

AUTOPILOT GREMLINS—

## Twice-Scrubbed Gemini XII Scheduled for Launch Today

After two 24-hour scrubs because of second-stage launch vehicle autopilot problems, Gemini XII at *Roundup* press time was scheduled for launch at 2:46 pm CST today. Gemini XII was originally scheduled for launch Wednesday, but failure

of a secondary autopilot power supply during Tuesday's midcount forced the first 24-hour postponement of the launch.

The faulty component was replaced and tests were continued in the repeat midcount Wednesday morning. Autopilot rate gyros did not operate at the proper synchronous speed during the second midcount and the launch again was postponed 24 hours. The second problem in the autopilot was not related to the first problem. The primary autopilot showed no anomalies during the tests, but since mission rules call for both autopilots to be working prior to launch, the mission was twice postponed.

Weather in the launch area was forecast to be acceptable for today's launch.

Launch times for both the Atlas/Agena rendezvous vehicle and Gemini XII were moved to eight minutes earlier to retain the same star fields. The only major change to the flight plan was elimination of the solar eclipse photography which was scheduled for Sunday morning during a pass over South America where the crew of Gemini XII would have seen some 20 seconds of total eclipse of the sun.

The Gemini XII crew spent the two scrub days practicing various phases of the mission in the Gemini Mission Simulator at Kennedy Space Center, and in review of the flight plan.



**NIGHT LAUNCH**—Lunar Orbiter B lifts off into the Florida night on its quarter-million mile journey to the moon to continue photographic reconnaissance of possible Apollo landing sites. The launch was made November 6 at 5:21 CST from Launch Complex 13 by an Atlas Standard Launch Vehicle and an Agena D.

## ECS Problem Forces A/S 204 Date Change

NASA will launch the first manned Apollo spacecraft in the first quarter of 1967. The earth orbital flight is planned to verify performance of spacecraft systems and crew operations.

The three-men crew will be Virgil Grissom, command pilot, Edward White, senior pilot, and Roger Chaffee, pilot. Backup crew is James McDivitt, command pilot, David Scott, senior pilot, and Russell Schweickart, pilot.

Although NASA manned space flight officials had hoped to launch the mission late this

year, it was decided to modify a unit in the spacecraft environmental control system (ECS) before the flight. This will require replacement of the ECS unit in the spacecraft and repeating some of the tests previously accomplished at the NASA Kennedy Space Center, Florida.

The unit is a water boiler-type heat exchanger in the command module which operates during peak heating periods to supplement the ECS radiators, the primary cooling mechanism. It cools a water glycol solution which is circulated throughout the spacecraft.

Its evaporative cooling is accomplished by inducing a controlled flow of water through metal pressure plates into a water glycol evaporator. The unit is vented to space which permits the space environment to evaporate water and dissipate steam.

Porous nickel pressure plates in the unit will be removed and replaced by stainless steel plates which have very fine drilled holes. During recent spacecraft tests, water flow through the nickel plates was restricted, due to clogging of the porous material, and cooling efficiency was reduced. In other tests of the unit, water flow was properly maintained through the stainless steel drilled plates.

The rupture October 25 of a service module fuel tank during a pressure test at North American Aviation, Space and Information Systems Division, Downey, California, is under study to determine any possible

(Continued on Page 6)



The last patch . . .

## Gemini Wind-Up Party Planned in Galveston

A centerwide Gemini end-of-program party, designated "The Final Gemini Rendezvous", is scheduled to be held December 2 in Galveston's Moody Civic Center.

The affair will begin at 8 p.m. and include dancing to big band music, top entertainment, hors d'oeuvres, a special Gemini Program commemorative favor, topped off by a midnight champagne breakfast. Tickets, at \$7.50 per person, will be made available on a first come-first serve basis through the various directorates, program and staff offices at the Center. November 18 is the deadline for tickets.

A maximum of 1600 people can be accommodated and tickets should be purchased early due to limited seating. In addition to center employees, support contractor employees are invited to attend. Dress will be informal, with cocktail dresses or suits suggested for the ladies and regular dark suits for the men.

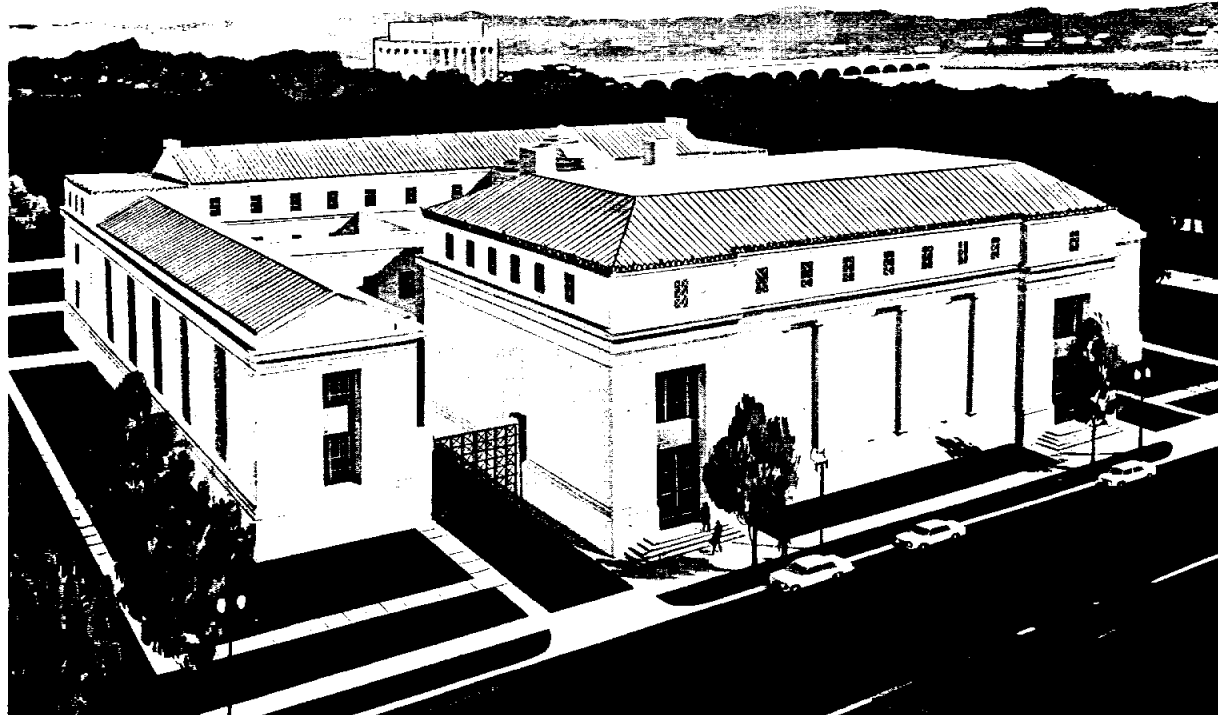
Special entertainment for the party includes Bill Dana (Jose Jimenez) and tentatively Don Knotts, popular TV personalities.

Bottled liquor may be brought to the party and bars will also serve reasonably priced drinks and set-ups. Table reservations will be made only for visiting dignitaries.

The major hotels in Galveston have established special rates

for those desiring to spend the night after the party. Rates may be obtained by calling the hotel reservation desks. The Galveston Convention and Tourist Bureau, the Chamber of Commerce, the Beach Park Board, the Moody Center and the office of the Mayor have all joined in assisting the party-committee headed by Tony Verrengia.

## Proposed Hugh L. Dryden Memorial



**MEMORIAL AUDITORIUM**—This sketch of the proposed auditorium at the National Academy of Sciences in Washington, D.C., as a memorial to the late Dr. Hugh L. Dryden, deputy administrator of NASA, would complete the home of the Academy on Constitution Avenue. (SEE STORY ON PAGE 2)

# Gemini Ground Support People Deployed to Points Around Earth

Flight controllers in Mission Control-Houston are working three shifts during the Gemini XII mission. The two crew-awake shifts are led by Black Team Flight Director Glynn Lunney and Green Team Flight Director Clifford E. Charlesworth, while the crew-asleep shift is manned by a reduced Blue Team of flight controllers.

Mission Operations Control Room (MOCR) console positions for each shift are identified by 1 (black), 2 (green) and 3 (blue).

Assistant Flight Director: Donald R. Butler 1, William E. Platt, Jr. 2. (on 12-hour shifts). Operations and Procedures Officer: Richard S. Sutton 1, Robert Britton 2, and Donald E. Holkan 3. Spacecraft Communicator: Charles Conrad 1, and William A. Anders 2.

Flight Surgeon: Dr. D. Owen Coons and Dr. William R. Carpenter 1; Dr. Fred G. Kelly and Dr. J. J. Droscher 2, and Dr. W. R. Hawkins 3. Tank Monitor: Charles Dukes (launch phase only). Guidance, Navigation and Control Engineer: Gary E. Coen 1, Bartus H. Batson 2. Electrical, Environmental and Communications Engineer (EECOM): John W. Aaron 1, Walter M. Merritt 2.

Agema: Bruce H. Walton 1, Melvin F. Brooks and James E. Saultz 2, and William L. Peters 3. Agema Systems: Bernard R. Brabant 1, Robert L. Carlton 2, and Harold A. Loden 3. Experiments Advisory Officer: James R. Bates 1, and Henry B. Fisher 2. Flight Dynamics Officer: Edward L. Pavelka 1, Stewart L. Davis 2, and Jerry C. Bostick 3.

Retrofire Officer: William P. Gravett and Thomas Carter 1, David R. Massaro 2, and John S. Llewellyn 3. Guidance Officer: William E. Fenner and Clayton Long 1, Stephen G. Bales 2, and Kenneth W. Russell 3.

Maintenance and Operations Supervisor: Clifton W. Phillips 1, Douglas R. Wilson 2, and Ken Jones 3. Public Affairs Officer: Terry White 1, John McLeaish 2, and Bennett James 3.

Remote-site flight controllers manning the command stations of the Manned Space Flight Network are as follows:

Canary Islands: William G. Bastedo, Capcom; George W. Conway, Gemini Systems; Paul D. Nering, Agena Systems; Lt Cdr R. A. Millington USN, Aeromed.

Carnarvon, Australia: James R. Fucci, Capcom; John E. Walsh, Gemini Systems; Harold V. Berlin, Agena Systems; Wing Cmdr. L. N. Walsh and Sqdn Ldr Reed, Royal Australian Air Force, Aeromed.

