

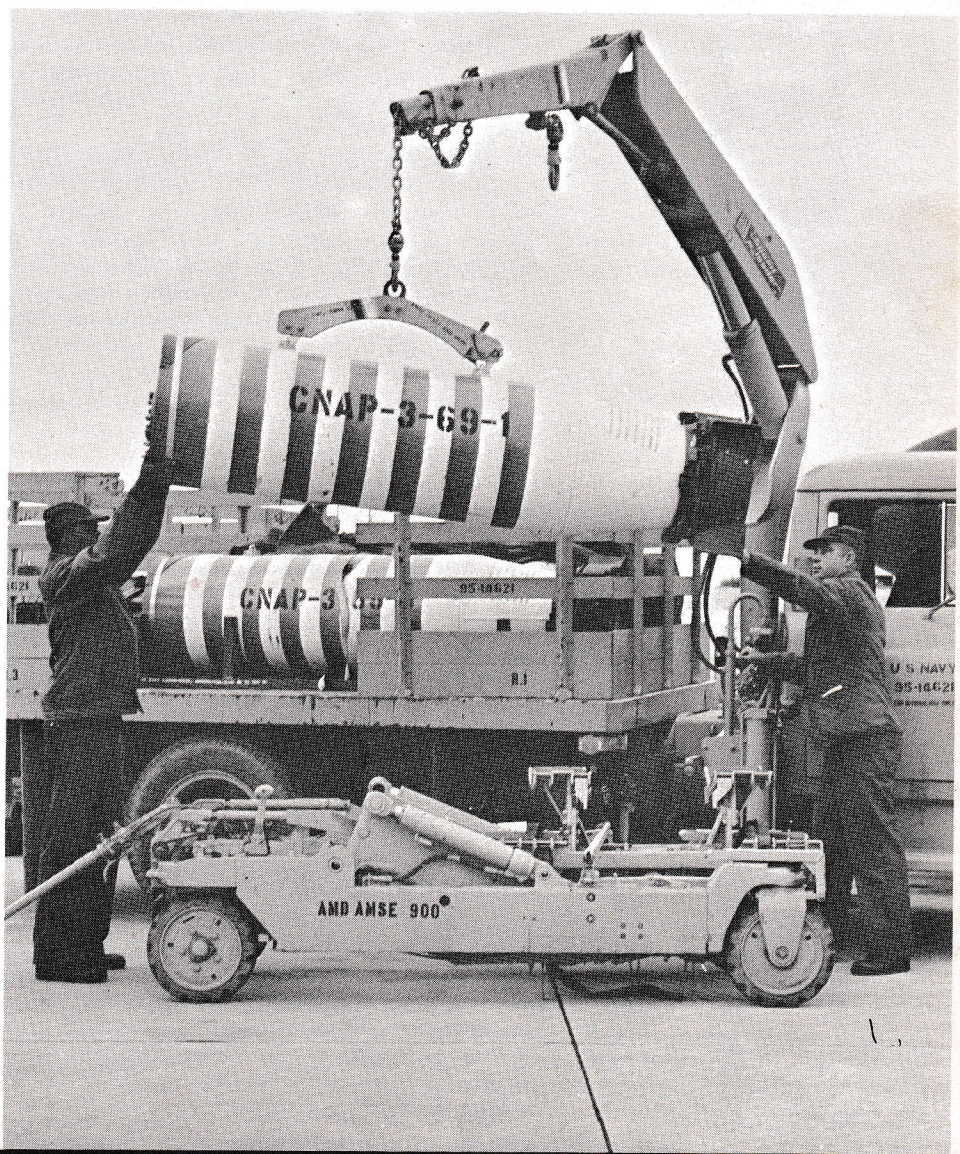
mine and depth-charge

THE TROUBLESHOOTER

▶ NEW 56-0 CRATE

▶ MINE HANDLING
MADE EASIER

▶ PUB SUPPLY



AN OFFICIAL NAVORD PUBLICATION

in this issue . . .

mine and depth-charge

THE TROUBLESHOOTER

Published by the Naval Mine Engineering Facility, Yorktown, Virginia 23491

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REGULAR FEATURES

FL Shoptalk	1
Hot Stuff	6
Job Right	9

ARTICLES

All Mines: Benny Sugg and the Mineman	2
Publications Supply	4
Saving Search Coils	4
Mines Handle Easier with New Truck	5
Ship Test Sets Complete	8
Cable Disconnecter	9
Mk 39-0: Curing a Misfit	6
Mk 52/55: Caps for Compensators	2
Cables Save Time	4
Mk 52/55/56: Switched Switches	6
Mk 56-0: New Crate Lugs and Sling	3
Bare Facts	9
Mk 56/57-0: Trim to Fit	7
Mk 57-0: High Cost of Living	6
Stray Voltage	8

COVER PHOTO: The HIAB High-Speed Loader truck, which is replacing the MJ-2 truck as mine shop equipment, shown at work during a Fleet Service-Mine Test at NAF Naha. For more see story and pictures, page 5.

1 JANUARY 1969

The Troubleshooter, an official NAVORD publication, contains technical information pertinent to the assembly, testing, and delivery of US naval depth charges and mines. It is both authoritative and directive in nature, and reference may be made to a particular issue as the authority for adoption of ideas promulgated therein.

Troubleshooter is also the official journal of the Rudminde Program a world-wide defect-reporting campaign designed to promote a high level of undersea warfare readiness in US naval depth charges and mines. The Program's basic instrument is NAVORD Form 8500/1 (2-68) Everyone who encounters problems with these weapons should report them via this form direct to the Naval Mine Engineering Facility as prescribed by NAVORDINST 8500.3.

ARTHUR R. GRALLA

Rear Admiral U.S. Navy

Commander, Naval Ordnance Systems Command

Troubleshooter is published quarterly by the Naval Mine Engineering Facility's Publications Division and printed by NPPSO-5ND, in accordance with NAVEXOS P-35. Contributions, questions, address changes, and requests for regular distribution should be addressed to: Editor, The Troubleshooter, Naval Mine Engineering Facility (Code GEP), Yorktown, Va., 23491, USA Request copies of back issues from the Naval Supply Depot, 5801 Tabor Ave., Philadelphia Each transmittal of this document outside the Department of Defense must have prior approval of the Naval Mine Engineering Facility.

THE OFFICIAL JOURNAL OF THE RUDMINDE PROGRAM

FL SHOPTALK

NMEF FLEET LIAISON DESK • 703/887-2411 • AUTOVON 555-3480 • EXTENSIONS 492 & 695

FL Shoptalk is a column of observations general and specific, prepared by members of NMEF's Fleet Liaison (FL) Department. Head of the department is LCDR Lyal M. Stryker. Other members include LT M.D. Horn, Jr., LT R.L. Anderson, LTJG T.W. Mudd, LTJG D.C. Tuttle, and ENS J.C. Owens, Jr.

