ADVANCED FUZE & EXPLOSIVE ORDNANCE BULLETIN

05 JANUARY 1944

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M-123
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AN M
M-118
M-119
M-82 FRAG
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MK.-53 D.B.
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CONFIDENTIAL

This Bulletin has been compiled by the staff of the U.S. Navy Bomb Disposal School primarily for the graduates of the Advanced Fuze & Explosive Ordnance School. While it is believed to be accurate, it is not to be considered an official publication.

FUZES

MK. 137 NOSE FUZE

USE:

The Mk. 137 nose fuze is used in barrage rockets which are designed principally for use by small craft in landing operations.

DESCRIPTION: (See Diagram on next page)

The arming vanes are secured to the firing pin by means of a cotter pin. Protection is afforded the vanes by means of a cup which is affixed to the top of the fuze body by four screws. The firing pin is screwed into the body and extends down alongside the detonator shutter. The detonator shutter is rotated by the shutter spring so that the detonator will be directly under the firing pin after it has risen out of the way during the arming of the fuze.

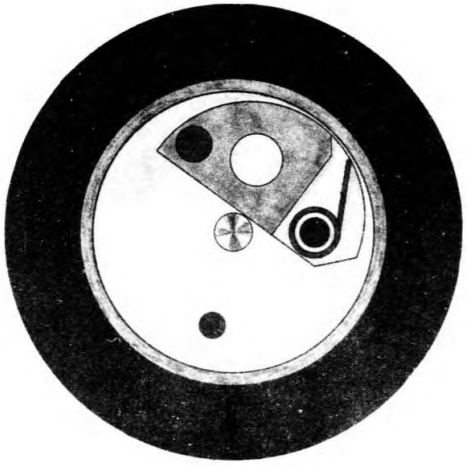
Fitted around the firing pin is a setback collar and spring. A vane locking pin extends from the setback collar through the head of the fuze and into a hole in the arming vane boss.

OPERATION

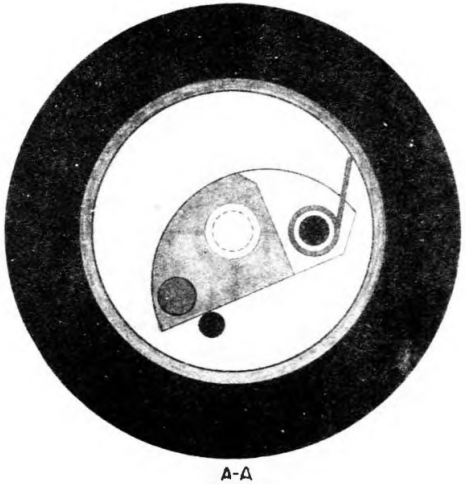
When the fuze is inserted in the rocket the safety wire is withdrawn and the rocket placed in the projector. At the instant the rocket is projected, setback causes the setback collar to move back against its spring. This movement of the setback collar withdraws the vane stop pin from the vane boss, freeing the vanes which immediately start to rotate. The setback collar spring will return the setback collar to its original position, but the firing pin will have unscrewed sufficiently to prevent reengagement of the vane locking pin with the arming vane boss.

Rotation of the vanes will cause the firing pin to thread up in the fuze body until the shoulder on the firing pin comes up against the top of the fuze body. As the firing pin rises it withdraws itself from alongside the detonator shutter allowing it to snap around and align the detonator directly under the firing pin and over the booster lead in. Approximately 8 rotations of the vanes are required to arm the fuze.

