of furnishing training assistance and advice to instructor personnel on the functioning, operation, and maintenance of US-supplied MDAP equipment. In addition, we were to assist them in the U.S. organization, training management, staff organization, technical procedures, shop organization, and tactical employment of Army aviation.

Upon arriving here we were informed that the runways were not as yet completed, no hangars up and ready, and no aircraft on the site. Shortly thereafter, things began to buzz and the first shipment of L-18C aircraft arrived. We served as instructors in these aircraft until our first 3 H-13 choppers arrived in January. As you know, this machine is equipped with *Power Steering* and the Large Lycoming engine. (Y'all gloat, now)

We were fortunate to have amongst the Germans three US-trained helicopter pilots and one that had been trained in Switzerland. Since that time three more US-trained helicopter pilots have arrived and they will remain here as permanent instructors when the original group leaves.

I would like to mention that the course given here is designed along the same principles of the courses in the States with only a few changes being made to suit the terrain differences. YC, Paul W. France.

► Foot in Door

TOPEKA, KAN.—By way of getting our foot in the door for the submission of photos and copy from the Kansas National Guard, you'll note that this editorial submission is accompanied by loot from some Rushin' *Volunteers,* subscriber-variety. Here in *Cessnaland,* the Guard operates 12 Birdogs, one superdog, 2 Navions, 1 Beaver, and occasionally, one H-23.

Our units are dispersed throughout the State with seven airfields having Guard tenants. Limited field maintenance is performed at the Maintenance Shop in Topeka at Municipal Airport. Some twenty-five pilots are currently on flight status and are assigned to units of the 35th Division and the 130th and 195th FA Groups (Non-Divisional). Please note that one of our *Volunteers* is non-Kansas. We were forced to jump the State line to sign him up.

We read the *"Welcome Mat"* advertisement placed by Col. Gray of Illinois in the January issue. Our *"Welcome Mat"* is extended for foot-rubbing.

Being between Fort Riley and Fort Leavenworth, we are favored with visits by all types of aircraft and drivers from both posts. We will welcome visiting firemen from anywhere—*the coffee pot is on.* Sincerely, (Capt.) Donald J. O'Toole, Army Acrft Supt, Kansas-National Guard.

(*Ed. That's a nice phrase—"the coffee pot is on." Can't think of a better way to say, "We'd like to see you. Stop by." Only thing that puzzles us—what is a "Superdog?"*)

Congratulations!

ELLIS, Lance Carlton, a son and second child, born to Major and Mrs. Clarence Heyward Ellis, Jr., on 4 February, 1947, at Fort Eustis, Virginia.

MATTESON—Lt. and Mrs. Lawrence F. Matteson, a daughter.

MESNIER—Captain and Mrs. Charles R. Mesnier, a second son born 19 January, 1957, at Fort Sill, Oklahoma.

ROSENSON—Lt. and Mrs. Daniel P. Rosenson, a daughter, Marissa Lee.

(*Ed. C'mon, fellows—give us the complete specs, namely, weight, date, name, and place. We know you're PRODUCING. Let's keep the horde informed.*)

A Many Sided Thing

Letters to the Editor

Letters from all sources are welcomed. All letters for publication must bear the signature of the writer. The writer's name will be withheld upon his personal request.

INEQUITY

On or about 1 April, 1956, Air Crews of the Reserve Components of the Air Force began attending 36 drills over and above the standard 48 drill year. These extra drills are *paid* drills. The immediate reaction among the Army aviators in this State was —*"Are we going to be authorized those extra drills?"* There's nothing abnormal in this reaction. I'm quite certain that it became a universal reaction as Army aviators in the NG and USAR components throughout the country became aware of this authorization.

Now we are not aware of the reasons why the Air people were given the extra pay time to accomplish their duties, but we *are* aware of the reasons why Army aviators should also be authorized these drills.

Very much has been said in recent months about branch qualification in the Army (for Army aviators). This, of course, has a direct bearing on both NG and USAR aviators.

Branch proficiency for aviators remains a highly controversial subject. In the ultimate utilization of the individual it is admitted that the military benefits if the aviator is branch qualified. However, it seems improbable to me whether very many Army aviators (whose primary duty in their civilian component is aviation) will be able to maintain their standards of proficiency in aviation and still remain proficient in a branch. Please bear in mind that the accomplishment of each of these requirements is expected within 48 drills and a 15-day AD tour. Let's assume the dual-proficiency can be accomplished within the Regular establishment. How much thought has been given as to whether or not the dual-proficiency can be accomplished in the civilian components? At the most, we've got 63 days to accomplish this little Hat Trick. It is obvious that this accomplishment will be difficult.