As promised in Issue 3-68, this article inaugurates T-Shooter's first Fleet Liaison column.

Since last issue we have also had another Navy first: the planting of a minefield by a nuclear submarine, USS QUEENFISH (SSN 651). The plant, FSMT (CSP 1-69) at Maui, Hawaii, was 4.0 in every respect, with FL's LT Dick Anderson, as the NMEF representative. Thumbs-up, then, for all the participants: NAD Hawthorne for DELTA Assembly, NAD Oahu for final prep and post recovery analysis, USS QUEENFISH for loading and planting, and USS GREENLET (ASR 10) and EODGRUPACDET for recovery. Well done!!!

FL Reps for FSMT CNAP 3-68 at Naha Okinawa were LCDR Lyal Stryker and ENS Jocko Owens who brought back word that results were excellent. They report that LTJG Frank Bumstead of COMINEFLOT-ONE Staff, a graduate of Mine Warfare Staff Officers School (Class 68-01), provided the overall coordinating effort for this test in which one problem was chalked up as a design deficiency: More than 50% of the Mk 17 fire recorders used in Mk 52s were shattered by ricocheting cutters from the Type B switching devices. NMEF is taking a look at this since the \$74.85 cost per recorder precludes a 50-60% damage risk.

Activities participating in CNAP 3-69 included NOF Yokosuka, NAS Atsugi, and NASU Iwakuni for Charlie assembly; NAF Naha for final prep; VP-4 for planting; USS SABALO (SS-302) and USS FLORIKAN (ASR-9) for target duty; USS PHOEBE (MSC 199), USS PEACOCK (MSC 198), USS WOODPECKER (MSC 209), and USS WHIPPORWILL (MSC 207), plus EODGRUPACDET #29 for sweeping and recovery, and MOMAT 0304 for post-recovery analysis.

The supply angle

We were surprised to find activities unaware that NMEF stands ready to help with supply problems. So we say try us! Just one example: an incomplete MILSTRIP is wasted effort if instead of getting your job done, it comes back to you marked UNABLE TO IDENTIFY; INSUFFICIENT INFO. Or when it gets you an unacceptable substitute item. This is not so apt to occur with mine components but it can easily happen with support material such as tape, tools, paints, lubricants, electronic equipment, etc. If nothing else, then, try us when you need amplifying information. CONUS activities use AUTOVON.

Monitoring equipment

Readiness inspection teams that toured Atlantic and Pacific mine shops last year found that no two activities

seemed to have like equipment for monitoring their 110-volt shop current, or a standard system for using it. Those who had good reliable instruments had them in remote locations. Those who had good locations for monitoring usually had poor instruments.

To standardize these systems from shop to shop NMEF has determined combinations of instruments that will best supply supervisors and test personnel with a ready reference to line-voltage characteristics and test-area environment. These instruments will be procured by NMEF for the EX-CONUS shops. Procurement will begin in about a month but please don't take this as a signal to initiate requests for it. Distribution will be automatic when we get it. Meanwhile a specific requirement is being written into your mine manuals. It states that when Class-B testing you should verify 105 to 125 volts ac at 58 to 62 Hertz . . . also 50% or less relative humidity at 69 to 75°F.

Inspection time

Just over the horizon are the annual LANT and PAC mine readiness inspections. That makes now the time to get out your old reports and inspection formats and start Spring housecleaning, 'cause you'd better believe that the inspectors are already doing their homework. The teams will include returnees who will undoubtedly be looking into specific problems that turned up in last year's inspections, so don't wait!

LT Toby Horn will be NMEF's PAC inspection-team representative and LCDR Lyal Stryker is presently programmed as his counterpart for LANT.

A word to the wise?

New test set, tool list

It appears that NAVMINENGRFACINST 8011, which was originally planned to serve only for a year or so, is going to continue in effect for some time. That being the case it is now being entirely revamped into a new direct-reading format which will make updating and increasing or decreasing activities' allowances far simpler. Specifically, those "multipliers" long used in NAVORD Lists are being dropped. In their place will be a code number for each activity, located in a column adjacent to the items listed. This way you will simply locate the item, then read across the page to your activity-code column, and there read your exact allowance. When a change to increase or decrease is necessary for one activity it will thus only affect items for that activity and none of the others. Consumables will not have spe-

Continued on page 4



BENNY SUGG and the MINEMAN



During recent mine readiness inspection trips questions concerning the Beneficial Suggestion Program show that there are still gray areas of understanding as far as military applicants and the mine program are concerned. Those in the military, especially the lower rates and those stationed in more or less remote areas, are inclined to believe they are left out of the Benny Sugg picture. Not so.

In April 1966 SECNAVINST 1650.24 authorized benefits of the program for all military personnel. Since then numerous awards have been made to military men and women all over the world for their contributions. According to NAVNEW 245-68 of 15 September 1968 Navy and Marine-Corps personnel submitted more than six thousand suggestions, which resulted in first-year savings of better than \$7 million to the Navy. To quote: "In return for their concentrated efforts to effect economies and improve operations, safety, and morale, over 1,400 personnel received \$136,785 in cash awards. Although all rates and ranks are eligible to participate in the program, personnel in pay grades E-4 through E-9 received more than 65% of the total awards. A number of contributions are currently being processed for wide adoption and personnel will be paid additional cash awards.

"This incentive, now available to all Armed Forces personnel by Congressional law, is expected to yield vast monetary benefits to both Government and personnel whose ideas are adopted."

All hands apparently understand that the Benny Sugg aims to stimulate practical thought . . . that it is sort of a mobile suggestion box that provides financial rewards for both suggester and management . . . that it's scope is practically unlimited since a suggestion can relate to just about anything you can think of. What seems not to be understood has to do with Benny Sugg submissions and review criteria. This is especially of concern at activities where there is no Awards Administrator or Committee, or where there are no review personnel technically qualified to judge the suggestions.

Enclosure (3) to revised SECNAV Instruction 1650.24A, dated 10 September 1968, defines the procedures to be followed upon submission of a Benny Sugg and should answer such situations. Use of Suggestion Form NAVSO 12450/8 (Rev 12-65) is specified as a help in the processing of suggestions. Lacking this form, a standard memo can be used if it gives a title to your suggestion, describes the problem, and describes your suggested solution. Such

memos should also include the clause, "I understand that the acceptance of a cash award for the use of this suggestion by the United States Government shall not form the basis of a further claim of any nature upon the United States by me, my heirs, or assigns." It must also be signed and dated.

It is preferred, of course, that memo-type submissions be kept to a minimum. So when you get the opportunity, stock up on enough forms to cover all your needs. With that done there should be no reason for minemen anywhere not to submit their bright ideas. The mine program can't help but benefit and, with luck, the mineman should profit too.