Hawaii: Keith Kundel, Capcom; Albert W. Barker, Gemini Systems; Thomas E. Weichel, Agena Systems; Cdr A. W. Stephenson, Jr. USN, Aeromed.

Tracking Ship USNS *Coastal Sentry*: William D. Garvin, Capcom; George M. Bliss, Gemini Systems; Hershel D. Perkins; Maj C. H. Sawyer USAF, Aeromed.

Tracking Ship USNS *Rose Knot*: William F. Buchholz, Capcom; Robert D. Legler, Gemini Systems; Charles L. Gruby, Agena Systems; LtCol Q. W. Jones USA, Aeromed.

Four console positions in the Recovery Control Room on the third floor of the Mission Control Center are manned by members of the Landing and Recovery Division. By shift number, they are:

Recovery Coordinator: Donald E. Stullken 1, Harold E. Granger 2, and Edward C. Bullock 3. Display: William G. Robinson 1, John E. Hoover 2, and Joe R. Vise 3. Evaluator: Bruce W. Larsen 1, Richard W. Blakley 2, and Frank J. Herbert 3. Status: Wayne H. Oldfield 1, William R. Chase 2, Millard C. Pettit 3.

Other MSC Landing and Recovery people are deployed to recovery control centers and recovery vessels around the world. At the Recovery Control Center in Kunia, Hawaii are Ryborn R. Kirby, Edward B. Petrash and Richard D. Tuntland. Manning the Cape Kennedy Recovery Control Center are Jerry E. Hoisington, Melvin R. Richmond, Rod Bass, M. Richmond and Fred Koons.

Thomas E. Holt is at the Recovery Control Center at Albrook AFB, Panama Canal Zone, while Richard C. Jacobs is assigned to the Recovery Control Center at Moron, Spain.

Abroad the prime recovery vessel USS *Wasp* are Jerome Hammack, John Stonesifer, W. B. Wood, Arnett E. Kilpatrick, John B. Haughton and R. Lane Brown. Assigned to recovery force destroyers are Dennis G. Mannering, USS *Roan*, and James S. Arthur, USS *Kennedy* in the West Atlantic; Stephen H. Ellis, USS *Chukawan*, East Atlantic; John Hirasaki, USS *Strauss*, Mid-Pacific; and Sheridan J. Berthiaume, USS *Osborn*, West Pacific.

Four MSC recovery people are assigned to USAF Air Rescue Service squadrons. They are Fredric C. Sponholz, Dakar, Republic of Senegal; Warren H. Glenn and Ronald J. Simantel, Kindley AFB, Bermuda; Donald J. Bourque, Hickam AFB, Hawaii; and Richard I. Green, Tachikawa AFB, Japan.

## FOR MSC GOVERNMENT EMPLOYEES—

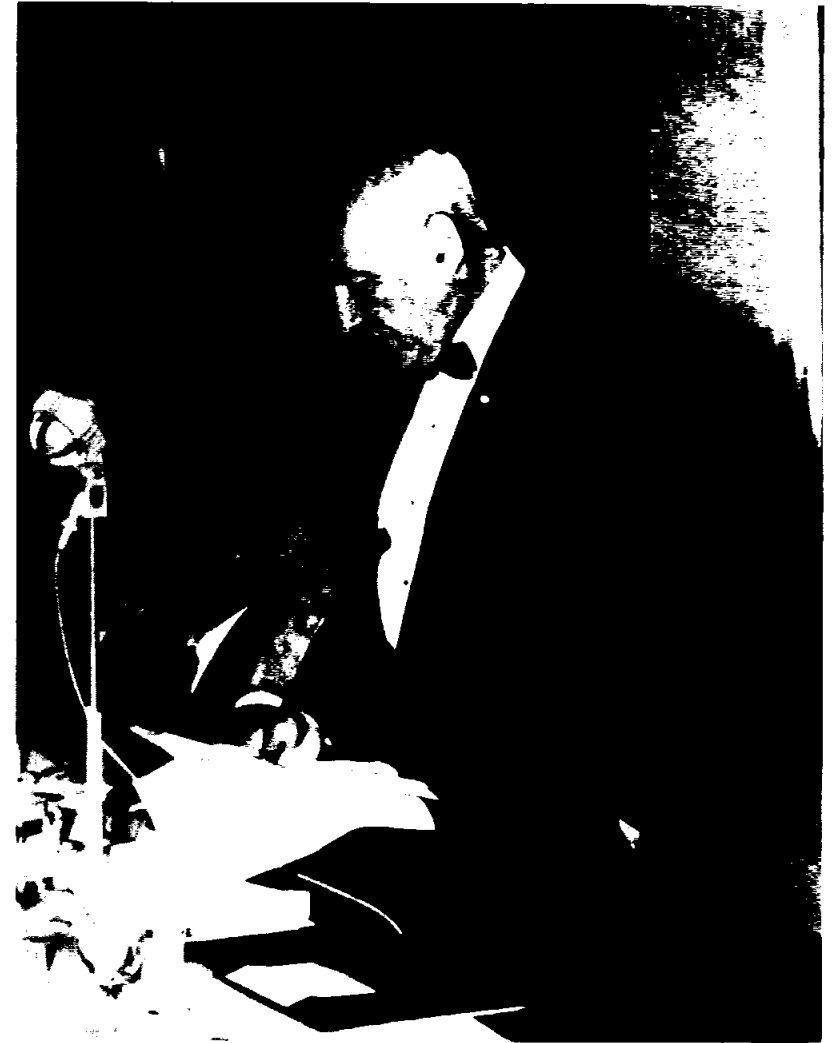
### Hjornevik To Head Drive For Dryden Memorial Funds

Wesley L. Hjornevik, Director of Administration at the Manned Spacecraft Center, has been selected to head the effort to raise funds among government employees at the Center for a memorial to Dr. Hugh Latimer Dryden, former deputy administrator of the National Aeronautics and Space Administration.

The Hugh L. Dryden Memorial Fund has been created to establish a suitable memorial to honor the noted scientist, engineer and administrator who devoted a lifetime of national service to bringing the United States into a position of world leadership in aviation and space science.

A committee, appointed by the National Academy of Sciences, decided that the most appropriate memorial would be the construction of an auditorium (see sketch on page 1) at the National Academy of Sciences in Washington, D.C., for the use of national and international scientific gatherings, and to establish an honorary award closely related to the work of his life. Dryden was a member of the Academy for 21 years and a principal officer for the last ten years of his life.

An estimated \$2-million will



MEDALIST—MSC Director Dr. Robert R. Gilruth delivers his acceptance speech after being presented the Daniel Guggenheim Medal at the Seventeenth International Astronautical Congress last month in Madrid, Spain.

## DR. GILRUTH ACCEPTS—

### Dr. Lovelace Gets Kitty Hawk Award

MSC Director Dr. Robert R. Gilruth December 16 will accept on behalf of the late Dr. W. Randolph Lovelace the 1966

Kitty Hawk Award at ceremonies in Los Angeles.

Dr. Lovelace, killed last December in a Colorado aircraft crash, is receiving the posthumous award for distinguished civilian achievement in aviation. Dr. Lovelace and Dr. Gilruth were close friends and co-workers both in NACA and its successor, NASA.

Dr. Gilruth last month received the Daniel Guggenheim Medal at the Seventeenth International Astronautical Congress in Madrid. Established in 1928 by the Daniel Guggenheim Fund for the Promotion of Aeronautics, the Medal is given for notable achievement in the advancement of aeronautics.

Among past recipients of the Guggenheim Medal are such names as Orville Wright, James H. Doolittle, Hugh L. Dryden, Igor I. Sikorsky, Charles A. Lindbergh and Sir Geoffrey deHavilland.

## MSC BOWLING ROUNDUP

Mimosa Men's League		
TEAM	WON	LOST
Whirlwinds	26	10
Road Runners	25	11
Strikers	20	16
Technics	19	17
Weightless Wonders	18½	17½
Fabricators	18	18
Foul Five	18	18
Real Timers	16	20
Chizzlers	16	20
Alley Oops	14½	21½
Agitators	14	22
Hustlers	11	25

## Feathered Stowaway



WREN-TIN-TIN—After a trip into the Gulf of Mexico aboard the NASA Motor Vessel *Retriever*, this stowaway wren decided that a sailor's life was not for the birds—at least not for land birds. Although he made brief flights from the deck of the *Retriever* during Apollo 204 egress training, he always returned to the ship.

INVENTIVENESS PAYS—

# Inventions Undergo Long Process Before Patents Finally Awarded

By Bob Gordon

MSC employees are finding it pays to be ingenious, inventive and original.

Harold Johnson, Flight Crew Support Division, is the twenty-sixth MSC employee to receive a cash award for an invention he developed. Johnson's invention of the air bearing training device which provides five degrees of freedom was awarded patent number 3,281,963 by the US Patent Office on November 1.

Marvin Matthews, MSC Patent Counsel, said Johnson's is the latest in a long line of inventions by MSC employees which have been awarded patents. Matthews heads up an office of five MSC lawyer-engineers which reviews all employee and contractor inventions before they are submitted to the U.S. Patent Office.

Matthews said his office receives each month approximately 80 inventions from MSC and contractor employees. At this time, 68 MSC patent applications are pending before the US Patent Office in Washington, another 122 are being evaluated by the MSC office, and 53 are pending in Washington for "prior art" search from which the MSC patent attorneys will determine whether the inventions are likely to be patentable.

It's a long and involved process before an MSC invention is submitted to the US Patent Office, Matthews said. After an invention is submitted, it is reviewed by MSC patent attorneys and then forwarded to the

cognizant MSC technical office for review.

After the technical review, the patent candidate is returned to the MSC patent staff, who then determine whether it is of sufficient patent interest to the government to warrant further processing. If it does, the next step is to prepare a "search abstract" of the invention.

A thorough search of patent records and other technical literature is performed in Washington to uncover the closest "prior art". A detailed study of the invention and the prior art is made by the MSC patent attorneys to determine whether they believe the invention is patentable. A favorable determination at this point guarantees an MSC inventor that he will receive at least a minimum award of \$50. The invention is then scheduled for preparation of a patent application, the most difficult and laborious task of all, Matthews said. "A lot of thought and skill go into the preparation of a good patent application," explained Matthews. "It is both a technical and a legal document, and we are trying to avoid the myriad pitfalls that an application is subject to during its three year pendency in the US Patent Office.