It is also obvious that the Army aviator's reaction to the 36 *extra* drills for AF crews is one of bewilderment. We wonder, with all the respect to our friends in the Air Force, if they have as high a requirement against their spare time as we have! We certainly feel that we should be given the same opportunity for our night and weekend warfare is just as extensive.

We have already been informed that these drills will *not* be authorized for the Army civilian components.

I do not know what action can be taken to have this problem re-aired. I do know that the State of Minnesota presented Resolution No. 85 to the 1956 National Guard Convention which is quoted in part below:

RESOLUTION NO. 85—A Resolution submitted by the State of Minnesota relating to the authorization of additional flying training periods for Army aviators assigned to Army National Guard units.

WHEREAS, The flying training requirements for Army National Guard Aviators are the same as for Army Aviators in the active service; and,

WHEREAS, The flying training requirements of the Army National Guard Aviators require extensive periods of training in excess of the forty-eight assemblies authorized each year; and

WHEREAS, Pilots and air crew personnel of the Air National Guard have been authorized thirty-six flying training assemblies each year to enable them to complete flying training requirements; now,

THEREFORE, BE IT RESOLVED, By the National Guard Association of the United States, in General Conference assembled this day of October, 1956, in the City of Spokane, State of Washington, that the President of this Association be directed to urge the Department of Defense and the National Guard Bureau to authorize additional flying training periods for Army Aviators assigned to Army National Guard units on a basis comparable with Air National Guard pilots.

The reason for the extra drills for the Air National Guard is *stated* in the Resolution: *To enable them to complete flying training requirements. Period.*

It isn't necessary to remind anyone that the flying time requirements for *Army* aviators are essentially the same as those of the ANG pilots.

Perhaps I'm barking up the wrong tree. Maybe, as the editor says, Army aviators are prone to gas about, but not to write about their problems. Perhaps you Reserve Component people agree basically with these thoughts but also will not get around to doing anything about it. I'd certainly like to believe that we can get together and work together for our mutual interests. If an Association of Army Aviators is the answer, and apparently it is for the Defense Department turned us down cold on the above, then let's get started. One cry from the wilderness means nothing; a few thousand will open most doors. Sincerely,

William H. Graul
Major, Inf, Md-NG
Avn Off, 29th Inf Div

(The views expressed in this letter are the author's and are not necessarily those of the Commanding General, 29th Infantry Division, or the Adjutant General of Maryland.)

A Many Sided Thing

Letters to the Editor

HILARITY

(Dear Editor:) I've enclosed one of your standard expiration "slip-in-the-flap" notices, the pink one that says. *"Never Say Die."* I'll be darned if I know how THIS card got into the middle of my copy of *"Aviation Week"* that arrived in the mail today. Perhaps it's appropriate for people in the trade to help each other out this way, but it certainly was a surprise. Especially so since I am PAID UP member of the AA periodical. No doubt, it was gathered in through the mad scramble in the mail room here. Interesting, huh? Capt. Ray W. Truex, Off Stu Co, Rucker.

(Ed. Disquieting is a better word. By hinting to a magazine huckster that a mail room is anything but a scene of calm efficiency you lower the Pepto-Bismol level another notch.)

FRATERNITY

(Dear Editor:) Please accept the congratulations of a *"now serving-on-ground-duty* Army aviator. To tell the truth, it gives the lost souls of separate Battalions more current information than any present official publication. Keep up your efforts of making us feel more like a *fraternal* organization than a service unit. It's *this* feeling that's going to help us keep our much needed mechanics. My personal fascination is the information about plans for future aircraft and organizations which give hope of departing this phase of AF paper work and Army inspections. Here's hoping you'll need some oxygen for that circulation altimeter in the near future. Sincerely, (Lt.) Chuck Jones, 613th FA Battalion, APO 189, N. Y., N. Y.

(Ed. The service ceiling is known but seems unattainable. The fraternal feeling is known and a fraternal organization is attainable.)

SUBMIT COPY BY THE 1st OF THE MONTH!

THE BIGGER THE BETTER

by Captain Theodore L. Prevost

(Continued from Page 20)

mind, however, that the two main reasons why it *does* work are human elements:

1. Initial enthusiasm will make anything work and 2, the pilots of the new companies are themselves ex-members of Artillery Battalions or Infantry Regiments and have a thorough knowledge and understanding of the particular needs of their units.