MINE MK 52/55- 1,3,4,5,6:

CAPS FOR COMPENSATORS

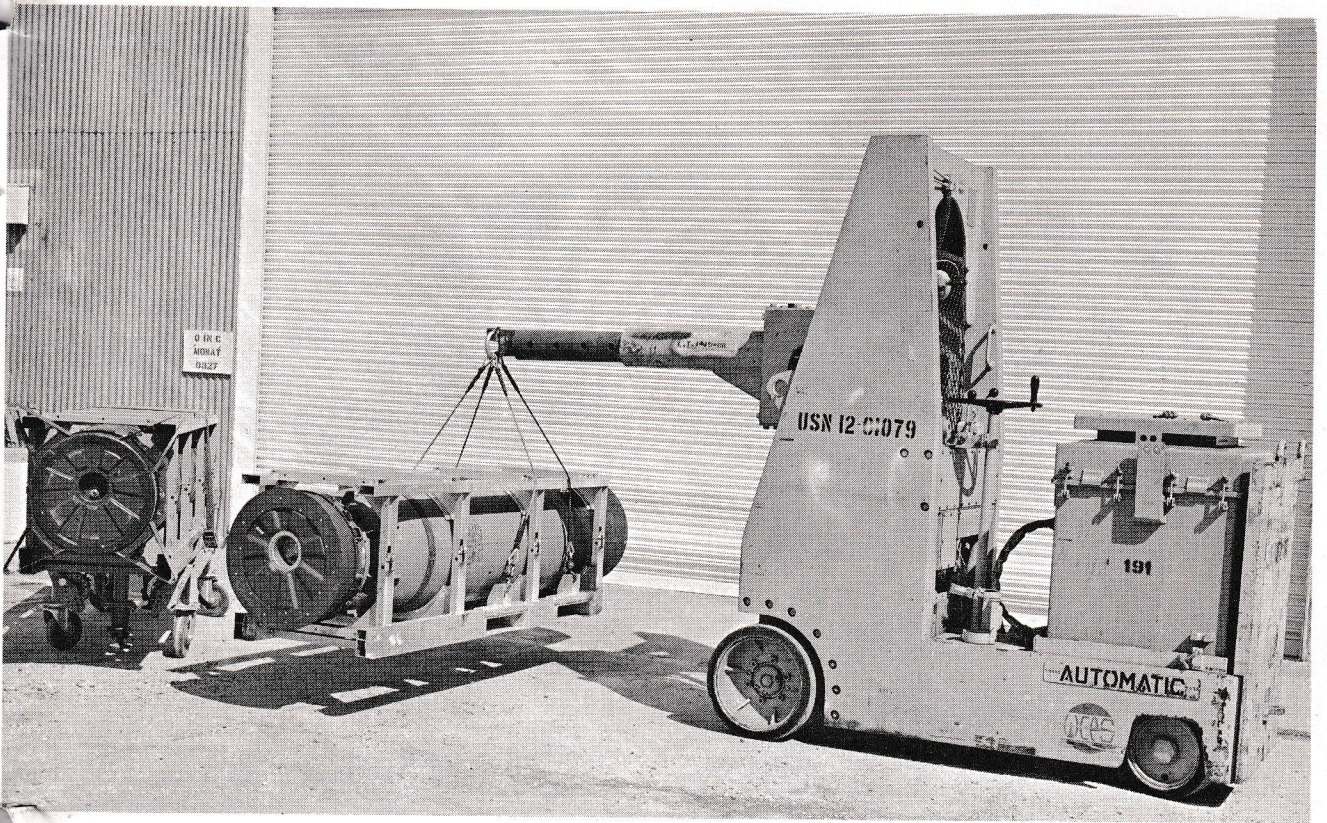
MNC Donald G. Duncan of MOMINEASYULANT has reported difficulty in keeping the water-inlet fittings sealed on Depth Compensators Mk 3 installed on mines being maintained in storage configurations. He evidently had problems with the specified tape refusing to adhere to the surface of the compensators and thereby providing a satisfactory moisture barrier.

In investigations pursuant to Duncan's report, however, the specified tape has been found satisfactory when the surface to which it is applied is clean and dry. Too, only Duncan's activity has reported this problem, so it does not appear to be of universal concern . . . unless others have also had the problem but neglected to report it.

As for the substitutions of grease for the tape, as was suggested, investigation reveals that grease is not a desirable agent for this particular application since it cakes and hardens with time, and causes blockage of the passage. Oil, which was also suggested, creates a messy situation of drainage when the mine case is handled.

A solution to this problem that will work when the tape will not is to use an extra protective cap MS 25178-10 from Parachute Control Unit Mk 66. FSN for these caps is 9Z5340-682-2474. Simply press the cap in place over the periphery of the nut which retains the compensator's water-inlet fitting.

The cap will be held in place by friction fit. As with the tape, the cap must be removed when the mine is prepared for planting. A warning tag to so remind final preparation personnel should therefore be installed.



MINE MK 56-0: NEW CRATE, LUGS, AND SLING

A NEW mine crate has been designed to contain the Mine Mk 56 in as few separate sub-assemblies as possible. Developed by NOL White Oak and the Naval Weapons Handling Laboratory at NAD Earle, it is expected to become available in 1969.

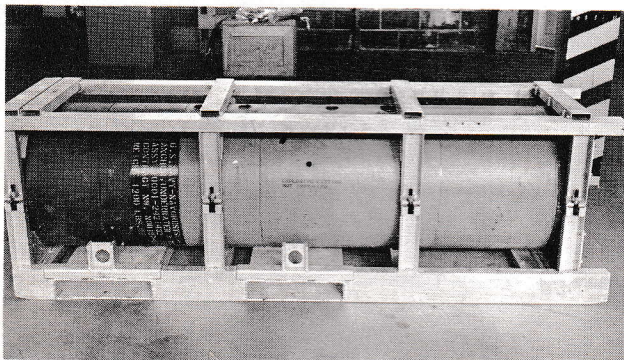
The new crate has the same designation as the mine: Mk 56 Mod 0. In use it will make it possible to ship Mk 56 mines in Assembly Configuration D (that is, with mechanism section and anchor married), whereas the mechanism section was formerly shipped in its own crate (Mk 102 Mod 0), the anchor was shipped on a pallet, and

the explosive on drill sections each in a crate Mk 101 Mod 0. The 101 will continue to be used for these sections and Crates Mk 102 and pallets will also continue to be used . . . for shipment and stowage of spare mechanism sections and anchors, respectively.