On the average it takes the US Patent Office three years of review, search and paper work before it is ready to say that an MSC employee invention is acceptable for the granting of a patent. However, Matthews

explained, MSC has had several exceptions to this rule.

Two months ago the US Patent Office granted patent number 3,270,908 for the design of the Mercury "space capsule" to a team of MSC engineers headed by Dr. Max Faget, Director of Engineering and Development. The original design was filed for patent on October 17, 1959, and seven years and one month later the US Patent Office awarded the patent.

On the other hand, a patent awarded the same day as the "space capsule" invention was submitted just ten months earlier. This patent concerned the invention of Harold I. Johnson, Flight Crew Support Division, and William C. Huber, Engineering Division, for their Hand-Held Self-Maneuvering Unit used by Gemini IV astronaut Edward H. White, II, during his space walk of June 3, 1965. The HHMU application was filed on December 3, 1965.

Other patents granted to MSC inventors include patents to:

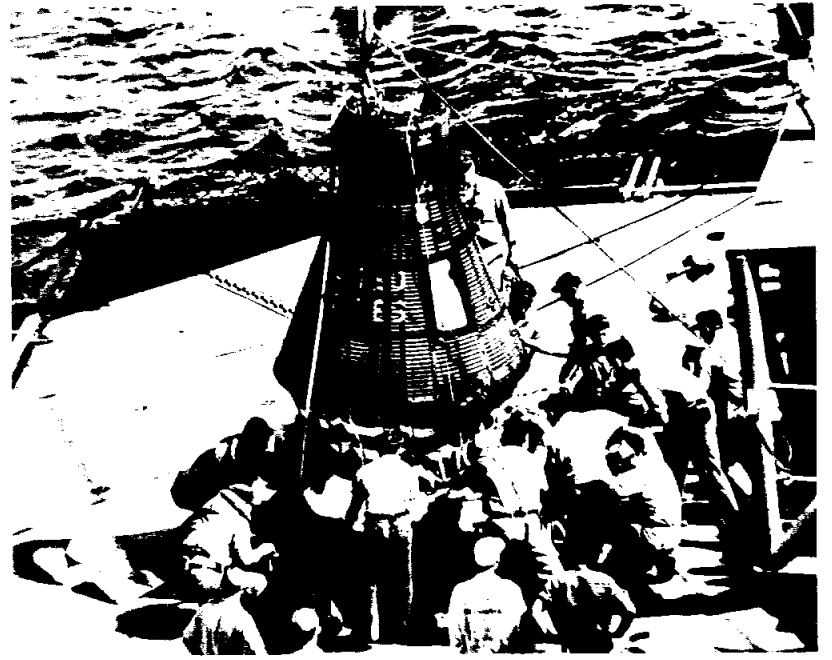
—Richard B. Erb and Kenneth C. Weston, both of Structures and Mechanics Division, for their invention of a heat shield for use on interplanetary space vehicles;

—Matthew I. Radnofsky and Glenn A. Shewmake, former MSC employees, for their life preserver invention, and for their inflatable life raft. Each of these inventions was used extensively in Project Mercury. Radnofsky and Shewmake also received a patent for their inflatable radar reflector;

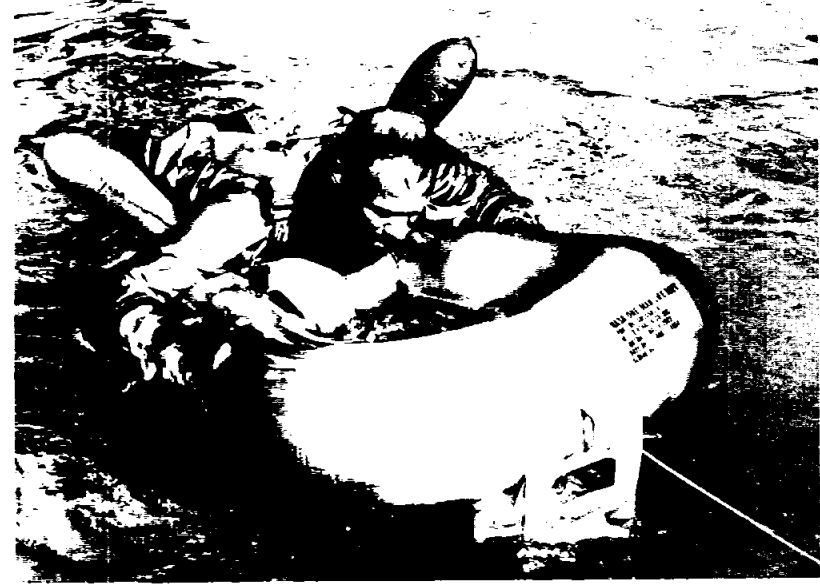
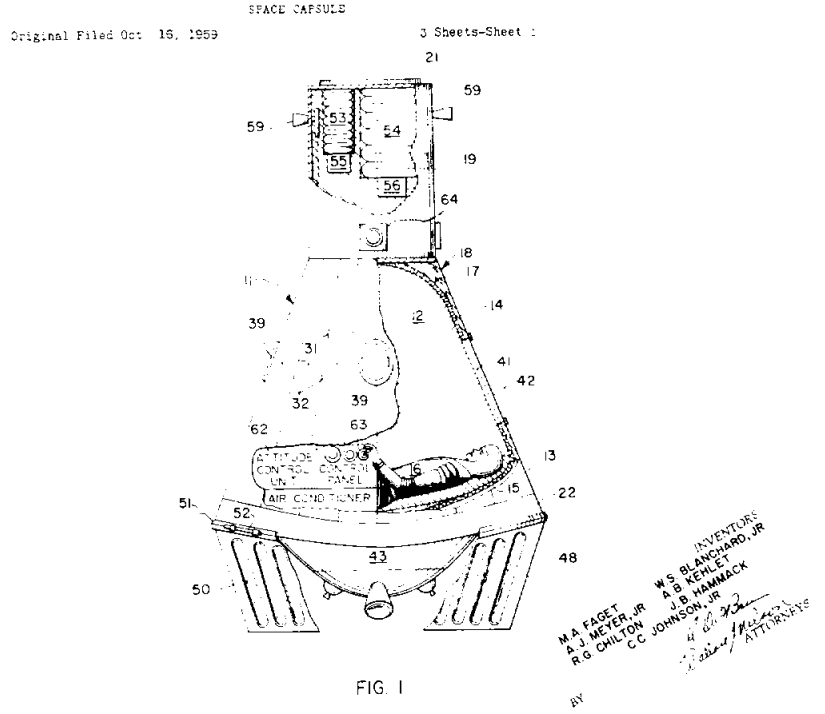
—Andre Meyer for an ablation structure.

While MSC inventors are entitled to a \$50 minimum award when it is determined that a patent application will be filed, the actual amount is determined by the NASA Inventions and Contributions Board in Washington. The average to date for MSC inventors has been \$307 per invention. However, inventions are also periodically reviewed each 18 months after the initial award to determine whether a still additional award is in order. One MSC inventor recently received an additional \$1000 on such a review.

The government's prime objective in encouraging Federal and contractor employees to disclose their inventions is to save the taxpayers' dollars. Through the patenting of employee and contractor inventions, the U.S. then avoids liability for the payment of royalties or damages in the event similar inventions are developed independent of the NASA. A few inventions have also been selected for filing in foreign countries for the protection of U.S. interests abroad. In addition, NASA encourages commercial exploitation of its patented inventions through its domestic and foreign licensing programs.

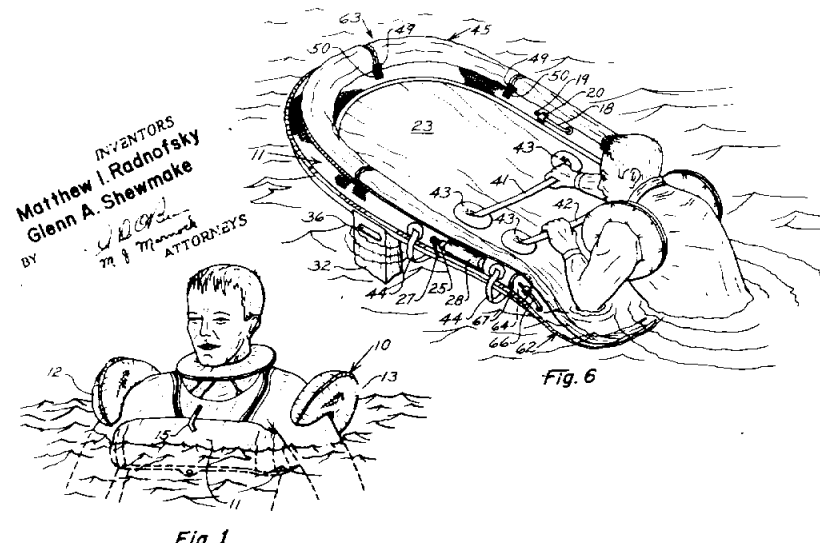


Sept. 6, 1966 M. A. FAGET ET AL 3,270,908



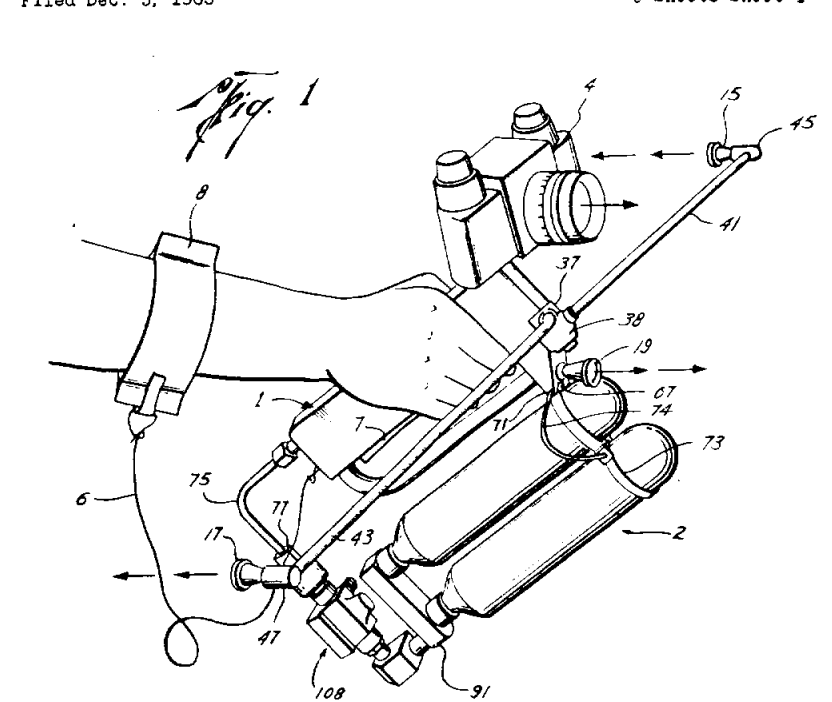
Nov. 10, 1964 G. A. SHEWMAKE ET AL 3,155,992

LIFE RAFT Filed Sept. 5, 1962 2 Sheets-Sheet 2



Sept. 6, 1966 H. I. JOHNSON ET AL 3,270,986

HAND-HELD SELF-MANEUVERING UNIT Filed Dec. 3, 1965 3 Sheets-Sheet 1



For "Unparalleled Excellence . . ."