A Five-Year Projection

But (pursuing our present policies), picture the situation five or ten years from now when these same men have been *replaced* by pilots fresh from school, pilots who are members of a ready-made empire and are completely without that essential advantage of being members of the unit for whom they are supposed to work. Picture the plight of the poor battalion commanders who must rely upon pilots from an aviation empire who lack understanding for and sympathy with their own battalion problems.

I believe that if the present concept of the Aviation Company is pursued the inevitable result will be this:

Back to the Cub

Three or four years from now during a field combat trial, an ingenious battalion commander will get a new idea—he'll rent or buy a Cub and get a pilot for observation purposes for his own battalion. The experiment will prove so successful that an entirely new phase of Army aviation will be born—and the cycle will go 'round again.

Increases in size, weight, range, and speed are not always improvements. Army aviation is now at the crossroads. Let's make the next step a wise one.

The views expressed in this article are the author's and are not necessarily those of the staff of this publication.—The Editor

AT YOUR BECK AND CALL!

(Continued from Page 11)

weight TV transmitter mounted in the robot, laying battlefield wire, and making permanent records of battle maneuvers through remotely actuated motion picture and still cameras installed in the robot.

Using TV to seek out target areas, the robot has dropped smoke bombs to mark simulated areas for artillery fire, or can be used to lay a smoke screen to obscure troop movements.

The robot helicopter can also be used to lay and detonate lines of explosive charges through areas spotted heavily with enemy land mines while a specialized form of the robot could be employed as a highly maneuverable vehicle capable of chasing down and destroying enemy tanks and transport vehicles.

Kaman Aircraft engineers, in developing the robot guidance system, modified a Kaman HTK-1. A joint Army-Navy sponsored program, the robot development offers one answer to the "cost per pound" problem. The safety and structural requirements made necessary by the presence of crewmembers can be eliminated in robot helicopters by making them more compact and lighter in weight than manned helicopters designed to do comparable missions.

Having just soloed, members of Class 57-9, Gary AAF wear the traditional emblems that denote that they have been booted out of the nest. L. to r. are Lts. R. I. Gillingham, C. V. Carter, W. C. Dalrymple, W. B. Wash, R. V. Kanahl, B. J. Herbert, and H. A. Marvin.

Cited by officials of TWA and United and the Airline Pilots Association, five AA's of the 1st AA Company received watches, engraved silver pilot's wings, and letters of appreciation in an honor guard ceremony at Lawson AAF. Mr. J. Klapp, UAL official, and Maj. Gen. H. B. Powell, Commander of the Inf Center, congratulate Maj. Jerome B. Feldt. Capts. Kenneth E. McGaughey and Werren A. Strong (r.) and Lts Kenneth R. Niederbrach and Ray A. Hudson (not pictured) were also honored.

Getting to know more about their competition, the aircraft that their husbands' fly, are the wives of Army Student Pilots at Gary AAF. The wives were given a tour of Camp Gary and the field shortly after arrival to acquaint them with the training program carried on by the Army and by Wm. J. Graham & Son, the civilian contract operator.

Familiar faces? The military instructors of Flt II of the F/W Dept at Ft Rucker pose for an informal shot (100%, too). L. to R.: Capt W. F. Winters (Flt Comdr); Capt P. S. Marlin (Asst Flt Comdr); and Lts L. D. Rallens, R. E. Hewell, and J. A. Cox (all IP's). Missing: Lts T. W. Pratt & L. J. Zimmer, off on TDY teaching some Observers how to land the Bird Dog in case of emergency.
YC, WFW.

Purely a Personal Matter

Taiwan Personals

Here at the MAAG, Taiwan, Capts Rufus Leggett and John Rodrigue are recent additions to the Flt Sec . . . Capt. Richard Bywaters, one of our *Old China Hands*, leaves this June for the 57-58 course at C&GSC. I'm sure his many friends join us in congratulating him . . . Add Maj. Gen. F. S. Bowen (Chief of the MAAG) and Brig. Gen. R. A. Risden (Army Sec, MAAG) to the regular readers. Who's the Ghost Writer who applied my name to a joke in a recent issue? No objections, just as long as the jokes remain as good as they've been. Sure startles one, though.