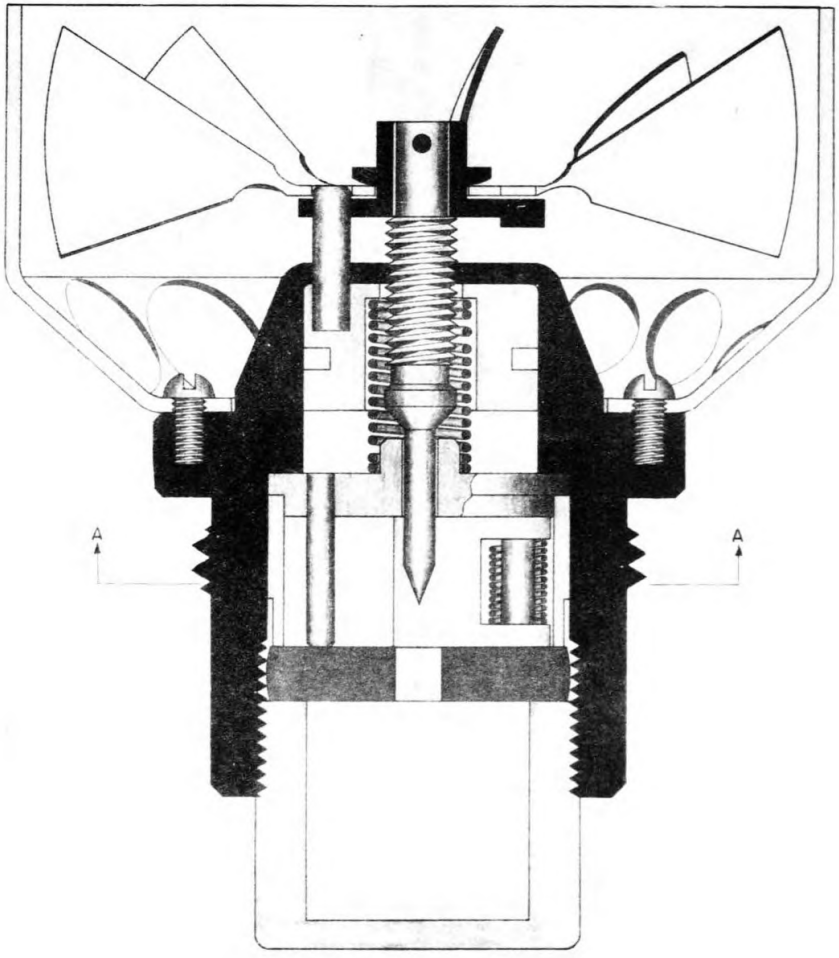
On impact with the beach or water, the firing pin shears the threads in the top of the fuze body, pierces the detonator, initiating the explosive train.



A-A
UNARMED



A-A
ARMED



C-O-N-F-I-D-E-N-T-I-A-L

T-41 TAIL FUZE

GENERAL

The T-41 fuze is similar in design to the M-123 series, incorporating a 10 minute delay element in the form of a soluble celluloid plug acted upon by acetone. In place of the glass ampoule of the M-123, the T-41 is equipped with a copper syphon bellows which will have a great advantage over the uncertainty and risk involved with the use of the glass ampoule.

The fuze is still more or less in the experimental stage but production is expected to commence the early part of this year.

USE

The T-41 has been designed for hedgehop bombing at low altitudes. Its delay of a minimum of 5 minutes offers protection to all aircraft during a mass raid, such as was carried out against the Ploesti oil fields in Rumania some time ago. No maximum delay has been specified since the primary objective of the fuze is to protect all the aircraft in a mass raid and this is accomplished by the minimum 5 minutes delay.

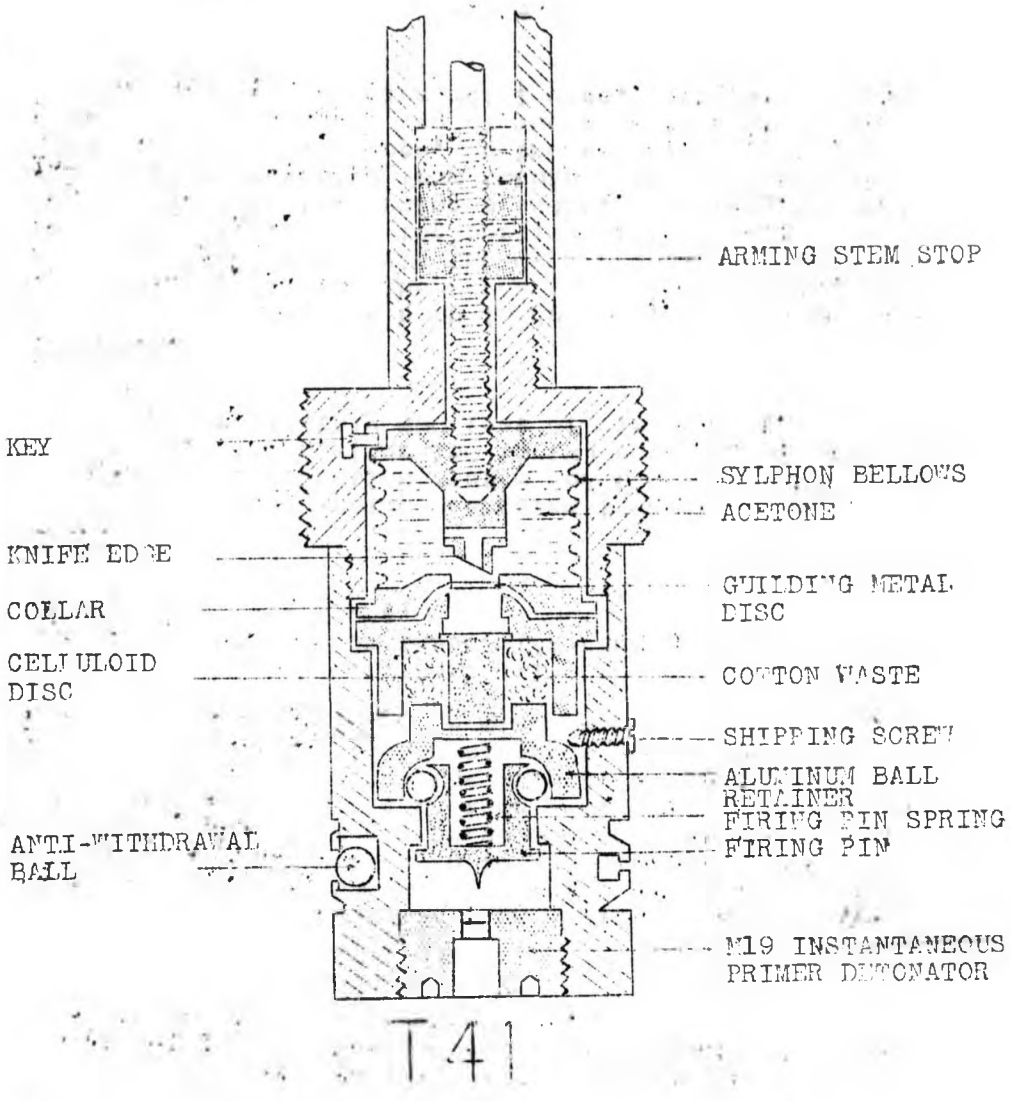
Any G.P. bomb will accomodate the fuze and it will be made in three different lengths as are all standard tail fuzes.