The New York Board of Trade, Inc.  
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Their dedication and demonstration of man's inherent and unlimited capacity to surmount the obstacle of space is an inspiration to each individual to strive for the lasting betterment of all men on earth.

Presented at the Business Speaks Dinner, October 27, 1966, Waldorf Astoria Hotel, N.Y.C.

*Griffin Crafts*  
Secretary



*James J. Hill*  
President

**AWARD FOR SPACE PROGRAM**—The above plaque was presented to NASA by the New York Board of Trade at its annual Business Speaks Dinner October 17 at the Waldorf Astoria in New York City. Accepting the plaque, duplicates of which were presented to each NASA installation, was NASA Deputy Administrator Dr. Robert C. Seamans, Jr. More than 1000 business and government leaders attended the dinner.

**FIRST AID FOR DELINQUENCY—**

**Things You Should Know About Your Credit Union**

Most members will read this out of curiosity; for them there is no personal application. So to help satisfy that curiosity, here are some facts:

Any arrears by a Credit Union borrower is serious and is so treated by the Credit Union. Whether a borrower is just careless and pays late or is on the road to bankruptcy, the fact remains that it is the savings of his fellow workers that are being jeopardized.

Let us consider an individual

member. Naturally, he is just as interested in keeping his account current as the Credit Union is for him to do so. A good way to start is the payday following the date on which the loan is made, to pay half of the monthly payment and then make another half-payment each succeeding payday. Not only are interest charges reduced to a minimum, but every few months the member gets ahead of schedule, then if some emergency arises, he can coast with no ill effects.

Now take a member who for one reason or another is unable to make a payment, within seven days he will receive his first notice. The member should then contact the collection manager at X2067. If the condition is temporary, the ledger will be so noted to avoid unnecessary and annoying follow-up letters.

Once a member misses a payment and fails to contact the credit union, the situation deteriorates rapidly. Two payments in arrears and he must be listed on the official delinquency report which is reviewed by the credit committee and the board of directors. Co-makers are notified and assistance requested from supervisors. Usually, this brings the member into the office where the groundwork for a satisfactory solution can be laid.

If the borrower falls behind in his payments again, the cycle is repeated. If the borrower leaves

NASA and refuses to answer correspondence, co-makers must pay off the loan. Each is liable up to the full amount of the note. If there are no co-makers and all other methods fail, the account is charged off by the board of directors and the account turned over to a lawyer or an agency for collection.

But rarely is any of this necessary. It can be avoided. Remember, to escape delinquency or to ease its effect, nothing beats a visit to the Credit Union. It is hard for the Credit Union to be understanding or propose an acceptable solution when it doesn't have the facts. It costs nothing to talk the situation over and it is surprising how much it helps.

**Houston AIAA Tours Steel Mill**

Houston AIAA chapter members change pace Monday from their usual space-oriented programs when they make a plant tour of Armco Steel Corporation's modern plant.

The group will leave by bus at 5:45 pm from 7015 Gulf Freeway (Office City, opposite Gulfgate) with box lunches aboard. The plant tour is scheduled to begin at 6:45 pm.

The two-hour tour will take the group riding around the entire plant, and will include walk-throughs of the metallurgical laboratory, the 160-inch combination plate and slab mill and the 130-inch plate mill. Armco uses computers, electronic controls and closed-circuit television in these areas in the manufacture of steel products.

Mail reservations only will be accepted for the tour so that transportation needs may be determined accurately. The tour costs \$3, and reservations accompanied by check should be made with AIAA Houston Chapter, P.O. Box 57524, Webster, Texas 77598.

**AFGE Sets Meeting For November 14**

The American Federation of Government Employees will hold their November meeting at 5 p.m., Monday, November 14 at the Webster State Bank. All interested parties are invited to attend.

**Yes, Linus. There is a Great Pumpkin!**



**PUNKIN'-HEAD**—The Great Pumpkin was absent from the pumpkin patch in the comic strip *Peanuts* because he was in the MSC Cafeteria on Hallowe'en. GP rejected an offer of a slice of lemon meringue pie from Mrs. C. L. Spillers, wife of the Cafeteria manager. Apparently, any kind of pie other than pumpkin is offensive, especially on Hallowe'en, to the Great Pumpkin (alias Gloria Martinez of Mission Planning and Analysis Division).

**Latest Attire For A Hot Fire**



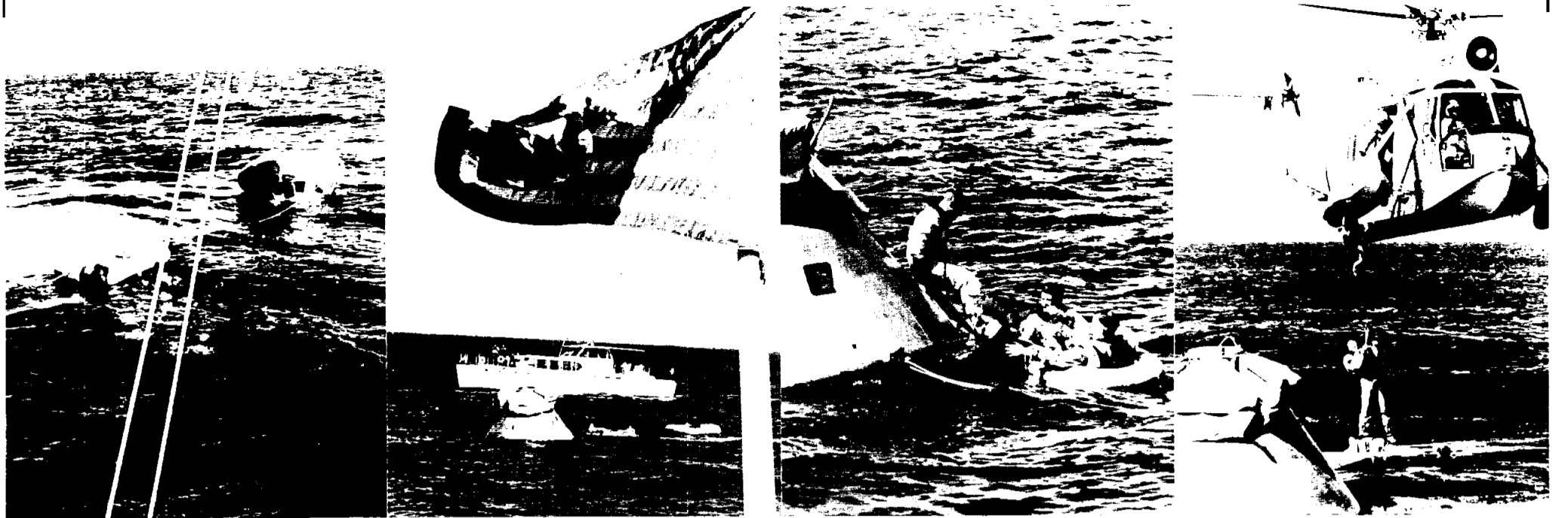
**THEY'RE EARTHLINGS!**—Three MSC firemen, recognizable only to themselves, are shown in some of the latest attire being utilized for fire and rescue work. They are (l. to r.) David Coburn in an aluminized proximity suit; Joel Douglas in a one-piece propellant handler's suit; and Jesse Coburn in a single piece crash suit.

**"Resusci-Anne" Gets The Works In A Training Session**



**HOW TO USE**—Grapham Engineering employees observe the proper use of the resuscitator with "Resusci-Anne" as the subject. Back row standing (l. to r.) are Dudley McIntosh, E. F. Jones, Robert Grieger, James Pickens, Bill Wright, A. L. Hulvey, assistant fire chief M. A. McWilliams, and Aubrey Stahl, the one-thousandth person to complete the standard first-aid course at MSC. Kneeling (l. to r.) are Graham Safety Supervisor Marvin Johnson, and instructors H. L. Rickman and A. P. Groda.