YC, (Maj.) George G. Tillery

Riley Personals

We've been raided again! This 1st Div NCO Academy needed two intelligent, hard-working officers for duty with their students and naturally we were the people from which they chose the two. Lts. Ed Shaw and Billy Branom were picked to fill the need. They should be back with us in a few months when suitable replacements have been found . . . Have the following inbounds: Capt John Mordan (Twin-E Sch); Lts OE Bolhofner, JT Ralph, and AE Toepel (Chopper Sch); and Lt CS Crouch, Jr (Newly-asgd).

The 1st Infantry's monthly party, under the direction of Lt Jay D. Rossman, was a good one. Nice custom—a monthly party. This month the get-together was held on a Friday night at the Main Club and was in conjunction with the weekly shrimp feed.

The hazards of driving on our crowded highways emphasize the relative safety of the blue. Brought to our attention last week was the news of an auto accident involving Lt. Ray Sielaff and his wife. They were returning from Ft. Rucker when they were involved in an accident. Both were hospitalized but the extent of their injuries is not known at this time.

YC, (Lt.) James L. Carney

Benning Personals

Joining the 1st AA Company after attending Instrument School at Rucker was Lt. Walter M. Royall, who immediately went TDY to Ft. Campbell on *Jump Light*. He replaced ex-Lt. Walter Reed who donned civilian clothes this month, Also joining the 1st from Rucker was Lt. Clyde P. Wilson. Despite the IG inspections, the new rates for the mag, etc. the 1st is still in the 100% category. Amen!

YC, (Lt.) Jimmy N. Moore

USAREUR Personals

Had a retirement review parade at Hq, USAREUR for M/Sgt James O. Goodwin, a successful affair in every respect. 'Twas held on the ramp at the Heidelberg Airfield; temp 23 above. Involved were the 33rd Army Band, the 529 MP Color Guard, and the Troops of the Avn Det. The review was deeply appreciated by M/Sgt Goodwin who, incidently, is no relation to our C.O, Maj. Norman Goodwin . . . We've said *Auf Wiedersehen* to Maj. Clarence Holliday who is bound for Hcptr School and then on to Ft. Devens.

YC, (Capt.) Fred W. McGowan

Random Clips

★ Maj. Arne Eliasson pens that police in Recklinghausen, Germany, had looked for a man who sold parents of dull pupils a medicine to improve their school grades.

★ In his airmail quickie, Maj. Hank Wann (MAAG-J) comments about the economic situation in Nippon-go. He says that the Japanese Welfare Ministry announced that it would aid the poor by opening 190 new pawnshops.

★ If you're bothered with a *back seat driver*, take solace. A Mexican invented a push-botton protective device in '56 which permits a cab driver to flood the passenger's compartment with tear gas. This will probably remain in the class of *optional equipment*.

★ The Army Map Service announced in '56 that the circumference of the earth's equator is about one-quarter of a mile shorter than previously believed. We're certain some Engineer pilot will take isssue with this statement.

★ The Olympics drew the headlines but buried way down in the corner of an evening paper was this brief news item: In a pig race held in Kemptville, Ont., the winner did 100 yards in 7.4 seconds. Now this fact in itself isn't so startling but it does prove that something else besides planes and money goes fast today.

CLASSIFIED

Let's Chat...

Air crew members of the Reserve Components of the Air Force have been authorized an additional thirty six *paid* drills per year to enable them to complete their flying training requirements. Army aviators in the Army National Guard and USAR establishments have *not* been authorized these extra drill periods.

On checking with an informed source we learned that a comparable program for the Army civilian component pilots had been under study but had been turned down by the Department of Defense.

This would appear to be an inconsistency. The explanation was offered that the Air Force crews were on constant *runway* alert and were M-Day necessities, a fact with which we have no quarrel. However, this one way ruling cannot help but cast reflection upon the Army's civilian components. It definitely places them in the *"M-Day Plus"* classification.

Short of a war—in which we believe the Army and its civilian components will also be M-Day necessities—a domestic disturbance or disaster has resulted in rather prompt "recall" of our friend, the Army civilian component pilot. He may not have an auxiliary power unit plugged into his small craft but when the State Adjutant calls it behooves him to be alert. By splitting hairs here, we think he may be given the impression that he isn't needed at all.

The authority also confirmed that in turning down an equivalent program for Army civilian component crews DOD referred to Army aircraft as being slow and relatively simple to operate. In believing so, Defense felt that the present 48 drill program was satisfactory for proficiency purposes.

By all standards, Army aircraft are slow. Simplicity of operation is a horse of another color. For example, the holding pattern for a B-52 and an L-20 are basically the same. The anxiety of stepping down through the "stack is felt by both pilots. Both pilots share the same concern for their passengers and crew, and in each ship the passengers *rely* upon the proficiency of the pilot.