ARMING

The arming mechanism is similar to the AN-M100A2 gear reduction system and the fuze will be in an armed condition after 150 to 170 revolutions of the vanes or approximately 400 feet of air travel.

OPERATION

When the bomb is dropped, the arming wire is withdrawn, freeing the vanes which then rotate. The rotation of the vanes via the gear reduction system turns the arming stem. T he top portion of the bellows is threaded to take the arming spindle. However, the bellows unit is prevented from turning with the spindle by means of a keyway. Hence, as the spindle rotates, the bellows are compressed and at the same time the knife edge pierces the guilding metal disc. Thus the acetone



OPERATION (CONT'D)

in the bellows is permitted to flow through the channels in the knife edge onto the celluloid plug. Cotton waste is packed around the celluloid plug to absorb the excess acetone and prevent leakage. As the celluloid plug is dissolved, the pressure of the firing pin spring thrusts the aluminum ball retainer upwards, freeing the balls holding the striker in place. The firing pin spring, being a two-way action spring is then in a position to thrust the firing pin onto the instantaneous primer detonator (M-19), causing detonation of the bomb.

INSTALLATION

Assembly and installation procedure are essentially the same as for the M-123 series. (See page 147 " United States Bombs and Fuzes".)

SAFETY PRECAUTIONS

Because this fuze is potentially dangerous, too much stress cannot be placed on the observance of safety precautions at all times. The ball locking device is designed to cause the fuze to function if an attempt is made to unscrew it. If such action is attempted, the lower fuze body will remain fast due to the ball locking device, while the upper fuze body will unscrew causing the aluminum ball retainer to rise, freeing the striker retainer balls and consequently permitting the striker to fire. Therefore, under no circumstances should an attempt be made to unscrew the fuze. Follow rules for the M-123.

As further details are made available, the information will be sent out to the field.

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AN-MARK 224 HYDROSTATIC FUZE

(Bulletin of Ordnance Information #2-43)

The reports which the Bureau of Ordnance contines to receive concerning the malfunctioning of the AN-MARK 224 hydrostatic fuze indicate that the operating instructions given in BuOrd Circular Letter V-89 of 23 January 1942 are not being carried out. This type of fuze requires considerable care and attention in servicing. Unless the fuze is weatherproofed, suspending it externally in freezing weather may cause icing which will prevent the jump-out pins from being expelled. Weatherproofing is accomplished by placing adhesive tape over the jump-out pin holes and water entrance holes and then wrapping it around the arming wire. The arming wire retains the tape, thus uncovering the holes, as the bomb drops. Complete information on weather-proofing is contained in BuOrd Circular Letter V-89A of 23 May 1942. Whenever it is necessary to guard the fuze against corrosion, whether from salt spray or other matter, the fuze should be removed from the bomb and all exposed working parts thoroughly cleaned, dried, and oiled. The jump-out pin springs are especially susceptible to corrosion in the older type fuzes. The springs should be checked for tension before each take-off to insure that they will expel the jump-out pins.

More detailed information on oiling and checking may be found in BuOrd Circular Letter V-89B of 9 October 1942.