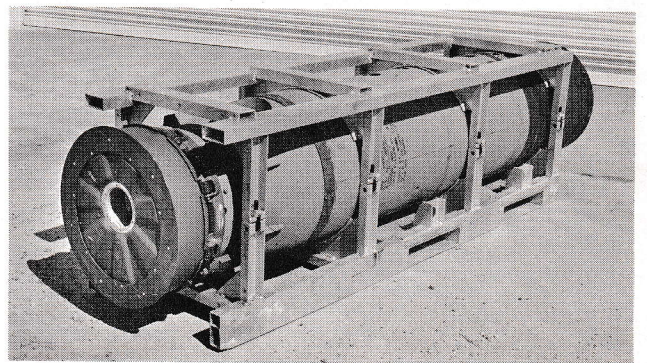
Accepts All Configurations

The married mechanism section and anchor fit entirely within the confines of the Mk 56 crate, in the attitude in which the Configuration D mine is most apt to be transported or stowed. The new crate also accepts Con-

Continued on page 8



Mine Mk 56 Mod 0 stored in its new Mk 56 Mod 0 crate in Assembly Configuration D . . .



. . . and in Assembly Configuration A. Elongated forklift pockets provide for shift in center of gravity.

FL SHOPTALK

Continued from page 1

cific allowance figures in cases where requirements will drastically differ from one activity to another. Where allowance figures are assigned to consumables they will be for items known to be necessary to maintain weapons assigned to the affected activity.

So does this remind you of a needed change . . . maybe an increase or decrease in allowances assigned under the old system? If so, please reference this article and send your request to NMEF so we can incorporate it into the new 8011 revision. Do remember that requests for increases must be realistic and by that we don't mean an accurate figure plus a "J" factor for breakage. Figures and justifications will be juggled against your weapons allowance, mission, etc., then assigned. Justify requests for increases, please.

Mr. Mudd

If you've read the masthead for this column you will have noticed that LTJG Tom Mudd has joined us in FL since Issue 3-68 went to press. Reporting in from Naval Hospital, Portsmouth, Tom was previously assigned to Sigonella and is a second-timer at NMEF having toured in the FL Department once before: from November '63 to July '66.

MINE MK 52/55-3,4,6:

CABLES TO SAVE TIME

CLASS B testing Pressure Detector Mk 1 in conjunction with the Firing Mechanism Mk 22, using Test Set Mk 266, is a time-consuming job. The bottleneck is that 16-hour wait for the solution-separation current to stabilize before the test procedure can be started. Each 266 test set comes with two Accessory Sets Mk 17. That makes six pressure pots and six each of Cables CA-34 and CA-35 available. Six, of course, is better than one. It means you can test six assemblies at a time. But there's still that 16-hour wait before you can B-test the next six, and for an outfit with many assemblies to test and a limited number of test sets this can eat up a lot of time.

The answer, coming late in 1969, will be the addition of extra Cables CA-34 and CA-35 to Accessory Set Mk 17. With each such pair, but no increase in number of test sets, one more assembly can be simultaneously stabilized for fifteen of those requisite sixteen hours before testing. There will be 12 extra cable sets per accessory set, which means 24 for each test set.

Each assembly will of course require a Battery BA-340/U for the stabilization process. It is not feasible to fabricate extra cables locally since all of the material is not available in the federal stock system. When they become available all activities holding Test Sets Mk 266 will be notified. Operating instructions for their use will provide a system for testing 30 assemblies with one test set in 21 hours.

ALL MINES:

PUBLICATIONS SUPPLY

IF YOU have read the introduction to your first revision to OP 3504 Vol 7 you are aware that the inventory manager for Cog-I publications, formerly the Naval Supply Depot, Philadelphia, has had a name change. The new name is Naval Publications and Forms Center (NPFC). The address and services remain the same.

All mine publications stocked by NPFC are identified in OP 3504. Many activities seem not to understand that requisitions for these pubs should go direct to NPFC, not to NMEF. The form to use is a standard MILSTRIP, and the way to get it there, if you really want fast service, is by AUTODIN – the Department of Defense Automatic Digital Network. "It is disconcerting," says NPFC, "to find activities that have or have access to AUTODIN – or at least to mechanized keypunch equipment – still sending handwritten requests by mail. We are geared to react rapidly to mechanized, preferably AUTODIN, requests. When an activity uses other methods for MILSTRIP requisitions they force us to process manually thus causing delays and the possibility of human error. Don't assume if you don't have AUTODIN that you don't have it available at a nearby activity," they say. "Check on it now and get your lines of communication established."

Another NPFC gripe is the receipt of MILSTRIPS that lack the stock number for the desired publication. There's really little excuse for mine activities contributing to this problem since stock numbers for all mine pubs are given in OP 3504 and stock numbers for all pubs are in NAVSUP PUB 2002. You should not be disturbed, by the way, if you find some stock-number listings that differ from those in OP 3504. Recently it became necessary to redesign the stock-numbering system for most ordnance publications. This means that the listings in 3504 and 2002 will ultimately have to be changed. Meantime, though – for a year at least – you can use the old (current) stock numbers and NPFC's computers will convert them to the new ones and honor your requests automatically.

So much for requisitioning pubs. Another area of confusion seems to be that of initial distributions. Why, we don't know. It's all explained in the introduction to OP 3504 Vol 7 Rev 1 far better than can be done in the space we have here. If you are one who has questions, please see if the answers you need aren't there.

ALL MINES:

SAVING SEARCH COILS

Rudmines continue to report search coils being received bent and otherwise damaged. Apparently they go into storage as Code A and come out Code H. All we can think of is a repetition of advice given, off and on, for three years or more: give them tender loving care . . . the kind spelled out in OP 1452.

One thing not mentioned there: when you do receive damaged coils do not try to straighten them. Straightening can change a coil's electrical characteristics.



MN3 J.L. Daniel, MNSN D.R. Mick, MN3 T.A. Lawson, and MN1 R.F. Smith (left to right) unload from truck directly onto Aero 33C Bomb Loader . . .

MINES HANDLE EASIER *with NEW TRUCK*

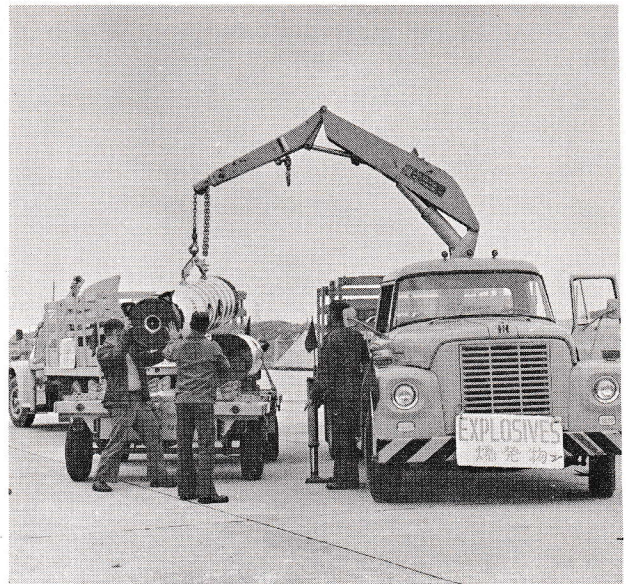
WITH the use of the latest in handling gear, mines moved smoothly from shop to aircraft during Fleet Service-Mine Test CNAP 3-69 at NAF Naha. Thanks to the cooperation of NMEF test observer, Ensign J. C. Owens Jr. and the alert eye of a NAHA photographer we have a picture sequence of the operation of new mine-shop equipment.