But there are several factors involved in the proficiency of Army civilian component crews. The harsh fact is that they are concerned with other *equal* and *pressing* demands.

We do know that Army aviators, and to an ever increasing extent the Army aviators of the civilian component establishments, are subject to a dual-qualification in both rotary-wing and fixed wing equipment.

We also know that the aircraft organic to the Army and its civilian components are subject to change. One can't describe the situation as static in viewing the Bell H-13 helicopter and its later stablemate, the Sikorsky H-37, or the stock L-19 airplane and its bigger brother, the *Otter*. The foaling of higher performance observation aircraft with a minimum top speed of 275 knots, of convertiplanes, of tilt-wing jobs would also seem to indicate that the job of an Army aviator may be anything but simple.

We do not mean to intimate that Army pilots in the civilian components will be flying *all* of these types of aircraft, if and when they are operational in the Regular establishment.

There's a time lag involved and the money just isn't there. However, the civilian components are not completely out of phase. Eventually, as the Regular establishment proceeds on to a new category, the equipment has been made available to the Guard establishment and may, in the future, be made available to the USAR component. Civilian Component funds abet the materiel base of the active establishment. And when this *plus* materiel is made available, the line must be toed.

Nothing has been said here about the *second* dual-qualification of the Army aviator, the fact that he must be branch qualified *in addition to* being proficient in his primary aviation pursuit. This requirement must also be met within the 48 drill period. When the Army refers to its aircraft as *organic* aircraft, it means just that. To the pilot it also means technical proficiency and knowledge in his basic branch. One does not acquire this proficiency and knowledge without sacrifice and time, *and without cutting into the period available for maintaining flight proficiency.*

We strongly feel that Army aviators in the civilian components could well employ the extra thirty-six paid drill periods. We feel that sufficient justification exists for authorizing such drills for the Army civilian components and hope that the matter is re-studied.

AN ASSOCIATION

HARTFORD, CONN.—An Army aviation fraternal organization intended to encompass members in the National Guard, USAR, and active Army establishments was created in this city recently.

Sponsored by interested civilian leaders in the Reserve Components, the new organization is entitled *The Army Aviation Association of America* and will serve to foster and generate a spirit of good fellowship among personnel of the various Army aviation elements.

Embracing self-governing, self-supporting regional and chapter activities as well as a national organization, the new association is expected to be staffed at all levels by recognized leaders in USAR, N.G., and active Army circles.

The inflatable rescue raft is flotation-tested with a six-person load

nor will she abandon the child. A similar situation may occur with one victim attending an injured or infirm relative.

The electric motor used to rewind the cable is always subject to malfunction, or the cable may fail to rewind on the spool properly causing a jam and leaving the victim suspended and unable to be retrieved.

Lastly, the victim may fall out of the apparatus during ascent due to a lack of knowledge on how to properly secure himself, or he may be injured during the transfer in mid-air from the hoist to the helicopter.

These disadvantages, for the most part, have been validated by actual events and it is apparent that a rescue device possessing the following features is needed for safe and adequate helicopter rescue:

The rescue device should be able to rescue several persons simultaneously, a device that does not require prior knowledge by a victim in order to secure himself and one which permits easy entry for all victims, whether ambulatory, injured, or infirm.

The device should not be subject to malfunction nor should it increase the victim's fear of the helicopter hovering overhead.

Militarily, the device should be simple, inexpensive, require little or no modification to the basic helicopter, and should not affect the characteristics or capabilities of the helicopter.

The answer lies in a device which does not require the transfer of the victims to the helicopter.

Raft is the Answer

One answer is an externally sling transit inflatable rescue *raft.*

While serving with the 93rd Transportation Company at Fort Riley, we developed and tested such a device. Our findings may be of interest to many readers.

The device was designed specifically to meet all of the needs for helicopter operations previously described.

Essentially, this rescue device is a simple and inexpensive contrivance which may be quickly attached to a standard H-21 helicopter.

In the attached traveling position under the helicopter, it does not interfere or restrict the landing or taxiing of the aircraft. (Note photo.) While the helicopter is airborne it does not restrict flight characteristics, thereby permitting the helicopter to fly on to the disaster scene with the raft externally attached an dready for use.

Standard Controls Employed

When the helicopter arrives at the disaster scene the pilot can release the device from its attached position under the craft, using *standard* cockpit controls.