Some AN-MARK 224 and AN-MARK 234 fuzes have been issued which have some manufacturing errors, the most serious being that the bodies of some of the extender and pistol ends are not perpendicular to the flanges. This defect is sufficient in some instances to cause binding in a transverse tube. In order to detect this defect, it is necessary to install the extender and pistol ends separately into the transverse tube of the bomb and to simulate the firing motion of the extender pistol to see if binding occurs. In this connection, the symetry of the transverse tube should be checked for warping and foreign matter.

Activities in localities of frequent high humidities should turn in fuzes with a non-removable jump-out pin (AN-MARK 224 Mod 1) and draw those with a plastic head (AN-MARK 224 Mod 2). The latter have removable pins, which will facilitate upkeep. (NOTE: At the present time there are some AN-MARK 224, AN-MARK 224 Mods 1 and 2 with all bronze heads while the newer issues are all plastic composition. Also, there are some AN-MARK 234 fuzes utilizing a plastic booster extender and a bronze pistol end.)

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M-123, M-124, M-125 LDT TAIL FUZES

A detailed account of these tail fuzes is given in "United States Bombs and Fuzes", page 147.

The following is an excerpt taken from a report submitted by the Bomb Disposal Officer at Munda:

"On November 4, this officer was called upon to offer technical advice in the investigation of an explosion. Upon arrival at the scene, it was ascertained that a TBF pilot carrying four 500 lb. G.P. bombs with M-124 LDT fuzes had been unable to release or jettison one of his bombs. He landed, parked his plane and opened the bomb bay doors, allowing the bomb, which had apparently shaken loose upon landing, to drop onto the ground. He left the plane after instructing ordnancemen in the

vicinity that the bomb contained a LDT fuze and should not be handled. Through some misunderstanding, an attempt seems to have been made to defuze the bomb in the pilot's absence. The usual number of spectators were on hand, so the explosion of the bomb killed 10 men, wounded 13 others, and demolished 2 planes, a gas truck, and injured an SBD sitting nearby carrying a bomb with mechanical impact fuze....

"....Steps had previously been taken to insure proper respect for the M-124... In addition to specific instructions forbidding removal of M-124 fuzes, it has now been provided that any plane carrying LDT fuzes back to the air field will be taxied by the pilot to a remote area and await action by Bomb Disposal personnel. Since many planes return shaken up a bit by enemy action, the fuzes may be in a sensitive condition even though the arming wires are still intact. The glass ampoule may break from various causes....Some consideration here is being given the discontinuation of the use of LDT fuzes of less than 12 hour delay because of operational hazards".

From the above report it becomes apparent that too much stress cannot be placed on extreme caution in handling this type fuze and under NO circumstances should it be removed from a bomb after the fuze has once been installed. Furthermore, the fuze should never be subjected to a temperature exceeding 120°F. Pilots should be aware that unexpended bombs are to be jettisoned.

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AN-M103 NOSE FUZE

There is a new modified AN-M103 arming vane to be used with that fuze on the flat nose depth bombs (Mark 53, 325 lbs., and Mark 54, 350 lbs.) The new vane, which will be broader and longer will arm the AN-M103 in 1100 to 1200 feet of air travel on the flat nose bombs.

According to Bomb Disposal reports, the AN-M103 fuze is failing with alarming regularity in nearly all battle areas. There are three principle reasons:

(1) Dropping the bombs at such a low altitude that the fuzes fail to arm.

(2) Improper sealing against moisture of the delay element. This has been corrected but all fuzes loaded prior to September 1942 should be returned to naval ammunition depots.

(3) On low angle impacts, the inertia of the detonator slider is sufficient to bend the spring loaded detent and thus permit the explosive train to move out of line with the striker. The use of a steel pin detent instead of the present copper cup has been recommended and will probably be adopted according to the army.

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M-118 & M-119 NOSE FUZES

The M-118 and M-119 fuzes are as yet not available for shipment to the field. The M-118 is designed to contain a 4 to 5 second delay for use against marine targets, while the M-119 is the same fuze except that it will have a delay of 8 to 11 seconds for use against shore targets. Neither of these fuzes will be safe for carrier use. Both are still failing tests because of the delay element cracking and the booster detonating spontaneously on impact. Until these difficulties have been overcome, no nose fuze will be available for masthead bombing. The AN-M103 is <u>not</u> to be used for such bombing.