### First Manned Apollo Crew Learns How to Abandon Ship

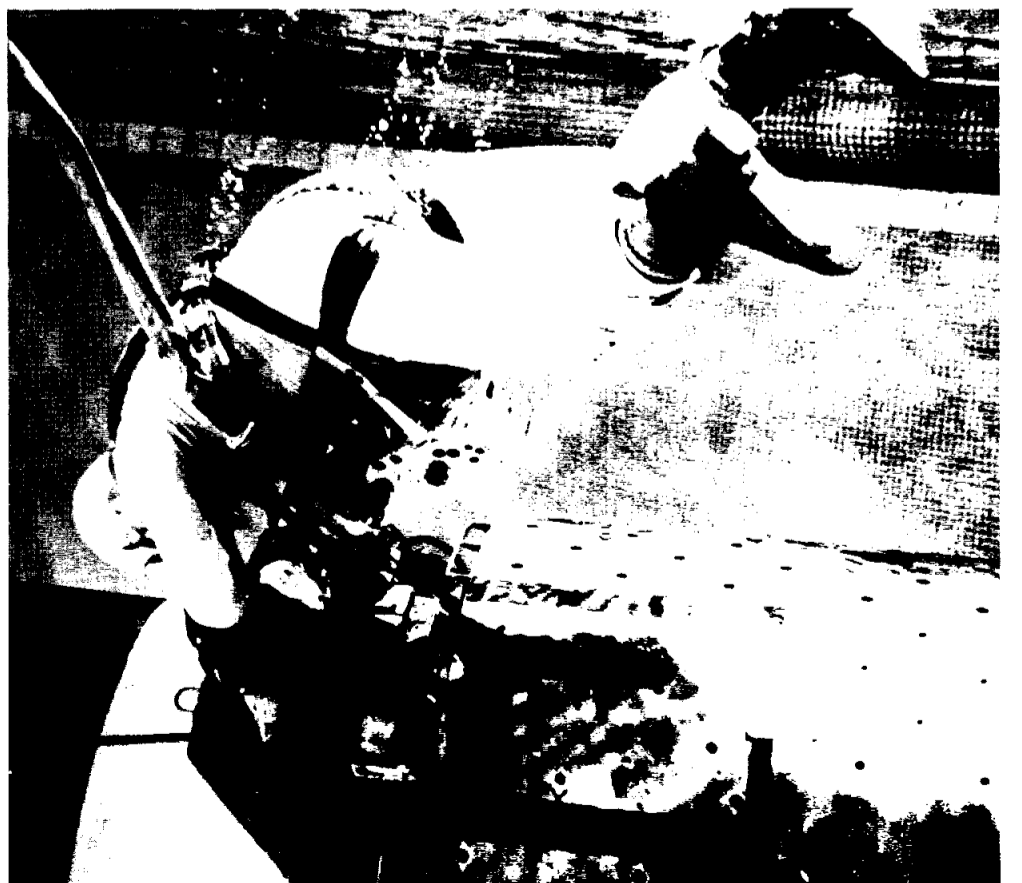
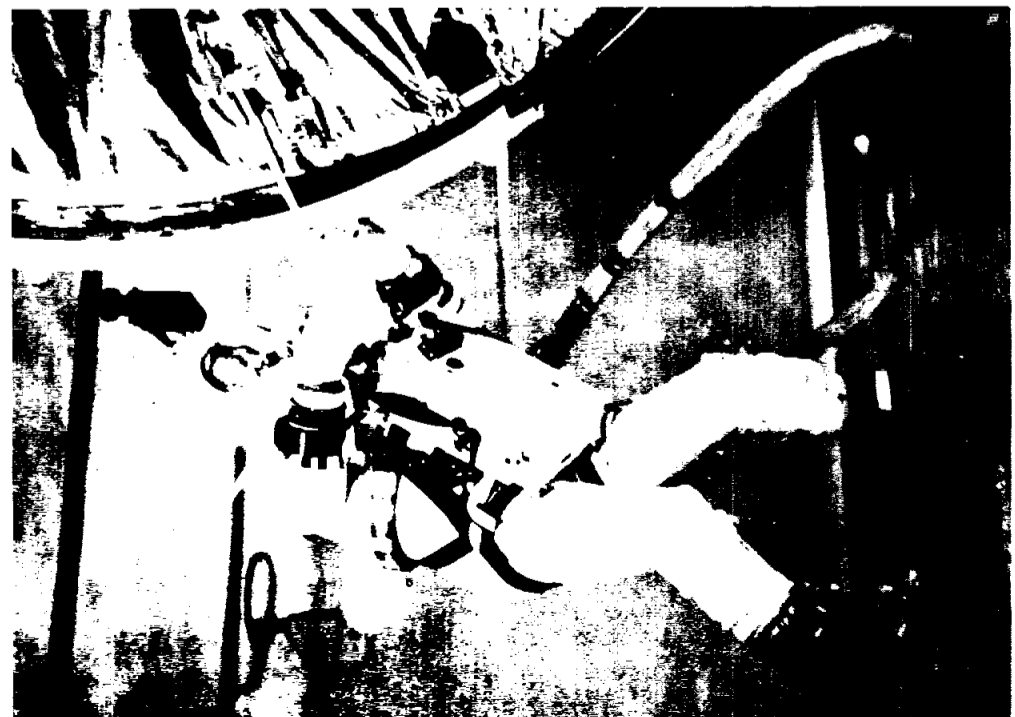
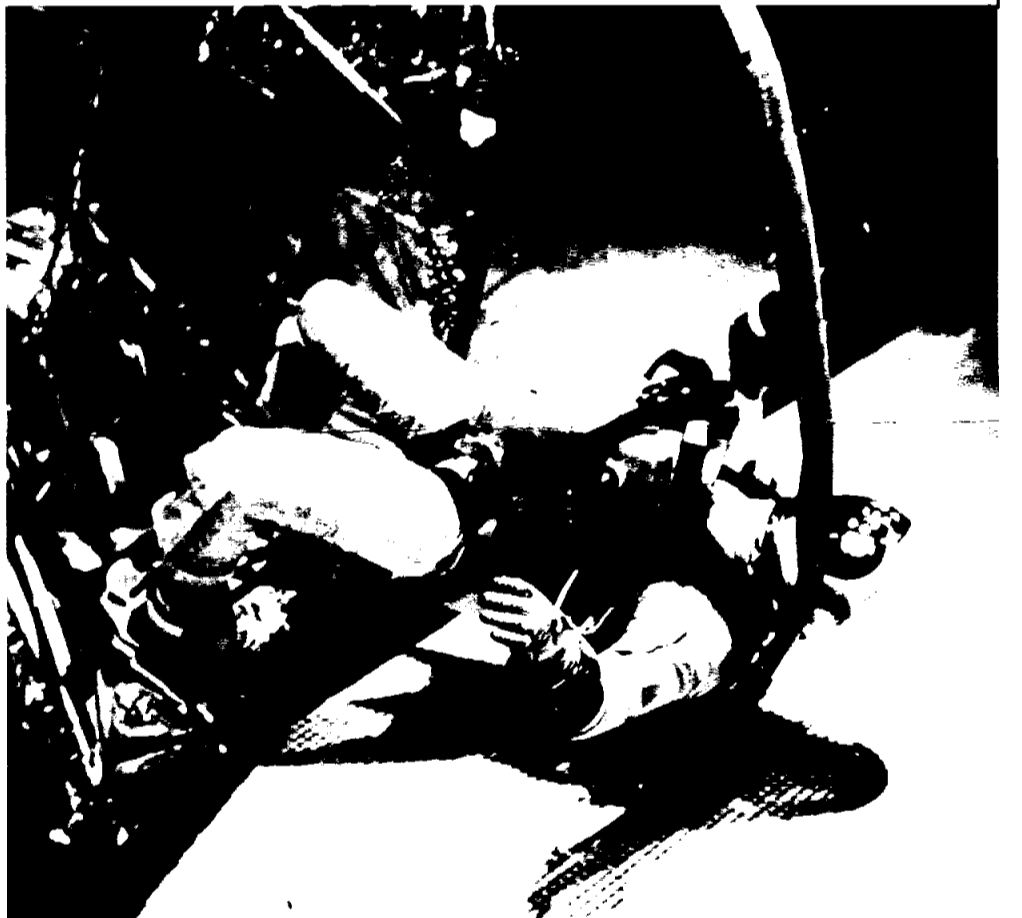
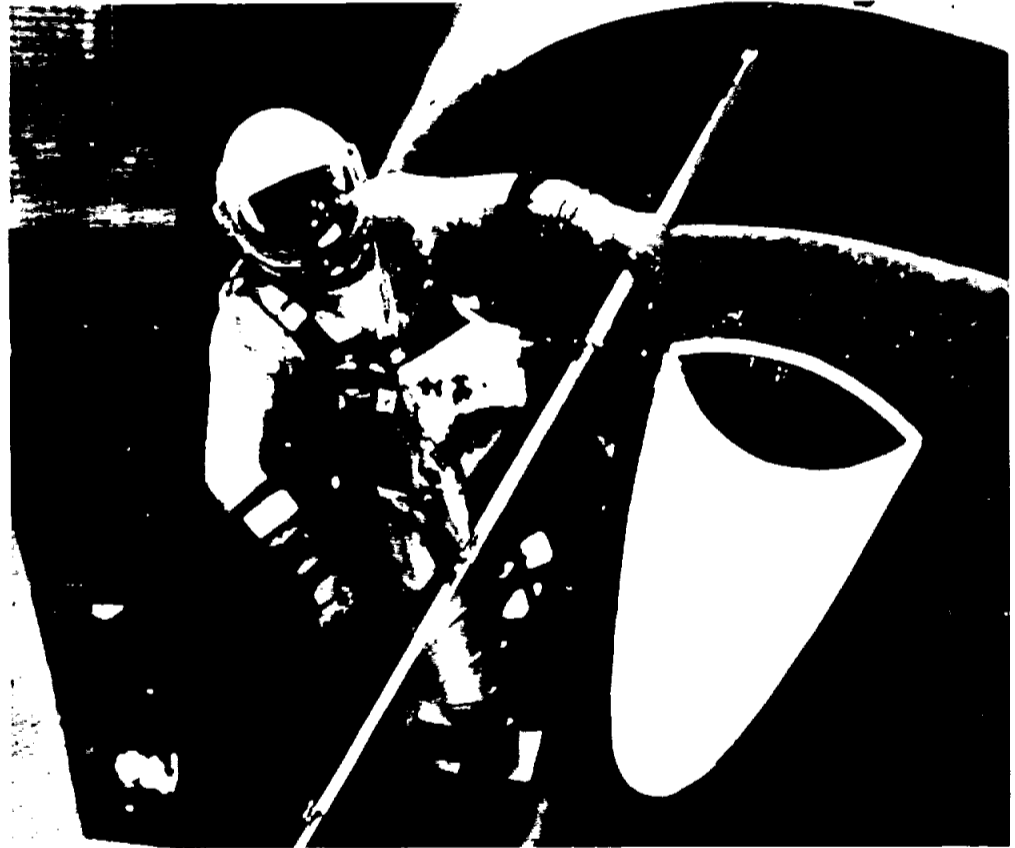


EGRESS REHEARSAL — Prime and backup crew for the first manned Apollo mission, A/S 204, received egress training in the Gulf of Mexico in late October. In the first photo, left, the prime crew floats in the Stable II (apex down) position aboard an Apollo command module training boilerplate. Righted to Stable I (apex up) position by uprighting bags in the apex of the command module (second photo) the crew prepares to egress to a three-man Apollo

life raft. In the background is the *Duchess*, a yacht owned by Houston businessman Paul Barkley and provided by him as a press boat for newsmen covering the training. In the third photo, prime crewmen Virgil I. Grissom, Roger Chaffee and Edward White board the raft to await sling pickup by a helicopter from the US Coast Guard Air Station at Ellington AFB. Backup crewman Russell Schweikart, fourth photo, is hoisted aboard the helo.