The new truck, replacement for the MJ-2 bomb service truck, is equipped with a HIAB speed loader. It is capable of loading and off-loading itself as well as the Aero 51A bomb trailers it pulls. The 51A trailer is a replacement for the older Mk 2, 3, and 4 bomb trailers.

The articulated boom of the speed loader is hydraulically powered with controls back of the truck cab where they are operated by a mineman from the ground. Out-riggers, also hydraulically powered, provide a steady platform for crane operation.

Mines can be unloaded directly onto the Aero 33C Bomb Truck which is capable of positioning the mine at the aircraft stations without further handling. It not only hydraulically lifts the mine to the bomb rack, but can also tilt its nose up or down 15 degrees, to match the attitude of the aircraft.

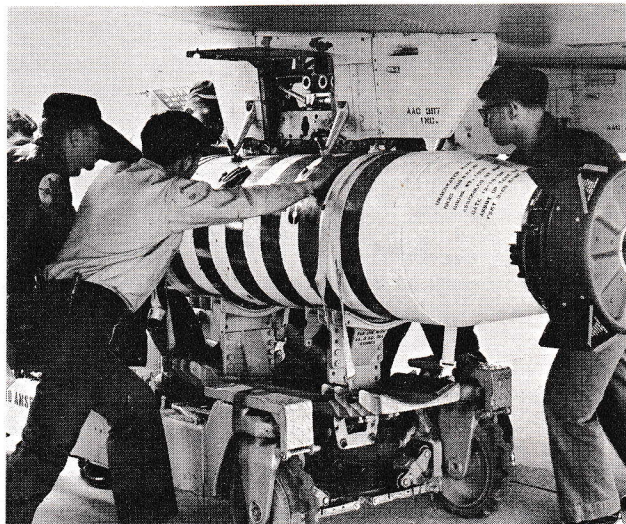
Two models of the new truck are available, a two-ton 4 x 2 for which the equipment code is 0445-01 and FSN is 2C2320-763-3141, and a five-ton 4 x 2, code 0603-01, SN 2C2320-763-3135.



. . . or from 51A Bomb Trailer.



The 33C and mine go to the aircraft, . . .



. . . and the mine, with an assist from AOs, is raised to the Aero 65A Bomb Rack. Click!

by B. Arnaclebutt, MNC

HOT STUFF

MINE MK 57-0:

High cost of living

Dear Barney:

In ordering spare swage fittings to use with Cable Dispenser Mk 1 during maintenance and overhaul of Mk 57 mines we found the price was \$100.00 each. Are they kidding or is this a misprint in the stock catalogue?

MN1 PTH

Dear PTH:

High or not, \$100 per was the listed price for fitting OD 11010 as of 19 March 1969. On 20 March (today) the story is different. Thanks to some fast footwork between MINEPAC's LT Bill Roberts, NMEF's LT Toby Horn, and TCMC John Opocensky, SPCC, the tab is a neat \$2.90 each. At that price you should be able to order spares to your heart's content.

B. Arnaclebutt

MINE MK 52/55/56 FSMT:

Switched switches

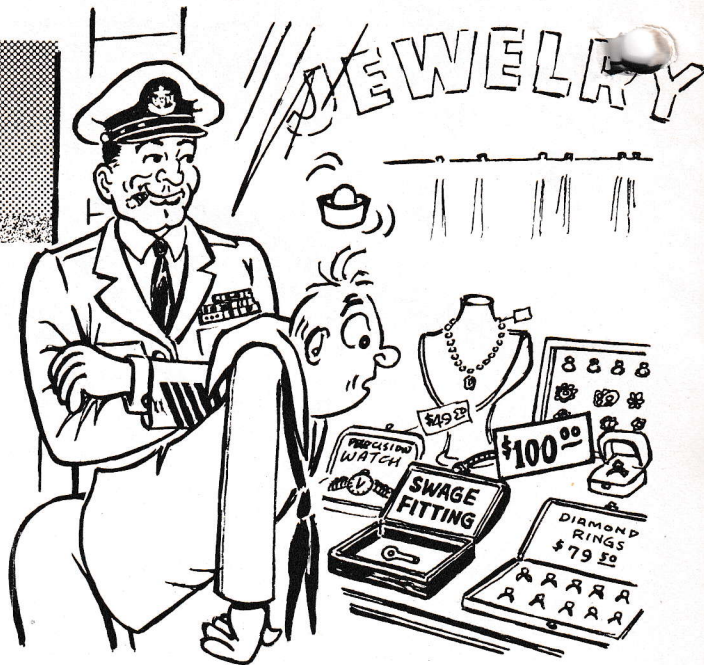
Dear B:

How come two types of switching device to instrument Mks 52, 55, and 57 FSMT mines? Arming Devices Mks 5 and 11 are so similar I can't see why both can't use the same switching device and the Type F for the 57 surely appears to be a better design than the Type B used in the 52 and 55: simpler,

USE 3504 VOL. 7, PLEASE!

On page 4 is a story which points out that NMEF is receiving requests that should be going direct to publications stock points. Since it was written we have received nearly 50 more. Yes, we take action. But it's indirect action, time-consuming because your requests can't get serviced until we send them elsewhere.

So again we say check Section 8 in OP 3504 Vol 7, which lists the stock point for every mine pub there is. Send requests direct to these points and we bet you'll find pubs supply ten times as good as you think it is now.



easier to install, no cutter to go flying around in the case, restorable.

HAM

Dear Ham:

NMEF agrees with you on all counts. Both arming devices could use the same switching device and Type is the better by far.

So why have we stuck with the Type B for the 52 & 55 mines? Simply because there are plenty in stock and we hoped to use them up in this way. Dollars. Data now coming to light, however, may make such savings too costly. See FL Shoptalk in this issue where Toby Horn is talking about flying cutters tearing up the fire recorders.

B. Arnaclebutt

MINE MK 39-0:

Curing a misfit

Dear Barnacles:

Interference of a crate cross member makes it impossible to engage a hook of the mine carrier Mk 46 with the after suspension lug of Mine Mk 39. If it is all right to shift the mine forward in its crate the hook would engage safely.

H B M

Dear HBM:

Shift the mine in the crate . . . or the crate on the mine. Take your pick. Whichever you do, you'll find there's enough leeway to make the carrier fit okay.