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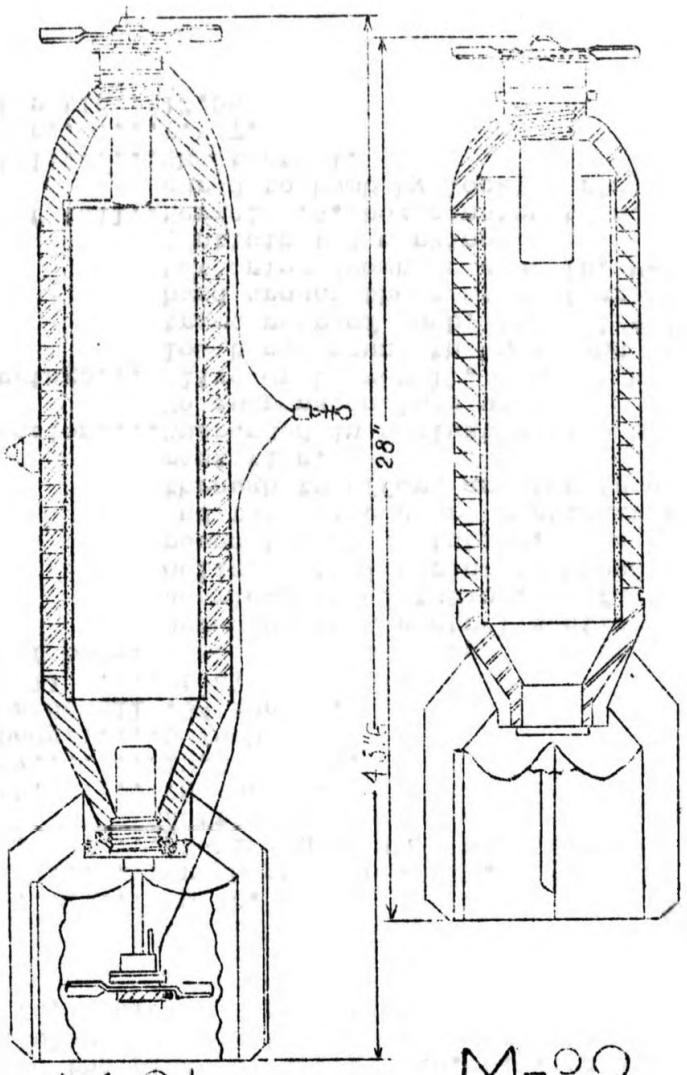
BOMBS

M-82 90 LB. FRAGMENTATION BOMB

A new Army 90 lb. fragmentation bomb designated M-32 has passed its final experimental tests and will shortly be in production. This bomb is designed to provide a large fragmentation bomb which may be used to take the place of the 100 lb. G.P. against targets particularly vulnerable to fragmentation as parked aircraft, vehicles, and personnel.

BOMB DATA

Size	90 lb.
Type	Fragmentation - H.E.
Fuze	AN-M103 nose fuze only (instant. setting).
Overall length	28 inches.
Length of body	19.8 inches.
Diameter of body	6 inches.
Thickness of sidewall	.94 inches.
Material of wall	Steel
Construction of body	Nose and tail pieces of cast steel screw on to a central section of seamless steel tubing. A flat helical steel spring is wound around the steel tubing. The nose and tail pieces are partially cut through to afford greater fragmentation.
Type of suspension	Suspended in a cluster of 6 bombs. No suspension lugs used.
Color and Markings	Olive drab overall. One inch yellow band around the nose and extreme rear of bomb, and a 1/4 inch band around the center of gravity. Lettering "Bomb Frag 90 lb. M-32" (anticipated marking).
Construction of tail	Normal U.S. box construction. Secured to bomb by locking ring.
Material of tail	Sheet steel.
T ype of filler	T.N.T.
Charge/Weight ratio	13.5%



FRAGMENTATION BOMBS

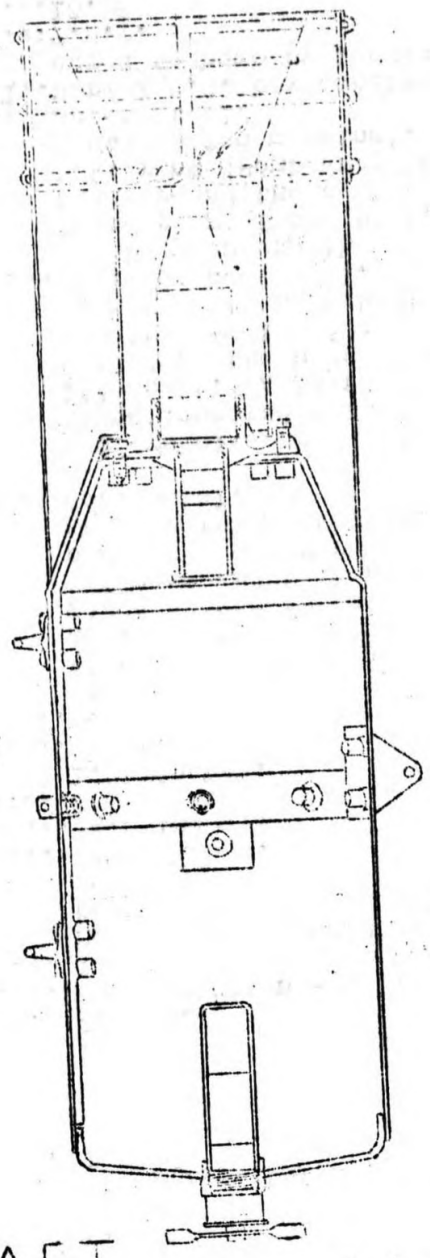
C-O-N-F-I-D-E-N-T-I-A-L

M-81 260 LB. FRAGMENTATION BOMB

The largest size fragmentation bomb yet to be developed by the United States is ready to be put in production. Designated M-81, this Army bomb is designed to be used against the same type of targets as the 90 lb. M-82, i.e. parked aircraft, vehicles, and personnel.