### Astronaut Aldrin Practices Underwater For Gemini XII EVA

IN THE SWIM — Astronaut Edwin Aldrin, pilot for the Gemini XII mission gets in some practice in a simulated zero-gravity environment produced by the buoyancy of water in a pool at Environmental Research Associates, Randallstown, Md. Below he egresses from the spacecraft grasping the telescoping handrail. In the lower left photo he performs a work task near the adapter section of the Gemini. Upper right he assumes a "rest" position, and lower right he grasps a handhold while working in the area of the Agena docking collar.



The SPACE NEWS ROUNDUP, an official publication of the Manned Spacecraft Center, National Aeronautics and Space Administration, Houston, Texas, is published for MSC personnel by the Public Affairs Office.

Director . . . . . Dr. Robert R. Gilruth  
Public Affairs Officer . . . . . Paul Haney  
Editor . . . . . Terry White  
Staff Photographer . . . . . A. "Pat" Patnesky

### Space News Of Five Years Ago

November 12, 1961—Mercury-Atlas 5, scheduled for launch no earlier than November 14, ran into technical difficulties, postponing launch for several days.

November 15, 1961—Mercury Spacecraft No. 18 was delivered to Cape Canaveral for the second manned (Carpenter) orbital flight, Mercury-Atlas 7.

NASA Director of the Office of the Manned Space Flight, D. Brainerd Holmes, said in an interview that at least 10 Apollo spacecraft would be ordered in the manned lunar vehicle prime systems contract to be awarded in December 1961.

November 16, 1961 — In speech on "Scientists and Engineers in the Space Program," Albert F. Siefert, NASA Director of Administration, outlined NASA's basic policies on personnel. He pointed out that of NASA's some 20,000 employees, only 4,000 had come to NASA through individual appointments, the remainder on transfer of organizations intact to NASA. NASA's personnel utilization practices, Siefert said, were as follows: "(1) Don't use a scientist or engineer when

another skill will do as well; (2) classify a man's skills by what he actually does rather than how he was formally trained; (3) provide professional entrance into the Federal civil service through an examination which is work centered rather than academically oriented; (4) take on-the-job training and education seriously; (5) encourage professional recognition outside the agency; and (6) recognize that job satisfaction depends upon the man's continued interest in his work as well as his take-home pay."

November 17, 1961—NASA announced selection of the Chrysler Corp. for construction, test, and launch of 20 first-stage Saturn boosters.

November 18, 1961 — Reported from Moscow that USSR was planning to orbit a man around the moon in 1962, and that USSR had ICBMs in being with 100-megaton warheads.

November 19, 1961—Factory roll-out inspection of Atlas launch vehicle 109-D was conducted. This booster was designated for the Mercury-Atlas 6 mission, the first manned orbital space flight.

### OUT OF TEXAS' PAST—

# All Sons of Texas Czech Village Came Home From World War II

For many years the true story of the fighting men of Frydek has helped strengthen the faith of many Texans, including this one. Moreover, it was my story; I discovered it and first published it. Frydek (pronounced "FREE-deck") is a pretty little Czech-American village of 300 souls just 45 miles west of Houston and 3 miles south of U. S. 90. During World War 2 Little Frydek sent 67 men into military service!

For the whole duration of that unpleasantness the people of this little Austin County village prayed night and day for the safe return of all 67 men. They prayed in the parish church, named for Our Lady of Frydek—for Frydek is the name of a former pilgrimage town in Moravia, where many of these 300 families originated. And they prayed in their homes and in the fields as they worked their crops and livestock.

And their prayer was not just that "our" sons be spared, but that all 67 men from new Frydek be permitted to come home safe and well and strong in a world at peace.

After the war, when I discovered this village that is on no road map, I found a beautiful grotto of honeycomb rock in the churchyard, and beside it a gray granite monument inscribed with the names of the 67 servicemen, the last name being that of Father Francis Klinkacek, who left his sanctuary in 1941 to march away with several of his boys as an Army chaplain.

And as happy and exultant as a sung *Gloria* on Easter morning was the inscription below the names: *God Granted Their Safe Return*. That's right—every last one of the 67!

Ludwig Sodolak came through unharmed after 102 consecutive days of bitter fighting as a ski trooper. Emil Saha was wounded several times while pushing through Italy and across France into Germany in a tank. And Ed Mlcak, a B-24 pilot, was shot down twice over Europe and was listed for 51 days as missing in action. He turned up in a field hospital, but the doctors said he couldn't live. He not only lived; he completely recovered.

What a story! I researched the ancient Moravian legends about the mysterious lights in the sky (like UFOs) and the miraculous apparitions of the Blessed Virgin. The man who had bossed the concrete work on the grotto was Frank Smesny, then 70 years old, and it turned out that he had known Thomas Masaryk and had helped Masaryk campaign for his Progressive Party. Smesny related an old Frydek legend that even the parish priest had never heard.

Well, all this was very interesting, but last week, thinking of retelling the story here, I wondered whether Frydek had sent any men to Vietnam and Korea, and how they had fared, and

whether the Frydek novena continued.

On a Sunday, Ruth and I drove out a new superhighway, turned off at a scarcely remembered road and found the village little changed. There were fresh flowers in the grotto and before the servicemen's monument, indicating that the people had not forgotten. The new pastor was out of town, but his housekeeper sent us out to the farm home of Joe Sodolak (a relative of Ludwig), whose son Joe Jr., a storekeeper striker on a Da Nang pier team, is the only Frydek serviceman now in Vietnam.

We had a pleasant visit with the Sodolaks, who assured us that the prayers for Frydek's servicemen are continuing, with a rosary at the church every Saturday. And then, to wrap up

the updated old story, we went back to the village.

At a charming new tavern filled with friendly people we met the relatives and friends of Army Cpl. Peter Slansky, the only man from Frydek to die in the Korean War.

We drank to his memory, and nobody in the tavern asked why he had been killed in a limited war while 67 men had survived a great war. Because the answer, such as it was, was inscribed over the altar of the parish church, just across the road: *Pojd'te Mne Kteriz Pracujete*, which means "Come unto Me, all ye that labor." In Frydek, everybody labors, young and old.

Besides, as everybody pointed out, Pete Slansky is Frydek's only martyred hero. So far.

—Sigman Byrd

## AS/204 Date Change

(Continued from Page 1)

impact on the Apollo spacecraft. At this time, it is not known if it will affect the spacecraft for the first manned flight.

There were no injuries to test personnel. Extent of the damage to the 22-foot long cylinder-shaped service module was being assessed by NAA and NASA engineers. The service module was the only piece of flight equipment in the test cell at the time.

The spacecraft was undergoing a checkout prior to delivery to Cape Kennedy, Florida, for an unmanned Apollo flight on a Saturn V next year.

The service module houses a 22,000 pound thrust service propulsion engine to be utilized

for mid-course maneuvers of the Apollo spacecraft on its way to and from the moon. The system includes two titanium fuel tanks and two oxidizer tanks, each approximately 14 feet in length and about 4 feet in diameter. The test was conducted with alcohol and freon in the tanks to simulate the hypergolic propellant which would be used in flight. The pressurizing gas was nitrogen. One oxidizer tank and one fuel tank were damaged. The tanks were pressurized somewhat above normal operating pressure which is 180 psi.

## MSC Charm Club Schedules Lectures On Self-Improvement

A series of ten self-improvement classes will be presented by the MSC Charm Club beginning Wednesday, November 16.

The lecture meetings will cover styling and wardrobe, make-up instruction, and poise, and will be held at the Nassau Bay Motor Hotel every other Wednesday from 6 to 7 p.m.

Cost for this series will be largely defrayed by the Employees Activity Association and the cost will be \$5 per enrollee. Classes will be limited to 25 girls. For further information, call Jan Shrum, X3671 or Dorothy Newberry, X4385.

## Tech Library Open Two Nights a Week

The MSC Technical Library will change its hours of operation to accommodate those persons who wish to use the Library during evening hours. Effective November 7, 1966, the new hours of operation are:

Tuesdays, Wednesdays, and Fridays—9 a.m. to 4:30 p.m.

Mondays and Thursdays—9 a.m. to 7 p.m.

This schedule will continue on a trial basis for the next few months.

## Suggestions Need Complete Detail For Evaluation

When inspiration strikes and you reach for a suggestion form, take an extra few minutes to think your suggestion through. Sometimes a suggestor will very articulately define the problem; he will even wax elaborate in stating reasons for changing to his proposed method. But he may trail off without being specific enough in explaining exactly how he wants his idea put to use.

This places a burden on the evaluator, because he must develop the idea for the suggestor before it can be given a fair appraisal. This is unfair to the evaluator. Frankly, some otherwise good suggestions may not be adopted because busy evaluators do not have time to do a lot of developmental work on them.

So how about giving the evaluator a break? Put yourself in his shoes, and try to answer all the questions you would ask if you evaluated your suggestion.

Speaking of suggestions, how about submitting one NOW?



# Space News ROUNDUP!

## MANNED SPACECRAFT CENTER, HOUSTON, TEXAS EMPLOYEE NEWS

### Roundup Swap-Shop

(Deadline for classified ads is the Friday preceding Roundup publication date. Ads received after the deadline will be run in the next following issue. Send ads in writing to Roundup Editor, AP3. Ads will not be repeated unless requested. Use name and home telephone number.)

**FOR SALE—HOUSES**

4-bdr 2-bath brick in Fairmount Park, LaPorte, living room, family room, dining room, patio/den with fireplace, 2-car garage, corner landscaped lot, 2600 sq ft. J. C. Chruch, GR 1-1127.

Two lots in Bacliff, nine miles from MSC gate 5, \$900. M. Buford, UN 4-5573.

3-bdr 1 1/2-bath brick, 2-car garage, paneled den, fenced yard, central heat/air, 4 yrs old, school bus across street. \$2000 for \$3100 equity, \$111/mo payments. James C. Weaver, 1506 Webster St., 932-2371, League City.

3-bdr 1 1/2-bath brick in Alameda area, 1-car attached garage, central heat/air, paneled den, carpets, built-in kitchen, near shopping center, school bus at corner, on corner lot. Owner drafted. \$12,100. Stanley Spaeth, HU 4-3170 for appointment.