The raft then extends below the helicopter 30 feet, being suspended by four ropes or cables. The pilot, assisted by the co-pilot, may then hover the raft directly to the victim to be rescued.

On the raft is a flooring with net sidings which allow *easy* access by a number of

(*Continued on next page*)

CWO John J. Cooney, (left), test pilot for the rescue device, discusses operational data with Lt. Col. Gerald H. Shea, originator of the multiple-rescue raft. The testing was performed at Ft. Riley, Kansas.

persons. The raft will float with the persons aboard, or it may be lowered into a confined area to the victims.

Once the victims are aboard, the raft is flown in the *extended* position under the helicopter to an adjacent place of safety where the raft is landed and the victims may disembark safely. The helicopter and raft may then return for additional victims at the disaster scene.

In order to facilitate rescue operations (and serve as a calming influence) it is anticipated that a crew member will ride in the raft to assist the injured victims and children. He would be equipped with interphone communication to the pilot.

During the actual tests of this device, the flooring and rigging supported a 1,500 lb. weight well within the CG limits of the helicopter. No unusual control effects or limitations were observed.

First Flight Successful

Interphone communication from passenger to pilot was established, and the first successful flight with a person aboard was made.

Upon picking up the raft, some initial twisting was encountered; however, stability was soon maintained and the signal was given for forward flight. The helicopter was not hovering in ground effect while the raft was just off the ground; consequently, there was little downwash felt in the raft.

During slow forward speeds, *before* transitional lift was encountered, slight swinging effects were noticed, primarily due to the helicopter's pitching moments for slow forward flight. As the speed increased into transitional lift, the swinging diminished and *absolute* stability ensued.

Limit Speed at 33 Knots

Forward speeds up to 33 knots (IAS) produced perfect stability without twisting and swinging. At 34 knots (IAS) the bow of the raft began to nose down and higher speeds were not considered safe. The limit speed of 33 knots (IAS), however, offers a fine range for rescue operations.

No downwash was felt in the raft during forward flight. During descent and while transcending to slower speeds to the hover, little or no forces on the raft were felt. It was found that winds, downwash reflected off ground surfaces, and pilot over-control were the only forces affecting the raft and none of these forces when combined were sufficient to produce any violent action or cause any passenger anxiety.

Riding in the raft produces no feeling of insecurity due to the security afforded by the hand rail, the solid flooring, the net sides, and the long distance of the helicopter above the raft.

Release Mechanism Tested

At the conclusion of the test, the raft release mechanism was found to function properly. The release mechanism is a necessary item in case the raft becomes entangled in trees or other debris and the helicopter becomes tethered to the ground.

A second test was conducted in order to determine load capacity and flotation ability. It was found that six persons may ride simultaneously with no cramping or other unusual effects. All six persons were adults with an average weight of 165 pounds.

These same persons rode the raft to the water test area and the entire device was floated with all six persons aboard. There was sufficient freeboard with this six person load to prevent wetting.

It was found that as the current of the water trails the raft behind the helicopter, the raft tends to drift out of line with a resultant twisting effect until the ropes are fully extended.

Water Towing Unsuccessful

Towing the raft in the water with the six persons aboard was tried unsuccessfully and the raft began to ship water over the bow. It was concluded that the raft must be lowered directly to the victims from the air and subsequently lifted again. It was believed that more than six persons could have been floated and flown in the raft without danger.

Expert pilot technique is, of course, a primary factor in smooth recovery. It was found that the co-pilot or the crew chief in the helicopter can easily guide the pilot in using the intercommunication system. The co-pilot has an adequate view of the raft from his open window and the crew chief easily observes the operation from the open forward hatch.

SOP Developed

Some techniques were learned during this test, including the advisability of flying the raft about ten feet above the ground. This provides for minimum fall of the persons in the raft in the event of any failures.

It was also found that the initial release of the raft from the bottom position of the helicopter should be from a height of approximately 20 feet. This permitted the raft to strike the surface without putting any undue shock upon the helicopter, and with minimum hazard of entangling the ropes.

It is recognized that hovering out of ground effect places the helicopter in a precarious position in the event of engine failure; however, since the helicopter is no closer to the surface than 30 feet, it is believed that enough control would remain from blade inertia to effect a landing off to the side of the raft.

This test—conducted under flight conditions of calm wind, a 52 degree temperature, and a 1,056′ altitude—proved conclusively that successful external helicopter evacuation of six persons can be effected simultaneously.

WANTED: A Multiple-Rescue Device

by Lt. Col. Gerald H. Shea

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