BOMB DATA

Size	260 lb.
Type	Fragmentation - H.E.
Fuzing	Tail: AN-M100A2 or AN-M100A1. (A non-delay M14 primer detonator must be used). Nose: AN-M103 (Instant. setting).
Overall length	43.6 inches.
Length of body	32.8 inches.
Diameter of body	8 inches.
Thickness of sidewall	1.25 inches.
Material of wall	Steel.
Construction of body	Nose and tail pieces of cast steel screw on to a central section of seamless steel tubing. A flat helical steel spring is wound around the steel tubing. The nose and tail pieces are partially cut through to afford greater fragmentation.
Type of suspension	Horizontal.
Construction of Suspension Lugs	Two eyebolts are welded to body along longitudinal axis of the bomb, 14" apart. A third eyebolt is welded to the body at center of gravity and 180 degrees removed from the other eyebolts.
Color and Markings	Olive drab overall. One inch yellow band around the nose and extreme rear of the bomb, and a 1/4" band around the center of gravity. Lettering "Bomb Frag 260 lb. M81" (anticipated marking).
Material of tail	Sheet Steel.
Construction of tail	Normal U.S. box construction. Secured to bomb by locking ring.
Type of filler	T.N.T.
Charge/Weight ratio	13.5%
Adapter Booster	M-102



AIRCRAFT DEPTH BOMB

MARK 53
MARK 54

325 LB. MARK 53 AND 350 LB. MARK 54 AIRCRAFT DEPTH BOMBS

In addition to reports of malfunctioning, there have been numerous accidents resulting from the use of the AN-MARK 224 and AN-MARK 234 depth bombs. If a depth bomb fuzed with the AN-MARK 224 or AN-MARK 234 is accidentally submerged with the arming wires removed an explosion will result when the bomb reaches the depth for which the fuze is set. To overcome this hazard, new 325 lb. and 350 lb. depth bombs have been developed, the distinctive characteristic of which is the elimination of the athwartship fuze pocket. The new bombs incorporate a tail fuze pocket in which only the AN-MARK 230 hydrostatic tail fuze may be used. The AN-MARK 230 fuze requires air travel to arm so that more submersion of the fuze with the arming wire withdrawn is not sufficient to actuate it as is the case with the AN-MARK 224 and AN-MARK 234.

In view of the number of accidents which have occured with the use of the AN-MARK 224 and the AN-MARK 234, the possibility exists that these athwartship hydrostatics may soon become obsolescent. However, no official word has been received from BuOrd regarding this matter. Nevertheless, it becomes apparent that men in the field should acquaint themselves with these two new depth bombs as well as the AN-MARK 230 tail hydrostatic (see page 175 "United States Bombs and Fuzes").

BOMB DATA

Sizes.....	Mark 53 - 325 lbs. Mark 54 - 350 lbs.
Type.....	Aircraft depth bombs.
Fuzing.....	AN-M103 nose fuze (must have long modified arming vanes for use with flat nose bomb). AN-MARK 230 hydrostatic tail fuze. (Note: The AN-MARK 219 with an adapter ring may be used in the nose if the AN-M103 with the long vanes is not available. The AN-MARK 219 requires 2000 to 2500 feet of air travel to arm. With the new vane it will require only 1100 to 1200 feet.)
Overall length- Including fuze.....	54.6 inches.

BOMB DATA (CONT'D)

Construction of body..	Cylindrical welded sheet steel body with a flat nose.
Diameter of body....	13.5 inches
Material of wall	Sheet steel.
Thickness of wall.....	1/16 inch.
Type of suspension....	These bombs have two suspension lugs bolted along the longitudinal axis of the bomb 14 inches apart. They also have a third lug bolted to the body at the center of gravity and 180 degrees removed from the other lugs. There is no external belly band, the bombs being strengthened internally by a band which is fitted into the bombs at the center of gravity. Trunnions for dive bombing are affixed to the case and internal strengthening band.
Color & Markings of Body and Tail.....	Olive drab overall. "Mk 53 325 lb. Depth Bomb", "Mk 54 350 lb. Depth Bomb" stencilled on the respective bomb bodies.
Length of tail.....	24.5 inches.
Width of tail.....	13.9 inches.
Construction of tail..	Welded to the tail cone are four vanes which are strengthened by interior box-type struts, and an exterior wide ring strut.
Types of filler.....	Mark 53 - T.N.T. Mark 54 - Torpex.