B. Arnaclebutt

MINE MK 56/57-0:

Trim to fit

Dear Chief Butt:

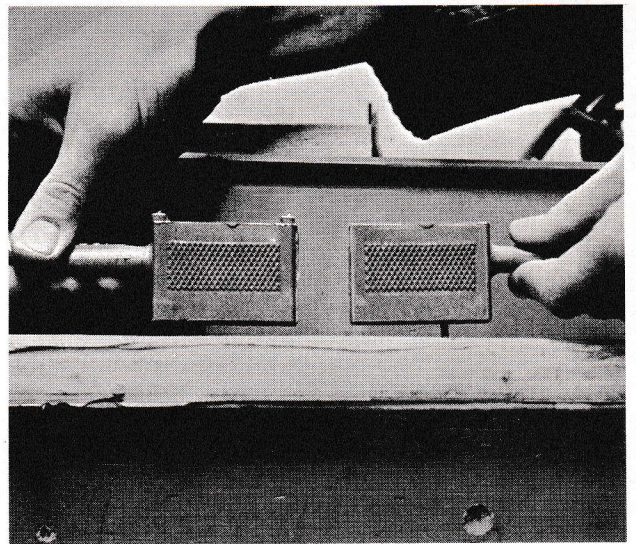
During assembly of Mines Mk 57 Mod 0 for an FSMT we encountered Cables CA-88 with connectors on their Junction Box Mk 43 ends that were too high to fit under the cover of the Instrument Rack Mk 2 Mod 1. Our solution was to trim off the two projecting cushion lugs (or pads) on top of the plugs. But how come they aren't manufactured short to begin with? After this treatment the cover fit snugly. Not too hard to do but it took time. Why can't these P1 plugs be designed to fit?

MN1 PTH

Dear PTH:

They are. But they weren't until your oversized P1 plug problem was discovered in tests of early procurement samples, and the drawings were revised.

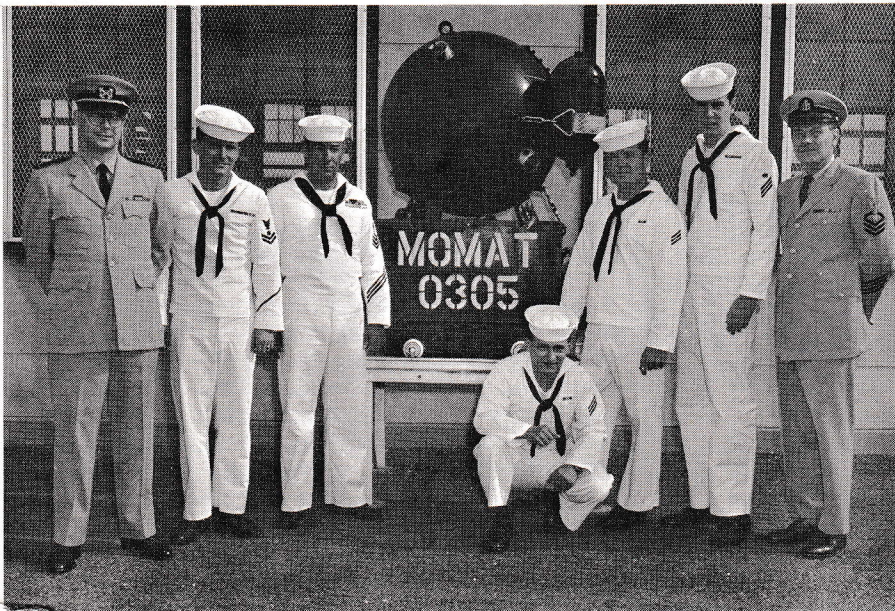
Others who may get CA-88s manufactured under the early contract can use the same fix by cutting off the pads. Scissors or knife will do but diagonal pliers are best. The oversized plugs can be detected by comparing the height of the P1 to the P3 of the Cable CA-72 installed next to it. You may also find the same problem when you get around to Mine Mk 56 which also uses the CA-88.

B. Arnackbutt

BEFORE AND AFTER: The pads have been trimmed from the P1 connector of the CA-88 (right) to make it fit.

Goof

Parachute Pack Mk 20 Mod 0 was erroneously described as being used on Mk 26 and Mk 55 mines in "Putting on the squeeze" on P4 of Hot Stuff, Troubleshooter 3-68. It is used only on Mines Mk 36 Drill, and Mk 52 Service and Drill.

B. Arnackbutt

Members of MOMAT 0305 posed for this shot back home at NAS Whidbey after returning from Subic where they shared in the operation that earned a commendation for the NAVMAG. The men, who were missed in the Subic photo on page 5 of Troubleshooter 2-68, are, (left to right): WO-1 P.E. Dechene OinC, MN2 Charles A. Parker, MN1 Christian M. Johnson, MN3 Joseph J. Jakubisin Jr., MN3 Ralph L. Blakeslee, MN3 Michael S. Flynn, MNC Frank A. Eck.

MN1 Johnson has since been transferred to NAF Sigonella and MN3 Flynn to MOMINEASYULANT, Charleston. MN3 Blakeslee, whose story is told on page 11 of Troubleshooter 3-68, is in Enlisted Reserve.

TROUBLESHOOTER 4-68

CRATE

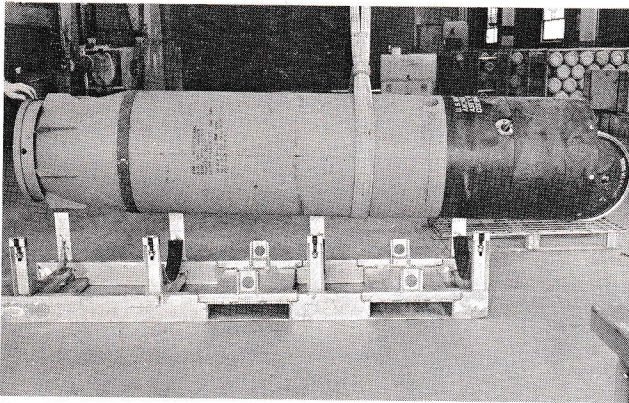
Continued from page 3

figurations B, C, and A but for A and B the crate does not afford much protection to the ends of the mine. This means greater care must be taken in handling, to avoid damage.

The new crate is made of aluminum and is 92-3/4 inches long by 30 inches high by 27 inches deep. It has fork-lift pockets designed to accept shifts in the center of gravity of the mine in different assembly configurations. Four eyes on the bottom rails of the crate provide lifting points for overhead hoists. Hinged bolts pinned to the bottom half of the crate secure the two halves. Provisions for locking or nesting make it possible to stack them up to five high when the explosive section or its substitute drill section is left off the mines. With the top half positioned under the bottom half, the Mk 56 crate makes an excellent work stand or cradle for the mine.