3-bdr 2-bath in Arlington Heights, 3 blks from elem and high school, large den, fenced yard, FHA appraised. Sell equity or can be refinanced FHA or GI. Sarah W. Lopez, HU 6-4609.

3-bdr 2-bath white brick Spanish in Clear Lake City, 2-car garage, separate dining room, 200-sq ft screen porch, circular drive, low equity. Assume 5 3/4% loan. Don Coryell, 488-1634, 1634 Neptune.

3-bdr 2-bath, built-ins, den, 1 blk elem school, fence. \$1500 equity. O. L. Adams, RE 3-1968.

**FOR SALE-AUTOS**

'55 Ford, xclnt cond, good work car. \$150. Kay Marsh, 534-2075 Dickinson.

1951 Ford 1/2-ton pickup, like new. G. W. Harvey, MO 5-0947.

1963 VW, sunroof, low mileage, xclnt cond. Nina Meier, 591-3330.

1952-Ford 1/2-ton pickup, ideal for hunting/fishing, mechanically perfect, \$195. B. G. Edwards, 932-4309.

1964 Ford Fairlane 500 sportcoupe, 289 2V, V8, 4-spd trans, factory air, buckets, console, new tires, xtras. \$1450. J. W. Colburn, MI 9-6361.

1956 Olds, factory air, body rusted, needs ignition work. \$75. R. F. Nugent, HU 8-3136.

1958 MGA, good cond, mech sound, \$500. Don Price, GR 1-3314.

1964 Falcon Future 2-door hardtop V-8, autoshift, factory air, radio, belts, vinyl int, tinted windshield, \$1250. Asa Yeaman, 658-3816.

1963 Corvette conv with 1965 body, 340-hp, 4-speed, racing green, AM/FM. \$2195. Noel Willis, MO 4-4877.

1966 Mustang, silver-blue, white vinyl top, air, automatic, 6-cyl, tinted glass, bucket seats, wire wheels, white walls, radio, other extras. \$2300. G. Shrum, 877-3109.

1964 Chevrolet Impala super sport, all super sport equipment including bucket seats, Daytona blue w/light blue interior, 327-hp engine, power glide, power steering and power brakes, tilt steering wheel, factory air, tinted glass, AM-FM radio. W. G. Pratt, Kemah 877-2954.

**FOR SALE—MISCELLANEOUS**

1963 Vespa Scooter, \$150. Glasspar out-board cruiser, \$1800. G. W. Harvey, MO 5-0947.

5-mo-old silver miniature poodle, good blood line, AKC, \$60. Kay Marsh, 534-2075 Dickinson.

Registered 1-yr-old toy silver poodle available for stud. Fee or pick of litter. F. L. Greene, 591-2305.

Ricoh autozoom 8mm movie camera, Keystone projector, Acme Mov-E-Lites; originally over \$200. Sell to best offer over \$100. Arthur Berkowitz, MI 3-7773, 2415 Flowers Apt 24, Houston.

Teacher of piano in Bay area for begin-

ning, intermediate, advanced and adult students. Qualifications include Master of Music degree and several years teaching experience at university, public school and private levels. Pamela Force, GR 1-1691.

Girl's 26-in Schwinn bicycle, like new, \$25. G. W. Harvey, MO 5-0947.

Imported French antique solid-brass bed, unique; see to appreciate. Roy Parker, NB 591-2253.

Homart dual wall furnace, xclnt cond with blower and thermostat, \$95. Virginia DeFoy, ID 3-4654.

Baldwin aersonic blond spinet piano, xclnt cond. R. F. Nugent, HU 8-3136.

Original oil painting of Gemini/Agena rendezvous, 18x24 in finished oak frame, ready to hang. John H. Boynton, MI 3-0926.

Double bed, mattress and boxsprings, condition fair. Madelyn Mitchell, MI 5-0396.

Fountainette, dispenses 3 cold drinks and soda water, drinks cost 1 1/2 cents each. Ann Hardeman, GR 1-4776.

Pink floral boudoir chair \$10; 2 pink pictures \$5; pink double bedspread \$5; 3 pink pillows (tri-shade) \$1 each. Mrs. W. R. Kelly, HU 2-7053.

Boy's 20-in bike, banana seat, hi-rise handlebars, good cond. \$12.50. P. P. McGathy, HU 6-5048.

**WANTED**

Practice piano, looks not important but must be cheap. Lois Ransdell, 534-4113 Dickinson.

Outboard motor up to 15-hp. Roy Alford, 932 2857.

Roommate to share 1-bdr apartment at Bay House Apartments. Diane Milner, NB 591-2509 after 5.

Car pool from Oak Meadows 8-4:30, have own car. Linda Menke, MI 3-5493.

Owner to claim brown size 9AA Johansen hi-heel pump, right shoe. Verby Balinas, Ext 4731.

Going rate for dependable ride. Hours flexible. Pickup and drop close in. Sig Byrd, JA 4-5624.

Pay rider wants ride from Broadway and Detroit (close to Bwy Apts. 4114 Bdwy) to MSC, shift 8 a.m. to 4:30 p.m., starting November 7, Mary Lopez, MI 4-0795.

Car pool or will pay from 2607 Cedar Drive, La Marque to Bldg 419, 7:30 a.m. to 4 p.m., Evelyn Villeneuve WE 5-3878.

### MSC Bridge Players Place in Sectional Meet

Winners of the October 25 MSC Duplicate Bridge Club Master Point were North-South, Edith Reid and D. Leighton, first; Mary Scott and A. Decker, second; East-West, Charlie Brown and B. Smith, first; and Mike Holman and John Kawasaki, second.

At the Sectional Tournament held in Galveston during the weekend of October 16, Mark Powell placed second in a section of the Men's Pairs, Max Cone and Bill DeGeorge had a Section second and placed sixth overall in the Masters' Pairs, and Leona Kempainen and W. Bryan won a section first and placed fifth overall in the Open Pairs.

The November 15 and 22 games will be part of the final Series Awards for 1966. The November 29th game will be the Club Master Point, and on December 6 there will be a Charity Master Point game.

### Gavel Handover



**NEW OFFICERS**—MSC Toastmasters last month installed new officers for the coming year. Left to right, they are Secretary J. Haptonstall, visiting Toastmasters Lieut. Gov. John W. Newman, Treasurer William H. Harris, Administrative Vice President C. W. Jones, President Richard J. Crane (receiving gavel from Newman), Sergeant-at-Arms M. Howard Sands and Educational Vice President Maurice Tremblay. Toastmasters offers members the opportunity to improve public speaking and conference abilities. The MSC Club meets the first and third Wednesdays of each month at 6 pm. Further Toastmasters information may be had from Secretary Haptonstall at 7361.

### 1966 MSC/EAFB Flag Football League Schedule

Date	Team No./Time	Date	Team No./Time	Date	Team No./Time
Nov. 11	8- 9/6 p.m.	Nov. 22	6- 2/6 p.m.	Dec. 5	11- 9/6 p.m.
	19-20/8 p.m.		17-13/8 p.m.		22-20/8 p.m.
Nov. 14	20-18/6 p.m.	Nov. 23	7- 1/6 p.m.	Dec. 6	1- 8/6 p.m.
	9- 7/8 p.m.		18-12/8 p.m.		12-19/8 p.m.
Nov. 15	21-17/6 p.m.	Nov. 28	21-19/6 p.m.	Dec. 7	2- 7/6 p.m.
	10- 6/8 p.m.		10- 8/8 p.m.		13-18/8 p.m.
Nov. 16	22-16/6 p.m.	Nov. 29	22-18/6 p.m.	Dec. 8	3- 6/6 p.m.
	11- 5/8 p.m.		11- 7/8 p.m.		14-17/8 p.m.
Nov. 17	12-15/6 p.m.	Nov. 30	12-17/6 p.m.	Dec. 9	4- 5/6 p.m.
	1- 4/8 p.m.		1- 6/8 p.m.		15-16/8 p.m.
Nov. 18	13-14/6 p.m.	Dec. 1	13-16/6 p.m.	Dec. 12	8-11/6 p.m.
	2- 3/8 p.m.		2- 5/8 p.m.		19-22/8 p.m.
Nov. 21	5- 3/6 p.m.	Dec. 2	14-15/6 p.m.	Dec. 13	9-10/6 p.m.
	16-14/8 p.m.		3- 4/8 p.m.		20-21/8 p.m.

### Retiree Offers Sage Advice To Newcomers

Retiring after a long and satisfying career, a federal employee wrote the following advice to young people entering federal service:

"I give you the advantage of working with others as the realization that cooperation is the best way to get mutual jobs done. In doing so, I offer these further guides:

Respect the views of others even though they may differ from your own: some may change your thinking.

Don't be obstinate; admit your mistakes and shortcomings.

Accept rebuffs and disappointments; life is full of them.

Be tolerant; remember that the world is made up of many kinds of people.

Be industrious; you can live to regret wasted time.

Be considerate if you expect others to be considerate of you.

Be courteous: the reputation of your office depends upon it.

Be gracious: it is the hallmark of gentlemen and gentlewomen.

Be truthful; reputations are founded upon truth.

Be forgiving: it will mellow your later years.

Be cheerful: it breeds happiness for those around you.

Take pride in your work and your office will be proud of you."

### Gemini's Paperwork Tiger



**COST CUTTER**—Phyllis T. Jenness receives Gemini Program Office Manager Charles W. Mathews' congratulations for having won the Administrative Management Society's Federal Paperwork Management Award. The award, presented at the Society's award banquet in Washington in September, was for Phyllis' efforts toward streamlining Gemini correspondence and documentation operations for a significant reduction of time, effort and cost to the government.

**Lane-Hopping:** Hopping is for frogs; Stay in your own lane!

# Space News ROUNDUP!

## SECOND FRONT PAGE

### AIAA Meet to Include 7 MSC Presentations

Seven MSC presentations will be among the highlights of the Third Annual Meeting and Technical Display of the American Institute of Aeronautics and Astronautics this fall.

The meeting will be held in the War Memorial Auditorium in Boston, Mass., November 29 to December 2. More than 5,000 aerospace scientists and engineers are expected to attend.

MSC presentations and their authors are:

"Collective Knowledge Gained from Gemini," Charles W. Mathews, Manager Gemini Program Office.