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FUZE EXTENSION M-1

The following reprint of instructions which accompany the fuze extension M-1 is published for the information of personnel who may encounter this device in the field.

GENERAL

The fuze extension M-1 fits the fuze cavity of any standard aircraft bomb and is used to secure bursts of the bomb at a distance above ground equal to the length of the extension used. Two sizes 9 and 18 inches are issued at present, but extensions can be obtained in any length up to 36 inches. An AN -M103 nose fuze usually is used with the extension.

DESCRIPTION

(a) The extension consists of the following parts:

1 pipe containing outside threads at one end and a collar with inside threads at the other.
1 lock washer.
1 burster charge in a waterproof fiber tube.

(b) The extension is 2-3/8 inches in diameter and is similar to a common steel pipe with the exception of the collar. A lock washer is provided to secure the extension to the bomb and make certain that it does not become detached in flight. The burster charge, consisting of cast tetrytol, fits into the pipe and carries the detonation from the fuze to the bomb.

ASSEMBLY

When this extension is used, the following procedure will be followed:

(1) Place the lock washer on the collar end of the extension.
(2) Assemble the extension to the bomb, making certain that it is screwed up tight.
(3) Place the burster charge in the extension.

ASSEMBLY (CONT'D)

(4) Screw the fuze into the extension.
(5) Prepare the fuze for functioning in the normal manner.
(6) If the bomb is not dropped, the above steps, in reverse order, will be followed to return the bomb and fuze to storage.

PRECAUTIONS

(a) Make certain that the lock washer is placed on the extension before it is assembled to the bomb, otherwise the extension and fuze may become detached during flight.
(b) The booster charge should be handled with reasonable care at all times.
(c) Precautions pertaining to the handling of bombs and bomb fuzes should be observed.

By order of the Chief of Ordnance:

J.S. HATCHER
Brigadier General, U.S. Army
Chief, Field Service Division

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INERT AIRCRAFT BOMB FUZES

(BuOrd Circular Letter AV114-43)

A recent minor accident occured during the disassembly of an aircraft bomb nose fuze, AN-M103 which was marked "EMPTY". This accident was due to the explosion of a detonator in the slide block. An investigation proved that even though the fuze was assembled by a trusted employee, no explanation could account for the presence of the explosive.

In the future, issues of components of complete round assemblies of ammunition marked "EMPTY", or similar purposes, will only be made by Naval ammunition or mine depots. These depots are charged with the responsibility of ascertaining prior to issue whether or not such ammunition is actually inert.

Inasmuch as some inert aircraft bomb fuzes have been obtained from sources other than

those enumerated above, all such fuzes now on hand which are marked "EMPTY", "DUMMY", or "INERT" should be used only after disassembly, or inspection by experienced ordnance personnel to determine whether they are, in fact, "EMPTY", "DUMMY", or "INERT". Where experienced personnel are not available, such fuzes must be returned to the nearest Naval ammunition or mine depot for such inspection. As a general safety precaution, all aircraft bomb fuzes should be considered fully loaded until proved otherwise

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CHANGES OF SYMBOLS FOR CHEMICAL WARFARE AGENTS

(BuOrd Circular Letter No. A92-43)

Recently British and American chemical warfare nomenclature has been standardized resulting in a change of symbols for certain chemical warfare agents. The changes in American chemical warfare symbols are as follows:

Lewisite	from M-1 to L
Mustard Gas	from HS to H
Lewisite-Mustard Mixture	from MS to HL
Phenyldichlorarsine	from PDA to PD
Brombenzylcyanide	from CA to BBC

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IMPROPER ALTERATION OF AMMUNITION

(Bulletin of Ordnance Information No. 3-43)

An instance of ill-advised initiative is described below as an example of dangerous alteration and tinkering which failed to have earlier fatal results only because the Fool Killer must have been on leave. An aircraft squadron operating from an advanced base decided that they needed a more nearly instantaneous fuze for low altitude bombing than the standard 4-1/2 second delay fuze supplied. Accordingly, they removed the M-115 booster from 500 lb. bombs by screwing it out of the tail cap with a heavy wrench.

They then took a carpenter's 2" expansion auger and drilled into the end of the bomb. After boring into the explosive charge for about 5" they reached the tetryl pellets of the main booster, still without other incident than the formation of quantities of annoying explosive dust. The dust was wiped away with rags and blown out by any convenient means, no particular effort being made to confine it. Shoes worn were ordinary, steel-nailed field shoes, and steel tools were used freely around the bomb. When an irregular, pear-shaped cavity had been produced, an M-106 fuze was inserted and anchored by means of a drilled-out shipping plate. The strength of the plate was later determined to be sufficient to stand an acceleration of about 64 feet per second.