Yes— No Lugs

It has been decided that the suspension lugs for the Mine Mk 56 will not be supplied with the mine case (that is, with Mechanism Section Mk 1). This is a departure from logistics procedures for older air-laid mines. The reason: both the Mk 17 lug used for 30-inch suspension,



Nylon Choker Sling Mk 101 Mod 0 handles mine out of crate.

and the Mk 18 lug used for 14-inch, are of an expensive titanium alloy . . . too expensive for NAVORD to supply one set of each for each Mk 56 Mine. So the lugs will be zero-level items, to be requisitioned separately.

This will introduce some changes in mine-handling habits. As long as the mine is in its Mk 56 Mod 0 crate, forklift pockets and hoisting lugs on the crate will take care of any handling problem. But what happens when the mine is out of its crate?

Wire-Rope Slings Are Out

The use of conventional wire-rope slings on the 56 is forbidden. The gear you'll need, then, is a new non-chafing Sling Mk 101 Mod 0 which will become available to the fleet at the same time as the mine. The 101 is a single-wrap choker of 3-inch wide reinforced nylon with a capacity of 5000 pounds. All Mk 56 handling tasks can be performed easily with this sling.

MINE MK 57-0:

STRAY VOLTAGE

TWENTY Radio Interference Filters Mk 4 were shipped from MOMINEASYULANT to NMEF for evaluation of a reported stray-voltage problem. These units were reported as having indicated presence of 1.0 to 2.0 volts dc when performing the required stray-voltage test prescribed by OP 2718. As soon as these units were received, they were checked for the presence of stray voltage with Multimeter AN/PSM-4B. Results were negative.

To verify integrity of the filters and try to explain the reported voltage a series of capacitance, inductance, and leakage-resistance tests have now been performed in accordance with manufacturing documents. In these tests 100 volts dc was applied during the leakage-resistance checks and all units indicated presence of voltage. Subsequent shorting of the filter terminals and retesting revealed no presence of stray voltages. If the filter terminals were not shorted by use of a shorting plug, voltage would remain on the capacitors indefinitely. Voltages measured were 1.6 to 17.7 volts dc after 96 hours, and 0.95 to 6.4 volts dc after 19 days.

While OP 2718 does not require an electrical leakage test, it is possible for a similar charging effect to be introduced if the multimeter used in tests that are prescribed is switched through its resistance scales while connected to the filter. For this reason, shorting plug must be installed on the input end of the Radio Interference Filter Mk 4 before and after stray-voltage tests.

These plugs (OF11014) are supplied with the filters but are not presently stocked as separate items. This is also true of the plugs for the Radio Interference Filter Mk 3. For this reason they should be retained for reinstallation on filters from recovered Drill and FSMT mines.

A forthcoming change to OP 2718 will require installation of shorting plugs on the input ends of Radio Interference Filters Mk 4-0 before performance of Class C tests.

ALL MINES:

SHIP TEST SETS COMPLETE

Some activities have been returning test sets to stock points minus auxiliary units such as power supplies, accessory sets, and connecting cables that are normally supplied as parts of the test sets. This is bad. When such sets are received they end up in Code G (incomplete), uselessly waiting for someone to find time and money to make them serviceable. In this year of DOD money and people cuts on the grand scale, that does mine warfare readiness no good whatsoever.

Latest to receive this treatment: Sets Mk 268 minus Power Supply Mk 94, and Sets Mk 264 minus Power Supply Mk 93. The unhappy recipient: QA Department, NAD-Hawthorne.

Do You do this Job Right?

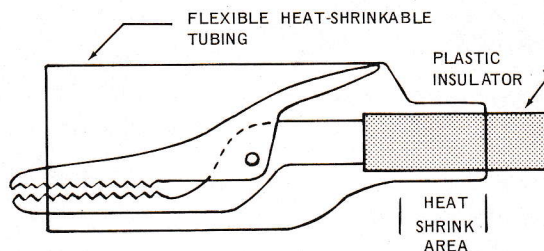
MINE MK 56-0:

BARE FACTS

RECENTLY a Rudminde from Charles Wright of NWS Yorktown reported that during assembly of Mine Mk 56, the bare clips of the case test plug (DWG 2422970) has a tendency to lay over and contact the case. If this happens while you're performing the stray-voltage test on the short leg of CA-71, it would show up as a direct short and cause erroneous readings.

His problem, along with the recommendation that insulating boots be installed on the clips, was referred to NMEF's Weapons Engineering Department who say that appropriate rubber boots are fine if you have them. If you don't you can make a good fix using heat-shrinkable tubing.

To do so, cut a two-inch length of 1/2" diameter tubing and slide it over the clip to a point where the tubing covers about half of each clip's plastic insulator as we show here. Next, heat-treat that portion of the tubing which covers the clips' plas-



tic insulators with the flame from a match or cigarette lighter. This will shrink the tubing and firmly adhere it to the insulator.

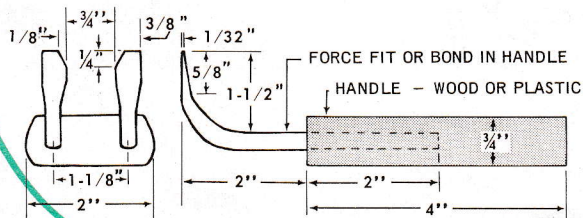
This fix can also be applied to the other test plugs used with Mine Mk 56, such as on the anchor (Plugs DWG 2422916 and DWG 2430189) and on explosive section (Plug DWG 2422969).

The tubing is available as Insulation Sleeving, Electrical, MIL-I-23053 Type 1, Size 1/2", FSN 5970-812-2967, at 12 cents per foot.

ALL MINES:

CABLE DISCONNECTOR

A Cable Connector Extractor tool that will help you disconnect those stubborn battery-cable connectors on the newer modular-type mines has been devised by M. Griffin, shop planner at NWS Charleston. It acts as a claw hammer does when used to pull a nail. Its use should prevent ruptured cable jackets and bent or otherwise damaged connector pins to say nothing about broken fingernails and high blood pressure.