"Apollo Command and Service Module Progress," Dr. Joseph Shea, Manager Apollo Spacecraft Program Office.

"Development of Advanced Operational Support for Future Manned Missions," Christopher C. Kraft, Jr., Director of Flight Operations, and John Boynton, Flight Operations staff.

"Physiological Monitoring," Dr. Charles A. Berry, Director of Medical Research and Operations.

"Bio-Medical Factors and External Hazards in Space Station Design," E. H. Olling, Earth Orbital Missions Office, Advanced Spacecraft Technology Division.

"Orbital Space Station Design for Permanent Residence," James A. Chamberlin, Manager of Special Design and Analysis, Engineering and Development Directorate.

"Survey of Structures and Materials for Manned Reentry Vehicles," Joseph N. Kotanchik, Chief Structures and Mechanics Division, and R. Bryan Erb, SMD staff.

In addition to the above listed presentations, MSC Director Dr. Robert R. Gilruth is chairman of the Manned Space Station Design Challenges session on the afternoon of December 1.

The AIAA, 35,000-member professional society composed of scientists, engineers and others who work on the nation's space, aviation, defense and marine programs, has concentrated its biggest meeting of the year into five theme areas:

—Manned Orbital Flight in the 1970's: Those in charge of current and future manned space programs will discuss such topics as Lifting Entry Vehicles, Space Stations, Missions, Logistics and Future Launch Vehicles.

—Air Transportation: This theme explores Long-Haul Air Transportation, subsonic and supersonic; the Rough Air Problem, and total transportation solutions in high-density areas such as the Boston-to-Washington corridor.

—Space Science Experiments:

Manned vs. Unmanned, Astronomy, Science and Engineering topics comprise this theme.

—Propulsion Systems: A review, a debate and a look ahead at all aspects of rocket propulsion.

—Aerospace Technology Utilization: Five detailed topics examine applications of aerospace technology to society.

Besides the major themes, the meeting will include specialist sessions ranging from profit-making to marine systems.

The Technical Display and Lecture-Demonstration portion of the meeting may well fill the huge, new War Memorial building. Some 85 aerospace firms will be displaying hardware and most of these will be presenting lecture-demonstrations.

## Often the Hunted is Safer than the Hunter, Especially When Hunters Shoot Each Other

Hunting is one of the few sports that has its roots among the early settlers of this country. Just as our ancestors used to hunt for their daily food, about 20 million Americans each fall take to the woods and plains in search of game.

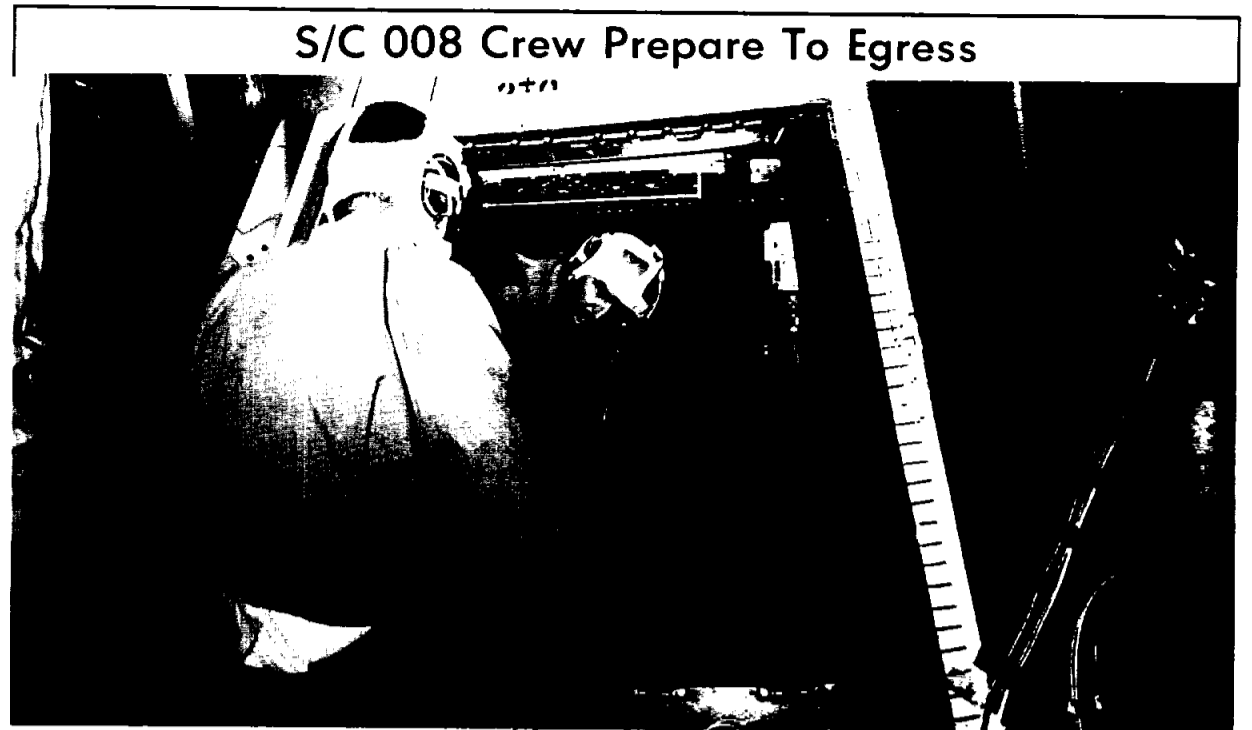
To our ancestors the territory was wide open and seldom did two hunters meet. Today, as the population has grown and the hunting areas shrunk, the possibility of a person meeting another in the woods has greatly increased. Each year the number of hunters is continuing to grow.

Sadly though, so are the number of deaths directly attributed to hunting accidents. Last year approximately 2,500 persons were killed by wild shots. Most of these deaths could have been avoided through better preparation, more knowledge, and by exercising greater care.

Adequate preparation should take several forms. One of the most important things that should be done before a hunt is to prepare yourself physically. Exercising is one of the best ways to get muscles back in tone, that have not been really used since last year's hunt. Also deep breathing should be practiced to increase lung capacity before leaving for one of the high altitude hunting areas.

If possible a person should arrive in the hunting area several days in advance of the hunt to get the lay of the land and to give his body time to acclimatize to the hunting areas.

Several weeks prior to leaving on your hunting trip, a hunter should have his eyes checked, especially if he wears glasses, to determine if a new prescription is needed or to see if long



**AFTER SIX DAYS**—Astronauts Joseph P. Kerwin (seated in hatchway) and Edward G. Givens Jr. (left), along with aerospace technologist Joseph A. Gagliano prepare to egress from Apollo Spacecraft 008 after the successful completion of the six-day test in the Space Environmental Simulation Laboratory's Chamber A.

## Apollo Ends Six-Day Chamber Test

The six-day manned Apollo systems test of Spacecraft 008 which was conducted in the Space Environmental Simulation Laboratory's big chamber was completed successfully Novem-

ber 1.

The crew entered the spacecraft October 26 and was reported in good physical and psychological condition after spending six days under simu-

lated space conditions. The three, Astronauts Edward G. Givens, Jr. and Joseph P. Kerwin and aerospace technologist Joseph A. Gagliano underwent a brief physical immediately after they climbed from the spacecraft.

Test officials, together with the crew, conducted extensive engineering and operations debriefings last week. At the conclusion of the six-day exercise, test directors reported the main objectives of the test were met and that the spacecraft systems performed satisfactorily.

Main objective of the test was to demonstrate the Block I Environmental Control System performance with spacecraft subsystems in modes representative of those planned for Apollo mission A/S 204.

Approximately 550 MSC and contractor employees were involved in the around-the-clock support of the test.

## Link Awarded Apollo Simulator Update Contract

NASA has awarded an 8.6 million dollars contract to the Link Group Systems Division, General Precision, Inc., Binghamton, N.Y., for modification equipment kits for updating Apollo mission simulators.

Under terms of the cost-plus-incentive award fee contract, Link will supply three sets of the modification kits for simulators located at MSC and the Kennedy Space Center, Fla. The contract covers the period from August 31, 1966, to May 30, 1967.

The Apollo mission simulators provide flight training for flight crews assigned to a specific mission. Nearly every detail of the flight, with the exception of weightlessness, can be simulated. This gives flight crews extensive on-the-ground training before the actual flight and provides them training in instant reaction to emergencies which might occur during flight.

range vision is as good as it possibly can be. Each person should prepare a small emergency kit containing waterproof matches, compass, knife and some basic first aid supplies.

Dress should fit the climate and should be of distinctive color so that it will stand out in almost all backgrounds to be easily seen by fellow hunters.

The ability to hit the target cannot be over emphasized. Prior to leaving for the hunt one should have spent several days on the rifle range to familiarize himself with his rifle and to recheck its sights.

During the hunt the basic rules for safe gun handling should be practiced by all members of the party. It is always a good idea to review with the party the basic rules and to establish and ground rules for the camp. Some of the basics are as follows:

- Alconol and gunpowder don't mix; leave the booze at home.
- Always handle the gun as if loaded.
- Never point a gun at something you don't intend to kill.
- Make sure of your target, never shoot at unidentified noises.
- Always carry your gun so that it does not point in anyone's direction.
- Keep the safety on except when firing.
- Check the bore frequently for obstructions.
- Always "break" the action of a gun before giving it to another person.
- Transport guns in a vehicle unloaded and in their cases.
- Always face opposite direc-

tions when hunting from a boat.

- Never cross a fence with a loaded gun.
- Never fire into a blind area; Know what's behind the obstruction you are shooting into.

Along with safety during the hunt, the true sportsman recognizes that there are other responsibilities of the sport. He should recognize that whoever violates the basic rules of consideration, hurts the sport for all who participate.

Some good rules are as follows:

- Respect for the property rights of others.
- Gain permission from the land-owner prior to hunting.
- Don't block the road; Park where your car won't be a nuisance.
- Never build fires without specific permission and extinguish them thoroughly when you do.
- Clean up all litter from your camping area.
- Respect the request of the land-owner or any member of his family.
- Leave all gates and fences the way you find them.
- Don't walk on freshly planted fields.
- Protect the plants, don't break branches on shrubs or trees.
- Always thank the owner for the use of his property; you may want to return someday.
- Hunt only during the season, this promotes good wildlife conservation by controlling the game population.