The project was carried to this point without untoward incident, but when the bomb was released from an airplane at about fifty feet altitude, an instantaneous low order detonation resulted under the tail of the airplane. It is believed that the poorly anchored fuze slapped against the booster upon impact causing this detonation without proper delayed fuze action. Similar experiences with other aircraft resulted in abandoning the ill-advised and ill-executed project.

The Bureau cites the above incident as an example of the sort of alteration which should not be undertaken without the knowledge, consent, and advice of the Bureau, and which caused the Bureau to express its policy in relation to such matters in paragraph 5, Bulletin 3-42, as follows:

> "The Bureau notes a growing tendency to make alterations to ordnance equipment without prior notification to or approval by the Bureau. The Bureau is entirely sympathetic to the attitude that under emergency conditions such as are more likely than not to exist in war time, it may often be necessary to make alterations to correct defects which actually prevent functioning. However, efforts merely to improve functioning which is basically sound may run afoul of improvements being undertaken by the Bureau. In any event, the Bureau expects that no changes which would prevent equipment from being restored to its original condition will be undertaken without the Bureau's permission except as an emergency measure to restore operation after a casualty."

C-O-N-F-I-D-E-N-T-I-A-L

DUMMY DRILL AMMUNITION

(BuOrd Circular Letter AV110-43)

Dummy drill ammunition includes any type of ammunition or any components of any type assembled without explosives or with inert materials, in imitation or regular ammunition. The following additional definitions are hereby standardized:

1. INERT LOADED BOMBS - Bombs loaded to actual weight with a non-explosive material such as plaster, cement, or sand.
2. EMPTY BOMBS - Bombs not loaded but complete with all components, specifically intended for space mock-ups.
3. INERT OR EMPTY FUZES - Fuzes with all the internal parts assembled but containing no explosive elements.
4. DUMMY OUTLINE FUZES - Fuzes with exact outside dimensions but with hollow (inert fuzes with internal mechanisms removed) or solid interior.

Dummy drill bombs will be painted olive drab and identified by one inch black bands at the nose and tail. Dummy drill fuzes will be painted with two black bands on the part of the fuze where they can be readily seen when the fuze is assembled to the bomb. Fuzes with boosters such as the AN-MARK 219 and AN-M103 will have two 1/4 inch holes drilled in the booster or booster cover to readily show their empty status. In addition, the fuzes will be stamped Inert, Empty, or Dummy outline to identify the type of fuze. This stamping will be on a part of the fuze projecting into the bomb as well as at a point on the fuze where it is plainly visible after the fuze is assembled to the bomb. All dummy drill aircraft bombs and fuzes now on hand are to be painted to comply with the above.

Inert loaded bombs and fuzes shall not be stowed in magazines with live ammunition or service fuzes.

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M-102 ADAPTER BOOSTER

In the future, the M-102 adapter booster will come staked to the tail plug of G.P. bombs. This is to prevent the adapter booster from being unscrewed readily when the M-123 series fuzes are used.

C-O-N-F-I-D-E-N-T-I-A-L

SECURITY CLASSIFICATION OF PROJECTILE FUZES

(BuOrd Circular Letter A111-43)

In view of the fact that the enemy has had ample opportunity to recover certain U.S. Naval fuzes and projectiles, and in order to facilitate production and handling of correspondence and drawings pertaining to fuzes, the security classification of the following fuzes (all modifications) is hereby reduced to "RESTRICTED".

BASE FUZES

Mark 19 (6"/47 common)
Mark 20 (5"/38 common)
Mark 21 (6"-16" AP)
Mark 28 (5"/38 AA common)
Mark 31 (4" HC)
Mark 36 (4" SC)
Mark 39 (8"-16" HC)

AUXILIARY DETONATING FUZES

Mark 17 (5" AA)
Mark 35 (8"-16" HC)
Mark 43 (5"/54 HC)
Mark 46 (5" AA)

NOSE FUZES

Mark 12 (1"1)
Mark 18 (5" AA)
Mark 22 (3" AA)
Mark 24 (8"-4" HC)
Mark 25 (5"/54-6"/47 DP AA)
Mark 26 (20mm)
Mark 27 (40mm)
Mark 29 (5"-16" HC)
Mark 30 (3"-4" HC)
Mark 34 (1"1)

All drawings, specifications, contracts and Bureau of Ordnance publications pertaining to these fuzes shall be revised to indicate the "RESTRICTED" classification. Future correspondence concerning these fuzes shall be classified as "RESTRICTED", except when reporting malfunctioning, duds, prematures, etc., in which case the classification shall be "CONFIDENTIAL".