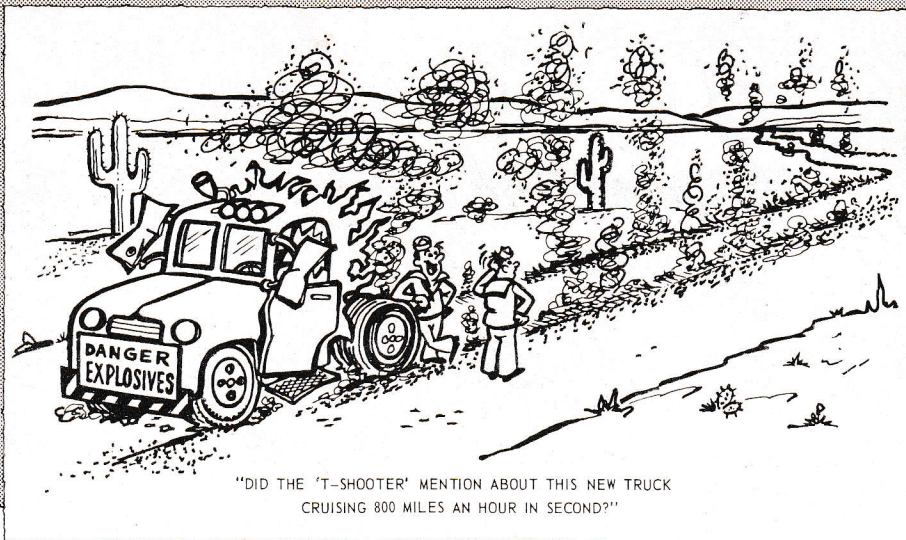
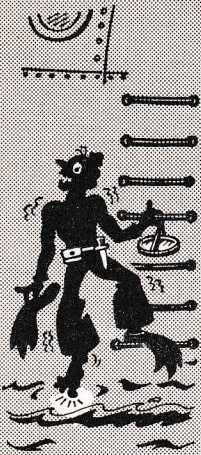


Cable Connector Extractor

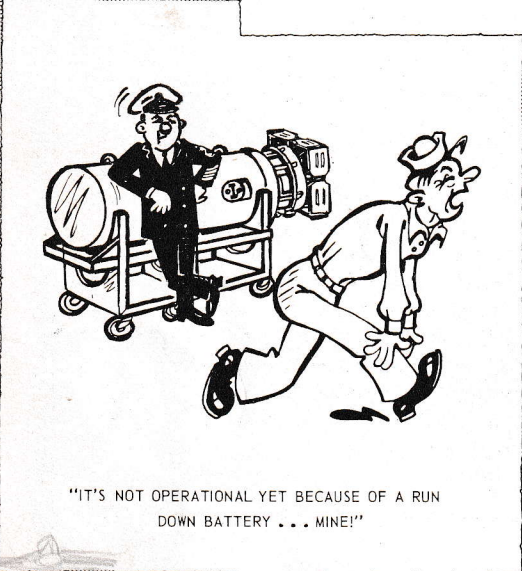
Griffin's sample tool has been reduced to a drawing with some refinements to the original after being put through its paces by our engineers. As shown here it should take care of any connector except those on components that are protected by a fence, where there is not enough room for the tool to be inserted.

If this Cable Connector Extractor appeals, you can shape 3/16 or 1/4-inch round stock in steel or brass to make one. Shape the handle out of a scrap of wood or plastic to fit your hand and you will be in business. The tool will not be put in the supply system.

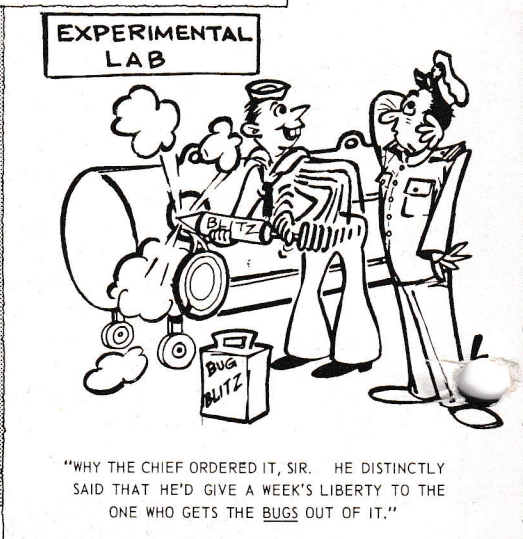
The Editor



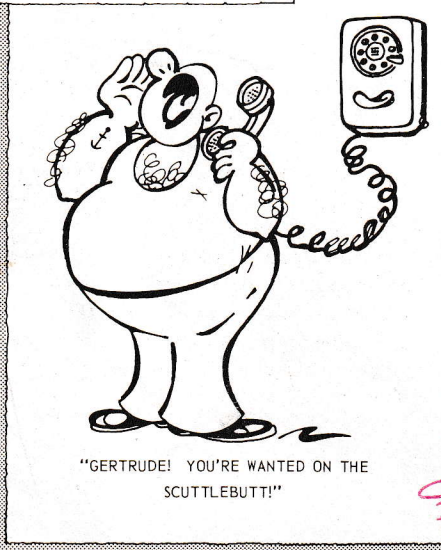
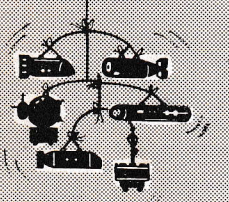
"DID THE 'T-SHOOTER' MENTION ABOUT THIS NEW TRUCK CRUISING 800 MILES AN HOUR IN SECOND?"



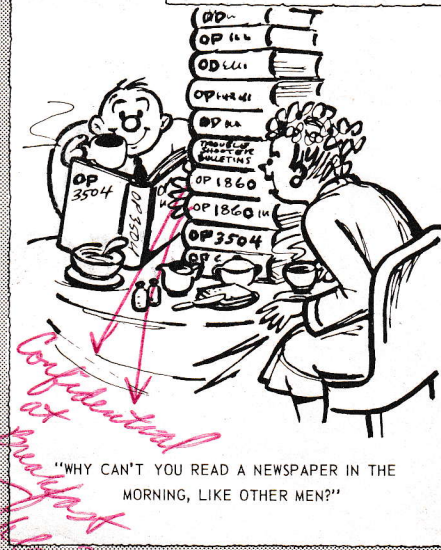
"IT'S NOT OPERATIONAL YET BECAUSE OF A RUN DOWN BATTERY . . . MINE!"



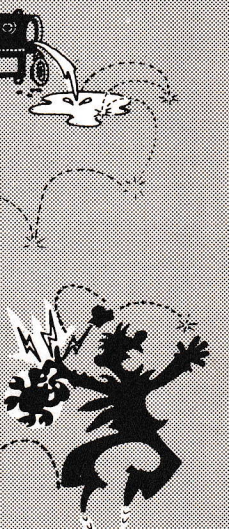
"WHY THE CHIEF ORDERED IT, SIR. HE DISTINCTLY SAID THAT HE'D GIVE A WEEK'S LIBERTY TO THE ONE WHO GETS THE BUGS OUT OF IT."



"GERTRUDE! YOU'RE WANTED ON THE SCUTTLEBUTT!"



"WHY CAN'T YOU READ A NEWSPAPER IN THE MORNING, LIKE OTHER MEN?"



BUT *Real* PROBLEMS ARE NO JOKING MATTER....
USE RUDMINDE!